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3d Inf Div (Mech)

## **Compliance Status Report Revision 1**

### **HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvents Area)**

Hunter Army Airfield, Georgia  
HSI Site Number 10395

Revision 1 - April 2012

Original Report – June 2011



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**Compliance Status Report  
Revision 1**  
HAA-01 (Former Fire Training  
Area and DAACG Chlorinated  
Solvents Area)

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<b>Acronyms</b>	<b>ix</b>
<b>Executive Summary</b>	<b>xiii</b>
<b>1. Compliance Status Certification</b>	<b>1-1</b>
<b>2. Qualified Groundwater Scientist Certification</b>	<b>2-1</b>
<b>3. Introduction</b>	<b>3-1</b>
<b>4. Site Background</b>	<b>4-1</b>
4.1 Regulatory Status	4-1
4.2 Site Description and Setting	4-1
4.2.1 Site Description	4-1
4.2.2 Regional Geology/Hydrogeology	4-2
4.2.3 Hunter Army Airfield Depositional Model	4-3
4.3 Description of Each Known Source	4-4
4.3.1 Former Fire Training Area	4-4
4.3.2 DAACG Chlorinated Solvents Area	4-5
4.3.3 Potentially Responsible Parties	4-5
<b>5. Investigations and Monitoring Conducted at HAA-01</b>	<b>5-1</b>
5.1 1987 Preliminary Assessment	5-1
5.2 1990 and 1992 Additional Assessments	5-1
5.3 1995 Source Removal Design Investigation	5-2
5.4 1997 to 2000 Remedial Actions	5-3
5.5 July 1999 through January 2000	5-4
5.6 October and November 2001	5-5
5.7 2003 Interim Removal Actions	5-6
5.8 Vertical Profile Investigation (2002-2003)	5-8
5.9 CSR Groundwater Monitoring Program (2004 – 2009)	5-8
5.10 Site Wide Investigation Activities (2009 - 2010)	5-9
5.10.1 Groundwater Monitoring Event (February 2009)	5-10

5.10.2	CSR Soil Investigation (November 2009)	5-11
5.10.2.1	Soil Investigation Results	5-12
5.10.3	Groundwater Investigation (December 2009)	5-14
5.10.3.1	Groundwater Investigation Results	5-15
5.11	Extent of Compounds in Soil	5-18
5.12	Supplemental Investigation Activities (2012)	5-21
<b>6.</b>	<b>Conceptual Site Model</b>	<b>6-1</b>
<b>7.</b>	<b>Human Health Risk Assessment</b>	<b>7-1</b>
7.1	Potential Receptors	7-1
7.2	Exposure Assessment	7-2
7.2.1	Soil Exposure	7-2
7.2.2	Groundwater Exposure	7-2
7.3	Toxicity Assessment	7-3
7.4	Risk Reduction Standards	7-3
7.4.1	Soil Risk Reduction Standards	7-4
7.4.2	Groundwater Risk Reduction Standards	7-5
7.4.2.1	Residential Risk Reduction Standards	7-5
7.4.2.2	Nonresidential Risk Reduction Standards	7-5
7.4.3	Sediment	7-6
7.4.4	Surface Water	7-7
7.5	Summary and Conclusions	7-7
<b>8.</b>	<b>Ecological Health</b>	<b>8-1</b>
8.1	Introduction	8-1
8.2	Ecological Risk Assessment Dataset Evaluation	8-3
8.3	Screening Level Ecological Risk Assessment	8-3
8.3.1	Screening-Level Problem Formulation	8-3
8.3.1.1	Environmental Setting	8-4

8.3.1.2	Toxicological Profiles	8-5
8.3.1.3	Media of Concern	8-7
8.3.1.4	Potentially Exposed Receptors	8-8
8.3.1.5	Potentially Complete Exposure Pathways	8-8
8.3.1.6	Assessment and Measurement Endpoints	8-9
8.3.2	Screening-Level Ecological Effects Evaluation	8-10
8.3.3	Screening-Level Exposure Estimate and Risk Calculation	8-10
8.3.3.1	Surface Soil	8-11
8.3.3.1	Sediment as Soil	8-11
8.3.4	Scientific Management Decision Point	8-12
8.4	Baseline Ecological Risk Assessment	8-12
8.4.1	Refinement of COPECs	8-14
8.4.2	Refinement of Exposure Point Concentrations	8-14
8.4.3	Alternative Screening Values	8-15
8.4.4	Risks to Upper-Trophic Level Wildlife	8-15
8.4.4.1	Wildlife Receptors and Exposure Parameters	8-15
8.4.4.2	Bioconcentration Factors	8-17
8.4.4.3	Toxicity Reference Values	8-17
8.4.4.4	Wildlife Dose Models	8-17
8.4.5	Risk Characterization	8-18
8.4.6	Risk Characterization Results	8-21
8.4.7	Uncertainties	8-21
8.4.8	Summary and Conclusions	8-22
<b>9.</b>	<b>Public Involvement</b>	<b>9-1</b>
<b>10.</b>	<b>Conclusions</b>	<b>10-1</b>
<b>11.</b>	<b>Recommendations</b>	<b>11-1</b>
<b>12.</b>	<b>References</b>	<b>12-1</b>

**Tables**

- 5-1a Historical Soil Sample Summary
- 5-1b Historical Sediment Sample Summary
- 5-1c Historical Surface Water Sample Summary
- 5-1d Historical Groundwater Sample Summary
- 5-2 Monitor Well Construction Details
- 5-3 Former Fire Training Area Soil Investigation Summary – November 2009
- 5-4 DAACG Area Soil Investigation Summary – November 2009
- 5-5 Groundwater Elevation Summary – December 2009
- 5-6 Groundwater Investigation Summary – December 2009 – January 2012
- 6-1 Historical Detections of Compounds in Media
- 6-2 Historical Groundwater Elevations
- 7-1 Risk Reduction Standard Equations for Exposure to Soil
- 7-2 Risk Reduction Standard Equations for Exposure to Groundwater
- 7-3 Toxicity Values
- 7-4 Physical-Chemical Properties of the Detected Soil Constituents
- 7-5 Comparison of Maximum Concentrations Detected in Soil to Types 1 and 2 Risk Reduction Standards
- 7-6 Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil
- 7-7 Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil
- 7-8 Comparison of Maximum Concentrations Detected in Soil to Types 3 and 4 Risk Reduction Standards
- 7-9 Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil
- 7-10 Soil Screening Level Partitioning Equation for Migration to Groundwater – Type 1 Risk Reduction Standards
- 7-11 Soil Screening Level Partitioning Equation for Migration to Groundwater – Type 2 Risk Reduction Standards
- 7-12 Soil Screening Level Partitioning Equation for Migration to Groundwater – Type 4 Risk Reduction Standards

- 7-13 Comparison of Maximum Concentrations Detected in Groundwater to Types 1 and 2 Risk Reduction Standards
- 7-14 Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure
- 7-15 Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure
- 7-16 Comparison of Maximum Concentrations Detected in Groundwater to Types 3 and 4 Risk Reduction Standards
- 7-17 Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure
- 7-18 Comparison of Maximum Concentrations Detected in Sediment to Types 1, 2, 3, and 4 Risk Reduction Standards
- 7-19 Comparison of Maximum Concentrations Detected in Surface Water to Georgia Instream Standards or Type 1 Risk Reduction Standards
- 7-20 Type 4 Risk Reduction Standard for Lead in Soil Based on Adult Worker Exposure Scenario
- 7-21 Health-Based Concentration Goal Equations for Sediment Exposure
- 7-22 Receptor Exposure Parameters
- 7-23 Dermal Absorption Parameters
- 7-24 Toxicity Values
- 7-25 Health-Based Concentration Goal Calculations for Exposure to Sediment by a Youth Wader
- 7-26 Health-Based Concentration Goal Equations for Wading in Surface Water
- 7-27 Water Volatilization Factors
- 7-28 Health-Based Concentration Goal Calculations for Exposure to Surface Water by a Youth Wader8-1 Ecological Risk Assessment Dataset, Surface Soil (0-2 foot Depth Interval)
- 8-2 Federal- and State-Listed and Candidate Species of Potential Occurrence
- 8-3 SLERA - Constituents of Potential Ecological Concern in Surface Soil
- 8-4 BERA - Constituents of Potential Ecological Concern in Surface Soil
- 8-5 Food Chain Modeling for the Short-tailed Shrew
- 8-6 Food Chain Modeling for the American Robin
- 8-7 SLERA - Constituents of Potential Ecological Concern in Sediment as Soil

- 8-8 BERA - Constituents of Potential Ecological Concern in Sediment as Soil
- 8-9 Food Chain Modeling for the Short-tailed Shrew Using Sediment as Soil
- 8-10 Food Chain Modeling for the American Robin Using Sediment as Soil
- 8-11 Uncertainties in the Ecological Risk Assessment

### Figures

- 4-1 Site Location Map
- 4-2 Site Map
- 4-3 Topographic Map
- 5-1 Historic Soil Boring, Vertical Aquifer Profile, and Monitor Well Location Map
- 5-2 Surface Water and Sediment Sample Location Map
- 5-3 Soil Investigation Summary (November 2009)
- 5-4 Summary of Benzene Concentrations in Soil
- 5-5 Summary of Total Xylenes Concentrations in Soil
- 5-6 Summary of Acetone Concentrations in Soil
- 5-7 Summary of Ethylbenzene Concentrations in Soil
- 5-8 Summary of Benzo(a)pyrene Concentrations in Soil
- 5-9 Summary of Chrysene Concentrations in Soil
- 5-10 Summary of Benzo(a)anthracene Concentrations in Soil
- 5-11 Summary of Benzo(b)fluoranthene Concentrations in Soil
- 5-12 Summary of Benzo(k)fluoranthene Concentrations in Soil
- 5-13 Summary of Indeno(1,2,3-cd)pyrene Concentrations in Soil
- 5-14 Summary of Lead Concentrations in Soil
- 5-15 Extent of VOCs in Soil
- 5-16 Extent of SVOCs (PAH) in Soil
- 5-17 Extent of SVOCs in Soil
- 5-18 Extent of Metals in Soil
- 5-19 Extent of Pesticides in Soil

5-20	Shallow Potentiometric Surface Map (December 2009)
5-21	Deep Potentiometric Surface Map (December 2009)
5-22	Fire Training Area Groundwater Summary (December 2009)
5-23	DAACG Chlorinated Solvent Area Groundwater Summary (December 2009 through February 2012)
5-24	Summary of cis-1,2-Dichloroethene Concentrations in Groundwater (December 2009 through February 2012)
5-25	Summary of trans-1,2-Dichloroethene Concentrations in Groundwater (December 2009 through February 2012)
5-26	Summary of Vinyl Chloride Concentrations in Groundwater (December 2009 through February 2012)
5-27	Summary of Aldrin Concentrations in Groundwater (December 2009)
5-28a	Geologic Cross-Section A-A'
5-28b	Geologic Cross-Section B-B'
5-28c	Geologic Cross-Section C-C'
5-28d	Geologic Cross-Section D-D'
5-29	Summary of 1,1-Dichloroethene Concentrations in Groundwater (December 2009 through February 2012)
5-30	Summary of Acetone Concentrations in Groundwater (December 2009 through February 2012)
5-31	Summary of Benzene Concentrations in Groundwater (December 2009 through February 2012)
5-32	Summary of Carbon Disulfide Concentrations in Groundwater (December 2009 through February 2012)
5-33	Summary of Trichloroethene Concentrations in Groundwater (December 2009 through February 2012)
5-34	Summary of Toluene Concentrations in Groundwater (December 2009 through February 2012)
5-35	Summary of Endrin Aldehyde Concentrations in Groundwater (December 2009)
8-1	Eight-Step Ecological Risk Assessment Process
8-2	Expanded Eight-Step Ecological Risk Assessment Process
8-3	Conceptual Site Model for Potential Ecological Receptors

### Appendices

- A Historical Analytical Results Summary
- B Historic Field Procedures, Field Forms, and Historic Well Construction Logs
- C Field Forms, Well Construction, and Boring Logs
- D Historic Remedial Action Summaries
- E UBC Background Concentration Summary
- F Vertical Profile Boring Summary
- G Laboratory Analytical Reports
- H Hydraulic Conductivity Calculations
- I Photographic Log
- J ProUCL Output and IEUBK Model Output
- K ARCADIS Field Investigation Procedures
- L CSR Checklist





Revision 1 – April 2012  
Original Report – June 2011

## Acronyms

ARCADIS	ARCADIS U.S., Inc.
AST	Aboveground Storage Tank
ASV	alternate screening value
BaP	benzo[a]pyrene
BAF	bioaccumulation factor
BCF	bioconcentration factor
BERA	baseline ecological risk assessment
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
COC	constituent of concern
COPC	constituents of potential concern
COPEC	constituent of potential ecological concern
CSF	cancer slope factor
CSM	conceptual site model
CSR	Compliance Status Report
DAACG	Departure / Arrival Airfield Control Group
DCE	dichloroethene
DNA	deoxyribonucleic acid
DO	dissolved oxygen
DPT	Direct Push Technology
DRO	diesel range organics
EcoSSL	ecological soil screening level
EPC	exposure point concentration
ERA	ecological risk assessment
ESV	ecotoxicity screening value



Revision 1 – April 2012  
Original Report – June 2011

ESE	Environmental Science and Engineering, Inc.
FOD	frequency of detection
ft	feet
ft bls	feet below land surface
ft/ft	feet per foot
ft/min	feet per minute
ft msl	feet above mean sea level
ft/yr	feet per year
FTA	Fire Training Area
GAEPD	Georgia Environmental Protection Division
GADNR	Georgia Department of Natural Resources
GRO	gasoline range organics
HAAF	Hunter Army Airfield
HHRA	Human health risk assessment
HQ	hazard quotient
HSA	hollow-stem auger
HSI	Hazardous Site Index
HSRA	Georgia Hazardous Site Response Act
I	horizontal hydraulic gradient
ID	inside diameter
IRA	Interim Removal Action
IWQS	In-Stream Water Quality Standard
JP-4	#4 Jet Propulsion Fuel
K	hydraulic conductivity
kg	kilograms
KM	Kaplan-Meyer
Law	Law Engineering Services, Inc.



Revision 1 – April 2012  
Original Report – June 2011

L/day	liters per day
LNAPL	Light Non-Aqueous Phase Liquid
LOAEL	lowest observed adverse effect level
MCLs	USEPA Maximum Contaminant Levels
MTBE	methly tert-butyl ether
mg/day	milligrams per day
mg/kg	milligrams per kilogram
µg/kg	micrograms per kilogram
µg/L	micrograms per Liter
$n_e$	effective porosity
NOAA	National Oceanic and Atmospheric Administration
NOAELS	no observed adverse effect level
OCGA	Official Code of Georgia Annotated
Omega	Omega Environmental Services, Inc.
ORNL	Oak Ridge National Laboratory
ORP	oxidation reduction potential
PAHs	polycyclic aromatic hydrocarbons
PBC	Performance Based Contract
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PID	photoionization detector
PVC	polyvinyl chloride
PQL	Practical Quantitation Limit
RAGS	Risk Assessment Guidance for Superfund, Part B
RCRA	Resource Conservation and Recovery Act
RFD	reference dose
RRS	Risk Reduction Standard

## Compliance Status Report Revision 1

HAA-01 (Former Fire Training  
Area and DAACG Chlorinated  
Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

RSL	Regional Screening Level
SAIC	Science Applications International Corporation
SLERA	screening level ecological risk assessment
SMDPs	scientific management decision points
SM	silty sand
SP	poorly graded sand
SSL	soil screening level
STEP	Solutions To Environmental Problems, Inc.
SUF	site use factor
SVOC	semi-volatile organic compound
TCE	trichloroethene
TPH	total petroleum hydrocarbon
TRV	toxicity reference value
UBC	upper background concentration
UCL	upper confidence limit
USACE	United States Army Corps of Engineers
USAEHA	United States Army Environmental Hygiene Agency
USAF	United States Air Force
USFW	United States Fish and Wildlife Service
USCS	Unified Soil Classification System
USGS	United States Geological Survey
USEPA	United States Environmental Protection Agency
V	velocity
VOC	volatile organic compound



Revision 1 – April 2012  
Original Report – June 2011

## **Executive Summary**

This Compliance Status Report (CSR) documents current and historical investigations performed at the former Fire Training Area (FTA) and the Departure/Arrival Airfield Control Group (DAACG) Chlorinated Solvents Area, at the Hunter Army Airfield (HAAF) in Savannah, Georgia. This report details the nature and extent of impacts associated with historic site operations as defined by CSR investigation and Interim Measure (IM) activities conducted between 1987 and 2010. The report interprets the current and historical data as they relate to horizontal and vertical delineation of impacts, potential migration of constituents in each medium, identification of constituents of potential concern (COPCs), and evaluation of potential impacts to human health and the environment. This CSR investigation was conducted in accordance with the requirements of the Georgia Hazardous Site Response Act (HSRA).

Due to their proximity and history, the FTA and DAACG Chlorinated Solvent Area are collectively identified as HAA-01 (Hazardous Site Inventory [HSI] No. 10395) for the purpose of this investigation. HAA-01 is located in the northwestern portion of the HAAF. The site is located west of the flightline and approximately 800 feet (ft) northwest of the control tower.

The former FTA consisted of a gravel covered concrete fire training pad, a steel structure utilized as a mock aircraft, a 17,000 gallon aboveground storage tank (AST) used to store fuel for training purposes, a 1,100 gallon AST used to contain water contaminated fuel and solvents, and associated underground piping. Typical activities included spraying water contaminated fuels on the mock aircraft, igniting the coated structure, and subsequently extinguishing the aircraft for training purposes. Fire training activities were discontinued at the site in 1991 and all components of the former FTA were removed in 1998 as part of soil remediation activities. Topography at the site gently slopes toward the Springfield Canal that is located 3,600 feet to the west. The Springfield Canal flows southwest before emptying into the Little Ogeechee River, five and a half miles downstream of HAAF.

Several investigations and remedial actions have been conducted at HAA-01 since 1987. Various phases of CSR investigations were performed at the site between 1999 and 2010. Investigations at the site have included the installation of soil borings and monitor wells; the collection and analysis of soil, sediment, groundwater, and surface water samples; human and ecological exposure assessments; and data evaluation.

In March 1987, the United States Army Environmental Hygiene Agency (USAEHA) conducted a preliminary assessment of soils in the vicinity of the former fire training



Revision 1 – April 2012  
Original Report – June 2011

pad in order to confirm the absence or presence of impacts. Metals, polynuclear aromatic hydrocarbons (PAHs), and phthalates were detected in soil samples. In February 1990, a total of 6 monitor wells were installed in the shallow and deep portions of the uppermost aquifer at the Site. In addition, 6 soil borings and 3 sediment samples were collected to further define soil and groundwater contamination. In March 1992, three additional monitor wells and 7 soil borings were installed and samples were collected. Four sediment samples were also collected. Laboratory results of these investigations identified volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) in surface soils and drainage ditch sediment samples. Low concentrations of VOCs, SVOCs and metals were also identified in the groundwater samples.

In 1995, a source removal design investigation was conducted in which 4 additional monitor wells and 17 additional soil borings were installed to further define the extent of impacts to soil and groundwater. Groundwater samples were collected from each of the newly installed monitor wells and soil samples were collected from 11 of the 17 soil borings during this investigation. Laboratory analysis of both the soil and groundwater samples confirmed the presence of VOCs and SVOCs exceeding the Risk Reduction Standard (RRS) in the immediate vicinity of the curbed concrete pad. In addition, free phase product was identified in monitor well HMW-07 during this phase of the investigation. The results of this investigation were reported in a Pre-Final CSR, which was subsequently withdrawn in order to incorporate the results of additional investigation activities.

Between November 1997 and March 1998, soil remediation activities were performed at the former FTA. Soils identified during the previous investigations at concentrations exceeding HSRA notification standards were targeted for removal. Remedial activities included the removal of the former FTA components including the simulated aircraft structure, ASTs, underground transmission lines, fire training pad, 9,430 tons of soil, 233 tons of concrete debris, and 81,906 gallons of wastewater. At the completion of the soil remediation activities, laboratory analytical data from confirmatory soil samples showed that concentrations of constituents remained above the HSRA notification standards at multiple locations in the excavation.

Free product removal activities were initiated in February 1999 in the vicinity of monitor well HMW-7 and were performed using a belt skimmer system. While a limited volume of free product was recovered by the skimmer system, no product was detected in surrounding monitor wells during subsequent 1999 or 2000 gauging activities.



Revision 1 – April 2012  
Original Report – June 2011

Between July 1999 and January 2000, supplemental CSR investigation activities were conducted, including the installation of 8 monitor wells, 31 soil borings and the collection of soil and groundwater samples for laboratory analysis. Human and ecological exposure assessments were also completed during this phase of investigation. The results of these investigations concluded that the extent of VOCs and SVOCs in soil and the extent of VOCs in groundwater were not completely delineated. Polychlorinated Biphenyls (PCBs) and pesticides were also identified in soil samples, and SVOCs and metals were identified in groundwater samples during this phase of investigation. Chlorinated solvents (cis 1,2-dichloroethene [DCE] and trans 1,2-DCE) were identified in groundwater north of the former FTA. Based on these results, the area north of the former FTA was designated as the DAACG Chlorinated Solvents Area.

In October and November 2001, investigation activities continued with the installation of 2 additional monitor wells, 9 soil borings and the collection of groundwater, surface water and soil samples for laboratory analysis to complete delineation. Six surface water samples were collected from the two drainage ditches adjacent to the former FTA.

In 2002, a Compliance Status Report (Law Engineering and Environmental Services, Inc. [Law] 2002) was prepared and submitted to the Georgia Environmental Protection Division (GAEPD) documenting investigation activities completed through 2001. The report identified several soil and groundwater samples that exceeded applicable RRS that were not fully delineated.

To address the deficiencies identified in the 2002 CSR, additional phases of investigation and remedial actions were completed between 2002 and 2004. In 2002 a vertical profile investigation was completed in the DAACG Area which included the installation of 17 vertical profile borings and the collection of approximately 8 groundwater grab samples from each boring for laboratory analysis. In 2003, 8 additional monitor wells were installed in the DAACG Area and sampled. A comprehensive groundwater sampling event was completed in both the former FTA and DAACG areas in 2004.

An Interim Removal Action (IRA) was conducted in 2003 to address free product and contaminated soil in the vicinity of HMW-7. The belt skimmer system was deactivated and removed during the IRA activities. Monitor well HMW-7 and the immediate surrounding area were excavated and removed for off-site disposal. A replacement monitor well was installed within the limits of the excavation. The results of the 2002



Revision 1 – April 2012  
Original Report – June 2011

through 2004 investigation and monitoring activities and the 2003 IRA were documented in a CSR Addendum (Science Applications International Corporation [SAIC] 2005).

Following the submittal of the CSR Addendum, a semi-annual groundwater monitoring program was initiated. Starting with the July 2004 event and continuing through January 2008, monitor wells at both the former FTA and DAACG Area were sampled for laboratory analysis. Analytical methods used for sample analysis varied by year and by sample location over the four years of semi-annual groundwater monitoring.

Based on comments received from the GAEPD on the CSR Addendum, additional soil and groundwater investigation activities were conducted in 2009 and 2010. A comprehensive groundwater monitoring event was completed in February 2009 with samples collected from 10 monitor wells associated with the former FTA and 10 monitor wells from the DAACG area. All samples were submitted for laboratory analysis of VOCs, SVOCs, metals, pesticides, and herbicides. Based on the results of the February 2009 groundwater monitoring event, additional investigation of soil and groundwater was recommended in order to complete delineation of detected compounds to background and/or non-detect concentrations. A total of five soil borings, nine shallow surficial aquifer monitor wells and three deep surficial aquifer monitor wells were proposed to be installed along with the collection of soil and/or groundwater samples.

In November 2009 a focused soil sampling was performed within the former FTA, with 5 soil borings installed to complete horizontal delineation of previously detected compounds. In addition to samples collected from the soil borings, soil samples were also collected from shallow and deep intervals during the installation of 9 of 12 new monitor wells. These soil samples were collected to further characterize and/or delineate previously detected compounds present in soils within the DAACG Area. Based on the cumulative results of the historic and recent soil investigation activities, impacts in soils and have been adequately delineated both horizontally and vertically.

Additional groundwater investigation activities were initiated in December 2009, with the installation of 12 new monitor wells. Nine shallow surficial aquifer monitor wells (HA01-MW-09, through HA01-MW-17) and three deep surficial aquifer monitor wells (HA01-MW-12D, HA-01-MW-14D, and HA01-MW-18D) were installed to complete delineation of the previously identified groundwater impacts within the former FTA and DAACG Areas. Monitor well HA01-MW-18D was installed downgradient of monitor well COE-MW-3, at the request of the GA EPD in order to enhance the vertical





Revision 1 – April 2012  
Original Report – June 2011

delineation in this area. This well was installed into the top of the Hawthorne Formation, at approximately 65 feet bls.

Following the installation and development of the new wells a comprehensive groundwater monitoring event was performed. Groundwater samples were collected from the 12 new monitor wells as well as 20 existing monitor wells within the former FTA and DAACG Area. The 20 existing wells were the same wells sampled during the February 2009 monitoring event. All groundwater samples collected from DAACG Area monitor wells were analyzed for metals, pesticides and VOCs. Groundwater samples collected from the former FTA were analyzed for VOCs. Select wells (8 total) from both the DAACG Area and the former FTA were also analyzed for SVOCs based on historic detections. The results of the additional investigation showed that impacts in groundwater were adequately delineated both horizontally and vertically. Results of this event were reported in the Compliance Status Report dated September 2011.

The Georgia EPD completed a review and issued comments on the CSR in January 2012. In response to these comments, monitor wells HA01-MW-12 and HA01-MW-14 were resampled in January 2012 and analyzed for VOCs. Laboratory analysis confirmed the absence of designated VOCs in the wells. In addition, deep monitor well HA01-MW-07D was installed in the vicinity of monitor well COE-MW-07 in order to enhance vertical delineation. The well was installed and sampled in February 2012. Laboratory analysis showed no detections above the laboratory reporting limit.

### **Human Health Risk Assessment**

A human health risk assessment (HHRA) was completed to evaluate the potential risks to human health at HAA-01 by comparing the maximum detected soil and groundwater constituent concentrations to the Types 1 through 4 RRS. The potential exposure to constituents detected in surface water and sediment were also evaluated by comparing the maximum detected concentrations to the Type 1 RRS and the Georgia In-Stream Water Quality Standards (IWQS) (surface water only). Type 1 and Type 2 standards were exceeded by 16 and 10 constituents in soil, respectively. In addition, 14 and 6 constituents were observed to exceed their respective Type 3 and Type 4 RRSs. Thirty-three constituents were detected in groundwater at concentrations that exceeded the Type 1 and Type 3 groundwater RRS. Eighteen constituents exceeded the Type 2 RRS and 17 constituents exceeded the Type 4 RRS for the shallow groundwater. Eight constituents detected in sediments exceeded the Type 1 and Type 3 RRS. Five constituents detected in sediments exceeded the Type 2 RRS for soil. None of the detected constituents in sediment exceeded the Type 4 RRS. Three constituents detected in surface water exceeded the Georgia in-stream water quality



Revision 1 – April 2012  
Original Report – June 2011

standards (IWQS). All of the detected surface water constituents were compared with Type 4 RRS calculated based on exposure of a recreational receptor. None of the maximum detected concentrations exceeded the Type 4 RRS.

### **Ecological Risk Assessment**

An ecological risk assessment (ERA) was also completed for HAA-01. The ERA presented the results of a screening level ERA (SLERA) and Step 3a of a baseline ERA (BERA) for ecological receptors at the site based on hazard quotients (HQs). Risks were characterized for ecological receptors at the site by considering direct contact with constituent of potential ecological concern (COPECs) in surface soil (0-2 ft below land surface [ft bls]) and through ingestion of prey tissue through a food web model to upper-trophic level wildlife. Overall, potential ecological risks are low to negligible for exposure to site surface soil. Potential risks modeled to upper-trophic level invertivorous birds and mammals are also low. Based on this assessment, ecological risks at the site were determined to be minimal and no further evaluation was determined to be necessary.

### **Conclusions**

This CSR for HAA-01 has presented physical, analytical, and risk assessment data to support the conclusion that the potential impacts to the environment by past activities at the site have been sufficiently characterized in surface soil, subsurface soil, sediment, surface water and groundwater. Based on the data provided herein, the following conclusions are submitted for consideration by the GAEPD:

- § The CSR investigation has been completed, and the potential impacts to the environment by past activities at HAA-01 have been sufficiently characterized and delineated where necessary in surface soils, subsurface soils, sediment, surface water and groundwater.
- § A Corrective Action Plan (CAP) will be developed to address CVOC, benzene and aldrin impacts in groundwater in the DAACG Area and benzene and naphthalene impacts in groundwater in the former FTA. Additionally, soil impacts historically detected in the former FTA will also be carried forward in the CAP for further evaluation.

Upon approval of this document, preparation of the CAP will be initiated. The CAP will be prepared to identify the selected corrective action to be implemented in order to address residual compounds in groundwater and soil exceeding the Type 1 RRS.



Revision 1 – April 2012  
Original Report – June 2011

## **1. Compliance Status Certification**

I certify under penalty of law that this report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Based on the findings of this report, with respect to the established risk reduction standards of the Rules for Hazardous Site Response, Rule 391-3-19-.07, the Installation acknowledges the identified constituents that exceed the Type 1-4 standards.

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Robert R. Baumgardt  
Director, Public Works

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Date

**Compliance Status Report  
Revision 1**

HAA-01 (Former Fire Training  
Area and DAACG Chlorinated  
Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

**2. Qualified Groundwater Scientist Certification**

I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields as demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.

Name: Charles A. Bertz, P.E.

License Number: 029498

Expiration Date: December 31, 2012



Charles A. Bertz, P.E.

4.11.2012

Date



Revision 1 – April 2012  
Original Report – June 2011

### **3. Introduction**

ARCADIS U.S., Inc. (ARCADIS) has been retained by the U.S. Army Environmental Command and Hunter Army Airfield to perform investigation and remediation activities at HAAF in accordance with the requirements of the Performance Based Contract (PBC) number W91ZLK-05-D-0015. As previous investigations triggered notification to GAEPD, the HAA-01 site has been assigned HSI Site No. 10395. The GAEPD has required HAAF to pursue delineation and clean up of impacted soil and groundwater at HAA-01 in accordance with the Georgia Hazardous Site Response Act, Section 391-3-19-.06.

This CSR incorporates data obtained from recent investigations as well as previous investigations completed between January 1987 and January 2010. Recent field investigation activities were completed by ARCADIS between November 2009 and January 2010 in accordance with the scope in the Compliance Status Report Work Plan, Revision 1 (ARCADIS 2010). This CSR will also be utilized to address GAEPD comments received in a correspondence dated December 21, 2006 (GAEPD 2006) on the Revised Compliance Status Report for the former Fire Training Area (Science Applications International Corporation [SAIC] 2002) and the Addendum to the Compliance Status Report for the former Fire Training Area (SAIC 2005) that were not addressed as part of the Compliance Status Report Work Plan, Revision 1 (ARCADIS, 2010).



Revision 1 – April 2012  
Original Report – June 2011

## **4. Site Background**

### **4.1 Regulatory Status**

Potential impacts to soil and groundwater were initially evaluated at the former FTA between 1987 and 1992. Based on the results of these initial investigations and the promulgation of the Georgia Hazardous Site Response Act, Official Code Georgia Annotated (O.C.G.A) in 1992, the site was listed on the HSI as Site No. 10395 in August 1995. During the performance of the initial CSR investigation conducted between 1999 and 2000, previously unidentified chlorinated solvent impacts were detected in groundwater north of the former FTA. This area was identified as the Departure/Arrival Airfield Control Group (DAACG) Chlorinated Solvents Area

Due to their proximity and history, the FTA and DAACG Chlorinated Solvent Area are collectively identified as HAA-01 (HSI No. 10395) for the purpose of this investigation. This CSR investigation was conducted to meet GAEPD HSRA requirements for compounds above regulatory thresholds. The most recent investigation activities conducted in 2009 and 2010 were based on the Compliance Status Report Work Plan (ARCADIS 2009) submitted to GAEPD in June 2009 and subsequently revised in May 2010. The combined results of the historical investigations and the recent investigation are included in this CSR. Findings from this CSR will be utilized to prepare a CAP to achieve compliance with GAEPD HSRA requirements.

### **4.2 Site Description and Setting**

#### **4.2.1 Site Description**

HAAF is located in Chatham County, Georgia, in the southwestern portion of Savannah and covers approximately 5,400 acres (see Figure 4-1). The U.S. Army acquired the property from the United States Air Force (USAF) in 1967 for use as a flight training center. The mission of the facility is to provide command, control, training, administration, logistical, and civilian-military support to non-divisional units stationed at Fort Stewart and HAAF. Aircraft based at HAAF currently include combat, transport, and training helicopters. The airfield is also used for overseas mobilization of troops and equipment.

The former FTA is located in the northwestern portion of the HAAF. The site is located west of the flightline and approximately 800 feet northwest of the control tower, at the approximate geographic coordinates of 32° 01' 10" north latitude and 81° 08' 36" west



Revision 1 – April 2012  
Original Report – June 2011

longitude (USGS 1980). The topography of the site slopes gently west toward the Springfield Canal. The canal flows southwest before emptying into the Little Ogeechee River Floodplain. The elevation of the site ranges from approximately 35 feet mean sea level (ft msl) at the eastern boundary of HAA-01 (fire training pad) to 14 ft msl along the northwestern boundary (the northern drainage ditch) of the site. A map depicting the site features is included as Figure 4-2. The site topography is depicted on Figure 4-3.

#### 4.2.2 Regional Geology/Hydrogeology

HAAF is located on the Lower Coastal Plain physiographic province, which is typified by low relief that slopes toward the Atlantic Ocean. The geology is comprised of a seaward thickening sequence of unconsolidated sediments deposited from sediments eroded from the Blue Ridge Mountains. Previous regional investigations suggest that there have been minor amounts of structural deformation in the Savannah, Georgia, area during deposition of these sediments, starting in the early Cretaceous Period. The total thickness of the sediments in the Savannah, Georgia, area is more than 2,000 ft.

The regional hydrogeology in the vicinity of HAAF consists of two aquifers separated by a thick confining unit. The primary water supply aquifer in the Lower Coastal Plain of Georgia and Florida is the Floridan aquifer, which is the deeper of the two aquifers. The Floridan aquifer is a regionally extensive aquifer that is approximately 800 feet thick in the area of Savannah. It is comprised primarily of Oligocene-age and Eocene-age porous limestones. The uppermost aquifer system is the surficial aquifer at and surrounding Savannah, Georgia, and is underlain by two continuous clay units separating this aquifer from the Floridan. These two clay units, separating the aquifers, are named the Coosawhatchie Formation and Berryville Clay member of the Hawthorne Group (Huddleston 1988). Fossils and sediment samples suggest that these two units were deposited during the Middle Miocene Period in a low-energy, open marine environment over a wide area. The open ocean depositional environment resulted in the widespread and continuous nature of these clay units. A deep test well in Savannah (GGS-3139) shows that the clay units extend from approximately 45 ft to 167 ft in depth near HAAF. It has been demonstrated that there is minimal potential for shallow groundwater to impact deeper groundwater quality as a result of the thick confining unit that separates the uppermost aquifer system from the underlying Floridan aquifer.





Revision 1 – April 2012  
Original Report – June 2011

The sediments overlying the Hawthorne Group clays to land surface are composed of a sequence of near-shore to shoreface (barrier island) sediments that prograde over the Hawthorne Group marine clays. Published investigations have identified nine sets of overlapping relict beach ridges of Pleistocene age to Holocene age on the Lower Coastal Plain that prograde toward the Atlantic Ocean. Each barrier sequence forms a ridge (also termed terrace) that is progressively lower and closer to the modern barrier island. The ancient beaches formed during higher sea levels and are approximately parallel to the modern barrier island complex. Each barrier system is at a consistent elevation above sea level with approximately 20 ft of relief above surrounding land.

#### 4.2.3 Hunter Army Airfield Depositional Model

HAAF is located on a relict beach ridge named the Pamlico Terrace, which has current elevations ranging from approximately 20 ft msl to 40 ft msl. This abandoned beach ridge was formed during the late Pleistocene (>10,000 years) age. The Pamlico Terrace sediments are approximately 50 ft thick at HAAF. The shallow sediments at HAAF are comparable to sediments that form the nearby modern barrier islands along the Atlantic Coast. Pamlico Terrace is older and is at a slightly higher elevation than the modern barrier beach. Common general characteristics of barrier island systems are:

- an exposed belt of sand separated from the mainland by a shallow body of water, such as a lagoon
- greater length than width
- a straight seaward margin with a lobate, crenulate, or cusped landward margin
- a coarsening-upward sequence of sand with the uppermost portion of which consists of eolian dunes

These generalities of modern barrier islands can be used to predict the shallow stratigraphy at HAAF. Utilizing the general depositional model of the barrier island system, an understanding of the shallow sediments at HAAF can be placed into context for the interrelationships of the sand units, silt units, and clay units in the uppermost aquifer system observed at HAAF. The highest part of the ridge is the beach, comprised of fine- to medium-grained, well-sorted quartz sand. The beach itself is a massive sand with little clay and silt because it was reworked by constant wave action and migration of tidal inlets. This ridge is the location of the current airfields at HAAF and trends northeast to southwest through HAAF. East of the ridge was the shallow open Atlantic Ocean, which should consist of finer sands that were constantly reworked to form well-sorted sands that are finer when compared to the





Revision 1 – April 2012  
Original Report – June 2011

beach. Grain size should decrease with increasing water depth because of the limited winnowing in deeper water by reduced wave action with depth.

Marshes and bays would have occurred behind the barrier to the west of the airfields. Deposits in this area are generally silts and clays characteristic of lower energy environments with some interbeds of sands. The sand units were deposited from tidal inlets that migrated along the barrier and wash-over fans from storms. Individual units will drape off of the central barrier island sands. Clays interbedded with the sands will compact with time to form somewhat continuous but thin units, which can be confining in nature.

### **4.3 Description of Each Known Source**

#### **4.3.1 Former Fire Training Area**

The former FTA during operation consisted of a gravel covered concrete fire training pad (approximately 6,400 square foot area enclosed within a concrete curb), a steel structure utilized as a mock aircraft, a 17,000 gallon AST used to store fuel for training purposes located approximately 150 ft north of the training pad (secondary containment was a 2.5-ft high earthen berm), an 1,100 gallon AST located northeast of the 17,000 gallon AST used to contain water contaminated fuel and solvents, and associated underground piping (see Figure 4-2). Typical activities included spraying water contaminated fuels (#4 Jet Propulsion Fuel (JP-4) and diesel fuel) on the mock aircraft, the ignition and subsequent extinguishing of the aircraft for training purposes. Fire training activities were discontinued at the site in 1991 and all components of the FTA, along with contaminated soils, were removed in 1998 as part of soil remediation activities. The Site has not been used for any purpose since fire training activities ended in 1991.

Multiple regulated compounds have been detected in both soil and groundwater at the former FTA. The majority of these compounds are associated with the past fire training activities conducted in the area. These activities included the storage of petroleum fuels in ASTs and transmission of these fuels through underground pipelines. Releases may have potentially occurred from components of the former FTA fuel application system that may not have been structurally sound, resulting in releases of fuels to soils and/or groundwater. In addition, the application of these fuels to the simulated aircraft structure and the poor containment of excess water and foam generated during fire training exercises may also have contributed to constituents detected in soils and groundwater.



Revision 1 – April 2012  
Original Report – June 2011

#### 4.3.2 DAACG Chlorinated Solvents Area

While conducting subsequent field investigations at the former FTA in 2000, chlorinated solvents (cis-1,2-DCE and trans-1,2-DCE) were detected in a monitor well located north of the former FTA area. This area was subsequently designated as the DAACG Chlorinated Solvents Area. There is no documentation of activities conducted at HAA-01 prior to 1967. Additional investigations in this area, as well as historical record searches (no records were available for the area prior to the 1967 acquisition of the site by the Army), have been unsuccessful in identifying any potential sources of the chlorinated solvents in the area. Additionally, investigations performed to date have not identified a clear source of the chlorinated compounds. Investigation in the DAACG area has identified construction and demolition (C&D) debris in the vicinity of the DAACG Area, although it cannot be confirmed as a source for the chlorinated solvents.

#### 4.3.3 Potentially Responsible Parties

HSRA Rules require the name, address, and contact information of any person(s) that may be a responsible party for the site, and a description of the type/amount of the regulated substance that was contributed to the release. The phrase “responsible party” is defined only as “a person who has contributed or who is contributing to a release”. That phrase, as defined in O.C.G.A. § 12-8-92 and implemented through the application of principles of liability in O.C.G.A. § 12-8-96.1, implies a number of legal principles, defenses, and related definitions. Contact information:

Department of the Army  
Headquarters, US Army Garrison, Fort Stewart / Hunter Army Airfield  
Attn: Directorate of Public Works  
Mr. Thomas Frye, Chief Environmental Division  
1550 Frank Cochran Drive  
Fort Stewart, Georgia 31314-4927

Based on the fact that only the U.S. Army used the former FTA and HAAF, it is assumed that all identified contamination within the boundaries of the FTA portion of this site are related to activities conducted at the former FTA. Therefore, the U.S. Army assumes all responsibility for the identified soil and groundwater contamination within the FTA boundaries. However, it is noted that no source or historic activities that may have caused a release of the constituents identified in the DAACG Area activities

## Compliance Status Report

### Revision 1

HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

have been identified. Activities conducted by the other parties in this area prior to 1967 are unknown.



Revision 1 – April 2012  
Original Report – June 2011

## 5. Investigations and Monitoring Conducted at HAA-01

Investigations and remedial actions have been conducted at HAA-01 since 1987 with CSR investigation activities performed between 1999 and 2010. Investigations at the site have included the installation of numerous soil borings, monitor wells and the collection and analysis of soil, sediment, surface water and groundwater samples. A summary of all soil samples (Table 5-1a), sediment samples (Table 5-1b), surface water samples (Table 5-1c) and groundwater samples (Table 5-1d) collected at HAA-01 and the analytical methods used have been included in this report. The monitor well construction details are summarized in Table 5-2. A site map depicting historic and recent soil boring locations and monitor well locations is presented as Figure 5-1. A site map depicting all historical and current sediment and surface water sample locations is presented as Figure 5-2. Previous field investigation activities are summarized in the sections below.

### 5.1 1987 Preliminary Assessment

In March 1987, the USAEHA conducted a preliminary assessment of soils in the vicinity of the former fire training pad in order to confirm the absence or presence of contaminants. This preliminary assessment included the installation of 4 soil borings (BH-10 through BH-13). Samples were analyzed for Resource Conservation and Recovery Act (RCRA) 8 metals and select SVOCs by United States Environmental Protection Agency (USEPA) Methods 6010 and 8270, respectively. Metals, PAHs, and phthalates were detected in the soil samples. Results were reported in the *Hazardous Waste Study No. 37-26-0127-88 Investigation of Soil Contamination* (USAEHA 1987). A summary of the historical soil, groundwater, sediment, and surface water sample analytical results has been provided as Appendix A. Available field forms documenting historic field procedures, well development, and other field activities have been included as Appendix B.

### 5.2 1990 and 1992 Additional Assessments

Between 1990 and 1992, Environmental Science and Engineering, Inc. (ESE) conducted two additional phases of investigations as a follow up to the 1987 Preliminary Assessment. Investigation work conducted included completion of additional soil borings, installation and sampling of monitor wells, and sediment sampling.

In February 1990, a total of 6 monitor wells were installed in the shallow and deep portions of the uppermost aquifer in the FTA area. Shallow wells (HMW-02, HMW-04,



Revision 1 – April 2012  
Original Report – June 2011

and HMW-06) were installed to depths ranging from approximately 13-15 ft bls. Deep wells (HMW-01, HMW-03, and HMW-04) were advanced to depths ranging from approximately 48-49 ft bls. In addition, 6 soil borings (HSB-1 through HSB-6) were installed to a maximum depth of 10 ft bls each, and 3 sediment samples (SD-1 through SD-3) were collected to further define the extent of potential impacts.

In March 1992, three monitor wells (HMW-07 through HMW-09) were installed to depths ranging from approximately 13 to 15 ft bls at the former FTA. Additionally, 7 soil borings (PSB-1 through PSB-7) were advanced to depths ranging from approximately 4-9 ft bls and samples were collected. Four sediment samples (HSD-1 through HSD-4) were also collected at locations PSS-1 through PSS-4 and submitted for analysis during this phase of investigation.

All samples collected during 1990 and 1992 investigations were submitted for laboratory analysis of VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), and RCRA metals (USEPA Method 6010). Laboratory results identified VOCs (ketones, petroleum compounds) and SVOCs (PAHs) in soils. Drainage ditch sediment samples contained elevated levels of PAHs and metals. Low concentrations of VOCs, SVOCs and metals were also identified in the groundwater samples. The results of the 1990 and 1992 investigations were reported in the *Final Significance of Contamination Report, Hunter Army Airfield Fire Training Area, Fort Stewart, Georgia* (ESE 1993). Delineation of contamination was not completed by this investigation.

### **5.3 1995 Source Removal Design Investigation**

In 1995, a source removal design investigation was conducted by Law, in which 4 additional monitor wells (HMW-10 through HMW-13) and 17 additional soil borings (FTASB-01 through FTASB-17) were installed to further define the extent of impacts to soil and groundwater. Groundwater samples were collected from each of the newly installed monitor wells and 2 soil samples were collected from 11 of the soil borings during this investigation.

All samples collected during the 1995 investigation were submitted for analysis of VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), RCRA metals (USEPA Method 6010), total petroleum hydrocarbons (TPH) – gasoline range organics (GRO), and TPH – diesel range organics (DRO) (USEPA Method SW8015B). Laboratory analysis of both soil and groundwater samples confirmed the presence of VOCs (BTEX, PAH compounds) exceeding the RRS in the immediate vicinity of the former fire training pad. The horizontal extent of soil contamination was reported as delineated while groundwater contamination was reported as delineated vertically, but



Revision 1 – April 2012  
Original Report – June 2011

not horizontally. In addition, free phase product was identified in monitor well HMW-07 during this phase of the investigation. The results of this investigation were reported in the 1996 Pre-Final CSR. This report was subsequently withdrawn in order to incorporate the results of additional investigation and soil removal activities. Results were later summarized in the Soil Remedial Action Report (Omega 1998).

#### **5.4 1997 to 2000 Remedial Actions**

Remedial actions were initiated in 1997 and continued through 2000. These remedial actions were based upon the results of the Source Removal Design Investigation (Law) as well as previously completed investigations. Remedial actions consisted of former FTA equipment removal, soil excavation, free product removal and confirmatory soil sampling activities.

Between November 1997 and March 1998, soil excavation activities were performed at the former FTA. Omega Environmental Services, Inc. (Omega) along with their subcontractor, Geosciences, Inc. conducted remedial activities including the removal of the former FTA components (simulated aircraft structure, ASTs, underground transmission lines, fire training pad) and impacted soils in the immediate area that exhibited signs of contamination. The excavation depths ranged from 5 to 8 ft bls. Approximately 9,430 tons of soil, 233 tons of concrete debris, and 81,906 gallons of wastewater were removed and disposed of during this phase of remedial activities. Twenty-seven confirmatory soil samples were collected from the sidewalls and base of the excavation. Confirmatory samples were analyzed for select RCRA metals, BTEX, pesticides, PCBs, and TPH. Soils identified during the previous investigations at concentrations exceeding HSRA notification standards were targeted for removal. However, the laboratory analytical data from confirmatory soil samples showed that concentrations of constituents remained above the HSRA notification standards at multiple locations in the excavation after removal activities were completed. Details of the remedial activities can be seen in the *Soil Remedial Action Report* (Omega 1998). A summary of the remedial action and the post-remedial action laboratory analytical results, as provided in the Revised Final CSR (Law 2002), has been included in Appendix A.

In February 1999, a second remedial action was initiated. Free product removal was initiated in monitor well HMW-7 using an automated belt skimmer system. The system was operated from February 1999 through October 1999. Records indicate that approximately 3 gallons of free product was recovered during that period. In October, the system was temporarily shut off to allow free product to equilibrate in the well. After 1 week, 2.4 feet of free product was observed in the well. The system was



Revision 1 – April 2012  
Original Report – June 2011

restarted with a modified operation cycle (15 minutes on, 12 hours off) in October. In addition to restarting the system, six product delineation points (slotted well screen installed to 8 feet bls) were installed around the perimeter of HMW-7. Free product measurements in these points were collected on December 15, 1999, February 24, 2000, March 3, 2000, and March 11, 2000. No free product was detected during any of these measurements. The belt skimmer system remained in place after these measurements, but additional recovery data was not recorded. Monitor well HMW-7 was removed along with the additional delineation points in December 2003 (see Section 5.7).

### **5.5 July 1999 through January 2000**

In July 1999, borings SB-18 through SB-29 and monitor well borings HMW-14 through HMW-17 were installed. Two soil samples, one from the surface (0-2 ft bls interval) and one from just above the water table, were collected from each boring and submitted for laboratory analysis of select VOCs (USEPA Method 8260) and select SVOCs (USEPA Method 8270). Six borings (SB-22 through SB-27) were also analyzed for pesticides (USEPA Method 8081) and PCBs (USEPA Method 8082) in addition to VOCs and SVOCs.

Based on the results of the July 1999 investigation, 11 additional soil borings (SB-30 through SB-40) and 4 additional monitor wells (HMW-14R, HMW-18, 19, and 20) were installed in January 2000. Samples were collected and submitted for laboratory analysis of select VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), and/or pesticides (USEPA Method 8081).

After a review of the laboratory analytical data from these investigations, 2 additional soil borings (SB-41 and SB-42) were installed on January 31, 2000, to further define the extent of SVOCs detected in sample SB-38. One shallow interval (0-2 ft bls) sample and one deep interval (2-3 or 3-5 ft bls) sample was collected from each boring. The soil samples were submitted for analysis of select VOCs (USEPA Method 8260) and select SVOCs (USEPA Method 8270). Laboratory analytical results of the shallow interval samples from each of these 2 borings confirmed that the select SVOCs were not present and, therefore, analysis was not completed on the deeper interval of SB-42. Based on the results of the investigations, a CSR, dated March 31, 2000, was prepared and submitted to the GAEPD. After review of the report, a series of comments were generated by the GAEPD. Based on comments, the report was rescinded and additional investigations were completed.





Revision 1 – April 2012  
Original Report – June 2011

Groundwater investigations were continued at HAA-01 in July 1999. As part of this phase of investigation, 6 temporary piezometers (HMW-14, HMW-15, HMW-16A, HMW-16B, HMW-16C, and HMW-17) were installed and sampled via low flow sampling techniques using a peristaltic pump and disposable polyethylene tubing. Groundwater samples were submitted for analysis of BTEX. Based on the laboratory analytical data, locations HMW-14, HMW-15, HMW-16A, and HMW-17 were converted into permanent monitor wells by overdrilling and removing the temporary piezometer. The laboratory analytical results for temporary piezometers HMW-16A, HMW-16B, and HMW-16C were utilized to determine the location of permanent monitor well HMW-16. Monitor well HMW-14 was installed on July 28, 1999, however, subsequent monitor well development activities revealed that HMW-14 did not have adequate volume for sampling (total well depth of 14 ft bls) and it was abandoned. In January 2000, replacement monitor well HMW-14R was installed to a depth of 20.37 ft bls in order to provide adequate groundwater for development and sampling.

In January 2000, two additional temporary piezometers (SB-38 and SB-40) were installed in order to fill data gaps identified after the July 1999 groundwater investigation. These piezometers were sampled via low flow sampling techniques using a peristaltic pump, with the samples submitted for analysis of VOCs (USEPA Method 8260) and SVOCs (USEPA Method 8270). Based on the laboratory analytical results, permanent monitor wells HMW-19 and HMW-20 were installed by overdrilling and removing the temporary piezometers at the borings at SB-38 and SB-40, respectively. In addition, HMW-18 was installed in order to delineate the southern boundary of the site. In January 2000, 7 monitor wells (HMW-2, HMW-12, HMW-14R, HMW-17, HMW-18, HMW-19, and HMW-20) were sampled via low flow sampling techniques. The groundwater samples were submitted for analysis of select VOCs (USEPA Method 8260), select SVOCs (USEPA Method 8270), and specific metals (arsenic, barium, lead) with the exception of HMW-2, which was only analyzed for lead as the background well.

#### **5.6 October and November 2001**

In October and November 2001, 2 additional monitor wells (HMW-21, HMW-22) were installed to the northwest and east, respectively, of monitor well HMW-14R in an attempt to delineate VOCs identified in groundwater. Monitor wells HMW-14R (analyzed for VOCs to confirm the results of the January 2000 monitoring event), HMW-21 and HMW-22 were sampled via low flow sampling techniques and analyzed for VOCs in November 2001. In addition to these wells, monitor well HMW-3 was sampled via low flow techniques and analyzed for VOCs, SVOCs, and 8 RCRA metals in order to evaluate the deepest portion of the uppermost aquifer, downgradient of the





Revision 1 – April 2012  
Original Report – June 2011

former fire training pad. A summary of the monitor well construction details are presented on Table 5-2. Historic soil boring logs and monitor well construction logs have been included as Appendices B.

On October 31, 2001, six surface water samples (HSW-1 through HSW-6) were collected from the two drainage ditches adjacent to the former FTA and submitted to Accura Analytical Laboratory in Norcross, Georgia for laboratory analysis of VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), and RCRA metals (USEPA Method 6010). Samples were collected by directly filling sample containers from the stream flow at each sample location. The samples were collected as part of the ecological risk assessment to evaluate the potential impacts of groundwater discharge on surface water in the drainage ditches. Laboratory analysis of the surface water samples showed concentrations of benzene, toluene, ethylbenzene and xylenes (BTEX) compounds and naphthalene in one sample (HSW-1). The concentrations of all of these compounds were below the Georgia In-Stream Water Quality Standards (IWQS). It was noted that the location of HSW-1 was at the headwall of a pipe that carried storm water from the nearby flightline and most likely represented storm water flow from the flightline, not groundwater discharge from the HAA-01 area.

Nine (9) soil borings (SB-43, SB-43A, and SB-44 through SB-50) were also advanced to further investigate the presence VOCs, SVOCs, barium and chromium in soils at HAA-01. A background statistical evaluation was also completed during this phase of investigation in order to establish an upper background concentration (UBC) of metals in soils at the site. Results of this investigation, as well as data presented in the original CSR were documented in the *Revised Final Compliance Status Report* (Law 2002). Details of the UBC calculations have been included as Appendix E.

### **5.7 2003 Interim Removal Actions**

In November and December 2003, Solutions To Environmental Problems, Inc. (STEP) conducted an Interim Removal Action (IRA) to address free product and contaminated soil present in the vicinity of HMW-7.

Prior to excavation and removal of the free product recovery system, the belt skimmer system was confirmed to be operational, then was manually removed from HMW-7. After the belt skimmer was removed, excavation to remove the contaminated soils and monitor well HMW-7 began. Excavation around monitor well HMW-7 began by removing the surface soil to a depth of 2 ft bls. Field screening of the excavated material was conducted using a photoionization detector (PID). The field screening was used in conjunction with visual and olfactory indicators to identify petroleum



Revision 1 – April 2012  
Original Report – June 2011

contamination. Excavated material within 2 feet of ground surface did not exhibit indications of petroleum contamination, therefore this material was stockpiled next to the excavation and used as backfill material.

Soil excavation continued to a depth of 8 ft bls and encompassed an approximate 15 ft x 15 ft area around well HMW-7. Excavated material from 2 to 8 ft bls was placed inside roll off containers that were lined with plastic sheeting pending characterization to determine disposal requirements. The demolished monitoring well, including the gravel pad, protective casing, and bollards were considered petroleum contaminated non-hazardous construction debris and were placed in roll off containers. The six temporary piezometers surrounding the recovery well were also removed and placed with the debris from monitor well HMW-7. The debris and excavated soil were transported to the Savannah Regional Landfill for disposal.

Once the excavation had reached the dimensions specified in the Work Plan (STEP 2003), soil samples were collected from each of the sidewalls and the bottom center of the excavation. Samples were collected using EnCore™ samplers from the bucket of the backhoe and submitted to an off-site laboratory for analysis of VOCs using USEPA Method 8260B. Laboratory analytical results of post excavation soil samples identified 12 compounds (2-butanone, acetone, benzene, carbon disulfide, cyclohexane, ethylbenzene, isopropyl benzene, methylcyclohexane, methylene chloride, tetrachloroethene (PCE), toluene, and total xylenes). Concentrations of these compounds were below the Type 1 RRS.

Monitor well HMW-23 was subsequently installed approximately 25 ft downgradient of the completed excavation. The well was installed to a total depth of 15 ft bls using a hollow stem auger. The well was constructed of a 2-inch inside diameter (ID), 10 ft length of factory slotted polyvinyl chloride (PVC) screen with a 2 inch solid PVC riser. Monitor well HMW-24 was installed within the limits of the excavation. The well was a 4-inch ID, 5-ft pre-packed PVC well screen with a bottom end cap and a 4-inch ID solid PVC riser. The well was pre-assembled and placed upright in the excavation. The excavation was then backfilled with gravel to approximately 1.5 ft above the top of the well screen. The remainder of the excavation was backfilled with stockpiled soil.

In December 2003, monitor well HMW-23 was purged and sampled for VOCs using USEPA Method 8260B. Prior to sampling, the well was purged of 3 well volumes and allowed to recharge. The sample was collected with a disposable bailer lowered into the well. Analytical results indicated that 17 VOCs were detected in groundwater including 1,2 dichlorobenzene, 1,2 dichloropropane, 1,4 dichlorobenzene, 2-butanone, benzene, carbon disulfide, chlorobenzene, cis-1,2 DCE, cyclohexane,



Revision 1 – April 2012  
Original Report – June 2011

dichlorodifluoromethane, ethylbenzene, isopropyl benzene, methylcyclohexane, methyl-tert-butyl, ether, tetrachloroethene, toluene, and vinyl chloride. HMW-23 was subsequently sampled in March 2004 with analytical results similar with the exception of carbon disulfide, dichlorodifluoromethane, methyl-tert-butyl-ether, and PCE being absent from the laboratory analytical results. Of the constituents detected, benzene exceeded the maximum contaminant level (MCL), IWQS, and Type 4 RRS. Vinyl chloride exceeded its MCL. No other compounds were present at concentrations exceeding their respective MCL, IWQS, or Type 4 RRS in HMW-23.

### **5.8 Vertical Profile Investigation (2002-2003)**

To further investigate the presence of chlorinated solvents in the DAACG Area, the U.S. Army Corps of Engineers (USACE) installed 12 vertical profile borings (DVP-1 through DVP-12) using geoprobe technology in August 2002. Groundwater samples were collected from the borings every 5 vertical feet below the groundwater table to a depth of approximately 45 or 50 ft bls. Approximately 8 samples were collected from each boring and submitted to an off-site laboratory for VOC analysis (USEPA Method 8260). Five additional vertical profile borings (DVP-13 through DVP-17) were installed by USACE in December 2002 to further delineate chlorinated solvents in groundwater to the southwest of the previously installed vertical profile borings.

Based on the laboratory analytical results of the vertical profile borings, eight permanent monitor wells (COE-MW-01 through COE-MW-08) were installed using Geoprobe® direct push technology (DPT) for plume delineation purposes in the DAACG Area in June 2003. Wells were constructed of a 1-inch diameter, 5-foot length of well screen and 1-inch diameter solid PVC riser. The results of this investigation were presented in the *Summary Package for the DAACG Chlorinated Solvents Area (HAA-16), Hunter Army Airfield, Georgia* (SAIC 2004). A summary of the Vertical Profile Boring investigation has been included in Appendix F. Following installation of the permanent monitor wells, the USACE collected groundwater samples from four existing monitor wells (HMW-14R, HMW-20, HMW-21, and HMW-22) located in the vicinity of the DAACG Area. Samples were analyzed for VOCs using USEPA Method 8260.

### **5.9 CSR Groundwater Monitoring Program (2004 – 2009)**

Based on the anticipated approval of the Revised Final CSR (Law 2002) and the Addendum to the Compliance Status Report (SAIC 2005), semi-annual (January and July) groundwater monitoring activities were initiated at the former FTA and DAACG areas. Groundwater monitoring was completed on a semi-annual basis beginning in



Revision 1 – April 2012  
Original Report – June 2011

July 2004 and was performed through January 2008. Due to a change in contractor, the performance of semi-annual sampling was suspended after January 2008. A summary of the semi-annual CSR groundwater monitoring activities performed between July 2004 and February 2009 are discussed in the following sections. Monitor well locations are shown on Figure 5-1. Laboratory analytical results from the CSR monitoring events are summarized in Appendix A. Details of the monitoring activities, including the laboratory analytical reports were summarized in Monitoring Only Reports for Calendar Year (CY)2005 (SAIC 2006), CY2006 (SAIC 2007), CY2007 (SAIC 2008), and January 2008 (SAIC 2008a). These Monitoring Only Reports were never submitted to the GAEPD as the installation was awaiting approval of the 2002 CSR. All historical groundwater data has been incorporated herein.

Beginning in July 2004, a semi-annual groundwater monitoring program was implemented in accordance with the recommendations provided in the Addendum to the Compliance Status Report (SAIC 2005). The monitoring program at the former FTA included the sampling and analysis of HMW-02, HMW-04, HMW-06, HMW-08, HMW-09, HMW-10, HMW-11, HMW-13, HMW-23, and HMW-24 for BTEX, polynuclear aromatic hydrocarbons (PAHs), and lead. The results of groundwater monitoring were to be used in the evaluation of potential corrective actions for the site.

In the DAACG Area, monitor wells COE-MW-01 through COE-MW-08, HMW-14R, and HMW-21 were monitored on a semi-annual basis. Laboratory analysis of VOCs was utilized in order to track the concentrations of 1,2-DCE, and vinyl chloride. The intent of the additional data collection was to provide an adequate basis for potential corrective action evaluation.

This groundwater monitoring program was implemented in July 2004 and continued on a semi-annual basis through January 2008. Laboratory analytical results for the FTA showed detections of multiple compounds with benzene, naphthalene, and 2-methylnaphthalene detected at concentrations above the Type 1, 3, and 4 RRS calculated in the previously submitted CSR (SAIC 2002). Laboratory analysis of samples associated with the DAACG area showed multiple exceedances of the Type 1, 3, and 4 RRS for 1,2-DCE, vinyl chloride, and benzene. A summary of this semi-annual groundwater monitoring data is shown on tables included in Appendix A.

#### **5.10 Site Wide Investigation Activities (2009 - 2010)**

Additional soil and groundwater investigations were completed at HAA-01, as discussed during the Tier I Partnering meeting held in Atlanta, Georgia on February 2, 2009, between November 2009 and January 2010 to further delineate the extent of soil



Revision 1 – April 2012  
Original Report – June 2011

and groundwater impacts. All field investigation activities were performed in general accordance with the *Compliance Status Report Work Plan, Revision 1* (ARCADIS 2010), submitted to the GAEPD in May 2010.

#### 5.10.1 Groundwater Monitoring Event (February 2009)

A comprehensive groundwater monitoring event was completed in February 2009 on monitor wells associated with the former FTA (HMW-02, 04, 06, 08, 09, 10, 11, 13, 23, and 24) and DAACG areas (COE-MW-01, 02, 03, 04, 05, 06, 07, 08, HMW-14R and HMW-21). The laboratory analysis of samples from both the former FTA and the DAACG area was expanded based on GAEPD comments on the Revised Final Compliance Status Report (SAIC 2002) and the Addendum to the Compliance Status Report (SAIC 2005) to include VOCs (USEPA Method 8260), SVOCs (USEPA Method 8270), metals (USEPA Method 6010), pesticides (USEPA Method 8081), and herbicides (USEPA Method 8151). Prior to initiating groundwater sampling activities, groundwater level measurements were collected from shallow aquifer monitor wells that were to be sampled. Deep aquifer monitor wells were not gauged or sampled as part of the February 2009 groundwater monitoring event. Data collected was used to construct a potentiometric map for the shallow surficial aquifer. A summary of the groundwater level measurements and a potentiometric contour map for the shallow aquifer based on these measurements were presented in the CSR Work Plan (ARCADIS 2010).

Ten monitor wells at the former FTA (HMW-02, HMW-04, HMW-06, HMW-08, HMW-09, HMW-10, HMW-11, HMW-13, HMW-23, and HMW-24) and ten monitor wells at the DAACG Chlorinated Solvents Area (COE-MW-01, COE-MW-02, COE-MW-03, COE-MW-04, COE-MW-05, COE-MW-06, COE-MW-07, COE-MW-08, HMW-14R and HMW-21) were purged and sampled during the February 2009 monitoring event. Monitor wells were purged using low-flow techniques until water was free of visible sediment and field parameters (pH, temperature and conductivity) had stabilized. Monitor wells were then allowed to recharge and samples were collected in laboratory-provided containers. All groundwater samples were submitted to Shealy Laboratories in West Columbia, South Carolina for analysis by USEPA Method 6010 (metals), USEPA Method 8260 (VOCs), USEPA Method 8270 (SVOCs), USEPA Method 8151A (herbicides), and USEPA Method 8081A (pesticides).

A summary of the laboratory analysis for the February 2009 monitoring event was presented in the CSR Work Plan (ARCADIS 2010) where data was screened against USEPA MCLs and the Type 1 RRS. Laboratory analytical data showed the detection of 4 metals (arsenic, barium, chromium, and mercury), 14 pesticides (aldrin, alpha



Revision 1 – April 2012  
Original Report – June 2011

chlordane, DDD, DDE, DDT, delta BHC, dieldrin, endosulfan I, endrin, gamma-chlordane, heptachlor epoxide, alpha BHC, beta BHC, and lindane) , 3 herbicides (2,4,5-TP, 2,4-D, and 2,4,5-trichlorophenoxyacetic acid), 14 VOCs (1,2-dichlorobenzene, 2-hexanone, acetone, benzene, 1-methylethylbenzene, chloroform, cis-1,2-dichloroethene, cyclohexane, ethylbenzene, methyl tert-butyl ether (MTBE), methylcyclohexane, toluene, vinyl chloride, and total xylenes) and 2 SVOCs (2-methylnaphthalene, naphthalene) at the former FTA. Laboratory analytical data showed the detection of 3 metals (arsenic, barium, and chromium), 3 pesticides (gamma-chlordane, beta BHC, and lindane) , 3 herbicides (2,4,5-TP, 2,4-D, and 2,4,5-trichlorophenoxyacetic acid), and 10 VOCs (1,1 dichloroethene, 2-hexanone, benzene, cis-1,2-dichloroethene, ethylbenzene, toluene, trans 1,2-dichloroethene, trichloroethene (TCE), vinyl chloride, and total xylenes) in wells associated with the DAACG Area.

Based on the results of the February 2009 groundwater monitoring event, additional investigation of soil and groundwater was recommended in order to complete delineation of detected compounds to background and/or non-detect concentrations. A total of five soil borings, nine shallow surficial aquifer monitor wells and three deep surficial aquifer monitor wells were proposed to be installed along with the collection of soil and/or groundwater samples.

#### 5.10.2 CSR Soil Investigation (November 2009)

Soil investigation activities, as detailed in the CSR Work Plan were completed as part of delineation activities in both the former FTA and DAACG Area. Focused soil sampling was performed within the former FTA, with targeted intervals in 5 soil borings to complete delineation of previously detected compounds. In addition to samples collected from the soil borings, soil samples were collected from shallow (0-2 ft bls) and deep intervals (2 ft above groundwater table) during the installation of 9 new monitor wells (no additional samples were collected from the deep wells installed as well pairs) to further characterize and/or delineate detected compounds present in soils within the DAACG Area.

On November 3, 2009, ARCADIS mobilized to the site with ARM Environmental Services, Inc. a certified Georgia driller to begin CSR investigation activities. Soil samples associated with the former FTA were collected from one monitor well location (HA01-MW-17 from the 0-2 ft bls interval and from 2 feet immediately above the groundwater table) and from five soil borings (HA01SB001 through HA01SB005). Soil borings were advanced in the former FTA using Geoprobe® DPT. The locations of the soil borings and monitor wells are included on Figure 5-3. Soil boring, monitor well





Revision 1 – April 2012  
Original Report – June 2011

boring, and monitor well construction logs have been included in Appendix C. The soil samples collected from HA01-MW-17 were analyzed for metals by USEPA Method 6010 and VOCs by USEPA Method 8260. The shallow soil sample was also analyzed for pesticides by USEPA Method 8081. The soil samples collected from the five soil borings were obtained from a target interval for analysis of specific constituents to complete delineation of historic detections. Soil boring samples, the interval sampled, and the compound(s) analyzed are as follows:

- HA01SB001 8'-10' bls analyzed for toluene (8260)
- HA01SB002 6'-6.5' bls analyzed for bis(2-ethylhexyl)phthalate (8270)
- HA01SB003 8'-10' bls analyzed for SVOCs (8270)
- HA01SB004 2'-4' bls analyzed for chromium (total)
- HA01SB005 2'-4' bls analyzed for chromium (total)

Soil samples were collected in the DAACG Area during the installation of eight shallow aquifer monitor wells (HA01-MW-09, through HA01-MW-16). A site map depicting the monitor well locations is included as Figure 5-3. Two soil samples were collected from each well boring using a split spoon sampler or hand auger at shallow soil sample locations. The first sample was collected from 0-2 feet bls interval and the second sample was collected from the 2 foot interval immediately above the groundwater table. The soil samples collected from each monitor well and boring were sent under Chain of Custody to Shealy Environmental Services, Inc. and analyzed for metals by USEPA Method 6010 and VOCs by USEPA Method 8260. In addition, shallow interval samples were analyzed for pesticides by USEPA Method 8081.

#### 5.10.2.1 Soil Investigation Results

The laboratory results for both the former FTA and DAACG Area showed multiple detections of metals in the shallow and deep soil samples collected during this phase of investigation. Of these detections, only chromium (total) was detected above the Upper Background Concentrations (UBC) calculated as part of the *Compliance Status Report* (SAIC 2002) (See Appendix E for UBC calculations). Chromium was detected in monitor well samples HA01-MW-13 (4'-5') at 9.9 milligram per kilogram (mg/kg), HA01-MW-14 (1'-2') at 8.6 mg/kg, and HA01-MW-17 (6'-7') at 9.3 mg/kg, which are above the UBC of 7.7 mg/kg, but below the Type 1 RRS of 100 mg/kg. The laboratory analytical results from the November 2009 soil investigation activities conducted at the former FTA and the DAACG Area are summarized in Tables 5-3 and Table 5-4, respectively and the complete laboratory analytical reports have been included as Appendix G. The results of the 2009 soil investigation are summarized below.



Revision 1 – April 2012  
Original Report – June 2011

Historical soil investigation data has been summarized and presented on Figures 5-4 through 5-19.

*Fire Training Area*

At the former Fire Training Area, one monitor well (HA01-MW-17) and five soil borings (HA01SB001 – HA01SB005) were installed to delineate compounds present in soil, identified during previous investigations (See Figure 5-1 for the location of historical soil sample locations) and Table 5-3 for a summary of the laboratory analytical results. The following summarizes the results of each sample:

Sample Location	Depth	Target Compound(s)	Result Summary
HA01-MW-17	1'-2' 6'-7'	VOCs, Metals, Pesticides	No exceedances of Type 1 RRS. 1'-2': 1,2,4-trichlorobenzene, toluene, arsenic, barium, chromium, lead, 6'-7': acetone, 1-methylethylbenzene, barium, cadmium, chromium, lead, mercury
HA01SB001	8'-10'	toluene	Not detected
HA01SB002	6'-6.5'	Bis(2-ethylhexyl)phthalate	Detected @ 540 (micrograms per kilogram (µg/kg), below Type 1 RRS of 50,000 µg/kg
HA01SB003	8'-10'	SVOCs	None detected
HA01SB004	2'-4'	chromium	Detected @ 4.9 mg/kg, below the UBC of 7.7 mg/kg and Type 1 RRS of 100 mg/kg
HA01SB005	0 -2'	chromium	Detected @ 2.6 mg/kg, below the UBC of 7.7 mg/kg and Type 1 RRS of 100 mg/kg

*DAACG Chlorinated Solvents Area:*

In the DAACG Chlorinated Solvents Area, eight monitor well borings (HA01-MW-9 through 16) were installed to complete delineation of compounds previously identified in soil (See Figure 5-3). The following table summarizes compounds detected above the Practical Quantitation Limit (PQL) in soil samples collected in the DAACG Area:





Revision 1 – April 2012  
Original Report – June 2011

Compound	Location of Maximum Concentration	Maximum Concentration (µg/kg)	Type 1 RRS (µg/kg)
Carbon disulfide	HA01-MW-16 (10'-11')	8.0	820,000 (Regional Screening Level (RSL))
Chloromethane	HA01-MW-12 (1'-2')	6.9 J	40
Methyl acetate	HA01-MW-09 (6'-7')	9.5	78,000,000 (RSL)
1-methylethylbenzene	HA01-MW-10 (3'-4')	8.4	21,880
DDT	HA01-MW-14 (0'-1')	4.9	660

Metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, and/or mercury) were detected at each location sampled. Concentrations were below the Type 1 RRS and the established UBC with the exception of chromium, detected in samples HA01-MW-13 (4'-5' interval), HA01-MW-14 (1'-2' interval), and HA01-MW-17 (6'-7' interval) at concentrations slightly above the 7.7 mg/kg UBC. A summary of the laboratory analytical data can be seen on Table 5-4 and the entire laboratory data package has been included in Appendix G.

5.10.3 Groundwater Investigation (December 2009)

Groundwater investigation activities performed in December 2009 included the installation of 12 new monitor wells, in accordance with the CSR Work Plan (ARCADIS 2010). Nine shallow surficial aquifer monitor wells (HA01-MW-09, through HA01-MW-17) and three deep surficial aquifer monitor wells (HA01-MW-12D, HA-01-MW-14D, and HA01-MW-18D) were installed to complete delineation of the previously identified groundwater impacts within the former FTA and DAACG Areas. Monitor well HA01-MW-18D was installed downgradient of monitor well COE-MW-3, at the request of the GA EPD (GA EPD, 2010) in order to enhance the vertical delineation in the vicinity of the highest groundwater concentrations. This well was installed into the top of the Hawthorne Formation, at approximately 65 feet bls. The new and existing wells at HAA-01 were sampled in December 2009.

Shallow monitor wells were installed such that the screened interval of each well bracketed the groundwater table. Construction details of the newly installed monitor wells are summarized in Table 5-2. Monitor well construction logs for 2009 have been included in Appendix C.



Revision 1 – April 2012  
Original Report – June 2011

Monitor wells were installed using 4.25-inch ID hollow-stem augers (HSA). Soil samples were collected and logged at 5-foot intervals for visual classification using the Unified Soil Classification System (USCS) and screened with a PID during the drilling process. Once each monitor well boring was advanced to its terminal depth, a 10-foot, 2-inch diameter schedule 40, flush-threaded 10-slot PVC screen and 2-inch schedule 40 PVC riser were placed through the inside of the HSA to a depth slightly above the bottom of the boring. Filter pack material consisting of clean 20/40 sand was placed, by tremie, from the bottom of the boring to 2 ft above the top of the well screen. The monitor well was then surged to allow settling of filter pack material. If necessary, additional filter pack material was added after surging to maintain two feet of sand pack above the screened interval. A minimum of two feet of bentonite pellets was added on top of the filter pack. The bentonite was hydrated and allowed to set. After sufficient time, neat cement (grout) was placed in the remaining annulus to a depth of 1 ft bls. Each well was completed using either an 8-inch flush mount manhole or a 3-foot tall, steel aboveground surface completion. Once the grout and the concrete pad sufficiently cured, the newly-installed monitor wells were surged for approximately 10 minutes over the entire screened intervals. The monitor wells were then developed using the pumping / overpumping method outlined in the USEPA Region 4 guidance document titled *Design and Installation of Monitoring Wells* (USEPA 2008). Groundwater samples from the 12 new monitor wells and 20 existing monitor wells were collected in December 2009. Monitor wells were sampled in accordance with the USEPA Region 4 Operating Procedure for Groundwater Sampling (USEPA 2007). Low flow sampling was used to minimize disturbance of any sediment remaining in the wells after development and to reduce the volume of investigation derived waste generated. Prior to the collection of groundwater samples, each monitor well was gauged for depth to water. Water quality parameters (pH, temperature, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP) and turbidity) were collected during the purging process. All groundwater samples collected from DAACG Area monitor wells were analyzed for metals by USEPA Method 6010, pesticides by USEPA Method 8081 and VOCs by USEPA Method 8260. Groundwater samples collected from the former FTA were analyzed for VOCs by USEPA Method 8260. Select wells (8 total) from both the DAACG Area and the former FTA were analyzed for SVOCs by USEPA Method 8270, based on historic detections.

#### 5.10.3.1 Groundwater Investigation Results

During the December 2009 groundwater sampling event conducted at the former FTA and DAACG Area, depth to groundwater measurements were collected from 43 wells associated with the site. The depth to groundwater measurements have been converted to water table elevations and are summarized in Table 5-5. The water table



Revision 1 – April 2012  
Original Report – June 2011

elevations were used to prepare potentiometric surface maps for both the shallow and deep surficial aquifer units, which are included as Figures 5-20 and 5-21, respectively. Shallow groundwater flow is in a west – northwest direction and deep aquifer flow is in a northwest direction, consistent with the previously reported flow direction.

In December 2009, groundwater samples were collected from the 12 new monitor wells as well as 20 existing monitor wells currently utilized as the groundwater monitoring network for the former FTA and DAACG Area. A summary of the groundwater sampling analytical results is included on Table 5-6. Site maps depicting the December 2009 groundwater analytical results for former FTA and the DAACG Area are included as Figures 5-22 and 5-23, respectively. A summary of the cis 1,2-DCE, trans 1,2-DCE, vinyl chloride, and aldrin concentrations in groundwater are shown on Figures 5-24 through Figure 5-27, respectively. Multiple cross sections have been included as Figures 5-28a, b, c, and d (Geologic Cross Sections A-A', B-B', C-C', and D-D') showing the geologic findings at designated monitor well borings as well as a summary of the results of soil and groundwater samples at those designated locations. Concentrations of 1,1-DCE, acetone, benzene, carbon disulfide, TCE, toluene, and endrin aldehyde in groundwater are summarized on Figures 5-29 through 5-35, respectively. A summary of the historical groundwater monitoring data has been provided on tables included as Appendix A.

*Former Fire Training Area:*

In the former FTA, multiple compounds were detected above the PQL. Of these detections, three compounds were reported at concentrations exceeding the Type 1 RRS:

<b>Compound</b>	<b>Location of Maximum Concentration</b>	<b>Maximum Concentration (µg/L)</b>	<b>Type 1 RRS (µg/L)</b>
1,1,2,2 tetrachloroethane	HMW-13	0.84	0.2
Benzene	HMW-13	56	5
Naphthalene	HMW-13	100	20



Revision 1 – April 2012  
Original Report – June 2011

VOCs detected in groundwater samples collected at the former FTA at concentrations above the PQL but below the Type 1 RRS include 1,2-dichlorobenzene (one detection), acetone (one detection), benzene (three detections), 1-methylethylbenzene (three detections), chlorobenzene (one detection), cyclohexane (two detections), ethylbenzene (three detections), methylcyclohexane (one detection), and total xylenes, (one detection). Barium (HA01-MW-16) was the only metal detected in samples analyzed for metals.

Semi-volatiles were analyzed at select locations (HMW-06, HMW-10, HMW-13, HMW-23, and HMW-24). Compounds detected above the PQL, but below the Type 1 RRS include: 2-methylnaphthalene (detected in two wells), 4-chlorobenzenamine (one detection), 4-methylphenol (one detection), and naphthalene (one detection).

*DAACG Chlorinated Solvents Area:*

In monitor wells associated with the DAACG Area, multiple compounds were detected in groundwater samples at concentrations above the PQL. Of the constituents detected, five were reported at concentrations exceeding the Type 1 RRS:

Compound	Location of Max Concentration	Max Concentration (micrograms per liter (µg/L))	Type 1 RRS (µg/L)
aldrin	COE-MW-1	4.6 J	0.02
cis-1,2-dichloroethene	COE-MW-3	7,800	70
vinyl chloride	COE-MW-3	1,000	2
benzene	COE-MW-3	11	5
trans-1,2-dichloroethene	COE-MW-3	230	100

VOCs detected in the DAACG Area above the PQL but below the Type 1 RRS include 1,1-DCE (five detections), 2-hexanone (one detection), acetone (two detections), benzene (five detections), carbon disulfide (one detection), cis-1,2-DCE (ten detections), toluene (three detections), trans-1,2-DCE (eight detections), TCE (two detections), vinyl chloride (five detections), total xylenes (two detections).



Revision 1 – April 2012  
Original Report – June 2011

Metals detected in the DAACG Area above the PQL but below the Type 1 RRS include barium (fifteen detections), and chromium (three detections). Pesticides detected in the DAACG Area above the PQL but below the Type 1 RRS include aldrin (five detections), and endrin aldehyde (five detections).

SVOCs were only analyzed at two locations associated with the DAACG Area, HA01-MW-10 and HA01-MW-18D. No compounds were detected above the PQL in either sample.

#### **5.11 Extent of Compounds in Soil**

Soil investigations completed at the site have identified 53 compounds detected in soil at concentrations above the laboratory PQL. Eleven compounds were detected at concentrations exceeding the Type 1 RRS in soil samples and have been identified on isocontour maps, included as Figures 5-4 through 5-14. Compounds exceeding the Type 1 RRS in soil include benzene, total xylenes, acetone, ethylbenzene, benzo(a)pyrene, chrysene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and lead. In general, the respective locations of VOCs and SVOCs listed are in the vicinity of the Former FTA, including areas around and below the excavation area. Compounds were also noted in a small lobe north of the FTA, extending toward the DAACG Area.

Detections of lead were also concentrated within the vicinity of the former excavation area, with multiple additional sporadic detections in each direction. The bulk of lead concentrations identified, including all delineation samples, were below the UBC previously established.

Compounds that have been identified in soils at concentrations below the Type 1 RRS, but above the laboratory PQL are shown on soil delineation maps included as Figures 5-15 - Extent of VOC Compounds in Soil, Figure 5-16 – Extent of SVOC (PAH) Compounds in Soil, Figure 5-17 – Extent of SVOCs in Soil, Figure 5-18 – Extent of Metals in Soil, and Figure 5-19 – Extent of Pesticides in Soil. In general, compounds detected were sporadic locations and at low concentrations. Compounds identified on these figures were delineated by perimeter samples collected.

The remainder of compounds identified were detected in a very low percentage of samples collected and analyzed. Based on the frequency of detection, these samples and the samples that complete delineation of these compounds have been summarized on the table below:

## Compliance Status Report

### Revision 1

HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

Compound	Frequency	Location of Detection	Delineation samples
2-Butanone	3 of 74	HSB-5 (5-8) PSB-2 (3-4) FTASB-10 (0.5-1.0)	FTASB-17 (0.5-2.5, 4.5-6.5) FTASB-12 (0.5-1, 8-10) HA01MW17 (1-2, 6-7) FTASB-14 (0.5-2.5, 4.5-6.5) HMW-11 (2-4, 6-8) FTASB-15 (0.5-2.5, 4.5-6.5)
Benzene, 1-methylethyl	2 of 19	HA01-MW-10 (3-4)	HA01MW09 (1-2, 9-10) HA01MW11 (1-2, 2-3)
Carbon disulfide	1 of 74	HA01-MW-16 (10-11)	HMW-13 (2-4, 8-10) HA01MW15 (1-2, 5-6) HA01MW09 (1-2, 9-10) FTASB-04 (0.5-1, 9-10.5)
Chlorobenzene	1 of 74	FTASB-11 (9.5-10)	FTASB - 06 (0.5-1, 8.5-10) FTASB-12 (0.5-1, 8-10) FTASB -16 (0.5-2.5, 6.5-8.1)
Chloromethane	3 of 74	HSB-5 (5-8)  HA01-MW-17 (6-7)  HA01-MW-12 (1-2)	HMW-11 (2-4, 6-8) FTASB-17 (0.5-2.5, 4.5-6.5)  HMW-10 (0-2, 2-4) PSB-2 (0-1, 3-4) HA01MW14 (1-2, 3-4)  HA01MW11 (1-2, 2-3) HA01MW13 (1-2, 4-5) HA01MW10 (1-2, 3-4) HA01MW09 (1-2, 9-10) HA01MW15 (1-2, 5-6)
cis-1,2-Dichloroethene	1 of 113	HMW-14R (7-9)	HA01MW09 (1-2, 9-10) HA01MW10 (1-2, 3-4) HA01MW15 (1-2, 5-6) HA01MW16 (1-2, 10-11)
Methyl acetate	1 of 19	HA01-MW-09 (9-10)	HA01MW10 (1-2, 3-4) A01MW12 (1-2, 3-4) HA01MW16 (1-2, 10-11) HA01MW15 (1-2, 5-6)
Tetrachloroethene	3 of 138	FTASB-06 (0.5-1.0)	SB-028 (0-1.5, 5.5-5.5)

## Compliance Status Report

### Revision 1

HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

		FTASB-09 (0.5-1.0)  SB-018 (0.0-1.5)	FTASB-12 (0.5-1, 8-10) FTASB-16 (0.5-2.5, 6.5-8.1) HSB-1 (8-10)  PSB-2 (0-1, 3-4) FTASB-13 (0.5-2.5, 2.5-4.5) FTASB-14 (0.5-2.5, 4.5-6.5) FTASB-10 (0.5-1, 9-10.4) FTASB-11 (0.5-1, 9.5-10)  FTASB-17 (0.5-2.5, 4.5-6.5) HSB-5 (5-8) HSB-1 (8-10) HSB-6 (8-10) SB-028 (0-1.5, 5.5-5.5)
trans-1,2-Dichloroethene	1 of 113	HMW-14R (7-9)	SB--030 (0-1, 6-8) SB-046 (4-6, 12-14) HA01MW-16 (1-2, 10-11) HA01MW15 (1-2, 5-6) SB043 (0-2, 2-4)
2,4-Dinitrotoluene	1 of 33	FTASB-15 (4.5-6.5)	FTASB-04 (0.5-1, 9-10.5) FTASB-14 (0.5-2.5, 4.5-6.5) FTASB-13 (0.5-2.5, 2.5-4.5)
Acenaphthene	6 of 116	HSB-2 (3-5) FTASB-14 (4.5-6.5) HMW-11 (2-4) HMW-11 (6-8) SB-030 (6-8) SB-038 (0-2)	SB-027 (0-1.5, 5.5-5.5) SB-019 (0-1.5, 5.5-5.5) SB-026 (0-1.5, 5.5-5.5) FTASB-15 (0.5-2.5, 4.5-6.5) SB-044 (2-4, 6-8) HMW-14R (0-2, 7-9) HA01MW15 (1-2, 5-6)
Diethyl phthalate	1 of 42	BH-12 (6.5-7.5)	FTASB-10 (0.5-1, 9-10.4) FTASB-11 (0.5-1, 9.5-10) BH-10 (0-1, 7.5-8.5) BH-13 (0-1, 6.5-7.5)
Di-n-butyl phthalate	4 of 42	BH-10 (0-1) BH-11 (7.5-8.5) BH-12 (6.5-7.5) FTASB-12 (0.5-1.0)	FTASB-10 (0.5-1, 9-10.4) FTASB-11 (0.5-1, 9.5-10) FTASB-16 (0.5-2.5, 6.5-8.1) BH-13 (0.5-1, 9-10.4)
N-Nitrosodiphenylamine	1 of 33	HA01SB002 (6-6.5)	FTASB-10 (0.5-1, 9-10.4) FTASB-11 (0.5-1, 9.5-10)



Revision 1 – April 2012  
Original Report – June 2011

			FTASB-12 (0.5-1, 8-10) FTASB-16 (0.5-2.5, 6.5-8)
Dieldrin	3 of 28	SB-025 (0-1.5) SB-026 (0-1.5) SB-027 (0-1.5)	
Methoxychlor	1 of 28	SB-026 (0-1.5)	SB-027 (0-1.5, 5.5-5.5) SB-025 (0.5-1.5, 6.5-5.5) SB-037 (0-2)
DDT	1 of 9	HA01MW14 (1-2)	HA01-MW13 (1-2) HA01-MW15 (1-2) HA01-MW17 (1-2)

**5.12 Supplemental Investigation Activities (2012)**

In January 2012, in response to GAEPD comments on the CSR submitted in September 2011, monitor wells HA01-MW-12 and HA01-MW-14 were re-sampled and analyzed for VOCs in order to verify detections of select VOCs (acetone in MW-12 and toluene in MW-14) identified during the 2009 groundwater monitoring event. Each well was sampled in accordance with the USEPA Region 4 Operating Procedure for Groundwater Sampling (USEPA 2007). Low flow sampling was used to minimize disturbance of any sediment remaining in the wells after development and to reduce the volume of investigation derived waste generated. Prior to the collection of groundwater samples, each monitor well was gauged for depth to water. Water quality parameters (pH, temperature, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP) and turbidity) were collected during the purging process. Each groundwater sample collected was analyzed for VOCs by USEPA Method 8260. Laboratory analytical results showed no VOCs detected at concentrations exceeding the laboratory reporting limit.

In February 2012, a deep monitor well, HA01-MW-07D was installed at the request of the GAEPD in order to provide additional vertical delineation in the vicinity of existing monitor well COE-MW-07. The monitoring well was installed as a double cased well. Initially, a Geoprobe 7822 was used to advance 7 7/8-inch OD hollow stem augers to a depth of 45 feet bgs. As the augers were advanced, continuous soil samples were collected using a Geoprobe Macro Core sampler, screened with a PID, and visually





Revision 1 – April 2012  
Original Report – June 2011

classified using the Unified Soil Classification System (USCS). A 4-inch surface casing was then installed and grouted to ground surface. Once the grout had sufficient time to cure, the borehole was advanced from the bottom of the surface casing to a terminal depth of 60 feet using mud rotary drilling with split spoon samples collected at 5-foot intervals for purposes of characterizing lithology. The monitoring well was installed using a 10-foot, 2-inch diameter Schedule 40 PVC, flush-threaded 10-slot screen and 2-inch Schedule 40 PVC riser. Filter pack material consisting of clean 20/40 sand was placed, by tremie, from the bottom of the boring to 2 ft above the top of the well screen. The monitor well was then surged to allow settling of filter pack material. Two feet of bentonite pellets were added on top of the filter pack. The remaining annular space was filled with a neat Portland Type I cement. The well was completed at ground surface with a 3-foot tall steel aboveground surface completion. Once the grout and the concrete pad sufficiently cured, the newly-installed monitor well was surged for approximately 10 minutes over the entire screened interval. The monitor well was then developed using the pumping / overpumping method outlined in the USEPA Region 4 guidance document titled *Design and Installation of Monitoring Wells* (USEPA 2008). Prior to the collection of groundwater samples, the monitor well was gauged for depth to water. Water quality parameters (pH, temperature, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP) and turbidity) were collected during the purging process. The groundwater sample collected from HA01-MW-07D was analyzed for metals by USEPA Method 6010, VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270, pesticides by USEPA Method 8081B and herbicides by USEPA 8151A. Laboratory analysis showed no compounds detected at concentrations exceeding the reporting limit.



Revision 1 – April 2012  
Original Report – June 2011

## 6. Conceptual Site Model

Multiple phases of soil and groundwater investigation have been completed at the site. Investigations have concluded that previous fire training activities are the most likely source of BTEX compounds in the soil and groundwater in the vicinity of the former FTA. Multiple remedial measures have been completed to address these residual contaminants, including soil excavations and LNAPL recovery activities. Investigations in the DAACG area have been successful in identifying the compounds present and the extents of these compounds, although a source of these compounds has not been successfully identified. Table 6-1 identifies all compounds identified in media investigated at the site and the suspected source of the impacts (i.e. former Fire Training Area or DAACG Area).

### Site Geology and Hydrogeology

Previous investigations conducted at or near the site indicate that the geologic sections consist of predominantly sand with interbeds of silty sand, and lesser clayey sand deposits to a depth of at least 100 ft bls. Shallow borings performed during the previous investigations indicated the surficial deposits at the site consist predominantly of fine-grained sand to a depth of at least 10 feet (ESE 1993, USAEHA 1987).

The subsurface soil conditions encountered during the CSR and previous investigations may be categorized into two general strata based on geologic and engineering characteristics. The upper zone soils extend from the surface to approximately 35 ft bls and consist of gray to brown, medium to coarse-grained, loose to medium-dense silty sand, with interbedded layers of clays, sand, and poorly graded sand. The soil is classified as silty sand (SM) according to the USCS. The lower zone soils begin at approximately 35 ft bls and continue to approximately 100 ft bls. The soil consists of gray, fine to medium-grained, loose to medium-dense, poorly graded sand and is classified as poorly graded sand (SP) according to the USCS (site geology obtained from the CSR Addendum, SAIC 2005).

### Groundwater Gradients

The hydrology at HAA-01 has been characterized by groundwater monitor wells installed across the site at two different intervals (the shallow and deep surficial aquifer). The shallow surficial aquifer monitor wells range from a total depth of 11.5 to 20.5 ft bls, while the deep surficial aquifer monitor wells have total depths ranging from 48 to 65 ft bls. A list of the wells and corresponding historical water level elevations is



Revision 1 – April 2012  
Original Report – June 2011

presented in Table 6-2. Typically, groundwater flow in the shallow and deep surficial aquifer direction is northwest across the DAACG Area with a horizontal groundwater gradient of approximately 0.017 feet per foot (ft/ft). At the former FTA, the groundwater flow direction is also to the northwest with an average horizontal groundwater gradient of approximately 0.042 ft/ft.

The vertical groundwater gradient has been historically measured at the site using 3 well clusters (HMW-1/HMW-2, HMW-3/HMW-4, and HMW-5/HMW-6). Calculated vertical gradients, developed from December 2009 well gauging data, range from 0.036 ft/ft to 0.075 ft/ft in a downward direction.

#### Hydraulic Conductivity Measurements

As detailed in the Revised Final CSR (Law 2002), the horizontal hydraulic conductivity was calculated for six wells located at the site using slug tests. Slug tests were conducted on wells HMW-03 and HMW-04 in 1992 by ESE and on wells HMW-10, 11, 12, and 13 in 1995 by Law. The Bouwer and Rice Method was used to analyze each of the test results and develop the hydraulic conductivity for the wells. Results of the analysis ranged from  $1.8 \times 10^{-3}$  feet per minute (ft/min) (HMW-03) to  $8 \times 10^{-4}$  ft/min (HMW-11) with an average hydraulic conductivity of  $1.25 \times 10^{-3}$  ft/min, as reported in the Revised Final CSR (Law 2002). Calculations of the hydraulic conductivity have been provided in Appendix H.

#### Groundwater Flow Rates

The average hydraulic conductivity (K) and average horizontal hydraulic gradient (I) were used to calculate an estimated velocity of horizontal groundwater flow beneath the site. An effective porosity ( $n_e$ ) for the saturated soil was assumed to be 20% (based on sandy soils). The horizontal groundwater flow velocity was calculated using the Darcy velocity equation:

*DAACG Chlorinated Solvents Area:*

$$V=KI/n_e = [(1.25 \times 10^{-3} \text{ ft/min})(0.017 \text{ ft/ft}) / (0.20)] \times (525,600 \text{ min/yr}) = 56 \text{ feet per year (ft/yr)}$$

*former FTA:*

$$V=KI/n_e = [(1.25 \times 10^{-3} \text{ ft/min})(0.042 \text{ ft/ft}) / (0.20)] \times (525,600 \text{ min/yr}) = 138 \text{ ft/yr}$$



Revision 1 – April 2012  
Original Report – June 2011

Based on CSR investigations, the extent of compounds in the soil and groundwater has been adequately delineated. Horizontal plume migration is limited, as demonstrated by the horizontal extent of soil and groundwater constituent plumes. Remedial measures completed have been successful in the removal of the former FTA source areas. Vertical migration has been confined by the clay unit, typical of the Hawthorne formation, identified between the depth of 55 to 65 ft bls.



Revision 1 – April 2012  
Original Report – June 2011

## **7. Human Health Risk Assessment**

The human health risk assessment for HAA-01 evaluated the potential risks to human health through the derivation of a RRS for each of the detected constituents in soil and groundwater and an evaluation of the potential exposure to constituents detected in surface water and sediment.

This remainder of the section is organized as follows:

- Potential receptors
- Exposure assessment
- Toxicity assessment
- Risk reduction standards
- Surface water and sediment evaluation
- Summary and conclusions

### **7.1 Potential Receptors**

HAA-01 has not been actively utilized since 1991. Like many military bases, access to the site is restricted. Thus, trespassers are not expected at the site under current conditions. Since HAA-01 has been unoccupied since 1991, portions of the site are overgrown. Workers charged with periodically mowing or using the bush-hog to clear the site are the most likely potential human receptors. Similarly, this site has been used for non-residential uses, and it is unlikely that the site will be used for permanent, residential housing. HAA has a master plan (U.S. Army 2006) that indicates that the nearest family housing is over one mile to the southeast of this site.

The surface water features are unlikely to be accessed from HAA-01. The ditch banks are steeply sloped and heavily vegetated, thus precluding contact with surface water and sediments. Three water supply wells were identified within 1 mile of the site (as identified on Table 5.1 of the Revised Final Compliance Status Report (Law 2002) during completion of a water well survey (US Geological Survey [USGS], Georgia District, 2000). Water use from these wells is identified as commercial, agricultural, or military usage. Groundwater at the site is not used as a potable water supply. The deeper Floridan aquifer is used as the potable water supply, although the three water supply wells identified are upgradient of the site.



Revision 1 – April 2012  
Original Report – June 2011

## 7.2 Exposure Assessment

In accordance with GAEPD guidance, default criteria for Types 1 and 3 RRS were identified. For Types 2 and 4 RRS, exposure factors from GAEPD guidance (GAEPD 1999) or USEPA guidance (USEPA 1997a) were used. These RRS values are therefore considered to be conservative (i.e., protective of human health) in that exposure to the identified and/or calculated concentrations is considered unlikely to cause significant carcinogenic or noncarcinogenic effects. Thus, if the soil or groundwater concentrations are less than the conservative RRS, then additional exposure scenarios related to soil and groundwater exposures will not be evaluated.

### 7.2.1 Soil Exposure

In accordance with GAEPD guidance, the Types 2 and 4 RRS for carcinogenic effects from potential exposure to soil are typically calculated using Equation 6 from Part B of the Risk Assessment Guidance for Superfund (RAGS Part B) (USEPA 1991). The Types 2 and 4 RRS for noncarcinogenic effects from potential exposure to soil are typically calculated using Equation 7 from RAGS Part B. Table 7-1 provides the equations used to derive the soil RRS.

The exposure factors used to calculate the Type 2 (i.e., residential) RRS include a body weight of 70 kilograms (kg) for an adult and 15 kg for a child, 30 years of exposure duration for an adult and six years for a child, a 114 milligram per day (mg/day) soil intake rate for an adult and 200 mg/day for a child, and an exposure period of 350 days per year. The inhalation rate was set at 15 cubic meters per day ( $\text{m}^3/\text{day}$ ) based upon USEPA (1991) guidance for residential receptors.

The exposure factors used to calculate Type 4 (i.e., commercial) RRS are based on industrial exposure and include a body weight of 70 kg, 25 years of exposure duration, a 50 mg/day soil intake rate, and an exposure period of 250 days per year. The inhalation rate for the commercial worker was set at 20  $\text{m}^3/\text{day}$ . Exposure factors for both Types 2 and 4 RRS were obtained from Georgia EPD guidance (EPD 1999; USEPA 1997a).

### 7.2.2 Groundwater Exposure

Types 2 and 4 RRS for carcinogenic and noncarcinogenic effects from potential exposure to groundwater were calculated using Equations 1 and 2, respectively, from RAGS Part B (USEPA 1991). The lowest criterion from Equation 1 or 2 was used as



Revision 1 – April 2012  
Original Report – June 2011

the Types 2 and 4 RRS. The equations and parameter values used to calculate the RRS for exposure to groundwater are presented in Table 7-2.

The exposure factors used to calculate the Type 2 (i.e., residential) RRS include a body weight of 70 kg for an adult and 15 kg for a child, 30 years of exposure duration for an adult and six years for a child, a 2-liter-per-day (L/day) water intake rate for an adult and 1 L/day for a child, and an exposure period of 350 days per year. The inhalation rate was set at 15 cubic meters per day ( $\text{m}^3/\text{day}$ ) based upon USEPA (1991) guidance for residential receptors.

The exposure factors used to calculate Type 4 (i.e., commercial) RRS are based on industrial exposure and include a body weight of 70 kg, 25 years of exposure duration, a 1-L/day water intake rate, and an exposure period of 250 days per year. The inhalation rate for the commercial worker was set at 20  $\text{m}^3/\text{day}$ . Exposure factors for both Types 2 and 4 RRS were obtained from GAEPD guidance (EPD 1999; USEPA 1997a).

### **7.3 Toxicity Assessment**

The toxicity values used to calculate Type 2 and Type 4 RRS (i.e., cancer slope factors [CSF] and reference doses [RFD]) were obtained from the USEPA RSL (USEPA 2011b) table. The values included in the RSL table were verified in the primary sources. The toxicity values are presented in Table 7-3.

### **7.4 Risk Reduction Standards**

The primary objective of the risk evaluation was to compile the available analytical data on the regulated substances that were detected in soil and groundwater and to compare the data to the RRS. The Type 1 RRS was identified, and residential exposure factors were used to calculate the Type 2 RRS in soil and groundwater. The Type 3 RRS also was identified for soil and groundwater, and industrial exposure factors were used to calculate the Type 4 RRS for soil and groundwater. The physical and chemical properties used to derive the soil RRS are provided in Table 7-4.

In addition, the potential for the detected soil constituents to leach from soil to groundwater was evaluated by calculating soil screening levels (SSLs) protective of groundwater using USEPA methodology (1996, 2002b). For these calculations, the groundwater RRS were used as the groundwater criteria.



Revision 1 – April 2012  
Original Report – June 2011

#### 7.4.1 Soil Risk Reduction Standards

The Type 1 RRS (default residential criteria) for soil were determined using the definition in Rule 391-3-19-.07(6)(c) of GAEPD guidance (1999). The concentrations of constituents of concern (COCs) detected in soil above the water table were compared to the Type 1 RRS. Table 7-5 includes the maximum detected constituent concentration above the water table, the location of the maximum, and the Type 1 soil RRS. Sixteen constituents exceeded the Type 1 RRS. Sample HMW-12 collected in 1995 was reported as containing the highest concentrations of detected constituents. The results of this sample were reevaluated as part of Revision 1 of this report and showed that concentrations of the sample were incorrectly reported. Data were identified as being exaggerated by a factor of 1,000 and being reported without proper qualifiers (<). These data were corrected, and the risk assessment was updated to reflect these data.

The equations used to calculate the Type 2 RRS for soil are presented in Table 7-1. The Type 2 carcinogenic and noncarcinogenic calculated criteria are presented in Table 7-6 for adult residential receptors and Table 7-7 for child residential receptors. In addition, for each of the constituents evaluated, the RRS was the lower of the direct contact soil RRS calculated in Tables 7-6 and 7-7 and the SSL which is protective of groundwater and was derived based on the groundwater Type 1 RRS (see Table 7-10) or the groundwater Type 2 RRS (Table 7-11). The comparison of detected concentrations and the source of the Type 2 RRS is presented in Table 7-5. Ten constituents exceeded their Type 2 RRS.

The Type 3 RRS were derived in a manner similar to those of the Type 1 standards with the exception that industrial worker assumptions were used to derive the default direct contact RRS. The Type 3 RRS are presented in Table 7-8 together with the maximum soil concentration detected above the water table. As seen in the table, fourteen constituents exceed their Type 3 soil RRS.

The Type 4 RRS was derived by selecting the lower of the Type 4 direct contact RRS (Table 7-9) and the Type 4 SSL (Table 7-12). Table 7-20 presents the derivation of the Type 4 RRS for lead in soil. As seen in Table 7-12, six constituents were detected at a maximum concentration exceeding their Type 4 RRS.





Revision 1 – April 2012  
Original Report – June 2011

#### 7.4.2 Groundwater Risk Reduction Standards

The calculation of RRS for groundwater included the integration of the exposure and toxicity assessments. Information on potential exposures and toxicity values was combined to generate the Types 2 and 4 RRS. These criteria, as well as the default criteria for Types 1 and 3 RRS, were then compared to the maximum detected concentrations of the constituents detected in the shallow and groundwater at the site.

##### 7.4.2.1 Residential Risk Reduction Standards

Residential RRS were calculated for groundwater as described above. The following sections further describe the Types 1 and 2 RRS.

- Type 1 RRS

The Type 1 RRS (default residential criteria) for groundwater are defined in Rule 391-3-19-07(6)(b) (GAEPD 1999) as the concentrations listed in Table 1 of Appendix III (if available for the COCs). The comparison of maximum detected groundwater concentrations to the Type 1 RRS and the source of the Type 1 RRS are presented in Table 7-13 for the shallow groundwater. 33 constituents were detected at concentrations greater than the Type 1 RRS for groundwater.

- Type 2 RRS

The equations and input parameters used to calculate the Type 2 RRS for the COCs in groundwater are presented in Table 7-2. Calculations of the Type 2 carcinogenic and noncarcinogenic criteria for groundwater are included in Table 7-14 for adults and in Table 7-15 for children. For each detected constituent, the least of the carcinogenic and noncarcinogenic criteria was then selected as the criterion for each receptor (adults and children), and the lower of the adult or child criterion was selected as the Type 2 RRS. A comparison of the maximum detected concentrations with the Type 2 RRS, along with the source of the Type 2 RRS, is included in Table 7-13 for the groundwater. Eighteen constituents exceeded the Type 2 RRS.

##### 7.4.2.2 Nonresidential Risk Reduction Standards

Nonresidential RRS were calculated for groundwater as previously described in this risk evaluation. The following sections further describe the Types 3 and 4 RRS.



Revision 1 – April 2012  
Original Report – June 2011

- Type 3 RRS

The Type 3 RRS for groundwater are identical to the Type 1 RRS used for the residential scenario, according to GAEPD guidance (EPD 1999). The comparison of maximum detected concentrations to the Type 3 RRS for groundwater is presented in Table 7-16 for groundwater. This comparison shows that 33 constituents were detected at concentrations greater than the Type 3 RRS for groundwater.

- Type 4 RRS

The equations and input parameters used to calculate a Type 4 RRS for the groundwater are presented in Table 7-2. Calculations of the Type 4 carcinogenic and noncarcinogenic criteria for groundwater are included in Table 7-17. For each constituent, the lesser of these two criteria was selected as the Type 4 RRS for groundwater. The comparison of maximum detected concentrations to Type 4 RRS for shallow groundwater presented in Table 7-17 shows that 17 constituents exceed the Type 4 RRS for groundwater.

#### 7.4.3 Sediment

Table 7-18 presents the comparison of the sediment maximum concentration and the Types 1, 2, 3, and 4 RRS. Several of the PAHs were present at concentrations exceeding all of their standards. Twenty-six constituents were detected in sediments. The maximum detected concentrations were compared to the soil Type 1 through 4 RRS, as seen in Table 7-18. Eight constituents were identified as exceeding the Types 1 and 3 soil RRS. Three of these constituents, benzo(k)fluoranthene, chrysene, and lead did not exceed their Type 2 residential soil RRS. Only two constituents, benzo(a)pyrene and dibenz(a,h)anthracene exceeded their Type 4 soil RRS. Although there were exceedances of the RRS, it is unlikely that individuals would frequent the sediments at HAA-01 as often as indicated by the exposure frequency identified in the RRS soil calculations. Therefore, exposure to sediments is not expected to pose an unacceptable risk to receptors at the site.

Nonetheless, potential exposure of a recreational receptor was evaluated for the sediment. The constituents of interest for this evaluation are the five constituents (all PAHs) exceeding the Types 1, 2, and 3 RRS. Table 7-21 presents the equations used to evaluate the potential exposure to sediments. The potential receptor considered in this evaluation is an older child, ages 6 to 16 years old, wading in the drainage ditch. It



Revision 1 – April 2012  
Original Report – June 2011

was assumed that this individual would wade in the drainage ditch twice a week for six months of the year or 48 days/year. Table 7-22 presents the exposure assumptions. The dermal parameters are included in Table 7-23, and the toxicity values used to evaluate sediment and surface water exposures are presented in Table 7-24. The Type 4 RRS or health-based concentration goals (HBGs) are presented in Table 7-25. The Type 4 (HBGs) are greater than the maximum detected concentrations.

#### 7.4.4 Surface Water

Constituents detected in surface water were compared to their Georgia In-Stream Water Quality Standards (IWQS), or in the absence of the in-stream standards, their Type 1 RRS. Only 3 compounds, cadmium, chromium (total) and mercury were detected at maximum concentrations greater than their in-stream standards, as seen in Table 7-19. Type 4 RRS were calculated for a recreational receptor potentially exposed to all detected constituents in surface water. The equations used to derive the Type 4 RRS or HBG are presented in Table 7-26. Since several of the detected constituents are volatile, volatilization factors were derived and are presented in Table 7-27. The Type 4 standards are presented in Table 7-28. The maximum detected concentrations were below the Type 4 recreational receptor RRS. Therefore, there are no risks to human health from exposure to constituents in the surface water.

### 7.5 Summary and Conclusions

This human health risk assessment for HAA-01 (the former FTA and the DAACG Chlorinated Solvents Area site) evaluated the potential risks to human health by comparing the maximum detected soil and groundwater constituents to the Types 1 through 4 RRS. The potential exposure to constituents detected in surface water and sediment also was evaluated by comparing the maximum detected concentrations to the Type 1 RRS and Type 4 RRS for a recreational receptor.

The soil data collected above the shallow groundwater were compared to the RRSs. 16 constituents were detected at concentrations exceeding the Type 1 RRS and 10 constituents were detected exceeding the Type 2 standards. In addition, 14 and 6 constituents were observed to exceed their respective Type 3 and Type 4 RRSs, respectively.

The groundwater data were compared to the Types 1 through 4 RRS. A total of 33 constituents exceeded the Type 1 and Type 3 groundwater RRS. A total of 18 and 17



Revision 1 – April 2012  
Original Report – June 2011

constituents exceeded the Type 2 and the Type 4 RRS for the shallow groundwater, respectively.

Eight constituents detected in sediments exceeded the Type 1 and Type 3 RRS. Five constituents detected in sediments exceeded the Type 2 RRS for soil. None of the detected constituents in sediment exceeded the Type 4 RRS. Three constituents detected in surface water exceeded the Georgia in-stream water quality standards (IWQS). All of the detected surface water constituents were compared with Type 4 RRS calculated based on exposure of a recreational receptor. None of the maximum detected concentrations exceeded the Type 4 RRS.



Revision 1 – April 2012  
Original Report – June 2011

## **8. Ecological Health**

This section presents the ERA that was conducted for the Site pursuant to GAEPD CSR guidance and HSRA regulations. The objective of the ERA is to evaluate whether ecological receptors may be adversely affected by exposure to site-related constituents. This ERA is intended to provide input for risk management decision-making for the Site, while maintaining a conservative approach that is protective of wildlife populations and communities.

### **8.1 Introduction**

As previously mentioned, the HAA-01 is located on the northwestern portion of HAAF, west of the parking apron and runway and 800 feet northwest of the air control tower. HHA-01 is comprised of the former FTA and the DAACG Chlorinated Solvents Area identified just north of the former FTA.

A mixture of evergreen and deciduous plant species, typical to the marshy woodlands of the Coastal Plains, covers the northern portion of the site. The southern portion of the site (i.e., the former FTA) is a maintained grassy meadow. Two densely vegetated man-made drainage ditches lie to the north and south of the site and periodically contain stormwater drainage. These ditches receive drainage both from the parking apron and the site itself. The two ditches join on the western edge of the site and discharge to the Springfield Canal. Areas of mature hardwood and evergreen forest are located north and south of the two drainage ditches.

Topography at the site gently slopes toward the Springfield Canal that is located 3,600 feet to the west. The Springfield Canal flows southwest before emptying into the Little Ogeechee River. Five and a half miles downstream of HAAF, the Little Ogeechee River is classified, according to the Georgia Water Use Classifications and Water Quality Standards, as a water "generally supporting shellfish" (GAEPD 1999).

HAAF is expected to continue in its current role as an adjunct military facility to Fort Stewart. The facility, as a whole, is gated and fenced. Therefore, it is primarily military personnel or military contractors who have access to the former FTA site. According to sources at HAAF, there are no future development plans for the former FTA area.

Groundwater at the site occurs in the surficial aquifer at depths ranging from 2 to 15 ft bls and the deeper Floridian aquifer. The surficial aquifer is separated from the



Revision 1 – April 2012  
Original Report – June 2011

Floridian Aquifer by a thick confining unit of clay. Recharge to the surficial aquifer occurs through precipitation on land directly above the aquifer.

As recommended by GAEPD regulations for a CSR under the HSRA regulations, the ERA was conducted in accordance with United States Environmental Protection Agency (USEPA) guidance. As such, the ERA is comprised of a SLERA followed by a BERA (USEPA 1997). Typically, the SLERA provides a conservative estimate of potential ecological hazards and compensates for uncertainty by incorporating numerous conservative assumptions. The purpose of the SLERA is to determine whether there is a high probability that there are no ecologically significant hazards; otherwise, a BERA is warranted (USEPA 1997, 2000a, 2001a). If a BERA is indicated, the information developed in the SLERA is used to help focus the BERA. The BERA is more complex than the SLERA and uses more realistic and site-specific information about potential exposures and effects in order to evaluate potential ecological hazards.

The approach used to assess ecological hazards associated with the Site is based on the USEPA eight-step process (USEPA 1997, 2000a, 2001a), as summarized in Figure 8-1. An expanded view of the USEPA eight-step process is provided in Figure 8-2. As illustrated on Figure 8-2, the USEPA paradigm divides Step 3 into two parts, Step 3a and Step 3b (USEPA 2000a). Step 3a allows for a more refined analysis of available information, while Steps 3b and beyond focus on further evaluation(s) for only those receptors, media, and constituents that are identified in previous steps. USEPA (2000a) states, “for the majority of sites, ERA activities will cease after the completion of Step 3a.” The details of each step and how they relate to the Site ERA are described in the sections below.

The ERA process culminates in clearly defined scientific management decision points (SMDPs). The SMDPs represent critical steps where risk management decision-making occurs. Generally, the following types of decisions are considered at the SMDPs:

1. Whether the available information is adequate to conclude that ecological hazards (if any) are negligible and, therefore, there is no need for further action on the basis of ecological hazard.
2. Whether the available information is inadequate to make a decision at this point and the ecological risk assessment process should continue.
3. Whether the available information indicates a potential for adverse ecological effects and a more thorough assessment or remediation is warranted.



Revision 1 – April 2012  
Original Report – June 2011

The remainder of the ERA is organized as follows:

- Ecological Risk Assessment Dataset Evaluation
- Screening-Level Ecological Risk Assessment
- Baseline Ecological Risk Assessment

## **8.2 Ecological Risk Assessment Dataset Evaluation**

A statistical summary of the surface soil data (0-2 ft bls) is provided in Table 8-1. This table includes the number of detected samples, the minimum and maximum detected samples, a range of the detection limits, the maximum concentration, and the mean of the data based on Kaplan-Meyer (KM).

## **8.3 Screening Level Ecological Risk Assessment**

This SLERA conservatively estimates potential hazards that may affect ecological receptors. The SLERA typically compensates for uncertainty in a precautionary manner by incorporating numerous conservative assumptions. The outcome of the SLERA is the conclusion that either there is a high probability that ecologically significant hazards are not posed to receptors, or that further assessment is warranted. Consistent with USEPA (1997) guidance, the SLERA for the Site is comprised of the following steps:

- Screening-Level Problem Formulation
- Screening-Level Ecological Effects Evaluation
- Screening-Level Exposure Estimate and Risk Calculation
- Scientific Management Decision Point

### **8.3.1 Screening-Level Problem Formulation**

Step 1 of the SLERA consists of both a screening-level problem formulation and a screening-level ecological effects evaluation. The screening-level problem formulation presents the background information, including a site characterization, potential ecological receptors, ecosystem characteristics, as well as information regarding the sources and effects of the potential chemicals (USEPA 1998). This information is used to develop a conceptual site model (CSM) that illustrates the potential relationships between stressors, pathways, and receptors.



Revision 1 – April 2012  
Original Report – June 2011

The following sections are included in the problem formulation:

- Environmental Setting
- Toxicological Profiles
- Media of Concern
- Potentially Exposed Receptors
- Potentially Complete Exposure Pathways
- Assessment and Measurement Endpoints

#### 8.3.1.1 *Environmental Setting*

This section describes the ecological habitat at the Site based on observations made by Law personnel during a site visit conducted in January 2002 and by ARCADIS personnel in October 2008. Photographs of the site are presented in Appendix I.

The principal habitat types present at the former FTA are managed grassland and neighboring forestland. Managed grasslands are found at the former FTA and extend north and south to the drainage ditch in either direction. Managed grasslands are typified by planted grass of one or more species maintained by mowing, application of fertilizers, etc. Common fauna includes earthworms and other soil-dwelling invertebrates, birds such as robins, and mammals, such as shrews, rabbits, and raccoons. The former FTA, beyond the drainage ditches and within the isolated tree island between the northern and southern ditches, consists mainly of mixed hardwood bottomland forest with a few interspersed pines. Characteristic flora of this habitat type includes long-leaf pine (*Pinus paustris*), loblolly pine (*P.taeda*), sweetgum (*Liquidambar styraciflua*), blackgum (*Nyssa sy/vatica*), live oak (*Quercus virginiana*), southern red oak (*Q. facata*), white oak (*Q. alba*), water oak (*Q. nigra*), and magnolia (*Magnolia sp.*). Saw-palmetto (*Serrenoa repens*) and honeysuckle (*Ionicera sp.*) are commonly found as two of several understory plants. Fauna includes a wide variety of birds and mammals, including white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), and gray squirrel (*Sciurus carolinensis*).

The principal surface water body receiving drainage from the former FTA are the drainage ditches to the north and south which flow to the west toward Springfield Canal located 3,600 feet to the west. The ditches originate on the former FTA site and are fed by underground culverts from the flightline area. The ditches assist in draining the northern and southern end of the runways which are located just across Lightning





Revision 1 – April 2012  
Original Report – June 2011

Road. These drainage ditches have concrete and asphalt waste lining both sides of the banks to prevent erosion (see Appendix I – Photographic Log). Flow in the ditches is governed by precipitation runoff. The ditches remain dry during periods of drought and swell during rain events. As a result, the ditches appear to be intermittent drainage conveyance, and any ponded areas of water provide essentially no viable aquatic habitat. To support this conclusion, vegetation growing in the ditches appears to be terrestrial, not wetland or aquatic rooted vegetation. This indicates that the ditches are at best an extremely marginal habitat for aquatic life and only during sporadic, temporary periods when they do contain water. Both sets of ditches are maintained by "bush hog" and are comprised predominantly of emergent grasses.

Additional drainage swales were identified along the northern portion of the site. These ditches were noted to receive waters from culverts originating from the airfield. Drainage appeared to be governed by precipitation runoff and flowed in a northern direction. During the October 2008 inspection, shallow water was observed at a depth of approximately 6 to 12 inches.

#### 8.3.1.2 *Toxicological Profiles*

The mechanisms of ecotoxicity for constituents detected at the site vary depending on a wide range of factors, such as concentrations, receptor species, the exposure route (e.g., ingestion or direct contact), and physical factors (e.g., pH, temperature, oxygen levels, water hardness). Some of the effects that could be observed in wildlife are mortality, reduced reproductive ability, decreased fertility, decreased offspring survival, alteration of immune and behavioral function, decreased hatching success of eggs/larvae, and retarded growth (Sample et al. 1996, USEPA 2001b). The remainder of this subsection discusses mechanisms of ecotoxicity for chemicals detected at the site. These descriptions are presented without consideration of concentrations because the descriptions are intended to convey an understanding of potential effects, rather than to describe the concentrations at which these effects might occur.

Volatile Organic Compounds – VOCs tend to attenuate rapidly in surface soil, sediment, and surface water due to their inherent volatility. Although the effects of VOCs on ecological receptors are not well-understood, there have been extensive inhalation studies of the effects of VOCs under laboratory conditions. Inhaled volatile organics are typically metabolized in the body (often the liver), which may cause liver damage (depending on the organism) or the release of more toxic secondary metabolites. The VOCs or their metabolites may also cause neurological damage, and



Revision 1 – April 2012  
Original Report – June 2011

many are mutagenic or carcinogenic. Additionally, some VOCs are fetotoxic and/or teratogenic (USEPA 2005; Sample et al. 1996).

Polynuclear Aromatic Hydrocarbons (PAHs) – PAHs (such as benzo(a)pyrene, chrysene, fluoranthene, and pyrene) are often released as a result of human activities, such as the incomplete combustion of fossil fuels or other organic materials. Some of these compounds are persistent and are known to be mammalian carcinogens, though the ecological effects of PAHs that are not carcinogenic are not well understood. Most PAHs are sorbed to solid particles in the environment, which radically reduces the bioavailability and toxicity of the sorbed PAHs. PAHs may be transformed by biotic and abiotic processes in the environment, and may bioaccumulate. PAHs have been shown to cause changes in liver enzymes and to perturb cell membranes but, in general, are not viewed as acutely toxic. Sublethal effects attributed to PAHs in aquatic animals include reduced reproductive ability and fertility, developmental abnormalities, delayed or retarded maturation, histological changes, and carcinogenesis (Neff, 1985).

#### Herbicides and Organochlorine Pesticides

While some herbicides and organochlorine pesticides (e.g., aldrin, dieldrin, endrin) may exhibit acute toxicity, the most toxicity is due to long-term, chronic effects. These effects may include reduced fecundity, chronic lethality, neurological effects, cessation of feeding, and bone degeneration (Nimmo and McEwen 1994; Fontenot 1999a, b). The mode of action for herbicides and organochlorine pesticides is not well understood, but they generally disrupt electrolyte balance in neurons and prevent them from conducting nerve impulses normally (Ware 1994). This manifests neurological effects such as reduced mobility, tremors, loss of equilibrium, convulsions, abnormal flexure, and lethargy or prostration. In addition, pesticides are well-known for causing eggshell thinning in birds and, thereby, reducing reproductive success (Newman 1998; Sample et al. 1996). In general, the organochlorine pesticides have very low water solubility and are considered insoluble (Nimmo 1985). However, they are soluble in polar solvents, and will preferentially move into fatty tissues. This fact, combined with the very slow breakdown rates, indicates that they will bioconcentrate into organisms in the lower levels of the food chain (such as worms) and will biomagnify into organisms in the higher levels of the food chain (such as raptors).

Inorganics – Many trace inorganics (e.g., cobalt, copper, chromium, iron, manganese, nickel, molybdenum, selenium, and zinc) are important in plant and animal nutrition, but the optimal concentration ranges are usually narrow (Leland and Kuwabara 1985). Other inorganics are nonessential, such as lead, cadmium, and mercury, and are toxic



Revision 1 – April 2012  
Original Report – June 2011

to receptors at very low concentrations. Mechanisms of toxicity depend on the nature of the reactivity of the inorganic itself (Efroymsen et al. 1997a). They may alter or inhibit enzyme activity, interfere with deoxyribonucleic acid (DNA) synthesis or electron transport, or block uptake of essential elements. Little is known about mechanisms of toxicity of constituents in earthworms (Efroymsen et al. 1997b).

Trace metals such as chromium, copper, and zinc are essential for healthy enzyme function, and some organisms cannot survive without these metals. However, these naturally occurring constituents may cause adverse effects when exposure occurs at concentrations that significantly exceed background concentrations. Imbalances in the essential trace metals may cause a decrease in photosynthetic ability, poor spawning/hatching success, teratogenesis, susceptibility to predation and disease, reduced growth, mortality, histopathological changes, organ dysfunction of the liver or kidneys, neurological defects, changes in respiration and osmoregulation, and anemia. Some metals may bioaccumulate, but this mechanism is thought to be a less important ecological concern. Because these constituents are naturally occurring, many organisms have a capacity (albeit limited) to biotransform and/or eliminate naturally occurring inorganics (Newman 1998; Leland and Kuwabara 1985).

#### 8.3.1.3 *Media of Concern*

Surface soil is the primary environmental media at the Site with which contact by ecological receptors is possible. There are no direct seeps of groundwater to soil that could serve as foraging grounds for ecological receptors. Furthermore, as discussed in Section 8.3.11, the drainage ditches only temporarily hold surface water and, for the most part, they are covered with terrestrial grass. The limited portions of the drainage ditches that do hold water during high rain events are lined with concrete and/or asphalt and do not provide suitable habitat for aquatic life (i.e., fish and benthic invertebrates). The lack of aquatic life in the drainage ditches prevents any upper-trophic level birds or mammals from foraging in the ditches. As a result, groundwater, surface water, and sediment are not considered to be direct and complete exposure pathways and are therefore not identified as media of concern for ecological receptors at the site. However, based on comments from the GADEP, the sediment was evaluated as if it were soil with a terrestrial perspective. The site-specific CSM is depicted in Figure 8-3.



Revision 1 – April 2012  
Original Report – June 2011

8.3.1.4 *Potentially Exposed Receptors*

The identification of the categories of receptors most likely to be exposed helps to focus the SLERA. Potentially exposed receptors are designated based on the available habitat associated with the Site. Section 8.3.1.1 provides a description of the habitat associated with the Site as well as wildlife observed or potentially present in these habitats. As described above and presented in the CSM, potentially exposed receptors include terrestrial wildlife (i.e., mammals and birds), soil invertebrates, and terrestrial plants.

As part of the identification of potentially exposed receptors, it is necessary to identify protected species that may be exposed to site constituents. The listings of threatened and endangered as well as tracked, rare, and unusual species were obtained from the Georgia Department of Natural Resources (GADNR, 2010) and the US Fish and Wildlife Service (USFW, 2010) online databases for Chatham County. No threatened or endangered species were identified at the Site, and the habitat present at the Site was found not to be suitable to support threatened or endangered species. The list of threatened and endangered species and habitats is presented in Table 8-2.

8.3.1.5 *Potentially Complete Exposure Pathways*

A complete exposure pathway is "one in which the chemical can be traced or expected to travel from the source to a receptor that can be affected by the chemicals" (USEPA 2001c). Therefore, a constituent, its release and migration from the source, a receptor, and the mechanisms of toxicity of that constituent must be demonstrated before a complete exposure pathway can be identified. The table below summarizes the potential exposure routes for the site, which is also illustrated in the CSM (Figure 8-3).

<b>Ecological Community</b>	<b>Possible Exposure Routes</b>
Terrestrial wildlife (i.e., birds and mammals)	Incidental ingestion of surface soil Direct contact of surface soil Ingestion of prey tissue
Terrestrial soil invertebrates (i.e., earthworms)	Direct contact of surface soil Ingestion of surface soil
Terrestrial plants	Direct contact of surface soil



Revision 1 – April 2012  
Original Report – June 2011

#### 8.3.1.6 *Assessment and Measurement Endpoints*

Assessment endpoints are the explicit expression of the ecological values to be protected (USEPA 1997). The selection of assessment endpoints depends on knowledge of the receiving environment, knowledge about the constituents released (including their toxicological properties and the relevant concentrations), and understanding of the values that will drive risk management decisions (Suter et al. 1995). Consistent with USEPA (1998) guidance, two elements are required to define an assessment endpoint: the specific valued ecological entity and the characteristic about the entity that is important to protect.

USEPA guidance provides that Superfund remedial actions should be designed not to protect organisms on an individual basis, but to protect local populations and communities of biota (USEPA 1999). Thus, the first management principle for conducting an ecological risk assessment is to provide a basis for selecting a response action “that will result in the recovery and/or maintenance of healthy local populations/communities of ecological receptors that are or should be present at or near the site” (USEPA 1999). The USEPA (1999) guidance also notes, as an exception to this rule, that threatened and endangered species may be evaluated on an individual basis. In concept, however, this focus is justified on the basis that, given the stressed nature of a threatened and endangered population, effects on individuals could impact the local population.

For the site, assessment endpoints include the following:

- § Sustainability of mammal populations
- § Sustainability of avian populations
- § Sustainability of terrestrial plant communities
- § Sustainability of terrestrial soil invertebrate communities (i.e., earthworms)

Because direct measurement of assessment endpoints is often difficult or infeasible, surrogate endpoints, called measurement endpoints, are used to provide the information necessary to evaluate whether the values associated with the assessment endpoint are being protected. A measurement endpoint is defined as a measurable ecological characteristic and/or response to a stressor (USEPA 1998). Hazard Quotients serve as the measurement endpoints for the SLERA. The HQ is the ratio of the exposure point concentration (EPC) of a given constituent to its ecotoxicity screening value (ESV). Exposure point concentrations in the SLERA are identified as the maximum concentrations of chemicals.



Revision 1 – April 2012  
Original Report – June 2011

ESVs are chemical concentrations in environmental media below which there is negligible hazard to receptors exposed to those media (USEPA 2000a). ESVs are generally based on effects such as mortality and reproductive impairment, and are assumed to be widely applicable to sites around the United States for screening purposes (USEPA 1997). For most constituents and receptors, the data available to generate ESVs are limited and related to effects on individual organisms, rather than subpopulations or communities. Given these limitations, conservative assumptions are used to ensure that the ESVs are protective. Where ESVs are published, users are cautioned to recognize that such screening values do not constitute remediation goals, as they are sometimes based on highly conservative exposure assumptions and/or wildlife receptors that may not be applicable to a particular site. As such, their robustness and biological association with the assessment endpoint may be limited.

#### 8.3.2 Screening-Level Ecological Effects Evaluation

The screening-level ecological effects evaluation (also Step 1 of the SLERA) involves the identification of ESVs for each detected constituent at the Site. As described above, ESVs are based on conservative assumptions to ensure that the values are protective and applicable to a wide variety of sites. Regardless, ESVs provide a starting point for the SLERA as they provide an indication of the worst-case measure of the potential for adverse impacts.

The ESVs used for this SLERA are consistent with GAEPD recommendations for HSRA and were identified from the USEPA Region 4 Ecological Screening Values (R4; USEPA 2001b). These values represent only highly conservative ESVs, as is appropriate for a SLERA (USEPA 1997; 1998; 2000a). These ESVs do not represent the range of ESVs that are available from a variety of other regulatory and scientific sources.

#### 8.3.3 Screening-Level Exposure Estimate and Risk Calculation

The screening-level exposure assessment is Step 2 of the SLERA process and consists of the identification of exposure estimates, hazard calculations, and the evaluation of uncertainties (USEPA 1997, USEPA 2001a). These form the lines of evidence necessary to support the SMDP at the conclusion of the SLERA (Section 8.3.4).

As a first step in the data screening process, chemicals with a detection frequency less than or equal to 5 percent were eliminated from further analysis (USEPA 1989, 2001).



Revision 1 – April 2012  
Original Report – June 2011

Then, exposure estimates for the SLERA were identified using the maximum detected concentrations for each constituent (USEPA 1997, USEPA 2001a). This conservative is appropriate for a SLERA. Exposure estimates are presented in Table 8-3 for surface soil and Table 8-7 for sediment assessed as soil.

Potential hazards to ecological receptors are calculated by dividing the exposure estimates (i.e., the maximum detected concentrations) by the conservative ESVs. The resulting ratio, the HQ, is a highly conservative surrogate for one or more of the assessment endpoints identified in Section 8.3.1.6. HQs equal to or less than a value of 1 (to one significant figure) indicate that adverse ecological impacts are unlikely (USEPA 1997). HQs greater than 1 indicate that further evaluation is warranted. Therefore, the constituents with HQs greater than 1 are carried forward as COPECs into Step 3a of the BERA.

#### 8.3.3.1 *Surface Soil*

Results of the SLERA for surface soil are presented in Table 8-3 and indicate 10 constituents in surface soil (0 to 2 feet bls) had maximum HQs greater than 1, and therefore were identified as COPECs: anthracene, benzo[a]pyrene, bis(2-ethylhexyl)phthalate, fluoranthene, phenanthrene, pyrene, 4,4'-DDT, dieldrin, cadmium, and chromium.

Eleven constituents in surface soil lack ESVs and were therefore identified as COPECs (Table 8-3): acetone, CFC-11, acenaphthylene, benz[a]anthracene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzoic acid, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene.

#### 8.3.3.1 *Sediment as Soil*

Results of the SLERA for sediment that was assessed as soil from a terrestrial perspective are presented in Table 8-7 and indicate 8 constituents in sediment had maximum HQs greater than 1, and therefore were identified as sediment as soil COPECs: anthracene, benzo[a]pyrene, fluoranthene, naphthalene, phenanthrene, pyrene, chromium, and lead.

Sixteen constituents detected in sediment lack ESVs and were therefore also identified as COPECs (Table 8-7): acetone, carbon disulfide, CFC-11, 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, 4-bromofluorobenzene, acenaphthylene, benz[a]anthracene, benzo[b]fluoranthene, benzo[g,h,i]perylene,





Revision 1 – April 2012  
Original Report – June 2011

benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, fluorene, and indeno[1,2,3-cd]pyrene.

#### 8.3.4 Scientific Management Decision Point

The SMDP represents a critical step in the ecological risk assessment process where risk management decision-making occurs (Figures 8-1 and 8-2). Generally, the following types of decisions are considered at this SMDP:

- § Whether the available information is adequate to conclude that ecological hazards are negligible and, therefore, there is no need for remediation to mitigate ecological hazards.
- § Whether the available information is not adequate to make a decision at this point, and the ecological risk assessment process should continue.
- § Whether the available information indicates a potential for adverse ecological effects, and a more thorough assessment or remediation is warranted.

As described above, the SLERA for the Site identified 21 COPECs, therefore, the possibility of adverse effects to ecological receptors cannot be ruled out, and the initial step of a BERA is warranted.

#### 8.4 Baseline Ecological Risk Assessment

The BERA is designed to more realistically identify the nature and extent of ecological hazards to support informed risk management decision-making (USEPA 1997, 2000a). This approach contrasts with the SLERA, which is designed to conservatively rule out further evaluation of constituents and media that clearly do not pose a significant ecological hazard. As indicated on Figure 8-1 and Figure 8-2, the BERA process involves numerous steps. These steps are executed in a manner appropriate to the conditions at any individual site (USEPA 1997, 2000a).

The USEPA process shows that the BERA begins with Step 3, the Problem Formulation (Figure 8-1). A more detailed look at the Step 3 shows that it is typically divided into Step 3a and Step 3b (Figure 8-2). “Step 3a serves to introduce information to refine the hazard estimates from Steps 1 and 2. For the majority of sites, ERA activities will cease after Step 3a” (USEPA 2000a). Step 3a provides a “reality check” so that “sites that do not warrant further study are not carried forward” (USEPA 2000a).





Revision 1 – April 2012  
Original Report – June 2011

Step 3b, the “additional problem formulation” is initiated only for those sites that warrant further study.

This section presents Step 3a of the BERA for the site. This approach is consistent with the following ecological risk assessment guidance and guidelines:

- § *ECO-Update: Role of Screening-level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments* (USEPA 2001a)
- § *Ecological Risk Assessment Guidance for Superfund* (USEPA 1997)
- § *Guidelines for Ecological Risk Assessment* (USEPA 1998)

This section presents Step 3a of the BERA for the site. Step 3a of the BERA is a refinement of the Step 2 exposure estimates and hazard characterization, and focused only on the COPECs and media that progress beyond the SLERA. Since further ecological evaluation was indicated, it was conducted with the intent to be an “incremental iteration of exposure, effects, and risk characterization” (USEPA 2001a). Therefore, the assumptions used in Step 3a are refinements of the conservative estimates of exposure and toxicological impacts, to site-specific (or receptor-specific) estimates of exposure, and alternative screening values (ASVs) (USEPA 2001b). Hazards were recalculated using these refined assumptions to further eliminate the number of COPECs that are retained for further evaluation in the BERA process.

Risk characterization in Step 3a is based on HQs generated for direct contact COPECs using ASVs and for bioaccumulative COPECs based on food chain modeling. The calculated HQs are considered within the context of weight-of-evidence and ecological significance of the hazard estimates. A weight-of-evidence approach is a means to evaluate the value of the information provided by measurement endpoints and observations made about a site (Menzie et al. 1996; Barnhouse 2007). This approach is particularly useful when conflicting predictions of hazard are obtained. The weight-of-evidence provided by the HQs and field observations are evaluated to make conclusions regarding hazard characterization.

Step 3a involves the following:

- Refinement of COPECs
- Refinement of Exposure Point Concentrations
- Alternative Screening Values



Revision 1 – April 2012  
Original Report – June 2011

- Hazards to Upper-trophic Level Wildlife
- Hazard Characterization
- Uncertainties
- Summary and Conclusions

#### 8.4.1 Refinement of COPECs

The refinement of the COPECs identified in the SLERA is necessary to help focus and streamline further risk assessment activities on the constituents that pose the greatest potential hazard to ecological receptors (USEPA 1997, 2001a). It is intended as an “incremental iteration of exposure, effects, and risk characterization” (USEPA 2001a). The outcome of this screening is that constituents are either excluded as COPECs or retained for further evaluation in the BERA process. The process for refining the COPECs generally consists of two steps: 1) the comparison of maximum detected concentrations with background concentrations; and 2) using the upper confidence limits on the mean (UCLs) as the EPCs and comparing those to alternative ESVs. The comparison to background step is applicable for inorganic constituents, and is not applicable for organic constituents, under most circumstances, because these constituents are not naturally occurring. Soil background levels for inorganics were identified from the Final Compliance Status Report for the Fire Training Station at HAAF (Law, 2002) and were incorporated into the BERA screen.

#### 8.4.2 Refinement of Exposure Point Concentrations

Exposure point concentrations (EPCs) were calculated based on the upper confidence limit of the mean of the data (UCLs) by statistical software provided by USEPA (ProUCL). This program calculates the UCLs based on different statistical assumptions and then selects the most representative statistic based on characteristics of the data set such as sample size, measures of variance, and frequency of detection (FOD). The most recent available version of the ProUCL software (version 4.00.05, USEPA 2010) was utilized to calculate UCLs for each COPEC. UCLs were calculated for datasets with a minimum of 5 samples detected. The lower of the UCL or the maximum detected value was used as the EPC for the refined data screen. Output files from ProUCL are presented in Appendix J.



Revision 1 – April 2012  
Original Report – June 2011

#### 8.4.3 Alternative Screening Values

An expanded list of ecological screening values (i.e., alternative screening values [ASVs]) was used to screen the UCLs. There are several reasons to include ASVs, and the methodology is consistent with the approach for, “incremental iteration of exposure, effects, and risk characterization” (USEPA 2001a, 1997c). For example, some constituents may not have screening values in the guidance used in the SLERA. Also, an expanded list of ASVs may provide insight into the type or likelihood of impacts (e.g., acute vs. chronic effects, threshold effects levels, severe effects levels, median effects levels, probable effects levels). ASVs used for this BERA were obtained from the following sources:

- USEPA Ecological Soil Screening Levels (EcoSSLs) (2005)
- USEPA Region 5 Ecological Screening Levels (USEPA 2003; R5)

A summary of the refined HQs and their likelihood for adverse impacts based on direct contact with surface soil is discussed in the Risk Characterization (Section 8.4.5) and presented in Table 8-4 for soil and Table 8-8 for sediment assessed as soil.

#### 8.4.4 Risks to Upper-Trophic Level Wildlife

Preliminary ingestion-based food chain modeling is used in Step 3a of the BERA to evaluate potential adverse effects to upper-trophic level wildlife from bioaccumulative COPECs. The remainder of this section provides general information regarding the following components of the model:

- Wildlife Receptors and Exposure Parameters
- Bioconcentration Factors
- Food Chain Ingestion Modeling
- Toxicity Reference Values
- Wildlife Dose Models

##### 8.4.4.1 *Wildlife Receptors and Exposure Parameters*

Indicator species were chosen to represent a cross-section of feeding guilds for selected assessment endpoints and allow for an estimation of rates of survival, growth, and reproduction for populations of receptors they represent.

Feeding guild and indicator species are as follows:



Revision 1 – April 2012  
Original Report – June 2011

- Invertivorous bird - American robin (*Turdus migratorius*)
- Invertivorous mammal - Short-tailed shrew (*Blarina brevicaudus*).

A graphical representation of the terrestrial receptors identified for the site for food chain modeling is presented in Figure 8-3. The shrew and robin were selected because these species are known to be susceptible to food chain exposures. Earthworms comprise a major component of the shrew and robin diets and accumulate persistent compounds (USEPA 1993). As a conservative measure, the diet of both the shrew and the robin were assumed to consist of 100% earthworms. As such, if hazards are not predicted for these species, then hazards would not be expected for species with lesser exposures to bioaccumulative constituents (e.g., herbivores). In addition, dietary and toxicological information is available for these species (e.g., USEPA 1993; Sample et al. 1996), making food chain modeling feasible.

The short-tailed shrew is one of the most common mammals in America and may be present in the site vicinity. The short-tailed shrew also represents a conservative species for use in the BERA because it has a very high ingestion rate, and it consumes a high percentage of earthworms in its diet compared with other mammalian species. If hazards are not predicted for this species, then hazards should not be expected for species with lesser exposures to bioaccumulative constituents (e.g., herbivorous mammals).

The American robin is prolific throughout the United States, with a home range that includes Georgia. This bird is likely to forage in open areas and the ecotone between woodlands and open areas (i.e., edge habitat), and thus may be exposed to bioaccumulative COPECs at the site. The American robin also can be used as a surrogate species to represent other species that are likely to be present at the site and in the adjacent woodlands, but for which less exposure-related and toxicological information is available. Hazards to the American robin could identify potential hazards to other species with similar diets.

Exposure parameters for each receptor were obtained from USEPA's Wildlife Exposure Factors Handbook (USEPA, 1993). One of the exposure parameters, the size of the home range, is an important factor in estimating the amount of time a receptor spends onsite and thus, the amount of exposure to COPECs. This is accounted for by using a site use factor (SUF) in the equation. As a conservative measure, the SUF was set to 1 implying that the receptors obtain their entire diet from the site.



Revision 1 – April 2012  
Original Report – June 2011

#### 8.4.4.2 *Bioconcentration Factors*

Soil bioconcentration factors (BCFs) used for the food chain modeling were obtained from constituent- specific documentation for USEPA Ecological Screening Levels for Soil (EcoSSL; USEPA 2007). Tissue concentrations for invertebrates in dry weights were converted to wet weight assuming a moisture content of 83.3%.

#### 8.4.4.3 *Toxicity Reference Values*

COPEC-specific toxicity reference values (TRVs) were obtained from the toxicological database presented in USEPA's Ecological Soil Screening Level (EcoSSL) documents (USEPA 2005) and Oak Ridge National Laboratory (ORNL). Toxicological benchmarks are typically reported as no observed adverse effect levels (NOAELs) and lowest observed adverse effect levels (LOAELs). TRVs reported as NOAELs were converted to LOAELs using a factor of 10. Both NOAELs and LOAELs for each COPEC are used in the food chain modeling so that a range of predicted food chain impacts can be evaluated.

#### 8.4.4.4 *Wildlife Dose Models*

Food chain ingestion-based exposure calculations were performed for the identified representative receptor species to characterize potential exposures to constituents via the food chain and to identify potential adverse effects for wildlife at the site. Ingestion modeling is based on species-specific exposure parameters and ingestion intake requirements. The use of upper bound concentrations is intended to represent, in effect, a reasonable maximum exposure estimate. The following model is used to calculate the ingestion based exposure for each indicator receptor:

$$ADD = \frac{\{[(IR_f \times C_f) + (IR_s \times C_s)] \times AUF \times SUF\}}{BW}$$

Where:

- ADD = Average daily dose of COPEC (mg/kg-day)
- IR<sub>f</sub> = Ingestion rate of food (kg/d)
- C<sub>f</sub> = Concentration of a COPEC in food (mg/kg)
- IR<sub>s</sub> = Ingestion rate of soil (kg/d)
- C<sub>s</sub> = Concentration of a COPEC in soil (mg/kg)
- SUF = Site use factor (unitless)
- BW = Body weight (kg)



Revision 1 – April 2012  
Original Report – June 2011

To estimate the concentration of COPEC in food ( $C_f$ ), the following equation is used:

$$C_f = (C_s \times \%Plant \times BCF) + (C_s \times \%Invert \times BCF) + (C_s \times \%Flesh \times BAF)$$

Where:

$C_f$	=	Concentration of a COPEC in food (mg/kg)
$C_s$	=	Concentration of a COPEC in soil (mg/kg)
BCF	=	Bioconcentration factor (unitless) (Table 5)
BAF	=	Bioaccumulation factor (unitless) (Table 5)
%Plant	=	Percentage of plants in diet
%Invert	=	Percentage of invertebrates in diet
%Flesh	=	Percentage of flesh in diet (mammals, birds, etc.)

Estimated ingestion intakes were divided by TRVs to obtain HQs for the bioaccumulative COPECs. A HQ value of 1 or less is considered to indicate that adverse effects are not expected. An HQ above 1 indicates the need for further refinement. Results are presented in Tables 8-5 and 8-6 for the shrew and robin, respectively from exposure to soil and Tables 8-9 and Table 8-10 also for shrew and robin from exposure to sediment assessed as soil.

#### 8.4.5 Risk Characterization

This section presents the results of the ecological risk assessment and discusses the potential hazards to ecological receptors per constituent below. Where possible, hazards are discussed quantitatively, based the relative magnitude of the HQs. If HQs could not be calculated due to a lack of toxicity data, the results are discussed qualitatively. The following COPECs did not have identified ESVs: 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, 4-bromofluorobenzene in sediment and benzoic acid in soil. Ecotoxicological information for those constituents is limited and their effects were not quantitatively evaluated. The qualitative assessment of benzoic acid in surface soil is described below.

#### Benzoic Acid

ASVs for benzoic acid were not identified; therefore, hazard from benzoic acid is qualitatively assessed. Benzoic acid or carboxybenzene is a common food additive and is used in the synthesis of other organic chemicals (Perrin and Armarego 1988). It is also naturally occurring in plants (notably berries and apples) and has been found in the urine of elephants (WHO IPCS 2000). The oral  $LD_{50}$  for rats is 3040 mg/kg, for



Revision 1 – April 2012  
Original Report – June 2011

mice it is 1940–2263 mg/kg. The one surface soil sample where benzoic acid was detected was located at HMW-10 at a concentration of 0.51 mg/kg. The one low detection of a chemical that is known to naturally occur indicates no possibility of potential adverse effects to ecological receptors at the site.

#### Benzo[a]anthracene

Benzo[a]pyrene (BaA) was detected in 6 out of 7 sediment samples. The HQ calculated for direct exposure to sediment assessed as soil using the R5 ESL was above 1 (Table 8-8). Because BaA is considered a bioaccumulative chemical and the HQ for direct contact to terrestrial organisms exceeded the threshold value of 1, it was also assessed in a dose model to upper-trophic level wildlife.

Potential hazards to the short-tailed shrew and American robin were conservatively estimated for dietary exposure to BaA using a diet consisting of 100% earthworms and the sediment UCL as the EPC. HQs for both the shrew and the robin slightly exceeded 1 (3) when based on the NOAEL TRV and were below 1 (0.3) when based on the LOAEL TRV (Table 8-9 and 8-10).

#### Benzo[a]pyrene

Benzo[a]pyrene (BaP) was detected in 12 of 39 samples, with a maximum concentration of 26 mg/kg and a UCL of 3.6 mg/kg. BaP was also detected in 5 of 7 sediment samples, with a maximum concentration of 27 mg/kg and a UCL of 14 mg/kg. The HQ calculated for direct exposure to both surface soil and sediment assessed as soil using the R5 ESL were above 1 (Tables 8-4 and 8-8). Because BaP is considered a bioaccumulative chemical and the HQ for direct contact to terrestrial organisms exceeded the threshold value of 1, it was also assessed in a dose model to upper-trophic level wildlife.

Potential hazards to the short-tailed shrew and American robin were conservatively estimated for dietary exposure to BaP using a diet consisting of 100% earthworms and the surface soil and sediment UCLs as the EPCs. HQs for both the shrew and the robin were below 1 when based on both NOAEL and LOAEL TRVs and surface soil (Tables 8-5 and 8-6). HQs for both the shrew and the robin slightly exceeded 1 (2) when based on the NOAEL TRV and were below 1 (0.2) when based on the LOAEL TRV (Table 8-9 and 8-10).



Revision 1 – April 2012  
Original Report – June 2011

### Chrysene

Chrysene was detected in 6 out of 7 sediment samples. The HQ calculated for direct exposure to sediment assessed as soil using the R5 ESL was above 1 (Table 8-8). Because chrysene is considered a bioaccumulative chemical and the HQ for direct contact to terrestrial organisms exceeded the threshold value of 1, it was also assessed in a dose model to upper-trophic level wildlife.

Potential hazards to the short-tailed shrew and American robin were conservatively estimated for dietary exposure to chrysene using a diet consisting of 100% earthworms and the sediment UCL as the EPC. HQs based on the NOAEL TRV (6 and 7 for the shrew and the robin, respectively) exceeded 1. However HQs based on the LOAEL TRV were below 1 (Table 8-9 and 8-10).

### Dieldrin

Dieldrin was detected in only 3 of 20 samples, with a maximum concentration of 0.043 mg/kg. Because of the small number of samples where dieldrin was detected, a UCL could not be calculated and the maximum concentration was used instead to calculate hazard. The direct contact HQ calculated using the maximum concentration and the ASV (EcoSSL) was 9 (Table 8-4). Because dieldrin is considered a bioaccumulative chemical and the HQ for direct contact exceeded the threshold value of 1, it was also assessed in a dose model to upper-trophic level wildlife.

Potential hazards to the short-tailed shrew and American robin were conservatively estimated for dietary exposure to dieldrin using a diet consisting of 100% earthworms and the maximum concentration as the EPC. The HQ based on the NOAEL TRV for the shrew (4) exceeded 1 while the LOAEL-based HQs for the shrew (0.4) was below 1 (Table 8-5). For the robin, only the NOAEL-based HQ exceeded 1 (16; Table 8-6) and the NOAEL TRV slightly exceeded 1 (2; Table 8-6).

### Lead

Lead was a COPC for sediment assessed as soil. All detected lead concentrations in both soil and sediment were below the screening level with the exception of one detection in sediment sample SD\_3 collected in 1990 (356 mg/kg). Potential hazards to the short-tailed shrew and American robin were conservatively estimated for dietary exposure to lead using a diet consisting of 100% earthworms and the concentration at SD-3 as the EPC. The HQs for the shrew were 1 and 2 based on the NOAEL and the





Revision 1 – April 2012  
Original Report – June 2011

LOAEL, respectively (Table 8-9). For the American robin, the HQs were 8 and 16 based on the NOAEL and the LOAEL, respectively (Table 8-10). The HQs based on the second highest concentration in sediment of 29 mg/kg were below 1 for both the shrew and were 1 and 2 based on the NOAEL and the LOAEL, respectively for the robin.

#### 8.4.6 Risk Characterization Results

Calculated HQs based on NOAEL TRVs for both the shrew and the robin for exposure to dieldrin in surface soil and BaA, BaP, and chrysene in sediment were above 1, while HQs for same COPECs were all below 1 if based on LOAEL TRVs. The HQs for both the robin and the shrew from exposure to lead concentration in one sample in sediment were above 1; however the HQs based on the second highest sample were below one for the shrew or 1 and 2 based on the NOAEL and the LOAEL, respectively for the robin. Because the LOAEL-based TRVs are much more realistic estimate of potential adverse effects, adverse effects to upper-trophic level wildlife from exposure to these COPECs at the site are considered unlikely.

Hazard to terrestrial wildlife from exposure to dieldrin in surface soil is especially unlikely because dieldrin was only detected in a small area of the site. Dieldrin was only detected in 3 out of 20 surface soil samples (SB-025, SB-026, and SB-027). As such, the HQs were calculated based on maximum concentrations from three samples in the localized area. The true EPC of dieldrin is likely much lower. Further, this localized area (with a radius of approximately 200 feet) represents a small percentage of the shrew's average foraging range (1 acre). Moreover, this area is maintained short grass without cover which is not ideal habitat for shrew or other small wildlife mammals. Because hazard from exposure to the area with dieldrin impacts is low, a remediation action level was not developed.

**Hazard to terrestrial wildlife from exposure to sediment is also unlikely. The area of the drainage ditches represent a small percentage of the shrew and robin's average foraging range and less than the de minimis areal extent typically used in an ecological risk assessment of 1-2 acres (Suter et al. 1995; Henning and Shear 1998; Efrogmson et al. 2003).**

#### 8.4.7 Uncertainties

A BERA is designed to evaluate potential hazards to ecological receptors by incorporating iterative changes that reduce uncertainty (when possible). Uncertainties associated with the ERA are summarized in Table 8-11.



Revision 1 – April 2012  
Original Report – June 2011

#### 8.4.8 Summary and Conclusions

This ERA presents the results of a SLERA and Step 3a BERA for ecological receptors at the Site based on HQs. An HQ less than or equal to a value of 1 indicates that adverse impacts to wildlife are considered unlikely (USEPA 2004a). An HQ greater than 1 indicates that adverse effects of some kind may have occurred in the past or may occur in the future and that further analysis of potential ecological hazards may be warranted.

Hazards were characterized for ecological receptors at the site by considering direct contact with COPECs in surface soil (0-2 ft bls) and through ingestion of prey tissue through a food web model to upper-trophic level wildlife. Overall potential ecological hazards are low to negligible for exposure to site surface soil. Most chemicals have HQs below 1. The two COPECs with direct contact HQs above 1 were relatively low (2 for benzo(a)pyrene and 9 for dieldrin). Potential hazards modeled to upper-trophic level invertivorous birds and mammals are also low, with LOAEL-based HQs less than 1 for the robin and only slightly above 1 for the shrew. The LOAEL-HQ that exceeded 1 is based on three localized detections of dieldrin, which represent a very small portion of the overall exposure area.

Based on this assessment, ecological hazards at the Site are minimal and no further evaluation is required.



Revision 1 – April 2012  
Original Report – June 2011

## **9. Public Involvement**

The opportunity for public involvement will be provided in accordance with the GAEPD, *HSRA*, Section 391-3-19-.06(5). A copy of the CSR will be made available to the public at the Live Oak Public Library, Chatham County, located at 2002 Bull Street, Savannah, GA 31419. Additionally, a public notice will be published in the Savannah Daily News and in The Frontline, a Fort Stewart publication announcing that the CSR is available for inspection by the public. A statement including the following will be included in the public notice:

*“The Georgia Environmental Protection Division, Department of Natural Resources, State of Georgia (GAEPD) has placed this site on the Hazardous Site Inventory pursuant to its authority under the Hazardous Site Response Act and Rules promulgated thereunder. As required by the Rules for Hazardous Site Response, the responsible party for this site was required to investigate the site and submit a compliance status report to GAEPD summarizing the results of that investigation. GAEPD is currently reviewing the compliance status report to determine if corrective action is needed for regulated substances that have been released at this site. Before GAEPD decides whether corrective action is needed, the public has the opportunity to review the compliance status report and provide comments to GAEPD about the report.”*

The notice will also include the announcement of a 30-day public comment period beginning on the date of the notice and will provide the location of the above referenced library where the CSR can be viewed. The public notice will also provide the name, address and telephone number of the responsible party or its designated contact person and the GAEPD contact person to whom written or oral comments can be made. The GAEPD will be provided with an exact copy of the public notice within 15 days of the publication of the notice. The Chatham County government will be provided with the same written notice within 7 days of the submittal of the CSR to the GAEPD.



Revision 1 – April 2012  
Original Report – June 2011

## 10. Conclusions

In November and December 2009, soil and groundwater investigations were completed at the former FTA and DAACG Area to complete delineation of previously detected compounds in soil and/or groundwater. Results of soil laboratory analysis in the former FTA showed the detection of several compounds above the PQL, including several metals, VOCs, and one SVOC (bis[2-ethylhexyl]phthalate). Of the contaminants detected, none exceeded the Type 1 RRS. In addition, the reported metals concentrations were below the calculated UBC, with the exception of chromium concentrations at 3 locations. Groundwater samples collected and analyzed in January and February 2012 provided further delineation of compounds in groundwater.

The laboratory analysis of soil samples collected from new monitor well locations in the DAACG area showed detections of VOCs, metals, and pesticides. Of these compounds, no exceedances of the Type 1 RRS were observed. In addition, the majority of metal compounds detected were observed to be below the established UBC. The majority of VOCs detected can be identified as either naturally occurring (carbon disulfide), common laboratory artifacts (acetone, chloromethane), or were detected at low concentrations qualified as estimated.

Results of groundwater laboratory analysis in the former FTA area revealed detections of multiple compounds in exceedance of the Type 1 RRS (benzene, 1,1,2,2-tetrachloroethene and naphthalene). Detections of these compounds are consistent with previous groundwater monitoring results at the FTA. In addition, multiple compounds were detected at concentrations above the PQL but below the RRS. Laboratory analytical results for monitor well HA01-MW-17, installed northwest of existing monitor well HMW-10 to delineate benzene in the former Fire Training Area, revealed no detection of benzene. As shown on Figure 5-31, the extent of benzene in groundwater has been horizontally delineated to non-detect concentrations.

Groundwater laboratory analysis of the new monitor wells installed in the DAACG area, as well as analysis of the existing monitor well network in the DAACG area, showed detections of multiple compounds exceeding the Type 1 RRS or the MCL when no RRS has been established (aldrin, benzene, cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride). Multiple compounds were also detected at concentrations below the RRS. In general, metals detected in groundwater were below the established UBC. Taking these factors into account, it can be concluded that COCs in groundwater are delineated in the DAACG Area.



Revision 1 – April 2012  
Original Report – June 2011

The human health risk assessment for HAA-01 (the former FTA and the DAACG Chlorinated Solvents Area site) evaluated the potential risks to human health by comparing the maximum detected soil and groundwater constituents to the Types 1 through 4 RRS. The potential exposure to constituents detected in surface water and sediment also was evaluated by comparing the maximum detected concentrations to the Type 1 RRS. Sixteen constituents were detected in soil at concentrations exceeding the Type 1 RRS and ten constituents were detected at concentrations exceeding the Type 2 standards. In addition, 14 and 6 constituents exceeded the Type 3 and Type 4 RRS, respectively. A total of 33 constituents were detected in groundwater at concentrations that exceeded the Type 1 and Type 3 groundwater RRS. Additionally, 18 and 17 constituents exceeded the Type 2 and Type 4 RRS, respectively, for the shallow groundwater. Eight constituents detected in sediments exceeded the Type 1 and Type 3 RRS. Five constituents detected in sediments exceeded the Type 2 RRS for soil. None of the detected constituents in sediment exceeded the Type 4 RRS. Three constituents detected in surface water exceeded the Georgia in-stream water quality standards (IWQS). All of the detected surface water constituents were compared with Type 4 RRS calculated based on exposure of a recreational receptor. None of the maximum detected concentrations exceeded the Type 4 RRS.

The ERA presented the results of a SLERA and Step 3a BERA for ecological receptors at the site based on HQs. Risks were characterized for ecological receptors at the site by considering direct contact with COPECs in surface soil (0-2 ft bls) and through ingestion of prey tissue through a food web model to upper-trophic level wildlife. Overall potential ecological risks are low to negligible for exposure to site surface soil. Most chemicals have HQs below 1. The two COPECs with direct contact HQs above 1 were relatively low (2 for benzo(a)pyrene and 9 for dieldrin). Potential hazards modeled to upper-trophic level invertivorous birds and mammals are also low, with LOAEL-based HQs less than 1 for the robin and only slightly above 1 for the shrew. The LOAEL-HQ that exceeded 1 is based on three localized detections of dieldrin, which represent a very small portion of the overall exposure area (vicinity of SB-025, SB-026, and SB-027). Based on this assessment, ecological hazards at the site were determined to be minimal with no further evaluation required.



Revision 1 – April 2012  
Original Report – June 2011

## **11. Recommendations**

This CSR for HAA-01 has presented physical, analytical, and risk assessment data to support the conclusion that the potential impacts to the environment by past activities at the site have been sufficiently characterized in surface soil, subsurface soil, sediment, surface water and groundwater. Based on the data provided herein, the following conclusions are submitted for consideration by the GAEPD:

- § The CSR investigation has been completed, and the potential impacts to the environment by past activities at HAA-01 have been sufficiently characterized and delineated where necessary in surface soils, subsurface soils, sediment, surface water and groundwater.
  
- § A Corrective Action Plan (CAP) will be developed to address CVOC, benzene and aldrin impacts in groundwater in the DAACG Area and benzene and naphthalene impacts in groundwater in the former FTA. Additionally, soil impacts historically detected in the former FTA will also be carried forward in the CAP for further evaluation.

Upon approval of this document, preparation of the CAP will be initiated. The CAP will be prepared to identify the selected corrective action to be implemented in order to address residual compounds in groundwater and soil exceeding the Type 1 RRS.



Revision 1 – April 2012  
Original Report – June 2011

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Revision 1 – April 2012  
Original Report – June 2011

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Revision 1 – April 2012  
Original Report – June 2011

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Revision 1 – April 2012  
Original Report – June 2011

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Original Report – June 2011

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## Compliance Status Report

HAA-01 (Former Fire Training  
Area and DAACG Chlorinated  
Solvent Area)



Revision 1 – April 2012  
Original Report – June 2011

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**Table 5-1a**  
**Historical Soil Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
BH-10	Soil	0.0-1.0 7.5-8.5	1987	--	RCRA Metals, SVOC RCRA Metals, SVOC	Excavated during soil remediation activities
BH-11	Soil	0.0-1.0 7.5-8.5	1987	--	RCRA Metals, SVOC RCRA Metals, SVOC	Excavated during soil remediation activities
BH-12	Soil	0.0-1.0 6.5-7.5	1987	--	RCRA Metals, SVOC RCRA Metals, SVOC	Excavated during soil remediation activities
BH-13	Soil	0.0-1.0 6.0-7.5	1987	--	RCRA Metals, SVOC RCRA Metals, SVOC	Excavated during soil remediation activities
HSB-1	Soil	8.0-10.0	2/12/90	--	VOCs, SVOCs, RCRA Metals	
HSB-2	Soil	3.0-5.0	2/13/90	--	VOCs, SVOCs, RCRA Metals	Excavated during soil remediation activities
HSB-3	Soil	6.0-8.0	2/13/90	--	VOCs, SVOCs, RCRA Metals	
HSB-4	Soil	2.0-4.0	2/13/90	--	VOCs, SVOCs, RCRA Metals	
HSB-5	Soil	5.0-8.0	2/13/90	--	VOCs, SVOCs, RCRA Metals	
HSB-6	Soil	8.0-10.0	2/13/90	--	VOCs, SVOCs, RCRA Metals	
PSB-1	Soil	0.0-1.0 3.0-4.0	3/3/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	
PSB-2	Soil	0.0-1.0 3.0-4.0	3/3/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	
PSB-3	Soil	0.0-1.0 3.5-4.5	3/4/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	
PSB-4	Soil	0.0-1.0 3.5-4.0 5.5-6.5	3/4/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	Excavated during soil remediation activities Excavated during soil remediation activities Excavated during soil remediation activities
PSB-5	Soil	0.0-1.0 3.5-4.0	3/4/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	
PSB-6	Soil	0.0-1.0 3.0-4.0 7.5-8.5	3/3/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	Excavated during soil remediation activities Excavated during soil remediation activities
PSB-7	Soil	0.0-1.0 3.0-4.0 6.0-7.0	3/4/92	--	VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals VOCs, SVOCs, RCRA Metals	Excavated during soil remediation activities Excavated during soil remediation activities
FTASB-01 (SB-01)	Soil	0.5-1.0 2.5-3.0 4.5-5.0 6.5-7.0 8.5-9.0	8/21/95	0 70 100 50 60	NA NA NA NA NA	Excavated during soil remediation activities Excavated during soil remediation activities Excavated during soil remediation activities
FTASB-02 (SB-02)	Soil	0.5-1.0 2.5-3.0	8/21/95	0 60	NA	Excavated during soil remediation activities Excavated during soil remediation activities
FTASB-03 (SB-03)	Soil	0.5-1.0 2.5-3.0	8/21/95	0 60	NA	Excavated during soil remediation activities Excavated during soil remediation activities
FTASB-04 (SB-04)	Soil	0.5-1.0 2.5-3.0 4.5-5.0 6.5-7.0 8.5-9.0 9.0-10.5	8/22/95	0 0 0 0 0 0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
FTASB-05 (SB-05)	Soil	0.5-1.0 2.5-3.0 4.5-5.0 6.5-7.0 8.5-9.0	8/22/95	0 20 20 70 60	NA NA NA NA NA	Excavated during soil remediation activities Excavated during soil remediation activities Excavated during soil remediation activities
FTASB-06 (SB-06)	Soil	0.5-1.0 2.5-3.0 4.5-5.0 6.5-7.0 8.5-10.5	8/22/95	0 0 0 0 >1	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	



**Table 5-1a**  
**Historical Soil Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment	
FTASB-07 (SB-07)	Soil	0.5-1.0	8/22/95	0	NA	Excavated during soil remediation activities	
		2.5-3.0		16	NA		Excavated during soil remediation activities
		4.5-5.0		50	NA		Excavated during soil remediation activities
		6.5-7.0		80	NA		
		8.5-9.0		70	NA		
FTASB-08 (SB-08)	Soil	0.5-1.0	8/22/95	0	NA	Excavated during soil remediation activities	
		2.5-3.0		5	NA	Excavated during soil remediation activities	
		4.5-5.0		60	NA	Excavated during soil remediation activities	
FTASB-09 (SB-09)	Soil	0.5-1.0	8/22/95	0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-3.0		0	NA		
		4.5-5.0		0	NA		
		6.0-7.0		0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-10 (SB-10)	Soil	0.5-1.0	8/22/95	60	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	Excavated during soil remediation activities	
		2.5-3.0		50	NA		Excavated during soil remediation activities
		4.5-5.0		35	NA		Excavated during soil remediation activities
		6.5-7.0		60	NA		
		8.5-9.0		40	NA		
		9.5-10.0		70	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-11 (SB-11)	Soil	0.5-1.0	8/23/95	0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	Excavated during soil remediation activities	
		2.5-3.0		0	NA		Excavated during soil remediation activities
		4.5-5.0		5	NA		Excavated during soil remediation activities
		6.5-7.0		2	NA		
		8.5-9.0		10	NA		
		9.5-10.0		20	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-12 (SB-12)	Soil	0.5-1.0	8/23/95	15	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	Excavated during soil remediation activities	
		2.5-3.0		10	NA		Excavated during soil remediation activities
		4.5-5.0		10	NA		Excavated during soil remediation activities
		6.5-7.0		12	NA		
		8.0-10.0		11	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-13 (SB-13)	Soil	0.5-2.5	10/3/95	0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-4.5		0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-14 (SB-14)	Soil	0.5-2.5	10/4/95	20	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-4.5		50	NA		
		4.5-6.5		162	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-15 (SB-15)	Soil	0.5-2.5	10/4/95	>1	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-4.5		0	NA		
		4.5-6.5		0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-16 (SB-16)	Soil	0.5-2.5	10/4/95	30	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-4.5		40	NA		
		4.5-6.5		40	NA		
		6.5-8.1		30	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
FTASB-17 (SB-17)	Soil	0.5-2.5	10/4/95	0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
		2.5-4.5		2	NA		
		4.5-6.5		0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO		
SB-18	Soil	1.5	7/22/99	NA	VOCs, SVOCs		
		6.0		NA	VOCs, SVOCs		
SB-19	Soil	1.5	7/22/99	NA	VOCs, SVOCs		
		5.5		NA	VOCs, SVOCs		
SB-20	Soil	1.5	7/22/99	NA	VOCs, SVOCs		
		5.5		NA	VOCs, SVOCs		
SB-21	Soil	1.5	7/22/99	NA	VOCs, SVOCs		
		5.5		NA	VOCs, SVOCs		
SB-22	Soil	1.5	7/22/99	NA	VOCs, SVOCs, PCBs, Pesticides		
		5.5		NA	VOCs, SVOCs, PCBs, Pesticides		
SB-23	Soil	1.5	7/29/99	NA	VOCs, SVOCs, PCBs, Pesticides		
		6.5		NA	VOCs, SVOCs, PCBs, Pesticides		

**Table 5-1a**  
**Historical Soil Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
SB-24	Soil	1.5	7/29/99	NA	VOCs, SVOCs, PCBs, Pesticides	
		6.5		NA	VOCs, SVOCs, PCBs, Pesticides	
SB-25	Soil	1.5	7/22/99	NA	VOCs, SVOCs, PCBs, Pesticides	
		5.5		NA	VOCs, SVOCs, PCBs, Pesticides	
SB-26	Soil	1.5	7/22/99	NA	VOCs, SVOCs, PCBs, Pesticides	
		5.5		NA	VOCs, SVOCs, PCBs, Pesticides	
SB-27	Soil	1.5	7/22/99	NA	VOCs, SVOCs, PCBs, Pesticides	
		5.5		NA	VOCs, SVOCs, PCBs, Pesticides	
SB-28	Soil	1.5	7/22/99	NA	VOCs, SVOCs	
		5.5		NA	VOCs, SVOCs	
SB-29	Soil	1.5	7/22/99	NA	VOCs, SVOCs	
		5.5		NA	VOCs, SVOCs	
SB-30	Soil	0.0-2.0	1/5/00	0.5	VOCs, SVOCs	
		6.0-8.0		0.5	VOCs, SVOCs	
SB-31	Soil	0.5-2.0	1/5/00	0.3	VOCs	
		5.0-7.0		0.3	VOCs	
SB-32	Soil	0.5-2.0	1/5/00	0.3	PCBs	
		4.0-6.0		0.0	PCBs	
SB-33	Soil	0.5-2.0	1/5/00	0.1	VOCs, PCBs	
		3.0-5.0		0.4	VOCs, PCBs	
SB-34	Soil	0.0-2.0	1/5/00	0.7	VOCs, Pesticides	
		2.5-4.5		0.1	VOCs, Pesticides	
SB-35	Soil	0.0-2.0	1/6/00	1.7	VOCs, SVOCs, Pesticides	
		4.0-6.0		0.5	VOCs, SVOCs, Pesticides	
SB-36	Soil	0.0-2.0	1/6/00	0.3	VOCs, SVOCs, Pesticides	
		2.0-3.0		0.3	VOCs, SVOCs	
SB-37	Soil	0.0-2.0	1/6/00	0.0	VOCs, SVOCs, Pesticides	
		2.0-3.0		0.0	VOCs, SVOCs	
SB-38	Soil	0.0-2.0	1/4/00	0.6	VOCs, SVOCs	
		3.5-5.5		0.1	VOCs, SVOCs	
SB-39	Soil	0.0-2.0	1/4/00	0.0	VOCs	
		2.0-4.0		0.0	VOCs	
SB-40	Soil	0.0-2.0	1/4/00	11.7	VOCs	
		2.0-4.0		3.2	VOCs	
SB-41	Soil	0.0-2.0	1/31/00	NA	SVOCs	
		2.0-4.0		NA	NA	
SB-42	Soil	0.0-2.0	1/31/00	NA	SVOCs	
		2.0-4.0		NA	NA	
SB-43	Soil	0.0-2.0	11/1/01	0.0	VOCs, SVOCs, and Chromium	
		2.0-4.0		0.0	VOCs, SVOCs, and Chromium	
		4.0-6.0		0.0		
		6.0-8.0		0.0		
		8.0-10.0		0.0		
SB-43A	Soil	0.0-2.0	11/5/01	0.0	Acetone	Confirmation sample of SB-43 (0.0-2.0)
SB-44	Soil	0.0-2.0	11/1/01	NA	NA	
		2.0-4.0		0.0	VOCs, SVOCs, and Chromium	
		4.0-6.0		0.0	NA	
		6.0-8.0		94.0	VOCs, SVOCs, and Chromium	
SB-44	Soil	8.0-10.0	11/1/01	NM	NA	
SB-45	Soil	0.0-2.0	10/31/01	0.0	SVOCs	

**Table 5-1a**  
**Historical Soil Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
SB-46	Soil	0.0-2.0	10/31/01	0.0	VOCs, SVOCS, and Chromium VOCs, SVOCS, and Chromium	
		2.0-4.0		0.0		
		4.0-6.0		0.0		
		12.0-14.0		0.0		
		14.0-16.0		0.0		
		16.0-18.0		0.0		
		18.0-20.0		0.0		
		20.0-22.0		0.0		
SB-47	Soil	0.0-2.0	10/31/01	0.0	Barium	
		2.0-4.0		0.0		
SB-48	Soil	0.0-2.0	10/31/01	0.0	Chromium	
		2.0-5.0		0.0		
SB-49	Soil	0.0-2.0	10/31/01	0.0	SVOCs	
SB-50	Soil	0.0-2.0	10/31/01	0.0	SVOCs	
HMW-10	Soil	0.0-2.0	10/3/95	0.0	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA NA NA	
		2.0-4.0		0.0		
		4.0-6.0		0.0		
		6.0-8.0		0.0		
		8.0-10.0		<1.0		
		10.0-12.0		<1.0		
		12.0-14.0		<1.0		
HMW-11	Soil	0.0-2.0	10/3/95	0.0	NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA NA	
		2.0-4.0		<1.0		
		4.0-6.0		9.0		
		6.0-8.0		9.0		
		8.0-10.0		2.0		
		10.0-12.0		<1.0		
		12.0-14.0		3.0		
14.0-16.0	0.0					
HMW-12	Soil	0.0-1.5	10/2/95	0.0	NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA NA NA NA	
		1.5-3.0		<1.0		
		3.0-4.5		1.0		
		4.5-6.0		2.0		
		6.0-7.5		<1.0		
		7.5-9.0		<1.0		
		9.0-10.5		<1.0		
		10.5-12.0		<1.0		
		12.0-14.0		<1.0		
		14.0-15.5		<1.0		
15.5-17.0	<1.0					
HMW-13	Soil	0.0-2.0	10/3/95	16.0	NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO NA NA NA NA	
		2.0-4.0		30.0		
		4.0-6.0		90.0		
		6.0-8.0		130.0		
		8.0-10.0		90.0		
		10.0-12.0		100.0		
		12.0-14.0		1.0		
		14.0-16.0		2.0		
		16.0-18.0		0.0		
18.0-20.0	2.0					
HMW-14	Soil	1.5-3.0	7/28/99	NA	VOCs, SVOCs	
		6.0-7.0		NA		
HMW-14R	Soil	0.0-2.0	1/5/00	0.7	VOCs, SVOCs	
		7.0-9.0		0.3		
HMW-15	Soil	1.5-3.0	7/28/99	NA	VOCs, SVOCs	
		7.5-9.0		NA		

**Table 5-1a**  
**Historical Soil Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
HMW-16	Soil	1.5-3.0	7/29/99	NA	VOCs, SVOCs	
		7.0-8.5		NA	VOCs, SVOCs	
HMW-17	Soil	1.5-3.0	7/28/99	NA	VOCs, SVOCs	
		6.5-8.0		NA	VOCs, SVOCs	
HMW-18	Soil	0.0-2.0	1/6/00	0.0	VOCs, SVOCs, Pesticides	
		2.0-3.0		0.0	VOCs, SVOCs	
HA01MW09	Soil	1.0-2.0	11/4/09	5.9	VOCs, Metals, Pesticides	
		9.0-10.0		0.0	VOCs, Metals	
HA01MW10	Soil	1.0-2.0	11/9/09	0.0	VOCs, Metals, Pesticides	
		3.0-4.0		0.0	VOCs, Metals	
HA01MW11	Soil	1.0-2.0	11/9/09	0.0	VOCs, Metals, Pesticides	
		2.0-3.0		0.0	VOCs, Metals	
HA01MW12	Soil	1.0-2.0	11/6/09	0.0	VOCs, Metals, Pesticides	
		3.0-4.0		0.0	VOCs, Metals	
HA01MW13	Soil	1.0-2.0	11/9/09	0.0	VOCs, Metals, Pesticides	
		4.0-5.0		0.0	VOCs, Metals	
HA01MW14	Soil	1.0-2.0	11/6/09	0.0	VOCs, Metals, Pesticides	
		3.0-4.0		0.0	VOCs, Metals	
HA01MW15	Soil	1.0-2.0	11/5/09	0.0	VOCs, Metals, Pesticides	
		5.0-6.0		0.0	VOCs, Metals	
HA01MW16	Soil	1.0-2.0	11/4/09	0.0	VOCs, Metals, Pesticides	
		10.0-11.0		0.0	VOCs, Metals	
HA01MW17	Soil	1.0-2.0	11/4/09	0.0	VOCs, Metals, Pesticides	
		6.0-7.0		0.2	VOCs, Metals	
HA01SB001	Soil	8.0-10.0	11/3/09	0.0	SVOCs, Metals	
HA01SB002	Soil	6.0-6.5	11/3/09	0.0	SVOCs	
HA01SB003	Soil	8.0-10.0	11/3/09	0.0	SVOCs	
HA01SB004	Soil	2.0-4.0	11/3/09	0.0	Chromium	
HA01SB005	Soil	0.0-2.0	11/3/09	1.6	Chromium	

Notes:

ft feet  
RCRA Metals Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver analyzed by USEPA Methods 6010, 7060, 7421, 7471, and 7740  
SVOCs Semi-volatile organic compounds analyzed by USEPA Method 8270  
VOCs Volatile organics compounds analyzed by USEPA Method 8240 or 8260  
TPH-GRO/DRO Total petroleum hydrocarbons for gasoline range organics and diesel range organics analyzed by USEPA Method 8015B  
NA Not analyzed

**Table 5-1b**  
**Historical Sediment Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
HSD-1	Sediment	0.0-5.0	2/12/90	NA	VOCs, SVOCs, RCRA Metals	
HSD-2	Sediment	0.0-5.0	2/12/90	NA	VOCs, SVOCs, RCRA Metals	
HSD-3	Sediment	0.0-5.0	2/12/90	NA	VOCs, SVOCs, RCRA Metals	
PSS-1	Sediment	0.0-5.0	3/3/92	NA	VOCs, SVOCs, RCRA Metals	
PSS-2	Sediment	0.0-5.0	3/3/92	NA	VOCs, SVOCs, RCRA Metals	
PSS-3	Sediment	0.0-5.0	3/3/92	NA	VOCs, SVOCs, RCRA Metals	
PSS-4	Sediment	0.0-5.0	3/4/92	NA	VOCs, SVOCs, RCRA Metals	

Notes:

Ft                    feet  
RCRA Metals      Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver analyzed by USEPA Methods 6010, 7060, 7421, 7471, and 7740  
SVOCs              Semi-volatile organic compounds analyzed by USEPA Method 8270  
VOCs                Volatile organics compounds analyzed by USEPA Method 8240 or 8260  
NA                    Not analyzed

**Table 5-1c**  
**Historical Surface Water Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Sample Type	Sample Depth (Ft)	Date	Organic Vapor	Laboratory	Comment
HSW-1	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS
HSW-2	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS
HSW-3	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS
HSW-4	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS
HSW-5	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS
HSW-6	Surface Water	NA	10/31/01	NA	VOCs, SVOCs, RCRA Metals	Surface water from FTA ditches collected by CESAS

Notes:

Ft                    feet

RCRA Metals      Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver analyzed by USEPA Methods 6010, 7060, 7421, 7471, and 7740

SVOCs             Semi-volatile organic compounds analyzed by USEPA Method 8270

VOCs               Volatile organics compounds analyzed by USEPA Method 8240 or 8260

CESAS             United States Army Corps of Engineers, Savannah District

NA                  Not analyzed

**Table 5-1d  
Historical Groundwater Sample Summary  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
Hunter Army Airfield, Georgia**

Boring/Well	Screened Interval (feet)	Date	Organic Vapor	Laboratory Analysis	Comment
HMW-01	38.0-48.0	03/07/90	NA	VOCs, SVOCs, RCRA Metals	
		03/12/92		VOCs, SVOCs, RCRA Metals	
		10/07/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
HMW-02	4.6-14.6	03/07/90	NA	VOCs, SVOCs, RCRA Metals	
		03/12/92		VOCs, SVOCs, RCRA Metals	
		10/07/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		05/16/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		01/16/00		Total Lead	
		06/24/00		BTEX, PAHs	
		07/19/04		BTEX	
		01/15/05		BTEX	
		07/19/05		VOCs, SVOCs, Total Lead	
		01/15/06		VOCs, SVOCs, Total Lead	
		07/26/06		VOCs, SVOCs, Total Lead	
		01/21/07		VOCs	
		07/13/07		Select VOC, BTEX, SVOCs, Total Lead	
01/26/08	Select VOC, BTEX, SVOCs, Total Lead				
HMW-03	39.0-49.0	02/02/09	NA	VOCs, SVOCs, RCRA Metals, Pesticides	
		12/16/09		VOCs, Select SVOCs	
		03/08/90		VOCs, SVOCs, RCRA Metals	
HMW-04	3.0-13.0	03/12/92	NA	VOCs, SVOCs, RCRA Metals	
		10/06/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		10/06/01		VOCs, SVOCs, RCRA Metals	
		03/08/90		VOCs, SVOCs, RCRA Metals	
		03/12/92		VOCs, SVOCs, RCRA Metals	
		10/06/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		05/06/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		06/24/00		BTEX, PAHs	
		07/19/04		BTEX	
		01/15/05		BTEX	
		07/17/05		VOCs, SVOCs, Total Lead	
		01/14/06		VOCs, SVOCs, Total Lead	
		07/24/06		VOCs, SVOCs, Total Lead	
01/21/07	VOCs, SVOCs, Total Lead				
07/12/07	Select VOCs, BTEX, SVOCs, Total Lead				
01/24/08	Select VOCs, BTEX, SVOCs, Total Lead				
HMW-05	39.0-49.0	02/03/09	NA	VOCs, SVOCs, RCRA Metals, Pesticides	
		12/17/09		VOCs, Select SVOCs	
		03/08/90		VOCs, SVOCs, RCRA Metals	
HMW-06	3.0-13.0	03/12/92	NA	VOCs, SVOCs, RCRA Metals	
		10/06/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		03/08/90		VOCs, SVOCs, RCRA Metals	
		03/12/92		VOCs, SVOCs, RCRA Metals	
		10/06/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		11/15/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		05/06/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		06/24/00		BTEX, PAHs	
		07/19/04		BTEX	
		01/15/05		BTEX	
		07/17/05		VOCs, SVOCs, Total Lead	
		01/14/06		VOCs, SVOCs, Total Lead	
		07/25/06		VOCs, SVOCs, Total Lead	
		01/20/07		VOCs, SVOCs, Total Lead	
07/11/07	VOCs, SVOCs, Total Lead				
01/24/08	Select VOCs, BTEX, SVOCs, Total Lead				
02/03/09	VOCs, SVOCs, RCRA Metals, Pesticides				
12/17/09	VOCs, SVOCs				
HMW-07	3.0-13.0	03/12/92	NA	VOCs, SVOCs, RCRA Metals	

**Table 5-1d**  
**Historical Groundwater Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Screened Interval (feet)	Date	Organic Vapor	Laboratory Analysis	Comment		
HMW-08	3.0-13.0	03/12/92	NA	VOCs, SVOCs, RCRA Metals			
		10/08/95		VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO			
		11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		05/06/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		06/24/00		BTEX, PAHs			
		07/19/04		BTEX			
		01/15/05		BTEX			
		07/17/05		VOCs, SVOCs, Total Lead			
		01/14/06		VOCs, SVOCs, Total Lead			
		07/24/06		VOCs, SVOCs, Total Lead			
		01/21/07		VOCs, SVOCs, Total Lead			
		07/12/07		Select VOCs, BTEX, SVOCs, Total Lead			
		01/24/08		Select VOCs, BTEX, SVOCs, Total Lead			
		02/03/09		VOCs, SVOCs, RCRA Metals, Pesticides			
		12/16/09		VOCs, Select SVOCs			
		HMW-09	5.0-15.0	03/12/92	NA	VOCs, SVOCs, RCRA Metals	
10/08/95				VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO			
11/05/98				BTEX, PAHs	Long-Term Semi-Annual Monitoring		
05/06/99				BTEX, PAHs	Long-Term Semi-Annual Monitoring		
07/12/99				BTEX, PAHs	Long-Term Semi-Annual Monitoring		
06/24/00				BTEX, PAHs			
07/19/04				BTEX			
01/15/05				BTEX			
07/17/05				VOCs, SVOCs, Total Lead			
01/14/06				VOCs, SVOCs, Total Lead			
07/24/06				VOCs, SVOCs, Total Lead			
01/21/07				VOCs, SVOCs, Total Lead			
07/12/07				Select VOCs, BTEX, SVOCs, Total Lead			
01/24/08				Select VOCs, BTEX, SVOCs, Total Lead			
02/03/09				VOCs, SVOCs, RCRA Metals, Pesticides			
12/16/09				VOCs, Select SVOCs			
01/25/11				VOCs; Select SVOCs; Total/Dissolved Arsenic, Iron, Manganese; Other			
HMW-10	2.7-12.8	10/09/95	NA	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO			
		11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		05/06/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring		
		06/24/00		BTEX, PAHs			
		07/19/04		BTEX			
		01/15/05		BTEX			
		07/16/05		VOCs, SVOCs, Total Lead			
		01/14/06		VOCs, SVOCs, Total Lead			
		07/23/06		VOCs, SVOCs, Total Lead			
		01/21/07		VOCs, SVOCs, Total Lead			
		07/11/07		VOCs, SVOCs, Total Lead			
		01/23/08		Select VOC, BTEX, SVOCs, Total Lead			
		02/03/09		VOCs, SVOCs, RCRA Metals, Pesticides			
		12/17/09		VOCs, SVOCs			
		HMW-11	4.7-14.8	10/08/95	NA	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
				11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring
05/06/99				BTEX, PAHs	Long-Term Semi-Annual Monitoring		
07/12/99				BTEX, PAHs	Long-Term Semi-Annual Monitoring		
06/24/00				BTEX, PAHs			
07/19/04				BTEX			
01/15/05				BTEX			
07/17/05				VOCs, SVOCs, Total Lead			
01/14/06				VOCs, SVOCs, Total Lead			
07/23/06				VOCs, SVOCs, Total Lead			
01/20/07				VOCs, SVOCs, Total Lead			
07/12/07				Select VOC, BTEX, SVOCs, Total Lead			
01/24/08				Select VOC, BTEX, SVOCs, Total Lead			
02/03/09				VOCs, SVOCs, RCRA Metals, Pesticides			
12/16/09				VOCs, Select SVOCs			
HMW-12	5.1-15.2			10/08/95	NA	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
				01/19/00		Select VOCs, Select SVOCs, Total Arsenic, Barium, and Lead	



**Table 5-1d**  
**Historical Groundwater Sample Summary**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Boring/Well	Screened Interval (feet)	Date	Organic Vapor	Laboratory Analysis	Comment
HMW-13	7.5-17.6	10/09/95	NA	VOCs, SVOCs, RCRA Metals, TPH-GRO/DRO	
		11/05/98		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		05/06/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		07/12/99		BTEX, PAHs	Long-Term Semi-Annual Monitoring
		06/24/00		BTEX, PAHs	
		07/19/04		BTEX	
		01/15/05		BTEX	
		07/16/05		VOCs, SVOCs, Total Lead	
		01/14/06		VOCs, SVOCs, Total Lead	
		07/24/06		VOCs, SVOCs, Total Lead	
		01/21/07		VOCs, SVOCs, Total Lead	
		07/12/07		Select VOC, BTEX, SVOCs, Total Lead	
		01/25/08		Select VOC, BTEX, SVOCs, Total Lead	
		02/02/09		VOCs, SVOCs, RCRA Metals, Pesticides	
		12/17/09		VOCs, SVOCs	
		01/25/11		VOCs; Select SVOCs; Total/Dissolved Arsenic, Iron, Manganese; Other	
HMW-14	4.9-14.9	NA	NA	Not Sampled	Monitoring well abandoned
HMW-14	4.0-14.0*	07/21/99	NA	BTEX	Temporary piezometer water sample
HMW-14R	9.2-18.9	01/05/00	NA	VOCs, SVOCs	
		01/17/00		VOCs, SVOCs, Total Arsenic, Barium, and Lead	
		11/06/01		VOCs	
		07/20/04		VOCs	
		01/16/05		VOCs	
		07/16/05		VOCs	
		01/16/06		VOCs	
		07/25/06		VOCs	
		01/20/07		VOCs	
		07/13/07		VOCs	
		01/25/08		VOCs	
		02/03/09		VOCs, SVOCs, RCRA Metals, Pesticides	
		12/16/09		VOCs, Select SVOCs, RCRA Metals, Pesticides	
HMW-15	4.7-14.7	NA	NA	Not Sampled	
HMW-15	4.7-14.7	07/21/99	NA	BTEX	Temporary piezometer water sample
HMW-16	4.3-14.3	NA	NA	Not Sampled	
HMW-16A	4.0-14.0*	07/21/99	NA	BTEX	Temporary piezometer water sample
HMW-16B	4.0-14.0*	07/21/99	NA	BTEX	Temporary piezometer water sample
HMW-16C	4.0-14.0*	07/21/99	NA	BTEX	Temporary piezometer water sample
HMW-17	4.3-14.3	07/21/99	NA	VOCs, SVOCs, Total Arsenic, Barium, and Lead	
HMW-17	4.3 - 14.3	07/21/99	NA	BTEX	Temporary piezometer water sample
		01/19/00		VOCs, Select SVOCs, RCRA Metals, Pesticides	
HMW-18	3.7-13.5	01/20/00	NA	VOCs, Select SVOCs, RCRA Metals, Pesticides	
HMW-19	4.2-14.0	01/20/00	NA	VOCs, Select SVOCs, RCRA Metals, Pesticides	
HMW-20	3.7-13.4	01/20/00	NA	VOCs, Select SVOCs, RCRA Metals, Pesticides	
HMW-21	2.0-11.5	11/06/01	NA	VOCs	
		07/20/04		VOCs	
		01/16/05		VOCs	
		07/17/05		VOCs	
		01/15/06		VOCs	
		07/25/06		VOCs	
		01/20/07		VOCs	
		07/14/07		VOCs	
		01/25/08		VOCs	
		02/04/09		VOCs, SVOCs, RCRA Metals, Pesticides	
		12/17/09		VOCs, Select SVOCs, RCRA Metals, Pesticides	
		01/26/11		VOCs; Select SVOCs; Total/Dissolved Arsenic, Iron, Manganese; Other	
HMW-22	11.0-20.5	11/06/01	NA	VOCs	

**Table 5-1d  
Historical Groundwater Sample Summary  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
Hunter Army Airfield, Georgia**

Boring/Well	Screened Interval (feet)	Date	Organic Vapor	Laboratory Analysis	Comment
HMW-23	5.0-15.0	07/19/04		BTEX	
		01/15/05		BTEX	
		07/17/05		VOCs, SVOCs, Total Lead	
		01/14/06		VOCs, SVOCs, Total Lead	
		07/25/06		VOCs, SVOCs, Total Lead	
		01/21/07		VOCs, SVOCs, Total Lead	
		07/12/07		Select VOCs, BTEX, SVOCs, Total Lead	
		01/23/08		Select VOCs, BTEX, SVOCs, Total Lead	
		02/03/09		VOCs, SVOCs, RCRA Metals, Pesticides	
		12/17/09		SVOCs	
		01/18/10		VOCs, SVOCs	
HMW-24	7.0-12.0	07/19/04		BTEX	
		01/15/05		BTEX	
		07/17/05		VOCs, SVOCs, Total Lead	
		01/15/06		VOCs, SVOCs, Total Lead	
		07/25/06		VOCs, SVOCs, Total Lead	
		01/21/07		VOCs, SVOCs, Total Lead	
		07/12/07		Select VOCs, BTEX, SVOCs, Total Lead	
		01/24/08		Select VOCs, BTEX, SVOCs, Total Lead	
		02/03/09		VOCs, SVOCs, RCRA Metals, Pesticides	
		12/17/09		VOCs, SVOCs	
		01/04/00	4.0-14.0*	NA	VOCs, SVOCs
SB-40	4.0-14.0*	NA	VOCs, SVOCs	Temporary piezometer water sample	

**Notes:**

\*Denotes sample depth, not screened interval.

BTEX Benzene, Toluene, Ethylbenzene, Xylene

NA Not analyzed

RCRA Metals Arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver analyzed by USEPA Methods 6010, 7060, 7421, 7471, and 7740

SVOCs Semi-volatile organic compounds analyzed by USEPA Method 8270

TPH-GRO/DRO Total petroleum hydrocarbons for gasoline range organics and diesel range organics analyzed by USEPA Method 8015B

VOCs Volatile organics compounds analyzed by USEPA Method 8240 or 8260

Other Alkalinity, chloride, nitrate, nitrite, sulfate, sulfite, and total organic carbon

Duplicate information

**Table 5-2**  
**Monitor Well Construction Details**  
**HAA-01 Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	Northing	Easting	TOC Elevation (ft msl)	Well Diameter (in)	Screen Interval (ft bgs)	Screen Length (ft)
HMW-01	not available	not available	38.42	2	38.0 - 48.0	10
HMW-02	734786.58	816063.02	37.93	2	4.6-14.6	10
HMW-03	not available	not available	29.75	2	39.0 - 49.0	10
HMW-04	734718.68	816018.22	30.42	2	3.0-13.0	10
HMW-05	not available	not available	31.94	2	39.0 - 49.0	10
HMW-06	734497.34	816067.77	31.53	2	3.0-13.0	10
HMW-08	734779.81	816009.36	27.50	2	3.0-13.0	10
HMW-09	734790.68	816129.62	34.39	2	5.0-15.0	10
HMW-10	734614.87	815936.60	27.51	2	2.7-12.8	10
HMW-11	734491.04	815971.75	31.05	2	4.7-14.8	10
HMW-12	not available	not available	31.78	2	5.1 - 15.2	10
HMW-13	734858.99	816186.45	34.88	2	7.5-17.6	10
HMW-14R	735029.26	816249.07	34.67	2	9.2-18.9	10
HMW-15	not available	not available	23.84	2	4.7 - 14.7	10
HMW-16A	not available	not available	29.06	2	4.3 - 14.3	10
HMW-17	not available	not available	33.29	2	4.3 - 14.3	10
HMW-18	not available	not available	29.87	2	3.7 - 13.5	10
HMW-19	not available	not available	24.50	2	4.2 - 14.0	10
HMW-20	not available	not available	23.19	2	3.7 - 13.4	10
HMW-21	735133.03	816083.64	22.28	2	2.0-11.5	8.5
HMW-22	not available	not available	38.19	2	11.0 - 20.5	10
HMW-23	734701.53	972202.19	29.46	2	5.0-15.0	10
HMW-24	734682.81	972236.88	31.92	2	7.0-12.0	5
COE-MW-01	735187.44	972442.15	34.67	2	15.0-20.0	5
COE-MW-02	735266.60	972422.67	31.28	2	14.9-19.9	5
COE-MW-03	735209.97	972400.71	32.66	2	15.0-20.0	5
COE-MW-04	735274.25	972359.94	22.67	2	10.0-15.0	5
COE-MW-05	735330.83	972346.01	21.18	2	10.0-15.0	5
COE-MW-06	735283.70	972291.03	22.34	2	10.0-15.0	5
COE-MW-07	735183.39	972173.19	22.92	2	10.0-15.0	5
COE-MW-08	735221.29	972124.58	22.53	2	10.0-15.0	5
HA01-MW-09	735209.55	972577.98	33.66	2	7.0 - 17.0	10
HA01-MW-10	735350.72	972603.33	23.51	2	2.0 - 12.0	10
HA01-MW-11	735422.52	972307.95	19.74	2	2.0 - 12.0	10
HA01-MW-12	735333.97	972229.69	21.22	2	2.0 - 12.0	10
HA01-MW-12D	735329.99	972226.29	21.00	2	40.0 - 50.0	10
HA01-MW-13	735220.19	972038.26	20.13	2	2.0 - 12.0	10
HA01-MW-14	735065.10	972084.42	23.22	2	3.0 - 13.0	10
HA01-MW-14D	735067.33	972075.32	23.92	2	39.0 - 49.0	10
HA01-MW-15	735033.32	972311.79	28.11	2	4.5 - 14.5	10
HA01-MW-16	735017.97	972456.13	35.95	2	9.0 - 19.0	10
HA01-MW-17	734811.24	972131.72	24.86	2	4.5 - 14.5	10
HA01-MW-18D	735244.77	972390.49	29.58	2	56.0 - 66.0	10

Notes:

ft - feet

ft bgs - feet below ground surface

ft MSL - feet above mean sea level

in - inches

TOC - Top of Casing

**Table 5-3**  
**Former Fire Training Area**  
**Soil Investigation Summary - November 2009**  
**HAA-01 - Former Fire Training Area**  
**Hunter Army Airfield, Georgia**

Chemical Name	Location ID Depth (ft bgs) Sample Date	HA01-MW-17 1 - 2 11/4/2009	HA01-MW-17 6 - 7 11/4/2009	HA01SB001 8 - 10 11/10/2009	HA01SB002 6 - 6.5 11/3/2009	HA01SB003 8 - 10 11/3/2009	HA01SB004 2 - 4 11/3/2009	HA01SB005 0 - 2 11/3/2009
<b>VOCs - USEPA Method SW8260 (µg/kg)</b>								
1,1,1-Trichloroethane	5440	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	130	< 6.1 UJ	< 5.8 UJ	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-Trifluoroethane	6920	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	500	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,1-Dichloroethane	30	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,1-Dichloroethene	360	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	10830	2.4 J	< 5.8 U	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane (DBCP)	530	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,2-Dibromoethane	10	< 6.1 UJ	< 5.8 UJ	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	25000	3.6 J	< 5.8 U	NA	NA	NA	NA	NA
1,2-Dichloroethane	20	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,2-Dichloropropane	20	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	2220	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	DL/0.13	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
2-Butanone	790	< 12 U	< 12 U	NA	NA	NA	NA	NA
2-Hexanone		< 12 U	< 12 U	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	3300	< 12 U	< 12 U	NA	NA	NA	NA	NA
Acetone	2740	< 25 UJ	36 J	NA	NA	NA	NA	NA
Benzene	20	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Benzene, 1-methylethyl	21880	< 6.1 U	3.9 J	NA	NA	NA	NA	NA
Bromodichloromethane	1180	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Bromoform	1000	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Bromomethane	800	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Carbon disulfide	DL(P)	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Carbon tetrachloride	170	< 6.1 U	4.7 J	NA	NA	NA	NA	NA
CFC-11	700	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
CFC-12	1490	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Chlorobenzene	4180	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Chloroethane	170	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Chloroform	680	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Chloromethane	40	< 6.1 U	4.1 J	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene		< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene		< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Cyclohexane	2500	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Dibromochloromethane	1630	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Ethylbenzene	20000	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Methyl acetate		< 6.1 UJ	< 5.8 UJ	NA	NA	NA	NA	NA
Methylcyclohexane		< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Methylene chloride	80	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Styrene	14000	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
tert-Butyl methyl ether		< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Tetrachloroethene	180	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Toluene	14400	13	2.2 J	< 5.1 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	530	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene		< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Trichloroethene	130	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Vinyl chloride	40	< 6.1 U	< 5.8 U	NA	NA	NA	NA	NA
Xylenes (total)	20000	12	< 5.8 U	NA	NA	NA	NA	NA

Footnotes appear on last page.

**Table 5-3**  
**Former Fire Training Area**  
**Soil Investigation Summary - November 2009**  
**HAA-01 - Former Fire Training Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-17	HA01-MW-17	HA01SB001	HA01SB002	HA01SB003	HA01SB004	HA01SB005
Depth (ft bgs)	1 - 2	6 - 7	8 - 10	6 - 6.5	8 - 10	2 - 4	0 - 2
Sample Date	11/4/2009	11/4/2009	11/10/2009	11/3/2009	11/3/2009	11/3/2009	11/3/2009
Chemical Name	Type 1 RRS						
<b>Metals - USEPA Method SW6010B (mg/kg)</b>							
Arsenic	41	0.73	< 2.9 U	NA	NA	NA	NA
Barium	500	3.6	17	NA	NA	NA	NA
Cadmium	39	0.017 J	0.083 J	NA	NA	NA	NA
Chromium	1200	1.8	9.3	NA	NA	NA	4.9
Lead	300	2.3	5.2	NA	NA	NA	NA
Selenium	36	< 0.57 U	< 2.9 U	NA	NA	NA	NA
Silver	10	0.054 J	< 1.4 U	NA	NA	NA	NA
Mercury	17	0.032 J	0.023 J	NA	NA	NA	NA
<b>Pesticides - USEPA Method SW8081 (µg/kg)</b>							
Aldrin	660	< 1.9 U	NA	NA	NA	NA	NA
alpha-Chlordane		< 1.9 U	NA	NA	NA	NA	NA
DDD	660	< 1.9 U	NA	NA	NA	NA	NA
DDE, p,p'	660	< 1.9 U	NA	NA	NA	NA	NA
DDT	660	< 1.9 U	NA	NA	NA	NA	NA
delta BHC	25	< 1.9 U	NA	NA	NA	NA	NA
Dieldrin	660	< 1.9 U	NA	NA	NA	NA	NA
Endosulfan I		< 1.9 U	NA	NA	NA	NA	NA
Endosulfan II	10,000	< 1.9 U	NA	NA	NA	NA	NA
Endosulfan Sulfate	1,650	< 1.9 U	NA	NA	NA	NA	NA
Endrin	10,000	< 1.9 U	NA	NA	NA	NA	NA
Endrin Aldehyde	10,000	< 1.9 U	NA	NA	NA	NA	NA
Endrin ketone		< 1.9 U	NA	NA	NA	NA	NA
gamma-Chlordane		< 1.9 U	NA	NA	NA	NA	NA
Heptachlor		< 1.9 U	NA	NA	NA	NA	NA
Heptachlor epoxide	1,650	< 1.9 U	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	660	< 1.9 U	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	25	< 1.9 U	NA	NA	NA	NA	NA
Lindane	660	< 1.9 U	NA	NA	NA	NA	NA
Methoxychlor	10,000	< 7.4 U	NA	NA	NA	NA	NA
Toxaphene	10,880	< 92 U	NA	NA	NA	NA	NA
<b>SVOCs - USEPA Method SW8270 (µg/kg)</b>							
1,1'-Biphenyl		NA	NA	NA	NA	< 83 U	NA
2,4,5-Trichlorophenol	4,560	NA	NA	NA	NA	< 83 U	NA
2,4,6-Trichlorophenol	660	NA	NA	NA	NA	< 83 U	NA
2,4-Dichlorophenol	960	NA	NA	NA	NA	< 83 U	NA
2,4-Dimethylphenol	1,510	NA	NA	NA	NA	< 83 U	NA
2,4-Dinitrophenol	3,300	NA	NA	NA	NA	< 410 U	NA
2,4-Dinitrotoluene	660	NA	NA	NA	NA	< 160 U	NA
2,6-Dinitrotoluene	760	NA	NA	NA	NA	< 160 U	NA
2-Chloronaphthalene	25,000	NA	NA	NA	NA	< 83 U	NA
2-Chlorophenol	680	NA	NA	NA	NA	< 83 U	NA
2-Methyl-4,6-dinitrophenol	DL(P)	NA	NA	NA	NA	< 410 U	NA
2-Methylnaphthalene		NA	NA	NA	NA	< 83 U	NA
2-Methylphenol	3,800	NA	NA	NA	NA	< 83 U	NA
2-Nitrobenzenamine		NA	NA	NA	NA	< 160 U	NA
2-Nitrophenol	1,000,000	NA	NA	NA	NA	< 160 U	NA
3,3'-Dichlorobenzidine	25,000	NA	NA	NA	NA	< 410 U	NA

Footnotes appear on last page.

**Table 5-3**  
**Former Fire Training Area**  
**Soil Investigation Summary - November 2009**  
**HAA-01 - Former Fire Training Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-17	HA01-MW-17	HA01SB001	HA01SB002	HA01SB003	HA01SB004	HA01SB005
Depth (ft bgs)	1 - 2	6 - 7	8 - 10	6 - 6.5	8 - 10	2 - 4	0 - 2
Sample Date	11/4/2009	11/4/2009	11/10/2009	11/3/2009	11/3/2009	11/3/2009	11/3/2009
Chemical Name	Type 1 RRS						
<b>SVOCs continued - USEPA Method SW8270 (µg/kg)</b>							
3-Nitrobenzenamine		NA	NA	NA	NA	< 160 U	NA
4-Bromophenyl phenyl ether	1,000,000	NA	NA	NA	NA	< 83 U	NA
4-Chloro-3-methylphenol	13,200	NA	NA	NA	NA	< 83 U	NA
4-Chlorobenzene		NA	NA	NA	NA	< 83 U	NA
4-Chlorophenyl phenyl ether	1,000,000	NA	NA	NA	NA	< 83 U	NA
4-Methylphenol	3,800	NA	NA	NA	NA	< 160 U	NA
4-Nitrobenzenamine	DL(P)	NA	NA	NA	NA	< 160 U	NA
4-Nitrophenol	3,300	NA	NA	NA	NA	< 410 U	NA
Acenaphthene	300,000	NA	NA	NA	NA	< 83 U	NA
Acenaphthylene	130,000	NA	NA	NA	NA	< 83 U	NA
Acetophenone	DL/0.00026	NA	NA	NA	NA	< 83 U	NA
Anthracene	500,000	NA	NA	NA	NA	< 83 U	NA
Atrazine		NA	NA	NA	NA	< 83 U	NA
Benzo(a)anthracene	5000	NA	NA	NA	NA	< 83 U	NA
Benzaldehyde		NA	NA	NA	NA	< 83 U	NA
Benzo(a)pyrene	1,640	NA	NA	NA	NA	< 83 U	NA
Benzo(b)fluoranthene	5,000	NA	NA	NA	NA	< 83 U	NA
Benzo(ghi)perylene	500,000	NA	NA	NA	NA	< 83 U	NA
Benzo(k)fluoranthene	5,000	NA	NA	NA	NA	< 83 U	NA
Bis(2-chloroethoxy)methane	DL/0.00027	NA	NA	NA	NA	< 83 U	NA
Bis(2-chloroethyl) ether	DL/0.00060	NA	NA	NA	NA	< 83 U	NA
Bis(2-chloroisopropyl) ether	170,910	NA	NA	NA	NA	< 83 U	NA
Bis(2-ethylhexyl)phthalate	50,000	NA	NA	NA	540	< 83 U	NA
Butyl benzyl phthalate	50,000	NA	NA	NA	NA	< 160 U	NA
Caprolactam		NA	NA	NA	NA	< 83 U	NA
Carbazole		NA	NA	NA	NA	< 83 U	NA
Chrysene	5,000	NA	NA	NA	NA	< 83 U	NA
Dibenz(a,h)anthracene	5,000	NA	NA	NA	NA	< 83 U	NA
Dibenzofuran		NA	NA	NA	NA	< 83 U	NA
Diethyl phthalate	740	NA	NA	NA	NA	< 83 U	NA
Dimethyl phthalate	660	NA	NA	NA	NA	< 83 U	NA
Di-n-butyl phthalate	13,700	NA	NA	NA	NA	< 83 U	NA
Di-n-octylphthalate	50,000	NA	NA	NA	NA	< 83 U	NA
Fluoranthene	500,000	NA	NA	NA	NA	< 83 U	NA
Fluorene	360,000	NA	NA	NA	NA	< 83 U	NA
Hexachlorobenzene	2,140	NA	NA	NA	NA	< 83 U	NA
Hexachlorobutadiene	17,500	NA	NA	NA	NA	< 83 U	NA
Hexachlorocyclopentadiene	15,200	NA	NA	NA	NA	< 410 U	NA
Hexachloroethane	9,990	NA	NA	NA	NA	< 83 U	NA
Indeno(1,2,3-cd)pyrene	5,000	NA	NA	NA	NA	< 83 U	NA
Isophorone	DL/0.00019	NA	NA	NA	NA	< 83 U	NA
Naphthalene	100,000	NA	NA	NA	NA	< 83 U	NA
Nitrobenzene	700	NA	NA	NA	NA	< 83 U	NA
N-Nitroso-di-n-propylamine	1,710	NA	NA	NA	NA	< 83 U	NA

Footnotes appear on last page.

**Table 5-3**  
**Former Fire Training Area**  
**Soil Investigation Summary - November 2009**  
**HAA-01 - Former Fire Training Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-17	HA01-MW-17	HA01SB001	HA01SB002	HA01SB003	HA01SB004	HA01SB005
Depth (ft bgs)	1 - 2	6 - 7	8 - 10	6 - 6.5	8 - 10	2 - 4	0 - 2
Sample Date	11/4/2009	11/4/2009	11/10/2009	11/3/2009	11/3/2009	11/3/2009	11/3/2009
Chemical Name	Type 1 RRS						
<b>SVOCs continued - USEPA Method SW8270 (µg/kg)</b>							
N-Nitrosodiphenylamine	6,460	NA	NA	NA	NA	< 83 U	NA
Pentachlorophenol	3,300	NA	NA	NA	NA	< 410 U	NA
Phenanthrene	110,000	NA	NA	NA	NA	< 83 U	NA
Phenol	50,000	NA	NA	NA	NA	< 83 U	NA
Pyrene	500,000	NA	NA	NA	NA	< 83 U	NA

Notes:

\* - Duplicate sample

Indicate the analyte was detected above the Georgia HSRAType 1 Risk Reduction Standards

**BOLD** - indicate the analyte was detected.

B - Analyte was detected in an associated blank as well as in the sample.

D - Sample was diluted for analysis.

ft bgs - feet below ground surface

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

µg/kg - Micrograms per Kilogram

mg/kg - Milligrams per Kilogram

NA - Not analyzed

RRS - GAEPD Rule 391-3-19-.07 Risk Reduction Standard (July 23, 2003).

SVOCs - Semi-volatile Organic Compounds

U - The analyte was not detected above the reporting limit.

UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

VOCs - Volatile Organic Compounds

**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-09	HA01-MW-09	HA01-MW-10	HA01-MW-10	HA01-MW-11	HA01-MW-11	HA01-MW-11 (Dup)	HA01-MW-12	HA01-MW-12	HA01-MW-13	HA01-MW-13	
Depth (ft bgs)	1 - 2	9 - 10	1 - 2	3 - 4	1 - 2	2 - 3	2 - 3	1 - 2	3 - 4	1 - 2	4 - 5	
Sample Date	11/4/2009	11/4/2009	11/9/2009	11/9/2009	11/9/2009	11/9/2009	11/9/2009	11/6/2009	11/6/2009	11/10/2009	11/9/2009	
Chemical Name	Type 1 RRS											
<b>VOCs - USEPA Method SW8260 (µg/kg)</b>												
1,1,1-Trichloroethane	5,440	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
1,1,2,2-Tetrachloroethane	130	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	6,920	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
1,1,2-Trichloroethane	500	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
1,1-Dichloroethane	30	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
1,1-Dichloroethene	360	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
1,2,4-Trichlorobenzene	10,830	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	< 5.8 UJ	< 6.9 U	< 5.6 U
1,2-Dibromo-3-chloropropane (DBCP)	530	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
1,2-Dibromoethane	10	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
1,2-Dichlorobenzene	25,000	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	<b>2.3 J</b>	< 6.9 U	< 5.6 U
1,2-Dichloroethane	20	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
1,2-Dichloropropane	20	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
1,3-Dichlorobenzene	2,220	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	< 5.8 UJ	< 6.9 U	< 5.6 U
1,4-Dichlorobenzene	DL/0.13	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	< 5.8 UJ	< 6.9 U	< 5.6 U
2-Butanone	790	< 11 U	< 10 U	< 18 U	< 14 U	< 13 U	< 12 U	< 10 U	< 14 U	< 12 UJ	< 14 U	< 11 U
2-Hexanone		< 11 U	< 10 U	< 18 U	< 14 U	< 13 U	< 12 U	< 10 U	< 14 U	<b>1.5 J</b>	< 14 U	< 11 U
4-Methyl-2-pentanone	3,300	< 11 U	< 10 U	< 18 U	< 14 U	< 13 U	< 12 U	< 10 U	< 14 U	< 12 U	< 14 U	< 11 U
Acetone	2,740	< 22 U	< 20 U	< 35 U	< 27 U	< 27 U	< 23 U	< 20 U	24 UB	< 23 U	< 28 U	< 22 U
Benzene	20	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Benzene, 1-methylethyl	21,880	< 5.5 U	< 5.1 U	< 8.8 U	<b>8.4</b>	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	< 5.8 UJ	< 6.9 U	< 5.6 U
Bromodichloromethane	1,180	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Bromoform	1,000	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Bromomethane	800	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 UJ	< 5.8 UJ	< 6.9 U	< 5.6 U
Carbon disulfide	DL(P)	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Carbon tetrachloride	170	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	<b>4.6 J</b>
CFC-11	700	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
CFC-12	1,490	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Chlorobenzene	4,180	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Chloroethane	170	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Chloroform	680	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Chloromethane	40	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	<b>6.9 J</b>	< 5.8 UJ	< 6.9 U	< 5.6 U
cis-1,2-Dichloroethene		< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
cis-1,3-Dichloropropene		< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Cyclohexane	2,500	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Dibromochloromethane	1,630	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Ethylbenzene	20,000	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Methyl acetate		< 5.5 U	<b>9.5</b>	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Methylcyclohexane		< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Methylene chloride	80	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Styrene	14,000	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
tert-Butyl methyl ether		< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Tetrachloroethene	180	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Toluene	14,400	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
trans-1,2-Dichloroethene	530	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
trans-1,3-Dichloropropene		< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
Trichloroethene	130	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Vinyl chloride	40	< 5.5 U	< 5.1 U	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 UJ	< 6.9 U	< 5.6 U
Xylenes (total)	20,000	<b>3.5 J</b>	<b>3.2 J</b>	< 8.8 U	< 6.8 U	< 6.7 U	< 5.8 U	< 5.1 U	< 6.9 U	< 5.8 U	< 6.9 U	< 5.6 U
<b>Metals - USEPA Method SW6010B (mg/kg)</b>												
Arsenic	41	<b>0.67</b>	<b>0.92</b>	<b>1</b>	<b>0.47 J</b>	<b>0.30 J</b>	<b>0.46 J</b>	<b>0.48 J</b>	<b>0.47 J</b>	<b>0.48 J</b>	<b>0.25 J</b>	<b>0.29 J</b>
Barium	500	<b>23</b>	<b>17</b>	<b>10</b>	<b>8.7</b>	<b>8.2</b>	<b>13</b>	<b>15</b>	<b>4.3</b>	<b>6.3</b>	<b>2.4</b>	<b>23</b>
Cadmium	39	< 0.11 U	<b>0.016 J</b>	< 0.12 U	< 0.13 U	< 0.12 U	< 0.13 U	< 0.12 U	<b>0.014 J</b>	< 0.12 U	< 0.11 U	< 0.11 U
Chromium	1,200	<b>4</b>	<b>4</b>	<b>2</b>	<b>2.3</b>	<b>3.2</b>	<b>6</b>	<b>6.1</b>	<b>1.7</b>	<b>2.2</b>	<b>0.91</b>	<b>9.9</b>
Lead	300	<b>3.8</b>	<b>5.9</b>	<b>6</b>	<b>2.2</b>	<b>4.5</b>	<b>6.5</b>	<b>8.5</b>	<b>4.2</b>	<b>3.2</b>	<b>2.1</b>	<b>5.2</b>
Selenium	36	< 0.53 U	< 0.59 U	< 0.58 U	<b>0.23 J</b>	< 0.62 U	< 0.63 U	<b>0.38 J</b>	< 0.55 U	< 0.59 U	< 0.57 U	< 0.55 U
Silver	10	< 0.27 U	< 0.29 U	< 0.29 U	< 0.32 U	<b>0.095 J</b>	<b>0.22 J</b>	<b>0.24 J</b>	< 0.28 U	< 0.3 U	< 0.29 U	< 0.28 U
Mercury	17	<b>0.017 J</b>	<b>0.014 J</b>	<b>0.035 J</b>	<b>0.027 J</b>	<b>0.025 J</b>	<b>0.060 J</b>	<b>0.047 J</b>	<b>0.038 J</b>	<b>0.027 J</b>	< 0.094 U	<b>0.042 J</b>

Footnotes appear on last page.



**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Chemical Name	Location ID Depth (ft bgs) Sample Date	HA01-MW-09 1 - 2 11/4/2009	HA01-MW-09 9 - 10 11/4/2009	HA01-MW-10 1 - 2 11/9/2009	HA01-MW-10 3 - 4 11/9/2009	HA01-MW-11 1 - 2 11/9/2009	HA01-MW-11 2 - 3 11/9/2009	HA01-MW-11 (Dup) 2 - 3 11/9/2009	HA01-MW-12 1 - 2 11/6/2009	HA01-MW-12 3 - 4 11/6/2009	HA01-MW-13 1 - 2 11/10/2009	HA01-MW-13 4 - 5 11/9/2009
	Type 1 RRS											
<b>Pesticides - USEPA Method SW8081 (µg/kg)</b>												
Aldrin	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
alpha-Chlordane		< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
DDD	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
DDE, p,p'	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
DDT	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
delta BHC	25	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Dieldrin	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan I		< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan II	10,000	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan Sulfate	1,650	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin	10,000	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin Aldehyde	10,000	< 1.8 UJ	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin ketone		< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
gamma-Chlordane		< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Heptachlor		< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Heptachlor epoxide	1,650	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Hexachlorocyclohexane, Alpha-	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Hexachlorocyclohexane, Beta-	25	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Lindane	660	< 1.8 U	NA	< 2 U	NA	< 2 U	NA	NA	< 1.9 U	NA	< 1.8 U	NA
Methoxychlor	10,000	< 7 U	NA	< 7.9 U	NA	< 7.9 U	NA	NA	< 7.5 U	NA	< 7.2 U	NA
Toxaphene	10,880	< 86 U	NA	< 98 U	NA	< 98 U	NA	NA	< 93 U	NA	< 89 U	NA
<b>SVOCs - USEPA Method SW8270 (µg/kg)</b>												
1,1'-Biphenyl		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	4,560	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1,510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	3,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	760	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	25,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	DL(P)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	3,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrobenzenamine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	25,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	13,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorobenzenamine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	3,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrobenzenamine	DL(P)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	3,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	130,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	DL/0.00026	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes appear on last page.

**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Chemical Name	Location ID Depth (ft bgs) Sample Date	HA01-MW-09 1 - 2 11/4/2009	HA01-MW-09 9 - 10 11/4/2009	HA01-MW-10 1 - 2 11/9/2009	HA01-MW-10 3 - 4 11/9/2009	HA01-MW-11 1 - 2 11/9/2009	HA01-MW-11 2 - 3 11/9/2009	HA01-MW-11 (Dup) 2 - 3 11/9/2009	HA01-MW-12 1 - 2 11/6/2009	HA01-MW-12 3 - 4 11/6/2009	HA01-MW-13 1 - 2 11/10/2009	HA01-MW-13 4 - 5 11/9/2009
	Type 1 RRS											
<b>SVOCs continued - USEPA Method SW8270 (µg/kg)</b>												
Atrazine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	1,640	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	DL/0.000027	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl) ether	DL/0.00060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroisopropyl) ether	170,910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	740	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	13,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	50,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	360,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	2,140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	17,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	15,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	9,990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	DL/0.00019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	1,710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	6,460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	3,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	110,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	50,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes appear on last page.

**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-14	HA01-MW-14	HA01-MW-15	HA01-MW-15	HA01-MW-16	HA01-MW-16	
Depth (ft bgs)	1 - 2	3 - 4	1 - 2	5 - 6	1 - 2	10 - 11	
Sample Date	11/6/2009	11/6/2009	11/5/2009	11/5/2009	11/4/2009	11/4/2009	
Chemical Name	Type 1 RRS						
<b>VOCs - USEPA Method SW8260 (µg/kg)</b>							
1,1,1-Trichloroethane	5,440	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,1,2,2-Tetrachloroethane	130	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	6,920	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,1,2-Trichloroethane	500	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,1-Dichloroethane	30	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,1-Dichloroethene	360	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,2,4-Trichlorobenzene	10,830	< 6.2 UJ	< 5.9 UJ	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,2-Dibromo-3-chloropropane (DBCP)	530	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,2-Dibromoethane	10	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,2-Dichlorobenzene	25,000	< 6.2 UJ	< 5.9 UJ	< 6.3 U	<b>3.6 J</b>	< 5.4 U	< 4.7 U
1,2-Dichloroethane	20	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,2-Dichloropropane	20	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,3-Dichlorobenzene	2,220	< 6.2 UJ	< 5.9 UJ	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
1,4-Dichlorobenzene	DL/0.13	< 6.2 UJ	< 5.9 UJ	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
2-Butanone	790	< 12 U	< 12 U	< 13 U	< 14 U	< 11 U	< 9.4 U
2-Hexanone		< 12 U	< 12 U	< 13 U	< 14 U	< 11 U	< 9.4 U
4-Methyl-2-pentanone	3,300	< 12 U	< 12 U	< 13 U	< 14 U	< 11 U	< 9.4 U
Acetone	2,740	< 25 U	< 24 U	< 25 U	< 28 U	< 22 U	< 19 U
Benzene	20	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Benzene, 1-methylethyl	21,880	< 6.2 UJ	< 5.9 UJ	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Bromodichloromethane	1,180	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Bromoform	1,000	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Bromomethane	800	< 6.2 UJ	< 5.9 UJ	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Carbon disulfide	DL(P)	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	<b>8</b>
Carbon tetrachloride	170	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
CFC-11	700	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
CFC-12	1,490	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Chlorobenzene	4,180	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Chloroethane	170	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Chloroform	680	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Chloromethane	40	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
cis-1,2-Dichloroethene		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
cis-1,3-Dichloropropene		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Cyclohexane	2,500	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Dibromochloromethane	1,630	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Ethylbenzene	20,000	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Methyl acetate		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Methylcyclohexane		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Methylene chloride	80	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Styrene	14,000	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
tert-Butyl methyl ether		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Tetrachloroethene	180	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Toluene	14,400	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
trans-1,2-Dichloroethene	530	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
trans-1,3-Dichloropropene		< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Trichloroethene	130	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Vinyl chloride	40	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
Xylenes (total)	20,000	< 6.2 U	< 5.9 U	< 6.3 U	< 6.9 U	< 5.4 U	< 4.7 U
<b>Metals - USEPA Method SW6010B (mg/kg)</b>							
Arsenic	41	<b>1.7</b>	<b>0.47 J</b>	<b>1.4</b>	<b>0.72</b>	<b>0.57</b>	<b>0.65</b>
Barium	500	<b>25</b>	<b>3.1</b>	<b>13</b>	<b>9</b>	<b>3.6</b>	<b>25</b>
Cadmium	39	<b>0.020 J</b>	<b>0.025 J</b>	< 0.11 U	<b>0.012 J</b>	<b>0.017 J</b>	< 0.11 U
Chromium	1,200	<b>8.6</b>	<b>1.4</b>	<b>6.8</b>	<b>1</b>	<b>3</b>	<b>6.3</b>
Lead	300	<b>6.8</b>	<b>2</b>	<b>3.6</b>	<b>1.8</b>	<b>2.9</b>	<b>4.2</b>
Selenium	36	< 0.53 U	< 0.6 U	< 0.57 U	< 0.56 U	< 0.53 U	< 0.56 U
Silver	10	< 0.26 U	<b>1.1</b>	< 0.29 U	< 0.28 U	<b>0.20 J</b>	<b>0.42</b>
Mercury	17	<b>0.013 J</b>	<b>0.018 J</b>	<b>0.028 J</b>	<b>0.015 J</b>	<b>0.030 J</b>	<b>0.028 J</b>

Footnotes appear on last page.

**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

	Location ID	HA01-MW-14	HA01-MW-14	HA01-MW-15	HA01-MW-15	HA01-MW-16	HA01-MW-16
	Depth (ft bgs)	1 - 2	3 - 4	1 - 2	5 - 6	1 - 2	10 - 11
	Sample Date	11/6/2009	11/6/2009	11/5/2009	11/5/2009	11/4/2009	11/4/2009
Chemical Name	Type 1 RRS						
<b>Pesticides - USEPA Method SW8081 (µg/kg)</b>							
Aldrin	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
alpha-Chlordane		< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
DDD	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
DDE, p,p'	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
DDT	660	<b>4.9</b>	NA	< 1.9 U	NA	< 1.8 U	NA
delta BHC	25	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Dieldrin	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan I		< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan II	10,000	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endosulfan Sulfate	1,650	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin	10,000	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin Aldehyde	10,000	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Endrin ketone		< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
gamma-Chlordane		< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Heptachlor		< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Heptachlor epoxide	1,650	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Hexachlorocyclohexane, Alpha-	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Hexachlorocyclohexane, Beta-	25	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Lindane	660	< 1.8 U	NA	< 1.9 U	NA	< 1.8 U	NA
Methoxychlor	10,000	< 7.1 U	NA	< 7.4 U	NA	< 7.3 U	NA
Toxaphene	10,880	< 87 U	NA	< 92 U	NA	< 90 U	NA
<b>SVOCs - USEPA Method SW8270 (µg/kg)</b>							
1,1'-Biphenyl		NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	4,560	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	660	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	960	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1,510	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	3,300	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	660	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	760	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	25,000	NA	NA	NA	NA	NA	NA
2-Chlorophenol	680	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	DL(P)	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA
2-Methylphenol	3,800	NA	NA	NA	NA	NA	NA
2-Nitrobenzenamine		NA	NA	NA	NA	NA	NA
2-Nitrophenol	1,000,000	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	25,000	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	1,000,000	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	13,200	NA	NA	NA	NA	NA	NA
4-Chlorobenzenamine		NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	1,000,000	NA	NA	NA	NA	NA	NA
4-Methylphenol	3,800	NA	NA	NA	NA	NA	NA
4-Nitrobenzenamine	DL(P)	NA	NA	NA	NA	NA	NA
4-Nitrophenol	3,300	NA	NA	NA	NA	NA	NA
Acenaphthene	300,000	NA	NA	NA	NA	NA	NA
Acenaphthylene	130,000	NA	NA	NA	NA	NA	NA
Acetophenone	DL/0.00026	NA	NA	NA	NA	NA	NA
Anthracene	500,000	NA	NA	NA	NA	NA	NA

Footnotes appear on last page.

**Table 5-4**  
**DAACG Area Soil Investigation Summary - November 2009**  
**HAA-01 - DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	HA01-MW-14	HA01-MW-14	HA01-MW-15	HA01-MW-15	HA01-MW-16	HA01-MW-16
Depth (ft bgs)	1 - 2	3 - 4	1 - 2	5 - 6	1 - 2	10 - 11
Sample Date	11/6/2009	11/6/2009	11/5/2009	11/5/2009	11/4/2009	11/4/2009
Chemical Name	Type 1 RRS					
<b>SVOCs continued - USEPA Method SW8270 (µg/kg)</b>						
Atrazine		NA	NA	NA	NA	NA
Benzo(a)anthracene	5000	NA	NA	NA	NA	NA
Benzaldehyde		NA	NA	NA	NA	NA
Benzo(a)pyrene	1,640	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	5,000	NA	NA	NA	NA	NA
Benzo(ghi)perylene	500,000	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	5,000	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	DL/0.00027	NA	NA	NA	NA	NA
Bis(2-chloroethyl) ether	DL/0.00060	NA	NA	NA	NA	NA
Bis(2-chloroisopropyl) ether	170,910	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	50,000	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50,000	NA	NA	NA	NA	NA
Caprolactam		NA	NA	NA	NA	NA
Carbazole		NA	NA	NA	NA	NA
Chrysene	5,000	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	5,000	NA	NA	NA	NA	NA
Dibenzofuran		NA	NA	NA	NA	NA
Diethyl phthalate	740	NA	NA	NA	NA	NA
Dimethyl phthalate	660	NA	NA	NA	NA	NA
Di-n-butyl phthalate	13,700	NA	NA	NA	NA	NA
Di-n-octylphthalate	50,000	NA	NA	NA	NA	NA
Fluoranthene	500,000	NA	NA	NA	NA	NA
Fluorene	360,000	NA	NA	NA	NA	NA
Hexachlorobenzene	2,140	NA	NA	NA	NA	NA
Hexachlorobutadiene	17,500	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	15,200	NA	NA	NA	NA	NA
Hexachloroethane	9,990	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	5,000	NA	NA	NA	NA	NA
Isophorone	DL/0.00019	NA	NA	NA	NA	NA
Naphthalene	100,000	NA	NA	NA	NA	NA
Nitrobenzene	700	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	1,710	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	6,460	NA	NA	NA	NA	NA
Pentachlorophenol	3,300	NA	NA	NA	NA	NA
Phenanthrene	110,000	NA	NA	NA	NA	NA
Phenol	50,000	NA	NA	NA	NA	NA
Pyrene	500,000	NA	NA	NA	NA	NA

Notes:

\* - Duplicate sample

**B** - Indicate the analyte was detected above the Georgia HSRAType 1 Risk Reduction Standards

**BOLD** - indicate the analyte was detected.

B - Analyte was detected in an associated blank as well as in the sample.

D - Sample was diluted for analysis.

ft bgs - feet below ground surface

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

µg/kg - Micrograms per Kilogram

mg/kg - Milligrams per Kilogram

NA - Not analyzed

RRS - GAEPD Rule 391-3-19-.07 Risk Reduction Standard (July 23, 2003).

SVOCs - Semi-volatile Organic Compounds

U - The analyte was not detected above the reporting limit.

UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

VOCS - Volatile Organic Compounds

**Table 5-5  
 Groundwater Elevation Summary - December 2009  
 HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
 Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)
HMW-01	38.42	38.0 - 48.0	Dec-09	13.7	24.72
HMW-02	37.93	4.6 - 14.6	Dec-09	12.02	25.91
HMW-03	29.75	39.0 - 49.0	Dec-09	7.51	22.24
HMW-04	30.42	3.0-13.0	Dec-09	5.61	24.81
HMW-05	31.94	39.0 - 49.0	Dec-09	8.27	23.67
HMW-06	31.53	3.0-13.0	Dec-09	5.18	26.35
HMW-08	27.5	3.0-13.0	Dec-09	6.03	21.47
HMW-09	34.39	5.0-15.0	Dec-09	8.72	25.67
HMW-10	27.51	2.7-12.8	Dec-09	6.44	21.07
HMW-11	31.05	4.7-14.8	Dec-09	9.88	21.17
HMW-12	31.78	5.1 - 15.2	Dec-09	11.29	20.49
HMW-13	34.88	7.5 - 17.6	Dec-09	12.8	22.08
HMW-14R	34.67	9.2 - 18.9	Dec-09	11.47	23.2
HMW-15	23.84	4.7-14.7	Dec-09	5.53	18.31
HMW-16	29.06	4.3 - 14.3	Dec-09	9.56	19.5
HMW-17	33.29	4.3 - 14.3	Dec-09	7.82	25.47
HMW-18	29.87	3.7 - 13.5	Dec-09	7.03	22.84
HMW-19	24.50	4.2 - 14.0	Dec-09	12.19	12.31
HMW-20	23.19	3.7 - 13.4	Dec-09	3.70	19.49
HMW-21	22.28	2.0-11.5	Dec-09	2.99	19.29
HMW-22	38.19	11.0 - 20.5	Dec-09	13.98	24.21
HMW-23	29.46	5.0-15.0	Dec-09	5.30	24.16
HMW-24	31.92	7.0-12.0	Dec-09	5.47	26.45
COE-MW-01	34.67	15.0-20.0	Dec-09	12.56	22.11
COE-MW-02	31.28	14.9-19.9	Dec-09	11.29	19.99
COE-MW-03	32.66	15.0-20.0	Dec-09	11.15	21.51
COE-MW-04	22.67	10.0-15.0	Dec-09	3.26	19.41
COE-MW-05	21.18	10.0-15.0	Dec-09	2.60	18.58
COE-MW-06	22.34	10.0-15.0	Dec-09	3.25	19.09
COE-MW-07	22.92	10.0-15.0	Dec-09	3.40	19.52
COE-MW-08	22.53	10.0-15.0	Dec-09	3.61	18.92
HA01-MW-09	33.66	7.0 - 17.0	Dec-09	10.95	22.71
HA01-MW-10	23.51	2.0 - -12.0	Dec-09	4.25	19.26
HA01-MW-11	19.74	2.0 - 12.0	Dec-09	2.66	17.08
HA01-MW-12	21.22	2.0 - 12.0	Dec-09	4.35	16.87
HA01-MW-12D	21.00	40.0 - 50.0	Dec-09	3.05	17.95
HA01-MW-13	20.13	2.0 - 12.0	Dec-09	2.51	17.62
HA01-MW-14	23.22	3.0 - 13.0	Dec-09	4.5	18.72
HA01-MW-14D	23.92	39.0 - 49.0	Dec-09	3.1	20.82
HA01-MW-15	28.11	4.5 - 14.5	Dec-09	8.81	19.3
HA01-MW-16	35.95	9.0 - 19.0	Dec-09	14.1	21.85
HA01-MW-17	24.86	4.5 - 14.5	Dec-09	5.65	19.21
HA01-MW-18	29.58	56.0 - 66.0	Dec-09	8.81	20.77

Notes:  
 BTOC = Below Top of Casing  
 ft = feet  
 MSL = Mean Sea Level  
 NM = Not Measured  
 NA = Not Applicable

**Table 5-6**  
**Groundwater Investigation Summary -**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area**  
**Hunter Army Airfield, Georgia**

Chemical Name	Location ID	COE-MW-01	COE-MW-01	COE-MW-02	COE-MW-02	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-04	COE-MW-04	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-06
	Sample Date	2/3/2009	12/16/2009	02/03/09	12/16/2009	02/03/09	12/16/2009	01/25/11	02/04/09	12/17/2009	02/04/09	12/17/2009	01/26/11	02/04/09
	Type 1 RRS													
<b>VOCs - USEPA Method SW8260 (µg/L)</b>														
1,1,1-Trichloroethane	200	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-Tetrachloroethane	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1000000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	4000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	7	< 0.5 U	< 0.5 U	<b>0.21 J</b>	< 0.5 U	< 25 U	<b>6.4</b>	< 25 UJ	<b>2.2 J</b>	<b>2.4</b>	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.87</b>
1,2,4-Trichlorobenzene	70	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-chloropropane (DBCP)	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromoethane	0.05	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichlorobenzene	600	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloroethane	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloropropane	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-Dichlorobenzene	600	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-Dichlorobenzene	75	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-Butanone	2000	< 10 U	< 10 U	< 10 U	< 10 U	< 500 U	< 50 U	< 500 U	< 100 U	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
2-Hexanone	NA	<b>5.9 J</b>	< 10 U	<b>6.6 J</b>	< 10 U	< 500 U	< 50 U	< 500 U	< 100 U	<b>2.5 J</b>	< 10 U	<b>1.2 J</b>	< 10 U	< 10 U
4-Methyl-2-pentanone	2000	< 10 U	< 10 U	< 10 U	< 10 U	< 500 U	< 50 U	< 500 U	< 100 U	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone	4000	< 10 U	<b>13</b>	< 10 U	< 10 U	< 500 U	< 50 U	< 500 U	< 100 U	<b>14 J</b>	< 10 U	< 10 U	< 10 U	< 10 U
Benzene	5	<b>2</b>	<b>1.3</b>	<b>3.3</b>	<b>2.5</b>	<b>18 J</b>	<b>11</b>	<b>12 J</b>	<b>2.9 J</b>	<b>2.3</b>	<b>0.16 J</b>	<b>0.18 J</b>	<b>0.23 J</b>	<b>0.32 J</b>
Benzene, 1-methylethyl	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromodichloromethane	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromomethane	10	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon disulfide	4000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	<b>0.28 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon tetrachloride	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CFC-11	2000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 25 U	< 2.5 UJ	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CFC-12	1000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chlorobenzene	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroform	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	1.7 J	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloromethane	3	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	<b>160</b>	<b>92</b>	<b>240</b>	<b>130</b>	<b>9000</b>	<b>7800</b>	<b>7800</b>	<b>1600</b>	<b>1400</b>	<b>47</b>	<b>69</b>	<b>81</b>	<b>290</b>
cis-1,3-Dichloropropene	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Cyclohexane	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dibromochloromethane	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Ethylbenzene	700	<b>0.18 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Methyl acetate	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 50 U	< 5 U	< 50 U	< 10 U	< 2 U	< 1 U	< 1 U	< 1 U	< 1 U
Methylcyclohexane	NA	< 5 U	< 5 U	< 5 U	< 5 U	< 250 U	< 25 U	< 250 UJ	< 50 U	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Styrene	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
tert-Butyl methyl ether	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 UJ	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	1000	<b>1.1</b>	<b>0.87</b>	< 0.5 U	< 0.5 U	<b>53</b>	<b>42</b>	<b>40</b>	< 5 U	<b>0.75 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,2-Dichloroethene	100	<b>12</b>	<b>6.8</b>	<b>9.9</b>	<b>4.5</b>	<b>240</b>	<b>230</b>	<b>190</b>	<b>7.6</b>	<b>9.3</b>	<b>0.19 J</b>	<b>0.29 J</b>	<b>0.31 J</b>	<b>0.2 J</b>
trans-1,3-Dichloropropene	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tribromomethane	100	NA	< 0.5 U	NA	< 0.5 U	NA	< 2.5 U	NA	NA	< 1 U	NA	< 0.5 U	NA	NA
Trichloroethene	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	<b>0.98 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl chloride	2	<b>2.8</b>	< 0.5 U	<b>3.1</b>	<b>1.8</b>	<b>1000</b>	<b>1000</b>	<b>700 J</b>	<b>73</b>	<b>86</b>	<b>3.5</b>	<b>0.75</b>	<b>5.5</b>	<b>1.4</b>
Xylenes (total)	10000	<b>3</b>	<b>2.6</b>	< 0.5 U	< 0.5 U	< 25 U	< 2.5 U	< 25 U	< 5 U	<b>1.1</b>	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.19 J</b>
<b>Metals - USEPA Method SW6010/SW7470 (mg/L)</b>														
Arsenic	0.05	< 10 U	< 0.01 U	< 10 U	< 0.01 U	< 10 U	< 0.01 U	0 UB	< 10 U	< 0.01 U	< 10 U	< 0.01 U	0 UB	< 10 U
Barium	2	<b>120</b>	<b>0.13</b>	<b>53</b>	<b>0.042</b>	<b>88</b>	<b>0.094</b>	NA	<b>26</b>	<b>0.020 J</b>	<b>35</b>	<b>0.047</b>	NA	<b>38</b>
Cadmium	0.005	< 2 U	< 0.002 U	< 2 U	<b>0.00095 J</b>	< 2 U	< 0.002 U	NA	< 2 U	< 0.002 U	< 2 U	< 0.002 U	NA	< 2 U
Chromium	0.1	< 5 U	< 0.005 U	< 5 U	< 0.005 U	<b>2.6 J</b>	< 0.005 U	NA	<b>8.7</b>	<b>0.0032 J</b>	< 5 U	<b>0.0033 J</b>	NA	< 5 U
Lead	0.015	< 10 U	< 0.01 U	< 10 U	< 0.01 U	3 UB	< 0.01 U	NA	< 10 U	< 0.01 U	< 10 U	< 0.01 U	NA	< 10 U
Mercury	0.002	< 0.1 U	<b>0.000057 J</b>	< 0.1 U	< 0.0001 U	< 0.1 U	< 0.0001 U	NA	< 0.1 U	< 0.0001 U	< 0.1 U	< 0.0001 U	NA	< 0.1 U
Selenium	0.05	4.5 UB	< 0.01 U	< 10 U	< 0.01 U	< 10 U	< 0.01 U	NA	< 10 U	<b>0.0026 J</b>	< 10 U	< 0.01 U	NA	< 10 U
Silver	0.1	< 5 U	< 0.005 U	< 5 U	<b>0.0030 J</b>	< 5 U	< 0.005 U	NA	< 5 U	<b>0.0026 J</b>	< 5 U	<b>0.0020 J</b>	NA	< 5 U

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	COE-MW-01	COE-MW-01	COE-MW-02	COE-MW-02	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-04	COE-MW-04	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-06
	Sample Date	2/3/2009	12/16/2009	02/03/09	12/16/2009	02/03/09	12/16/2009	01/25/11	02/04/09	12/17/2009	02/04/09	12/17/2009	01/26/11	02/04/09
	Type 1 RRS													
<b>Pesticides - USEPA Method SW8081 (µg/L)</b>														
Aldrin	0.02	0.0044 J	4.6 J	< 0.025 U	0.66 J	< 0.025 U	0.22 J	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
alpha-Chlordane	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
DDD	0.1	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
DDE, p,p'	0.1	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
DDT	0.1	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
delta BHC	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Dieldrin	0.02	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endosulfan I	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endosulfan II	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endosulfan Sulfate	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endrin	2	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endrin Aldehyde	NA	< 0.025 U	0.014 J	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Endrin ketone	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
gamma-Chlordane	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Heptachlor	0.4	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Heptachlor epoxide	0.2	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Hexachlorocyclohexane, Alpha-	0.006	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Hexachlorocyclohexane, Beta-	0.02	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	0.46 J	< 0.028 U	NA	0.82 J	< 0.028 U	0.36 J	< 0.025 U	NA	< 0.025 U
Lindane	0.2	0.019 J	< 0.028 U	< 0.025 U	< 0.028 U	< 0.025 U	< 0.028 U	NA	< 0.025 U	< 0.028 U	< 0.025 U	< 0.025 U	NA	< 0.025 U
Methoxychlor	40	< 0.1 U	< 0.11 U	< 0.1 U	< 0.11 U	< 0.1 U	< 0.11 U	NA	< 0.1 U	< 0.11 U	< 0.1 U	< 0.1 U	NA	< 0.1 U
Toxaphene	3	< 0.25 U	< 0.28 U	< 0.25 U	< 0.28 U	< 0.25 U	< 0.28 U	NA	< 0.25 U	< 0.28 U	< 0.25 U	< 0.25 U	NA	< 0.25 U
<b>Herbicides - USEPA Method SW8151A (µg/L)</b>														
2,4,5-TP (Silvex)	NA	< 0.5 U	NA	< 0.5 U	NA	< 0.5 U	NA	NA	< 0.5 U	NA	< 0.5 U	NA	NA	< 0.5 U
2,4-D	NA	< 2 U	NA	< 2 U	NA	< 2 U	NA	NA	< 2 U	NA	< 2 U	NA	NA	< 2 U
Trichlorophenoxyacetic Acid, 2,4,5-	NA	< 0.5 U	NA	< 0.5 U	NA	< 0.5 U	NA	NA	< 0.5 U	NA	< 0.5 U	NA	NA	< 0.5 U
<b>SVOCs - USEPA Method SW8270 (µg/L)</b>														
1,1'-Biphenyl	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2,4,5-Trichlorophenol	4000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2,4,6-Trichlorophenol	30	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2,4-Dichlorophenol	20	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2,4-Dimethylphenol	700	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2,4-Dinitrophenol	70	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
2,4-Dinitrotoluene	0.05	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
2,6-Dinitrotoluene	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
2-Chloronaphthalene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2-Chlorophenol	40	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2-Methyl-4,6-dinitrophenol	NA	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
2-Methylnaphthalene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2-Methylphenol	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
2-Nitrobenzamine	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
2-Nitrophenol	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
3,3'-Dichlorobenzidine	0.08	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
3-Nitrobenzamine	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
4-Bromophenyl phenyl ether	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
4-Chloro-3-methylphenol	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
4-Chlorobenzamine	100	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
4-Chlorophenyl phenyl ether	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
4-Methylphenol	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
4-Nitrobenzamine	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
4-Nitrophenol	60	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
Acenaphthene	2000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Acenaphthylene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Acetophenone	4000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Anthracene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Atrazine	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Benz(a)anthracene	0.1	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Benzaldehyde	NA	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
Benzo(a)pyrene	0.2	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Benzo(b)fluoranthene	0.2	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Benzo(ghi)perylene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Benzo(k)fluoranthene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Bis(2-chloroethoxy)methane	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Bis(2-chloroethyl) ether	0.03	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Bis(2-chloroisopropyl) ether	300	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Bis(2-ethylhexyl)phthalate	6	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Butyl benzyl phthalate	100	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U	NA	< 10 U	NA	NA	< 10 U
Caprolactam	NA	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U

NOTES ON LAST PAGE



**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	COE-MW-01	COE-MW-01	COE-MW-02	COE-MW-02	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-04	COE-MW-04	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-06
	Sample Date	2/3/2009	12/16/2009	02/03/09	12/16/2009	02/03/09	12/16/2009	01/25/11	02/04/09	12/17/2009	02/04/09	12/17/2009	01/26/11	02/04/09
	Type 1 RRS													
Carbazole	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Chrysene	0.2	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Dibenz(a,h)anthracene	0.3	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Dibenzofuran	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Diethyl phthalate	5000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Dimethyl phthalate	400000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Di-n-butyl phthalate	4000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Di-n-octylphthalate	700	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Fluoranthene	1000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Fluorene	1000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Hexachlorobenzene	1	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Hexachlorobutadiene	1	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Hexachlorocyclopentadiene	50	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
Hexachloroethane	1	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Indeno(1,2,3-cd)pyrene	0.4	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Isophorone	100	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Naphthalene	20	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Nitrobenzene	20	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
N-Nitroso-di-n-propylamine	0.005	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
N-Nitrosodiphenylamine	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Pentachlorophenol	1	< 25 U	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U	NA	< 25 U	NA	NA	< 25 U
Phenanthrene	NA	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Phenol	4000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U
Pyrene	1000	< 5 U	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U	NA	< 5 U	NA	NA	< 5 U

NOTES ON LAST PAGE





**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	COE-MW-06	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-08	COE-MW-08	COE-MW-08	HA01-MW-07D	HAA01-MW-09	HAA01-MW-10	HAA01-MW-10	HAA01-MW-11	HAA01-MW-12	HA01-MW-12	HAA01-MW-12D	HAA01-MW-13	HAA01-MW-14	
	Sample Date	12/17/2009	02/04/09	12/16/2009	01/26/11	02/04/09	12/16/2009	01/26/11	2/16/2012	12/16/2009	12/17/2009	01/25/11	12/17/2009	12/17/2009	1/30/2012	12/17/2009	12/16/2009	12/16/2009	
	Type 1 RRS																		
Carbazole	NA	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Chrysene	0.2	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 UJ	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Dibenz(a,h)anthracene	0.3	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 UJ	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Dibenzofuran	NA	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Diethyl phthalate	5000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 5.3 U	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Dimethyl phthalate	400000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 5.3 U	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Di-n-butyl phthalate	4000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 5.3 U	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Di-n-octylphthalate	700	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 5.3 UJ	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Fluoranthene	1000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Fluorene	1000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Hexachlorobenzene	1	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Hexachlorobutadiene	1	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Hexachlorocyclopentadiene	50	NA	< 28 U	NA	NA	< 28 U	NA	NA	< 5.3 U	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Hexachloroethane	1	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Indeno(1,2,3-cd)pyrene	0.4	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 UJ	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Isophorone	100	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Naphthalene	20	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Nitrobenzene	20	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
N-Nitroso-di-n-propylamine	0.005	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
N-Nitrosodiphenylamine	NA	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Pentachlorophenol	1	NA	< 28 U	NA	NA	< 28 U	NA	NA	< 5.3 U	NA	< 5.1 U	NA	NA	NA	NA	NA	NA	NA	
Phenanthrene	NA	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Phenol	4000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	
Pyrene	1000	NA	< 5.6 U	NA	NA	< 5.6 U	NA	NA	< 1.1 U	NA	< 1 U	NA	NA	NA	NA	NA	NA	NA	

NOTES ON LAST PAGE



**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HAA01-MW-14	HAA01-MW-14D	HAA01-MW-15	HAA01-MW-15	HAA01-MW-16	HAA01-MW-17	HAA01-MW-18D	HMW-02	HMW-02	HMW-04	HMW-04	HMW-06	HMW-06	HMW-08	HMW-09
	Sample Date Type 1 RRS	1/30/2012	12/16/2009	12/17/2009	01/25/11	12/17/2009	12/17/2009	12/16/2009	2/2/2009	12/16/2009	02/03/09	12/17/2009	02/03/09	12/17/2009	12/16/2009	02/03/09
<b>Pesticides - USEPA Method SW8081 (µg/L)</b>																
Aldrin	0.02	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
alpha-Chlordane	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
DDD	0.1	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
DDE, p,p'	0.1	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
DDT	0.1	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	0.027 J
delta BHC	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Dieldrin	0.02	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endosulfan I	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endosulfan II	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endosulfan Sulfate	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endrin	2	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endrin Aldehyde	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Endrin ketone	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
gamma-Chlordane	NA	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Heptachlor	0.4	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Heptachlor epoxide	0.2	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	0.026 J	NA	NA	2.5 J
Hexachlorocyclohexane, Alpha-	0.006	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	< 0.029 U
Hexachlorocyclohexane, Beta-	0.02	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	0.5 J
Lindane	0.2	NA	< 0.025 U	< 0.027 U	NA	< 0.028 U	NA	< 0.028 U	< 0.028 U	NA	< 0.026 U	NA	< 0.027 U	NA	NA	0.17 J
Methoxychlor	40	NA	< 0.1 U	< 0.11 U	NA	< 0.11 U	NA	< 0.11 U	< 0.11 U	NA	< 0.1 U	NA	< 0.11 U	NA	NA	< 0.12 U
Toxaphene	3	NA	< 0.25 U	< 0.27 U	NA	< 0.28 U	NA	< 0.28 U	< 0.28 U	NA	< 0.26 U	NA	< 0.27 U	NA	NA	< 0.29 U
<b>Herbicides - USEPA Method SW8151A (µg/L)</b>																
2,4,5-TP (Silvex)	NA	NA	NA	NA	NA	NA	NA	NA	< 0.55 UJ	NA	< 0.52 UJ	NA	< 0.5 UJ	NA	NA	14 UJ
2,4-D	NA	NA	NA	NA	NA	NA	NA	NA	< 2.2 UJ	NA	< 2.1 UJ	NA	< 2 UJ	NA	NA	< 2.2 UJ
Trichlorophenoxyacetic Acid, 2,4,5-	NA	NA	NA	NA	NA	NA	NA	NA	< 0.55 U	NA	< 0.52 U	NA	< 0.5 U	NA	NA	2.6 J
<b>SVOCs - USEPA Method SW8270 (µg/L)</b>																
1,1'-Biphenyl	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2,4,5-Trichlorophenol	4000	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2,4,6-Trichlorophenol	30	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2,4-Dichlorophenol	20	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2,4-Dimethylphenol	700	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2,4-Dinitrophenol	70	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
2,4-Dinitrotoluene	0.05	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
2-Chloronaphthalene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2-Chlorophenol	40	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2-Methyl-4,6-dinitrophenol	NA	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
2-Methylnaphthalene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	4.3 J	< 1 U	NA	< 5.9 U
2-Methylphenol	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
2-Nitrobenzidine	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
2-Nitrophenol	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
3,3'-Dichlorobenzidine	0.08	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
3-Nitrobenzidine	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
4-Chlorobenzenamine	100	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
4-Methylphenol	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
4-Nitrobenzenamine	NA	NA	NA	NA	NA	< 2 U	NA	< 2.2 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 2 U	NA	< 12 U
4-Nitrophenol	60	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
Acenaphthene	2000	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Acenaphthylene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Acetophenone	4000	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Anthracene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Atrazine	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Benz(a)anthracene	0.1	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Benzaldehyde	NA	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
Benzo(a)pyrene	0.2	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Benzo(b)fluoranthene	0.2	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Benzo(ghi)perylene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Bis(2-chloroethyl) ether	0.03	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Bis(2-chloroisopropyl) ether	300	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 6.2 UJ	NA	< 5.7 UJ	NA	< 5.7 UJ	< 5 U	NA	< 5.9 UJ
Butyl benzyl phthalate	100	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 12 U	NA	< 11 U	NA	< 11 U	< 5 U	NA	< 12 U
Caprolactam	NA	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HAA01-MW-14	HAA01-MW-14D	HAA01-MW-15	HAA01-MW-15	HAA01-MW-16	HAA01-MW-17	HAA01-MW-18D	HMW-02	HMW-02	HMW-04	HMW-04	HMW-06	HMW-06	HMW-08	HMW-09
	Sample Date	1/30/2012	12/16/2009	12/17/2009	01/25/11	12/17/2009	12/17/2009	12/16/2009	2/2/2009	12/16/2009	02/03/09	12/17/2009	02/03/09	12/17/2009	12/16/2009	02/03/09
	Type 1 RRS															
Carbazole	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Chrysene	0.2	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Dibenz(a,h)anthracene	0.3	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Dibenzofuran	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Diethyl phthalate	5000	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 5 U	NA	< 5.9 U
Dimethyl phthalate	400000	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 5 U	NA	< 5.9 U
Di-n-butyl phthalate	4000	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 5 U	NA	< 5.9 U
Di-n-octylphthalate	700	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 5 U	NA	< 5.9 U
Fluoranthene	1000	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Fluorene	1000	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Hexachlorobenzene	1	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Hexachlorobutadiene	1	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Hexachlorocyclopentadiene	50	NA	NA	NA	NA	< 5 U	NA	< 5.6 U	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
Hexachloroethane	1	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Indeno(1,2,3-cd)pyrene	0.4	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Isophorone	100	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Naphthalene	20	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	<b>22</b>	< 1 U	NA	< 5.9 U
Nitrobenzene	20	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
N-Nitroso-di-n-propylamine	0.005	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 U	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Pentachlorophenol	1	NA	NA	NA	NA	< 5 U	NA	< 5.6 UJ	< 31 U	NA	< 28 U	NA	< 29 U	< 5 U	NA	< 29 U
Phenanthrene	NA	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Phenol	4000	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U
Pyrene	1000	NA	NA	NA	NA	< 1 U	NA	< 1.1 UJ	< 6.2 U	NA	< 5.7 U	NA	< 5.7 U	< 1 U	NA	< 5.9 U

NOTES ON LAST PAGE



**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID Sample Date Type 1 RRS	HMW-09	HMW-09	HMW-10	HMW-10	HMW-11	HMW-11	HMW-13	HMW-13	HMW-13	HMW-14R	HMW-14R
		12/16/2009	01/25/11	02/03/09	12/17/2009	02/03/09	12/16/2009	02/02/09	12/17/2009	01/25/11	02/03/09	12/16/2009
<b>VOCs - USEPA Method SW8260 (µg/L)</b>												
1,1,1-Trichloroethane	200	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1,2,2-Tetrachloroethane	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.84</b>	< 1 U	< 0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1000000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>8.5</b>	< 1 U	< 0.5 U
1,1,2-Trichloroethane	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1-Dichloroethane	4000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1-Dichloroethene	7	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2,4-Trichlorobenzene	70	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dibromo-3-chloropropane (DBCP)	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dibromoethane	0.05	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dichlorobenzene	600	< 0.5 U	<b>0.36 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dichloroethane	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>1.1</b>	< 1 U	< 0.5 U
1,2-Dichloropropane	5	< 0.5 U	<b>0.41 J</b>	<b>0.28 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,3-Dichlorobenzene	600	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,4-Dichlorobenzene	75	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 1 U	< 0.5 U
2-Butanone	2000	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 20 U	< 10 U
2-Hexanone	NA	< 10 U	< 10 U	<b>3.2 J</b>	0.30 J	< 10 U	< 10 U	<b>11</b>	< 10 U	< 10 U	<b>0.87 J</b>	< 10 U
4-Methyl-2-pentanone	2000	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	<b>2.4 J</b>	<b>7.7 J</b>	< 20 U	< 10 U
Acetone	4000	< 10 UJ	<b>8.4 J</b>	< 10 U	<b>3.2 J</b>	<b>3.4 J</b>	< 10 UJ	4.2 J	<b>490</b>	<b>13</b>	< 20 U	< 10 U
Benzene	5	< 0.5 U	<b>48</b>	<b>17</b>	< 0.5 U	<b>0.84</b>	< 0.5 U	<b>52</b>	<b>56</b>	<b>68</b>	<b>0.41 J</b>	<b>0.21 J</b>
Benzene, 1-methylethyl	NA	< 0.5 U	<b>40</b>	<b>3.5</b>	< 0.5 U	0.13 UB	< 0.5 U	<b>51</b>	<b>86</b>	< 0.5 U	< 1 U	< 0.5 U
Bromodichloromethane	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Bromomethane	10	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Carbon disulfide	4000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Carbon tetrachloride	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
CFC-11	2000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 UJ
CFC-12	1000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chlorobenzene	100	< 0.5 U	<b>1.2</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloroethane	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloroform	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloromethane	3	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
cis-1,2-Dichloroethene	70	< 0.5 U	< 0.5 U	<b>0.32 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>600</b>	<b>310</b>
cis-1,3-Dichloropropene	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>54</b>	< 1 U	< 0.5 U
Cyclohexane	NA	< 0.5 U	<b>65</b>	<b>9.2</b>	< 0.5 U	< 0.5 U	< 0.5 U	<b>76</b>	<b>130</b>	< 0.5 U	< 1 U	< 0.5 U
Dibromochloromethane	100	< 0.5 U	<b>0.68</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>25</b>	< 1 U	< 0.5 U
Ethylbenzene	700	< 0.5 U	<b>16</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>31</b>	<b>56</b>	< 1 U	< 1 U	< 0.5 U
Methyl acetate	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	<b>91</b>	< 2 U	< 1 U
Methylcyclohexane	NA	< 5 U	<b>30</b>	<b>1.1 J</b>	< 5 U	< 5 U	< 5 U	<b>78</b>	<b>160</b>	< 0.5 U	< 10 U	< 5 U
Methylene chloride	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Styrene	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
tert-Butyl methyl ether	NA	< 0.5 U	< 0.5 U	<b>0.74</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Tetrachloroethene	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.18 J</b>	< 1 U	< 0.5 U
Toluene	1000	< 0.5 U	<b>0.24 J</b>	<b>0.18 J</b>	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.57</b>	<b>0.48 J</b>	< 0.5 U	< 1 U	< 0.5 U
trans-1,2-Dichloroethene	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>25</b>	<b>17</b>
trans-1,3-Dichloropropene	NA	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	NA	< 1 U	< 0.5 U
Tribromomethane	100	< 0.5 U	NA	NA	< 0.5 U	NA	< 0.5 U	NA	< 0.5 U	< 0.5 U	NA	< 0.5 U
Trichloroethene	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>1.3</b>	<b>1.5</b>
Vinyl chloride	2	< 0.5 U	< 0.5 U	<b>0.6</b>	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	<b>0.87</b>	<b>1.4</b>	<b>1.3</b>
Xylenes (total)	10000	< 0.5 U	<b>0.51</b>	<b>0.69</b>	< 0.5 U	<b>0.21 J</b>	< 0.5 U	<b>38</b>	<b>61</b>	NA	<b>0.62 J</b>	< 0.5 U
<b>Metals - USEPA Method SW6010/SW7470 (mg/L)</b>												
Arsenic	0.05	NA	< 10 U	< 10 U	NA	< 10 U	NA	<b>6.7 J</b>	NA	NA	<b>4.7 J</b>	< 0.01 U
Barium	2	NA	NA	<b>54</b>	NA	<b>48</b>	NA	<b>18 J</b>	NA	NA	<b>29</b>	<b>0.048</b>
Cadmium	0.005	NA	NA	< 2 U	NA	< 2 U	NA	< 2 U	NA	NA	< 2 U	< 0.002 U
Chromium	0.1	NA	NA	< 5 U	NA	< 5 U	NA	<b>3.4 J</b>	NA	NA	< 5 U	0.0022 UB
Lead	0.015	NA	NA	< 10 U	NA	2.8 UB	NA	3.6 UB	NA	NA	3.7 UB	< 0.01 U
Mercury	0.002	NA	NA	< 0.1 U	NA	<b>0.1</b>	NA	< 0.1 U	NA	NA	< 0.1 U	< 0.0001 U
Selenium	0.05	NA	NA	< 10 U	NA	< 10 U	NA	< 10 U	NA	NA	3.6 UB	< 0.01 U
Silver	0.1	NA	NA	< 5 U	NA	< 5 U	NA	1.8 UB	NA	NA	1.7 UB	< 0.005 U

NOTES ON LAST PAGE



**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HMW-09	HMW-09	HMW-10	HMW-10	HMW-11	HMW-11	HMW-13	HMW-13	HMW-13	HMW-14R	HMW-14R
	Sample Date Type 1 RRS	12/16/2009	01/25/11	02/03/09	12/17/2009	02/03/09	12/16/2009	02/02/09	12/17/2009	01/25/11	02/03/09	12/16/2009
<b>Pesticides - USEPA Method SW8081 (µg/L)</b>												
Aldrin	0.02	NA	NA	< 0.028 U	NA	<b>0.067 J</b>	NA	<b>0.04 J</b>	NA	NA	< 0.025 U	<b>0.41 J</b>
alpha-Chlordane	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
DDD	0.1	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
DDE, p,p'	0.1	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
DDT	0.1	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
delta BHC	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Dieldrin	0.02	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Endosulfan I	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Endosulfan II	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Endosulfan Sulfate	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Endrin	2	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Endrin Aldehyde	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	<b>0.0066 J</b>
Endrin ketone	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
gamma-Chlordane	NA	NA	NA	< 0.028 U	NA	< 0.025 U	NA	<b>0.75 J</b>	NA	NA	<b>3.9 J</b>	< 0.027 U
Heptachlor	0.4	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Heptachlor epoxide	0.2	NA	NA	<b>0.014 J</b>	NA	<b>0.043 J</b>	NA	<b>0.024 J</b>	NA	NA	< 0.025 U	< 0.027 U
Hexachlorocyclohexane, Alpha-	0.006	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Hexachlorocyclohexane, Beta-	0.02	NA	NA	< 0.028 U	NA	<b>0.024 J</b>	NA	<b>0.034 J</b>	NA	NA	<b>0.52 J</b>	< 0.027 U
Lindane	0.2	NA	NA	< 0.028 U	NA	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.025 U	< 0.027 U
Methoxychlor	40	NA	NA	< 0.11 U	NA	< 0.1 U	NA	< 0.11 U	NA	NA	< 0.1 U	< 0.11 U
Toxaphene	3	NA	NA	< 0.28 U	NA	< 0.25 U	NA	< 0.28 U	NA	NA	< 0.25 U	< 0.27 U
<b>Herbicides - USEPA Method SW8151A (µg/L)</b>												
2,4,5-TP (Silvex)	NA	NA	NA	< 0.53 UJ	NA	< 0.55 UJ	NA	< 0.53 UJ	NA	NA	< 0.5 U	NA
2,4-D	NA	NA	NA	< 2.1 UJ	NA	1.7 UJ	NA	< 2.1 UJ	NA	NA	< 2 U	NA
Trichlorophenoxyacetic Acid, 2,4,5-	NA	NA	NA	< 0.53 U	NA	< 0.55 U	NA	< 0.53 U	NA	NA	< 0.5 U	NA
<b>SVOCs - USEPA Method SW8270 (µg/L)</b>												
1,1'-Biphenyl	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2,4,5-Trichlorophenol	4000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2,4,6-Trichlorophenol	30	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2,4-Dichlorophenol	20	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2,4-Dimethylphenol	700	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2,4-Dinitrophenol	70	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
2,4-Dinitrotoluene	0.05	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
2,6-Dinitrotoluene	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
2-Chloronaphthalene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2-Chlorophenol	40	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2-Methyl-4,6-dinitrophenol	NA	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
2-Methylnaphthalene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	<b>22</b>	NA	< 5 U	NA
2-Methylphenol	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
2-Nitrobenzenamine	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
2-Nitrophenol	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
3,3'-Dichlorobenzidine	0.08	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
3-Nitrobenzenamine	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
4-Bromophenyl phenyl ether	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
4-Chloro-3-methylphenol	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
4-Chlorobenzenamine	100	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
4-Chlorophenyl phenyl ether	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
4-Methylphenol	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	<b>9.9</b>	NA	< 10 U	NA
4-Nitrobenzenamine	NA	NA	NA	< 12 U	< 2 U	< 12 U	NA	< 12 U	< 2 U	NA	< 10 U	NA
4-Nitrophenol	60	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
Acenaphthene	2000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Acenaphthylene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Acetophenone	4000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Anthracene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Atrazine	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Benz(a)anthracene	0.1	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Benzaldehyde	NA	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
Benzo(a)pyrene	0.2	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Benzo(b)fluoranthene	0.2	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	<b>0.25 J</b>	NA	< 5 U	NA
Benzo(ghi)perylene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	<b>0.78 J</b>	NA	< 5 U	NA
Benzo(k)fluoranthene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	<b>0.12 J</b>	NA	< 5 U	NA
Bis(2-chloroethoxy)methane	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Bis(2-chloroethyl) ether	0.03	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Bis(2-chloroisopropyl) ether	300	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	< 6.2 UJ	< 5.1 U	< 6.2 UJ	NA	< 6.2 UJ	< 5.1 U	NA	< 5 U	NA
Butyl benzyl phthalate	100	NA	NA	< 12 U	< 5.1 U	< 12 U	NA	< 12 U	< 5.1 U	NA	< 10 U	NA
Caprolactam	NA	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HMW-09	HMW-09	HMW-10	HMW-10	HMW-11	HMW-11	HMW-13	HMW-13	HMW-13	HMW-14R	HMW-14R
	Sample Date Type 1 RRS	12/16/2009	01/25/11	02/03/09	12/17/2009	02/03/09	12/16/2009	02/02/09	12/17/2009	01/25/11	02/03/09	12/16/2009
Carbazole	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Chrysene	0.2	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Dibenz(a,h)anthracene	0.3	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Dibenzofuran	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Diethyl phthalate	5000	NA	NA	< 6.2 U	< 5.1 U	< 6.2 U	NA	< 6.2 U	< 5.1 U	NA	< 5 U	NA
Dimethyl phthalate	400000	NA	NA	< 6.2 U	< 5.1 U	< 6.2 U	NA	< 6.2 U	< 5.1 U	NA	< 5 U	NA
Di-n-butyl phthalate	4000	NA	NA	< 6.2 U	< 5.1 U	< 6.2 U	NA	< 6.2 U	< 5.1 U	NA	< 5 U	NA
Di-n-octylphthalate	700	NA	NA	< 6.2 U	< 5.1 U	< 6.2 U	NA	< 6.2 U	< 5.1 U	NA	< 5 U	NA
Fluoranthene	1000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Fluorene	1000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Hexachlorobenzene	1	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Hexachlorobutadiene	1	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Hexachlorocyclopentadiene	50	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
Hexachloroethane	1	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Indeno(1,2,3-cd)pyrene	0.4	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	0.43 J	NA	< 5 U	NA
Isophorone	100	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Naphthalene	20	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	<b>19</b>	<b>100</b>	NA	< 5 U	NA
Nitrobenzene	20	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
N-Nitroso-di-n-propylamine	0.005	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
N-Nitrosodiphenylamine	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Pentachlorophenol	1	NA	NA	< 31 U	< 5.1 U	< 31 U	NA	< 31 U	< 5.1 U	NA	< 25 U	NA
Phenanthrene	NA	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Phenol	4000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA
Pyrene	1000	NA	NA	< 6.2 U	< 1 U	< 6.2 U	NA	< 6.2 U	< 1 U	NA	< 5 U	NA

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HMW-21	HMW-21	HMW-21	HMW-23	HMW-23	HMW-23 +	HMW-24	HMW-24
	Sample Date	2/4/2009	12/17/2009	1/26/2011	2/3/2009	12/17/2009	1/18/2010	2/3/2009	12/17/2009
	Type 1 RRS								
<b>VOCs - USEPA Method SW8260 (µg/L)</b>									
1,1,1-Trichloroethane	200	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-Tetrachloroethane	0.2	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1000000	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	5	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	4000	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	7	< 0.5 U	<b>2.7</b>	<b>8.7 J</b>	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-Trichlorobenzene	70	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-chloropropane (DBCP)	0.2	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromoethane	0.05	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichlorobenzene	600	< 0.5 U	< 2 U	< 5 U	<b>0.46 J</b>	NA	<b>0.73</b>	<b>0.66</b>	< 0.5 U
1,2-Dichloroethane	5	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloropropane	5	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	0.28 J	< 0.5 U	< 0.5 U
1,3-Dichlorobenzene	600	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
1,4-Dichlorobenzene	75	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
2-Butanone	2000	< 10 U	< 40 U	< 100 U	< 10 U	NA	< 10 U	< 10 U	< 10 U
2-Hexanone	NA	< 10 U	< 40 U	< 100 U	<b>2.8 J</b>	NA	< 10 U	5.6 J	5.1 J
4-Methyl-2-pentanone	2000	< 10 U	< 40 U	< 100 U	< 10 U	NA	< 10 U	< 10 U	< 10 U
Acetone	4000	< 10 U	<b>7.7 J</b>	< 100 U	< 10 U	NA	15 UB	< 10 U	<b>9.4 J</b>
Benzene	5	< 0.5 U	<b>0.98 J</b>	< 5 U	<b>0.36 J</b>	NA	<b>2.4</b>	<b>140</b>	<b>4.9</b>
Benzene, 1-methylethyl	NA	< 0.5 U	< 2 U	< 5 U	<b>14</b>	NA	<b>29</b>	<b>19</b>	<b>3.1</b>
Bromodichloromethane	100	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Bromomethane	10	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Carbon disulfide	4000	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	0.15 J	< 0.5 U	< 0.5 U
Carbon tetrachloride	5	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
CFC-11	2000	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
CFC-12	1000	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Chlorobenzene	100	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	<b>0.51</b>	< 0.5 U	< 0.5 U
Chloroethane	NA	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Chloroform	100	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Chloromethane	3	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	<b>15</b>	<b>1200</b>	<b>3200</b>	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,3-Dichloropropene	NA	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Cyclohexane	NA	< 0.5 U	< 2 U	< 5 U	0.34 J	NA	<b>25</b>	<b>47</b>	< 0.5 U
Dibromochloromethane	100	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Ethylbenzene	700	< 0.5 U	< 2 U	< 5 U	<b>2.6</b>	NA	<b>8.8</b>	<b>32</b>	<b>2.1</b>
Methyl acetate	NA	< 1 U	< 4 U	< 10 U	< 1 U	NA	< 1 U	< 1 U	< 1 U
Methylcyclohexane	NA	< 5 U	< 20 U	< 50 UJ	< 5 U	NA	2.0 J	<b>12</b>	< 5 U
Methylene chloride	5	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	0.22 UB	< 0.5 U	< 0.5 U
Styrene	100	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
tert-Butyl methyl ether	NA	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	< 0.5 U	< 2 U	< 5 UJ	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	1000	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	<b>0.37 J</b>	<b>0.65</b>	< 0.5 U
trans-1,2-Dichloroethene	100	<b>0.7</b>	<b>3.5</b>	<b>9.5</b>	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,3-Dichloropropene	NA	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Tribromomethane	100	NA	< 2 U	NA	NA	NA	< 0.5 U	NA	< 0.5 U
Trichloroethene	5	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl chloride	2	0.13 J	< 2 U	36 J	< 0.5 U	NA	< 0.5 U	< 0.5 U	< 0.5 U
Xylenes (total)	10000	< 0.5 U	< 2 U	< 5 U	< 0.5 U	NA	< 0.5 U	<b>47</b>	< 0.5 U
<b>Metals - USEPA Method SW6010/SW7470 (mg/L)</b>									
Arsenic	0.05	< 10 U	< 0.01 U	0 UB	< 10 U	NA	NA	< 10 U	NA
Barium	2	<b>100</b>	<b>0.024 J</b>	NA	<b>40</b>	NA	NA	<b>33</b>	NA
Cadmium	0.005	< 2 U	< 0.002 U	NA	< 2 U	NA	NA	< 2 U	NA
Chromium	0.1	< 5 U	< 0.005 U	NA	< 5 U	NA	NA	< 5 U	NA
Lead	0.015	1.9 UB	< 0.01 U	NA	2.7 UB	NA	NA	< 10 U	NA
Mercury	0.002	< 0.1 U	< 0.0001 U	NA	< 0.1 U	NA	NA	< 0.1 U	NA
Selenium	0.05	4.8 UB	< 0.01 U	NA	4.2 UB	NA	NA	< 10 U	NA
Silver	0.1	< 5 U	< 0.005 U	NA	2.5 UB	NA	NA	2 UB	NA

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HMW-21	HMW-21	HMW-21	HMW-23	HMW-23	HMW-23 +	HMW-24	HMW-24
	Sample Date	2/4/2009	12/17/2009	1/26/2011	2/3/2009	12/17/2009	1/18/2010	2/3/2009	12/17/2009
	Type 1 RRS								
<b>Pesticides - USEPA Method SW8081 (µg/L)</b>									
Aldrin	0.02	< 0.025 U	< 0.025 U	NA	0.11 J	NA	NA	0.082 J	NA
alpha-Chlordane	NA	< 0.025 U	< 0.025 U	NA	0.046 J	NA	NA	0.077 J	NA
DDD	0.1	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.056 J	NA
DDE, p,p'	0.1	< 0.025 U	< 0.025 U	NA	0.01 J	NA	NA	0.044 J	NA
DDT	0.1	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.027 U	NA
delta BHC	NA	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.057 J	NA
Dieldrin	0.02	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.028 J	NA
Endosulfan I	NA	< 0.025 UJ	< 0.025 U	NA	0.034 J	NA	NA	0.057 J	NA
Endosulfan II	NA	< 0.025 UJ	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.027 U	NA
Endosulfan Sulfate	NA	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.027 U	NA
Endrin	2	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.015 J	NA
Endrin Aldehyde	NA	< 0.025 U	0.0045 J	NA	< 0.028 U	NA	NA	< 0.027 U	NA
Endrin ketone	NA	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.027 U	NA
gamma-Chlordane	NA	< 0.025 U	< 0.025 U	NA	2.2 J	NA	NA	1 J	NA
Heptachlor	0.4	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	< 0.027 U	NA
Heptachlor epoxide	0.2	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.17 J	NA
Hexachlorocyclohexane, Alpha-	0.006	< 0.025 U	< 0.025 U	NA	< 0.028 U	NA	NA	0.052 J	NA
Hexachlorocyclohexane, Beta-	0.02	< 0.025 U	< 0.025 U	NA	0.077	NA	NA	0.076 J	NA
Lindane	0.2	< 0.025 U	< 0.025 U	NA	0.025 J	NA	NA	0.026 J	NA
Methoxychlor	40	< 0.1 U	< 0.1 U	NA	< 0.11 U	NA	NA	< 0.11 U	NA
Toxaphene	3	< 0.25 U	< 0.25 U	NA	< 0.28 U	NA	NA	< 0.27 U	NA
<b>Herbicides - USEPA Method SW8151A (µg/L)</b>									
2,4,5-TP (Silvex)	NA	< 0.5 U	NA	NA	< 0.51 UJ	NA	NA	< 0.53 UJ	NA
2,4-D	NA	< 2 U	NA	NA	< 2 UJ	NA	NA	< 2.1 UJ	NA
Trichlorophenoxyacetic Acid, 2,4,5-	NA	< 0.5 U	NA	NA	0.25 J	NA	NA	0.43 J	NA
<b>SVOCs - USEPA Method SW8270 (µg/L)</b>									
1,1'-Biphenyl	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2,4,5-Trichlorophenol	4000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2,4,6-Trichlorophenol	30	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2,4-Dichlorophenol	20	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2,4-Dimethylphenol	700	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2,4-Dinitrophenol	70	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
2,4-Dinitrotoluene	0.05	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
2,6-Dinitrotoluene	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
2-Chloronaphthalene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2-Chlorophenol	40	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2-Methyl-4,6-dinitrophenol	NA	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
2-Methylnaphthalene	NA	< 5 U	NA	NA	8.7	9.7	9.3	17	0.40 J
2-Methylphenol	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
2-Nitrobenzenamine	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
2-Nitrophenol	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
3,3'-Dichlorobenzidine	0.08	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
3-Nitrobenzenamine	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
4-Bromophenyl phenyl ether	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
4-Chloro-3-methylphenol	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
4-Chlorobenzenamine	100	< 5 U	NA	NA	< 6.2 U	25	< 1.2 U	< 5.7 U	< 2 U
4-Chlorophenyl phenyl ether	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
4-Methylphenol	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
4-Nitrobenzenamine	NA	< 10 U	NA	NA	< 12 U	< 4 U	< 2.4 U	< 11 U	< 4 U
4-Nitrophenol	60	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
Acenaphthene	2000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Acenaphthylene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Acetophenone	4000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Anthracene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Atrazine	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Benz(a)anthracene	0.1	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Benzaldehyde	NA	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
Benzo(a)pyrene	0.2	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Benzo(b)fluoranthene	0.2	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Benzo(ghi)perylene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Benzo(k)fluoranthene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Bis(2-chloroethoxy)methane	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Bis(2-chloroethyl) ether	0.03	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Bis(2-chloroisopropyl) ether	300	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Bis(2-ethylhexyl)phthalate	6	< 5 U	NA	NA	< 6.2 UJ	< 10 U	< 5.9 U	< 5.7 UJ	< 10 U
Butyl benzyl phthalate	100	< 10 U	NA	NA	< 12 U	< 10 U	< 5.9 UJ	< 11 U	< 10 U
Caprolactam	NA	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U

NOTES ON LAST PAGE

**Table 5-6  
Groundwater Investigation Summary -  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvent Area  
Hunter Army Airfield, Georgia**

Chemical Name	Location ID	HMW-21	HMW-21	HMW-21	HMW-23	HMW-23	HMW-23 +	HMW-24	HMW-24
	Sample Date	2/4/2009	12/17/2009	1/26/2011	2/3/2009	12/17/2009	1/18/2010	2/3/2009	12/17/2009
	Type 1 RRS								
Carbazole	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Chrysene	0.2	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Dibenz(a,h)anthracene	0.3	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Dibenzofuran	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Diethyl phthalate	5000	< 5 U	NA	NA	< 6.2 U	< 10 U	< 5.9 U	< 5.7 U	< 10 U
Dimethyl phthalate	400000	< 5 U	NA	NA	< 6.2 U	< 10 U	< 5.9 U	< 5.7 U	< 10 U
Di-n-butyl phthalate	4000	< 5 U	NA	NA	< 6.2 U	< 10 U	< 5.9 U	< 5.7 U	< 10 U
Di-n-octylphthalate	700	< 5 U	NA	NA	< 6.2 U	< 10 U	< 5.9 U	< 5.7 U	< 10 U
Fluoranthene	1000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Fluorene	1000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Hexachlorobenzene	1	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Hexachlorobutadiene	1	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Hexachlorocyclopentadiene	50	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
Hexachloroethane	1	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Indeno(1,2,3-cd)pyrene	0.4	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Isophorone	100	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Naphthalene	20	< 5 U	NA	NA	<b>63</b>	<b>58</b>	<b>39</b>	<b>95</b>	<b>3.2</b>
Nitrobenzene	20	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
N-Nitroso-di-n-propylamine	0.005	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
N-Nitrosodiphenylamine	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Pentachlorophenol	1	< 25 U	NA	NA	< 31 U	< 10 U	< 5.9 U	< 29 U	< 10 U
Phenanthrene	NA	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Phenol	4000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U
Pyrene	1000	< 5 U	NA	NA	< 6.2 U	< 2 U	< 1.2 U	< 5.7 U	< 2 U

NOTES ON LAST PAGE

Notes:

  - Indicate the analyte was detected above the Type 1 RRS or detection limit where no RRS has been established

\* - Duplicate sample

NA

**BOLD** - indicate the analyte was detected above the PQL

B - Analyte was detected in an associated blank as well as in the sample.

D - Sample was diluted for analysis.

H - Sample was prepped or analyzed beyond the specified holding time.

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

µg/L - Micrograms per Liter

mg/L - Milligrams per Liter

NA - Not analyzed

RRS - GAEPD Rule 391-3-19-.07 Risk Reduction Standard (July 23, 2003).

SVOCs - Semi-volatile Organic Compounds

U - The analyte was not detected above the reporting limit.

UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

VOCs - Volatile Organic Compounds

+ - HMW-23 was re-sampled in January 2010 as a result of broken VOA vials in the December 2009 sample shipment

**Table 6-1  
Historical Groundwater Elevations  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
HMW-01	38.42	38.0 - 48.0	Jul-04	15.29	23.13	--
HMW-01	38.42	38.0 - 48.0	Jan-05	15.55	22.87	-0.26
HMW-01	38.42	38.0 - 48.0	Jul-05	13.85	24.57	1.7
HMW-01	38.42	38.0 - 48.0	Jan-06	14.27	24.15	-0.42
HMW-01	38.42	38.0 - 48.0	Jul-06	14.54	23.88	-0.27
HMW-01	38.42	38.0 - 48.0	Jan-07	16.38	22.04	-1.84
HMW-01	38.42	38.0 - 48.0	Jul-07	15.81	22.61	0.57
HMW-01	38.42	38.0 - 48.0	Jan-08	14.99	23.43	0.82
HMW-01	38.42	38.0 - 48.0	Feb-09	NM	--	--
HMW-01	38.42	38.0 - 48.0	Dec-09	13.7	24.72	1.29
HMW-02	37.93	4.6 - 14.6	Jul-04	13.64	24.29	--
HMW-02	37.93	4.6 - 14.6	Jan-05	14.12	23.81	-0.48
HMW-02	37.93	4.6 - 14.6	Jul-05	11.63	26.3	2.49
HMW-02	37.93	4.6 - 14.6	Jan-06	12.43	25.5	-0.8
HMW-02	37.93	4.6 - 14.6	Jul-06	14.45	23.48	-2.02
HMW-02	37.93	4.6 - 14.6	Jan-07	14.81	23.12	-0.36
HMW-02	37.93	4.6 - 14.6	Jul-07	14.07	23.86	0.74
HMW-02	37.93	4.6 - 14.6	Jan-08	13.76	24.17	0.31
HMW-02	37.93	4.6 - 14.6	Feb-09	14.21	23.72	-0.45
HMW-02	37.93	4.6 - 14.6	Dec-09	12.02	25.91	2.19
HMW-03	29.75	39.0 - 49.0	Jul-04	9.6	20.15	--
HMW-03	29.75	39.0 - 49.0	Jan-05	9.45	20.3	0.15
HMW-03	29.75	39.0 - 49.0	Jul-05	7.25	22.5	2.2
HMW-03	29.75	39.0 - 49.0	Jan-06	8.37	21.38	-1.12
HMW-03	29.75	39.0 - 49.0	Jul-06	14.41	15.34	-6.04
HMW-03	29.75	39.0 - 49.0	Jan-07	10.71	19.04	3.7
HMW-03	29.75	39.0 - 49.0	Jul-07	10.4	19.35	0.31
HMW-03	29.75	39.0 - 49.0	Jan-08	8.59	21.16	1.81
HMW-03	29.75	39.0 - 49.0	Feb-09	NM	--	--
HMW-03	29.75	39.0 - 49.0	Dec-09	7.51	22.24	1.08
HMW-04	30.42	3.0-13.0	Jul-04	8.4	22.02	--
HMW-04	30.42	3.0-13.0	Jan-05	8.65	21.77	-0.25
HMW-04	30.42	3.0-13.0	Jul-05	7.47	22.95	1.18
HMW-04	30.42	3.0-13.0	Jan-06	7.65	22.77	-0.18
HMW-04	30.42	3.0-13.0	Jul-06	10.62	19.8	-2.97
HMW-04	30.42	3.0-13.0	Jan-07	9.44	20.98	1.18
HMW-04	30.42	3.0-13.0	Jul-07	9.41	21.01	0.03
HMW-04	30.42	3.0-13.0	Jan-08	6.98	23.44	2.43
HMW-04	30.42	3.0-13.0	Feb-09	9.49	20.93	-2.51
HMW-04	30.42	3.0-13.0	Dec-09	5.61	24.81	3.88
HMW-05	31.94	39.0 - 49.0	Jul-04	9.9	22.04	--
HMW-05	31.94	39.0 - 49.0	Jan-05	10.13	21.81	-0.23
HMW-05	31.94	39.0 - 49.0	Jul-05	8.65	23.29	1.48
HMW-05	31.94	39.0 - 49.0	Jan-06	8.99	22.95	-0.34
HMW-05	31.94	39.0 - 49.0	Jul-06	NM	--	--
HMW-05	31.94	39.0 - 49.0	Jan-07	11.05	20.89	-2.06
HMW-05	31.94	39.0 - 49.0	Jul-07	10.55	21.39	0.5
HMW-05	31.94	39.0 - 49.0	Jan-08	9.31	22.63	1.24
HMW-05	31.94	39.0 - 49.0	Feb-09	NM	--	--
HMW-05	31.94	39.0 - 49.0	Dec-09	8.27	23.67	1.04
HMW-06	31.53	3.0-13.0	Jul-04	8.13	23.4	--
HMW-06	31.53	3.0-13.0	Jan-05	8.52	23.01	-0.39
HMW-06	31.53	3.0-13.0	Jul-05	6.48	25.05	2.04
HMW-06	31.53	3.0-13.0	Jan-06	6.98	24.55	-0.5
HMW-06	31.53	3.0-13.0	Jul-06	NM	--	--
HMW-06	31.53	3.0-13.0	Jan-07	9.12	22.41	-2.14
HMW-06	31.53	3.0-13.0	Jul-07	8.54	22.99	0.58
HMW-06	31.53	3.0-13.0	Jan-08	7.54	23.99	1
HMW-06	31.53	3.0-13.0	Feb-09	9.13	22.4	-1.59
HMW-06	31.53	3.0-13.0	Dec-09	5.18	26.35	3.95

**Table 6-1  
Historical Groundwater Elevations  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
HMW-08	27.50	3.0-13.0	Jul-04	8.07	19.43	--
HMW-08	27.5	3.0-13.0	Jan-05	8.6	18.9	-0.53
HMW-08	27.5	3.0-13.0	Jul-05	7.48	20.02	1.12
HMW-08	27.5	3.0-13.0	Jan-06	7.77	19.73	-0.29
HMW-08	27.5	3.0-13.0	Jul-06	11.02	16.48	-3.25
HMW-08	27.5	3.0-13.0	Jan-07	10.29	17.21	0.73
HMW-08	27.5	3.0-13.0	Jul-07	9.17	18.33	1.12
HMW-08	27.5	3.0-13.0	Jan-08	6.9	20.6	2.27
HMW-08	27.5	3.0-13.0	Feb-09	9.06	18.44	-2.16
HMW-08	27.5	3.0-13.0	Dec-09	6.03	21.47	3.03
HMW-09	34.39	5.0-15.0	Jul-04	10.53	23.86	--
HMW-09	34.39	5.0-15.0	Jan-05	11.37	23.02	-0.84
HMW-09	34.39	5.0-15.0	Jul-05	9.02	25.37	2.35
HMW-09	34.39	5.0-15.0	Jan-06	9.3	25.09	-0.28
HMW-09	34.39	5.0-15.0	Jul-06	11.71	22.68	-2.41
HMW-09	34.39	5.0-15.0	Jan-07	12.24	22.15	-0.53
HMW-09	34.39	5.0-15.0	Jul-07	9.11	25.28	3.13
HMW-09	34.39	5.0-15.0	Jan-08	9.41	24.98	-0.3
HMW-09	34.39	5.0-15.0	Feb-09	11.44	22.95	-2.03
HMW-09	34.39	5.0-15.0	Dec-09	8.72	25.67	2.72
HMW-10	27.51	2.7-12.8	Jul-04	8.5	19.01	--
HMW-10	27.51	2.7-12.8	Jan-05	8.05	19.46	0.45
HMW-10	27.51	2.7-12.8	Jul-05	8.8	18.71	-0.75
HMW-10	27.51	2.7-12.8	Jan-06	7.47	20.04	1.33
HMW-10	27.51	2.7-12.8	Jul-06	10.7	16.81	-3.23
HMW-10	27.51	2.7-12.8	Jan-07	10.31	17.2	0.39
HMW-10	27.51	2.7-12.8	Jul-07	10.67	16.84	-0.36
HMW-10	27.51	2.7-12.8	Jan-08	7.11	20.4	3.56
HMW-10	27.51	2.7-12.8	Feb-09	8.75	18.76	-1.64
HMW-10	27.51	2.7-12.8	Dec-09	6.44	21.07	2.31
HMW-11	31.05	4.7-14.8	Jul-04	11.02	20.03	--
HMW-11	31.05	4.7-14.8	Jan-05	11.23	19.82	-0.21
HMW-11	31.05	4.7-14.8	Jul-05	11.02	20.03	0.21
HMW-11	31.05	4.7-14.8	Jan-06	10.49	20.56	0.53
HMW-11	31.05	4.7-14.8	Jul-06	13.99	17.06	-3.5
HMW-11	31.05	4.7-14.8	Jan-07	13.16	17.89	0.83
HMW-11	31.05	4.7-14.8	Jul-07	13	18.05	0.16
HMW-11	31.05	4.7-14.8	Jan-08	10.36	20.69	2.64
HMW-11	31.05	4.7-14.8	Feb-09	12.7	18.35	-2.34
HMW-11	31.05	4.7-14.8	Dec-09	9.88	21.17	2.82
HMW-12	31.78	5.1 - 15.2	Jul-04	12.62	19.16	--
HMW-12	31.78	5.1 - 15.2	Jan-05	12.33	19.45	0.29
HMW-12	31.78	5.1 - 15.2	Jul-05	11.97	19.81	0.36
HMW-12	31.78	5.1 - 15.2	Jan-06	11.72	20.06	0.25
HMW-12	31.78	5.1 - 15.2	Jul-06	13.27	18.51	-1.55
HMW-12	31.78	5.1 - 15.2	Jan-07	13.05	18.73	0.22
HMW-12	31.78	5.1 - 15.2	Jul-07	12.89	18.89	0.16
HMW-12	31.78	5.1 - 15.2	Jan-08	11.59	20.19	1.3
HMW-12	31.78	5.1 - 15.2	Feb-09	NM	--	--
HMW-12	31.78	5.1 - 15.2	Dec-09	11.29	20.49	0.3
HMW-13	34.88	7.5 - 17.6	Jul-04	13.22	21.66	--
HMW-13	34.88	7.5 - 17.6	Jan-05	14.01	20.87	-0.79
HMW-13	34.88	7.5 - 17.6	Jul-05	12.67	22.21	1.34
HMW-13	34.88	7.5 - 17.6	Jan-06	12.68	22.2	-0.01
HMW-13	34.88	7.5 - 17.6	Jul-06	13.92	20.96	-1.24
HMW-13	34.88	7.5 - 17.6	Jan-07	14.62	20.26	-0.7
HMW-13	34.88	7.5 - 17.6	Jul-07	14.07	20.81	0.55
HMW-13	34.88	7.5 - 17.6	Jan-08	13.33	21.55	0.74
HMW-13	34.88	7.5 - 17.6	Feb-09	13.71	21.17	-0.38
HMW-13	34.88	7.5 - 17.6	Dec-09	12.8	22.08	0.91

**Table 6-1**  
**Historical Groundwater Elevations**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
HMW-14R	34.67	9.2 - 18.9	Jul-04	12.54	22.13	--
HMW-14R	34.67	9.2 - 18.9	Jan-05	12.94	21.73	-0.4
HMW-14R	34.67	9.2 - 18.9	Jul-05	11.55	23.12	1.39
HMW-14R	34.67	9.2 - 18.9	Jan-06	11.73	22.94	-0.18
HMW-14R	34.67	9.2 - 18.9	Jul-06	13.44	21.23	-1.71
HMW-14R	34.67	9.2 - 18.9	Jan-07	13.71	20.96	-0.27
HMW-14R	34.67	9.2 - 18.9	Jul-07	13.45	21.22	0.26
HMW-14R	34.67	9.2 - 18.9	Jan-08	12.63	22.04	0.82
HMW-14R	34.67	9.2 - 18.9	Feb-09	12.7	21.97	-0.07
HMW-14R	34.67	9.2 - 18.9	Dec-09	11.47	23.2	1.23
HMW-15	23.84	4.7-14.7	Jul-04	8.67	15.17	--
HMW-15	23.84	4.7-14.7	Jan-05	8.35	15.49	0.32
HMW-15	23.84	4.7-14.7	Jul-05	7.88	15.96	0.47
HMW-15	23.84	4.7-14.7	Jan-06	7.47	16.37	0.41
HMW-15	23.84	4.7-14.7	Jul-06	9.22	14.62	-1.75
HMW-15	23.84	4.7-14.7	Jan-07	dry	--	--
HMW-15	23.84	4.7-14.7	Jul-07	dry	--	--
HMW-15	23.84	4.7-14.7	Jan-08	7.31	16.53	1.91
HMW-15	23.84	4.7-14.7	Feb-09	NM	--	--
HMW-15	23.84	4.7-14.7	Dec-09	5.53	18.31	1.78
HMW-16	29.06	4.3 - 14.3	Jul-04	11.57	17.49	--
HMW-16	29.06	4.3 - 14.3	Jan-05	11.11	17.95	0.46
HMW-16	29.06	4.3 - 14.3	Jul-05	11.55	17.51	-0.44
HMW-16	29.06	4.3 - 14.3	Jan-06	10.61	18.45	0.94
HMW-16	29.06	4.3 - 14.3	Jul-06	13.71	15.35	-3.1
HMW-16	29.06	4.3 - 14.3	Jan-07	13.69	15.37	0.02
HMW-16	29.06	4.3 - 14.3	Jul-07	13.78	15.28	-0.09
HMW-16	29.06	4.3 - 14.3	Jan-08	10.34	18.72	3.44
HMW-16	29.06	4.3 - 14.3	Feb-09	NM	--	--
HMW-16	29.06	4.3 - 14.3	Dec-09	9.56	19.5	0.78
HMW-17	33.29	4.3 - 14.3	Jul-04	9.14	24.15	--
HMW-17	33.29	4.3 - 14.3	Jan-05	9.56	23.73	-0.42
HMW-17	33.29	4.3 - 14.3	Jul-05	7.38	25.91	2.18
HMW-17	33.29	4.3 - 14.3	Jan-06	8.1	25.19	-0.72
HMW-17	33.29	4.3 - 14.3	Jul-06	NM	--	--
HMW-17	33.29	4.3 - 14.3	Jan-07	10.21	23.08	-2.11
HMW-17	33.29	4.3 - 14.3	Jul-07	9.52	23.77	0.69
HMW-17	33.29	4.3 - 14.3	Jan-08	8.96	24.33	0.56
HMW-17	33.29	4.3 - 14.3	Feb-09	NM	--	--
HMW-17	33.29	4.3 - 14.3	Dec-09	7.82	25.47	1.14
HMW-18	29.87	3.7 - 13.5	Jul-04	9.97	19.9	--
HMW-18	29.87	3.7 - 13.5	Jan-05	8.45	21.42	1.52
HMW-18	29.87	3.7 - 13.5	Jul-05	8.6	21.27	-0.15
HMW-18	29.87	3.7 - 13.5	Jan-06	7.83	22.04	0.77
HMW-18	29.87	3.7 - 13.5	Jul-06	10.96	18.91	-3.13
HMW-18	29.87	3.7 - 13.5	Jan-07	10.36	19.51	0.6
HMW-18	29.87	3.7 - 13.5	Jul-07	10.5	19.37	-0.14
HMW-18	29.87	3.7 - 13.5	Jan-08	7.42	22.45	3.08
HMW-18	29.87	3.7 - 13.5	Feb-09	NM	--	--
HMW-18	29.87	3.7 - 13.5	Dec-09	7.03	22.84	0.39
HMW-19	24.50	4.2 - 14.0	Jul-04	13.22	11.28	--
HMW-19	24.50	4.2 - 14.0	Jan-05	13.96	10.54	-0.74
HMW-19	24.50	4.2 - 14.0	Jul-05	13.65	10.85	0.31
HMW-19	24.50	4.2 - 14.0	Jan-06	13.35	11.15	0.3
HMW-19	24.50	4.2 - 14.0	Jul-06	13.62	10.88	-0.27
HMW-19	24.50	4.2 - 14.0	Jan-07	13.5	11	0.12
HMW-19	24.50	4.2 - 14.0	Jul-07	13.28	11.22	0.22
HMW-19	24.50	4.2 - 14.0	Jan-08	12.8	11.7	0.48
HMW-19	24.50	4.2 - 14.0	Feb-09	NM	--	--
HMW-19	24.50	4.2 - 14.0	Dec-09	12.19	12.31	0.61



**Table 6-1**  
**Historical Groundwater Elevations**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
HMW-20	23.19	3.7 - 13.4	Jul-04	8.37	14.82	--
HMW-20	23.19	3.7 - 13.4	Jan-05	7.15	16.04	1.22
HMW-20	23.19	3.7 - 13.4	Jul-05	6.55	16.64	0.6
HMW-20	23.19	3.7 - 13.4	Jan-06	6.06	17.13	0.49
HMW-20	23.19	3.7 - 13.4	Jul-06	9.29	13.9	-3.23
HMW-20	23.19	3.7 - 13.4	Jan-07	9.44	13.75	-0.15
HMW-20	23.19	3.7 - 13.4	Jul-07	9.65	13.54	-0.21
HMW-20	23.19	3.7 - 13.4	Jan-08	6.57	16.62	3.08
HMW-20	23.19	3.7 - 13.4	Feb-09	NM	--	--
HMW-20	23.19	3.7 - 13.4	Dec-09	3.70	19.49	2.87
HMW-21	22.28	2.0-11.5	Jul-04	6.34	15.94	--
HMW-21	22.28	2.0-11.5	Jan-05	4.2	18.08	2.14
HMW-21	22.28	2.0-11.5	Jul-05	4.72	17.56	-0.52
HMW-21	22.28	2.0-11.5	Jan-06	3.57	18.71	1.15
HMW-21	22.28	2.0-11.5	Jul-06	8.34	13.94	-4.77
HMW-21	22.28	2.0-11.5	Jan-07	8.71	13.57	-0.37
HMW-21	22.28	2.0-11.5	Jul-07	8.67	13.61	0.04
HMW-21	22.28	2.0-11.5	Jan-08	3.71	18.57	4.96
HMW-21	22.28	2.0-11.5	Feb-09	5.02	17.26	-1.31
HMW-21	22.28	2.0-11.5	Dec-09	2.99	19.29	2.03
HMW-22	38.19	11.0 - 20.5	Jul-04	15.75	22.44	--
HMW-22	38.19	11.0 - 20.5	Jan-05	15.89	22.3	-0.14
HMW-22	38.19	11.0 - 20.5	Jul-05	14.45	23.74	1.44
HMW-22	38.19	11.0 - 20.5	Jan-06	14.62	23.57	-0.17
HMW-22	38.19	11.0 - 20.5	Jul-06	16.34	21.85	-1.72
HMW-22	38.19	11.0 - 20.5	Jan-07	16.49	21.7	-0.15
HMW-22	38.19	11.0 - 20.5	Jul-07	16.36	21.83	0.13
HMW-22	38.19	11.0 - 20.5	Jan-08	15.8	22.39	0.56
HMW-22	38.19	11.0 - 20.5	Feb-09	NM	--	--
HMW-22	38.19	11.0 - 20.5	Dec-09	13.98	24.21	1.82
HMW-23	29.46	5.0-15.0	Jul-04	8.41	21.05	--
HMW-23	29.46	5.0-15.0	Jan-05	8.11	21.35	0.3
HMW-23	29.46	5.0-15.0	Jul-05	8.05	21.41	0.06
HMW-23	29.46	5.0-15.0	Jan-06	7.22	22.24	0.83
HMW-23	29.46	5.0-15.0	Jul-06	10.45	19.01	-3.23
HMW-23	29.46	5.0-15.0	Jan-07	9.62	19.84	0.83
HMW-23	29.46	5.0-15.0	Jul-07	9.97	19.49	-0.35
HMW-23	29.46	5.0-15.0	Jan-08	6.53	22.93	3.44
HMW-23	29.46	5.0-15.0	Feb-09	8.68	20.78	-2.15
HMW-23	29.46	5.0-15.0	Dec-09	5.30	24.16	3.38
HMW-24	31.92	7.0-12.0	Jul-04	7.74	24.18	--
HMW-24	31.92	7.0-12.0	Jan-05	8.28	23.64	-0.54
HMW-24	31.92	7.0-12.0	Jul-05	6.9	25.02	1.38
HMW-24	31.92	7.0-12.0	Jan-06	7.2	24.72	-0.3
HMW-24	31.92	7.0-12.0	Jul-06	9.83	22.09	-2.63
HMW-24	31.92	7.0-12.0	Jan-07	9.31	22.61	0.52
HMW-24	31.92	7.0-12.0	Jul-07	9.33	22.59	-0.02
HMW-24	31.92	7.0-12.0	Jan-08	6.92	25	2.41
HMW-24	31.92	7.0-12.0	Feb-09	9.28	22.64	-2.36
HMW-24	31.92	7.0-12.0	Dec-09	5.47	26.45	3.81
COE-MW-01	34.67	15.0-20.0	Jul-04	13.64	21.03	--
COE-MW-01	34.67	15.0-20.0	Jan-05	13.43	21.24	0.21
COE-MW-01	34.67	15.0-20.0	Jul-05	12.72	21.95	0.71
COE-MW-01	34.67	15.0-20.0	Jan-06	12.83	21.84	-0.11
COE-MW-01	34.67	15.0-20.0	Jul-06	14.54	20.13	-1.71
COE-MW-01	34.67	15.0-20.0	Jan-07	15.16	19.51	-0.62
COE-MW-01	34.67	15.0-20.0	Jul-07	14.6	20.07	0.56
COE-MW-01	34.67	15.0-20.0	Jan-08	13.09	21.58	1.51
COE-MW-01	34.67	15.0-20.0	Feb-09	13.41	21.26	-0.32
COE-MW-01	34.67	15.0-20.0	Dec-09	12.56	22.11	0.85

**Table 6-1  
Historical Groundwater Elevations  
HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area  
Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
COE-MW-02	31.28	14.9-19.9	Jul-04	14.22	17.06	--
COE-MW-02	31.28	14.9-19.9	Jan-05	12.88	18.4	1.34
COE-MW-02	31.28	14.9-19.9	Jul-05	12.35	18.93	0.53
COE-MW-02	31.28	14.9-19.9	Jan-06	11.92	19.36	0.43
COE-MW-02	31.28	14.9-19.9	Jul-06	15.89	15.39	-3.97
COE-MW-02	31.28	14.9-19.9	Jan-07	16.95	14.33	-1.06
COE-MW-02	31.28	14.9-19.9	Jul-07	16.35	14.93	0.6
COE-MW-02	31.28	14.9-19.9	Jan-08	12.33	18.95	4.02
COE-MW-02	31.28	14.9-19.9	Feb-09	13.15	18.13	-0.82
COE-MW-02	31.28	14.9-19.9	Dec-09	11.29	19.99	1.86
COE-MW-03	32.66	15.0-20.0	Jul-04	13	19.66	--
COE-MW-03	32.66	15.0-20.0	Jan-05	12.87	19.79	0.13
COE-MW-03	32.66	15.0-20.0	Jul-05	12	20.66	0.87
COE-MW-03	32.66	15.0-20.0	Jan-06	11.84	20.82	0.16
COE-MW-03	32.66	15.0-20.0	Jul-06	14.41	18.25	-2.57
COE-MW-03	32.66	15.0-20.0	Jan-07	15.43	17.23	-1.02
COE-MW-03	32.66	15.0-20.0	Jul-07	14.35	18.31	1.08
COE-MW-03	32.66	15.0-20.0	Jan-08	11.97	20.69	2.38
COE-MW-03	32.66	15.0-20.0	Feb-09	12.81	19.85	-0.84
COE-MW-03	32.66	15.0-20.0	Dec-09	11.15	21.51	1.66
COE-MW-04	22.67	10.0-15.0	Jul-04	7.32	15.35	--
COE-MW-04	22.67	10.0-15.0	Jan-05	4.95	17.72	2.37
COE-MW-04	22.67	10.0-15.0	Jul-05	4.83	17.84	0.12
COE-MW-04	22.67	10.0-15.0	Jan-06	4	18.67	0.83
COE-MW-04	22.67	10.0-15.0	Jul-06	10.62	12.05	-6.62
COE-MW-04	22.67	10.0-15.0	Jan-07	10.07	12.6	0.55
COE-MW-04	22.67	10.0-15.0	Jul-07	9.82	12.85	0.25
COE-MW-04	22.67	10.0-15.0	Jan-08	4.45	18.22	5.37
COE-MW-04	22.67	10.0-15.0	Feb-09	5.53	17.14	-1.08
COE-MW-04	22.67	10.0-15.0	Dec-09	3.26	19.41	2.27
COE-MW-05	21.18	10.0-15.0	Jul-04	7.02	14.16	--
COE-MW-05	21.18	10.0-15.0	Jan-05	4.12	17.06	2.9
COE-MW-05	21.18	10.0-15.0	Jul-05	4.01	17.17	0.11
COE-MW-05	21.18	10.0-15.0	Jan-06	3.08	18.1	0.93
COE-MW-05	21.18	10.0-15.0	Jul-06	8.96	12.22	-5.88
COE-MW-05	21.18	10.0-15.0	Jan-07	9.95	11.23	-0.99
COE-MW-05	21.18	10.0-15.0	Jul-07	10.2	10.98	-0.25
COE-MW-05	21.18	10.0-15.0	Jan-08	3.82	17.36	6.38
COE-MW-05	21.18	10.0-15.0	Feb-09	4.78	16.4	-0.96
COE-MW-05	21.18	10.0-15.0	Dec-09	2.60	18.58	2.18
COE-MW-06	22.34	10.0-15.0	Jul-04	6.83	15.51	--
COE-MW-06	22.34	10.0-15.0	Jan-05	4.78	17.56	2.05
COE-MW-06	22.34	10.0-15.0	Jul-05	4.9	17.44	-0.12
COE-MW-06	22.34	10.0-15.0	Jan-06	3.86	18.48	1.04
COE-MW-06	22.34	10.0-15.0	Jul-06	9.34	13	-5.48
COE-MW-06	22.34	10.0-15.0	Jan-07	9.95	12.39	-0.61
COE-MW-06	22.34	10.0-15.0	Jul-07	10.01	12.33	-0.06
COE-MW-06	22.34	10.0-15.0	Jan-08	4.39	17.95	5.62
COE-MW-06	22.34	10.0-15.0	Feb-09	5.62	16.72	-1.23
COE-MW-06	22.34	10.0-15.0	Dec-09	3.25	19.09	2.37
COE-MW-07	22.92	10.0-15.0	Jul-04	6.92	16	--
COE-MW-07	22.92	10.0-15.0	Jan-05	5.22	17.7	1.7
COE-MW-07	22.92	10.0-15.0	Jul-05	5.21	17.71	0.01
COE-MW-07	22.92	10.0-15.0	Jan-06	4.31	18.61	0.9
COE-MW-07	22.92	10.0-15.0	Jul-06	9.32	13.6	-5.01
COE-MW-07	22.92	10.0-15.0	Jan-07	9.61	13.31	-0.29
COE-MW-07	22.92	10.0-15.0	Jul-07	9.41	13.51	0.2
COE-MW-07	22.92	10.0-15.0	Jan-08	4.45	18.47	4.96
COE-MW-07	22.92	10.0-15.0	Feb-09	6.06	16.86	-1.61
COE-MW-07	22.92	10.0-15.0	Dec-09	3.40	19.52	2.66

**Table 6-1**  
**Historical Groundwater Elevations**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Location ID	Top of Casing Elevation (ft above MSL)	Screen Interval (ft)	Measurement Date	Depth to Water (ft BTOC)	Groundwater Elevation (ft above MSL)	Change in Elevation (ft)
COE-MW-08	22.53	10.0-15.0	Jul-04	7.71	14.82	--
COE-MW-08	22.53	10.0-15.0	Jan-05	5.35	17.18	2.36
COE-MW-08	22.53	10.0-15.0	Jul-05	5.22	17.31	0.13
COE-MW-08	22.53	10.0-15.0	Jan-06	4.39	18.14	0.83
COE-MW-08	22.53	10.0-15.0	Jul-06	10.22	12.31	-5.83
COE-MW-08	22.53	10.0-15.0	Jan-07	10.68	11.85	-0.46
COE-MW-08	22.53	10.0-15.0	Jul-07	10.65	11.88	0.03
COE-MW-08	22.53	10.0-15.0	Jan-08	4.59	17.94	6.06
COE-MW-08	22.53	10.0-15.0	Feb-09	6.28	16.25	-1.69
COE-MW-08	22.53	10.0-15.0	Dec-09	3.61	18.92	2.67
HA01-MW-09	33.66	7.0 - 17.0	Dec-09	10.95	22.71	--
HA01-MW-10	23.51	2.0 - -12.0	Dec-09	4.25	19.26	--
HA01-MW-11	19.74	2.0 - 12.0	Dec-09	2.66	17.08	--
HA01-MW-12	21.22	2.0 - 12.0	Dec-09	4.35	16.87	--
HA01-MW-12D	21.00	40.0 - 50.0	Dec-09	3.05	17.95	--
HA01-MW-13	20.13	2.0 - 12.0	Dec-09	2.51	17.62	--
HA01-MW-14	23.22	3.0 - 13.0	Dec-09	4.5	18.72	--
HA01-MW-14D	23.92	39.0 - 49.0	Dec-09	3.1	20.82	--
HA01-MW-15	28.11	4.5 - 14.5	Dec-09	8.81	19.3	--
HA01-MW-16	35.95	9.0 - 19.0	Dec-09	14.1	21.85	--
HA01-MW-17	24.86	4.5 - 14.5	Dec-09	5.65	19.21	--
HA01-MW-18	29.58	56.0 - 66.0	Dec-09	8.81	20.77	--

Notes:  
 BTOC = Below Top of Casing  
 ft = feet  
 MSL = Mean Sea Level  
 NM = Not Measured  
 NA = Not Applicable

Table 7-1  
Risk Reduction Standard Equations for Exposure to Soil  
HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
Hunter Army Airfield, Savannah, Georgia

**ROUTE-SPECIFIC RRSs:****Oral:**

$$(RRS_o)_{C \text{ or } NC} = \frac{(TCR \text{ or } THI) \times BW \times (AT_C \text{ or } AT_{NC}) \times (10^6 \text{ mg/kg})}{IRs \times EF \times ED \times [SF_o \text{ or } (1/RfD_o)]}$$

**Inhalation:**

$$(RRS_i)_{C \text{ or } NC} = \frac{(TCR \text{ or } THI) \times (AT_C \text{ or } AT_{NC}) \times BW}{[(1/VF) + (1/PEF)] \times EF \times ED \times [SF_i \text{ or } (1/RfD_i)]}$$

where:

$$PEF = \frac{LS \times V \times DH}{A} \times \frac{(1000 \text{ g/kg}) \times (3,600 \text{ sec/hr})}{RPF \times (1-G) \times (Um/U_t)^3 \times F_x}$$

$$VF = \frac{LS \times V \times DH}{A} \times \frac{(3.14 \times \alpha \times T)^{3/2}}{2 \times Dei \times E \times Kas \times (10^9 \text{ kg/g})}$$

$$\alpha = \frac{Dei \times E}{E + [ps \times (1-E)/Kas]}$$

$$Dei = Di \times E^{0.33}$$

$$Kas = H/(RT \times Kd)$$

**Cancer Effects RRS:**

$$RRS_C = \frac{1}{\frac{1}{(RRS_o)_C} + \frac{1}{(RRS_i)_C}}$$

**Non-Cancer Effects RRS:**

$$RRS_{NC} = \frac{1}{\frac{1}{(RRS_o)_{NC}} + \frac{1}{(RRS_i)_{NC}}}$$

$$RRS = \text{Minimum result of } RRS_C \text{ and } RRS_{NC}.$$

where:

- $\alpha$  Alpha; calculation intermediate ( $cm^2/sec$ ).
- A Contiguous area of contamination (20,250,000  $cm^2$  USEPA [1991] default).
- $AT_C$  Averaging time for cancer effects (25,550 days).
- $AT_{NC}$  Averaging time for non-cancer effects (10,950 for adult residents; 2,190 days for child residents; 9,125 days for site workers); ED x 365 days/year.
- BW Body weight (70 kg for adult receptors; 15 kg for child resident)
- DH Diffusion Height (2 m, USEPA [1991] default)
- Dei Effective diffusivity ( $cm^2/sec$ ).
- Di Diffusivity in air ( $cm^2/sec$ ); constituent specific.
- E Total soil porosity (0.35 unitless, USEPA default)
- ED Exposure duration (30 years for adult resident; 6 years for child resident; 25 years for site workers)
- EF Exposure frequency (350 days/year for resident receptors; 250 days/year for site workers)
- Foc Fraction organic carbon in soil (0.02 unitless, USEPA default)
- Fx Function of Ut/Um (unitless);  $F_x = 0.18 \times [8x^3 + 12x] \times \exp(-x^2)$ , where  $x = 0.886 \times (Ut/Um)$ .
- G Fraction of vegetative cover (unitless) (0)
- H Henry's Law Constant ( $atm \cdot m^3/mol$ ); constituent specific.

Table 7-1  
Risk Reduction Standard Equations for Exposure to Soil  
HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
Hunter Army Airfield, Savannah, Georgia

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IR <sub>air</sub>	Inhalation rate (15 m <sup>3</sup> /day for residents; 20 m <sup>3</sup> /day for site workers).
IR <sub>soil</sub>	Incidental soil ingestion rate (114 mg/day for adult resident; 200 mg/day for child resident; 50 mg/day for site worker).
Kas	Soil-air partition coefficient (g soil/ cm <sup>3</sup> air).
Kd	Soil-water partition coefficient (cm <sup>3</sup> /g or mL/g); constituent specific. Kd is calculated as Foc × Koc.
Koc	Organic carbon partition coefficient (cm <sup>3</sup> /g or mL/g); constituent specific.
LS	Length of side of contaminated area (45 m, USEPA default)
PEF	Particulate emission factor (4.63 × 10 <sup>6</sup> m <sup>3</sup> /kg, USEPA default).
ps	True soil or particle density (2.65 g/cm <sup>3</sup> , USEPA default).
RfDi	Reference dose for inhalation (mg/kg/day)
RfDo	Reference dose for ingestion (mg/kg/day)
RPF	Respirable particle fraction (0.036 g/m <sup>3</sup> /hr).
RRS	Risk reduction standard for soil (mg/kg); minimum of the RRS <sub>o</sub> (based on cancer effects) and the RRS <sub>nc</sub> (based on non-cancer effects), which are based on the route-specific RRSs (RRS <sub>o</sub> for the oral route and RRS <sub>i</sub> for the inhalation route).
RT	Product of the ideal gas constant (8.206 × 10 <sup>5</sup> atm·m <sup>3</sup> /mol/K) and the absolute temperature (K); RT = 0.02445 atm·m <sup>3</sup> /mol at 25°C (298 K).
SF	Cancer slope factor or oral (SF <sub>o</sub> ) or inhalation (SF <sub>i</sub> ) exposure (kg-day/mg).
T	Exposure interval (7.9 × 10 <sup>8</sup> sec, USEPA default)
TCR	Target cancer risk (unitless); results presented for TCR value of 10 <sup>-6</sup> (10 <sup>-4</sup> for Class C carcinogens).
THI	Target hazard index (unitless); results presented for THI value of
Um	Wind speed, annual average (3.0 m/sec)
Ut	Equivalent threshold value of windspeed at 10 meters (12.8 m/sec)
V	Wind speed in the mixing zone (2.25 m/sec, USEPA default)
VF	Volatilization factor (m <sup>3</sup> /kg).

**SAMPLE CALCULATIONS, Tetrachloroethene, Industrial Exposure (Type 4)**

$$\begin{aligned}
 x &= 0.886 \quad x \quad \frac{12.8 \text{ m/sec}}{3.0 \text{ m/sec}} = 3.780 \\
 Fx &= 0.18 [(8 \times 3.780^3) + (12 \times 3.78)] \times \exp(-3.780) = 5.36\text{E-}05 \\
 Dei &= 0.079 \text{ cm}^2/\text{sec} \times (0.35)^{0.33} = 0.05587 \text{ cm}^2/\text{sec} \\
 Kas &= \frac{1.03 \times 10^2 \text{ atm}\cdot\text{m}^3/\text{mol}}{(0.02445 \text{ atm}\cdot\text{m}^3/\text{mol}) \times 0.02 \times 95.5 \text{ cm}^3/\text{g}} = 2.20\text{E-}01 \text{ g/cm}^3 \\
 \alpha &= \frac{0.05587 \text{ cm}^2/\text{sec} \times 0.35}{0.35 + [2.65 \text{ g/cm}^3 \times (1 - 0.35)/2.21 \times 10^1 \text{ g/cm}^3]} \\
 &= 2.40\text{E-}03 \text{ cm}^2/\text{sec} \\
 VF &= \frac{45 \text{ m} \times 2.25 \text{ m/s} \times 2 \text{ m}}{2.03 \times 10^7 \text{ cm}^2} \quad x \quad \frac{(3.14 \times 2.4 \times 10^3 \text{ cm}^2/\text{sec} \times 7.9 \times 10^8 \text{ sec})^{1/2}}{2 \times 0.05587 \text{ cm}^2/\text{sec} \times 0.35 \times 2.21 \times 10^1 \text{ g/cm}^3 \times 10^3 \text{ kg/g}} \\
 &= 2,816 \text{ m}^3/\text{kg}
 \end{aligned}$$

**CANCER EFFECTS:**

**Oral:**

$$\begin{aligned}
 (RRS_o)_c &= \frac{10^{-5} \times 70 \text{ kg} \times 25,550 \text{ days} \times 10^6 \text{ mg/kg}}{50 \text{ mg/day} \times 250 \text{ days/yr} \times 25 \text{ yrs} \times (2.1 \times 10^6 \text{ kg}\cdot\text{day/mg})} \\
 &= 27,250 \text{ mg/kg}
 \end{aligned}$$

Table 7-1  
 Risk Reduction Standard Equations for Exposure to Soil  
 HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
 Hunter Army Airfield, Savannah, Georgia

**Inhalation:**

$$(RRS_i)_C = \frac{10^{-5} \times 70 \text{ kg} \times 25,550 \text{ days}}{[(1/2,818 \text{ m}^3/\text{kg}) + (1/4.63 \times 10^9 \text{ m}^3/\text{kg})] \times 250 \text{ days/yr} \times 25 \text{ yrs} \times 20 \text{ m}^3/\text{day} \times (9.1 \times 10^4 \text{ kg-day/mg})}$$

$$= 443 \text{ mg/kg}$$

**CANCER EFFECTS RRS:**

$$RRS_C = \frac{1}{\frac{1}{27,250 \text{ mg/kg}} + \frac{1}{443 \text{ mg/kg}}} = 436 \text{ mg/kg}$$

**NON-CANCER EFFECTS:****Oral:**

$$(RRS_o)_{NC} = \frac{1 \times 70 \text{ kg} \times 9,125 \text{ days} \times 10^6 \text{ mg/kg}}{50 \text{ mg/day} \times 250 \text{ days/yr} \times 25 \text{ yrs} \times [1/6.0 \times 10^6 \text{ mg/kg-day}]}$$

$$= 12,260 \text{ mg/kg}$$

**Inhalation:**

$$(RRS_i)_{NC} = \frac{1 \times 70 \text{ kg} \times 9,125 \text{ days}}{[(1/2,818 \text{ m}^3/\text{kg}) + (1/4.63 \times 10^9 \text{ m}^3/\text{kg})] \times 250 \text{ days/yr} \times 25 \text{ yrs} \times 20 \text{ m}^3/\text{day} \times (1/1.1 \times 10^2 \text{ kg-day/mg})}$$

$$= 158 \text{ mg/kg}$$

**NON-CANCER EFFECTS RRS:**

$$RRS_{NC} = \frac{1}{\frac{1}{12,260 \text{ mg/kg}} + \frac{1}{158 \text{ mg/kg}}} = 156 \text{ mg/kg}$$

$$RRS = \text{Minimum result of } RRS_C (443 \text{ mg/kg}) \text{ and } RRS_{NC} (156 \text{ mg/kg}) = 156 \text{ mg/kg}$$

Table 7-2  
Risk Reduction Standard Equations for Exposure to Groundwater  
HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
Hunter Army Airfield, Savannah, Georgia

**ROUTE-SPECIFIC RRSs:****Oral:**

$$(RRS_o)_{C \text{ or } NC} = \frac{(TCR \text{ or } THI) \times BW \times (AT_C \text{ or } AT_{NC})}{IR_w \times EF \times ED \times [SF_o \text{ or } (1/RfD_o)]}$$

**Inhalation:**

$$(RRS_i)_{C \text{ or } NC} = \frac{(TCR \text{ or } THI) \times (AT_C \text{ or } AT_{NC}) \times BW}{K \times IR_{air} \times EF \times ED \times [SF_i \text{ or } (1/RfD_i)]}$$

**Cancer Effects RRS:**

$$RRS_C = \frac{1}{\frac{1}{(RRS_o)_C} + \frac{1}{(RRS_i)_C}}$$

**Non-Cancer Effects RRS:**

$$RRS_{NC} = \frac{1}{\frac{1}{(RRS_o)_{NC}} + \frac{1}{(RRS_i)_{NC}}}$$

$$RRS = \text{Minimum result of } RRS_C \text{ and } RRS_{NC}.$$

where:

$AT_C$	Averaging time for cancer effects (25,550 days).
$AT_{NC}$	Averaging time for non-cancer effects (10,950 for adult residents; 2,190 days for child residents; 9,125 days for site workers); ED x 365 days/year.
$BW$	Body weight (70 kg for adult receptors; 15 kg for child resident)
$ED$	Exposure duration (30 years for adult resident; 6 years for child resident; 25 years for site worker)
$EF$	Exposure frequency (250 days/year).
$IR_{air}$	Inhalation rate (15 m <sup>3</sup> /day for residents; 20 m <sup>3</sup> /day for site workers).
$IR_w$	Ingestion rate of drinking water (2 L/day for adult residents; 1 L/day for child residents and site workers) (USEPA 1997a).
$K$	Volatilization factor for volatile organic compounds (VOCs) from household tap water (0.5 L/m <sup>3</sup> ) (USEPA 1991).
$RfDi$	Reference dose for inhalation (mg/kg/day)
$RfDo$	Reference dose for ingestion (mg/kg/day)
$RRS$	Risk reduction standard for soil (mg/L); minimum of the $RRS_C$ (based on cancer effects) and the $RRS_{NC}$ (based on non-cancer effects), which are based on the route-specific RRSs ( $RRS_o$ for the oral route and $RRS_i$ for the inhalation route).
$TCR$	Target cancer risk (unitless); results presented for TCR value of 10 <sup>-5</sup> (10 <sup>-4</sup> for Class C carcinogens).
$THI$	Target hazard index (unitless); results presented for THI value of 1

**SAMPLE CALCULATIONS, Tetrachloroethene, Industrial Exposure (Type 4)****CANCER EFFECTS:****Oral:**

$$(RRS_o)_C = \frac{10^{-5} \times 70 \text{ kg} \times 25,550 \text{ days}}{1 \text{ L/day} \times 250 \text{ days/yr} \times 25 \text{ yrs} \times (2.1 \times 10^3 \text{ kg-day/mg})}$$

$$= 1.36 \text{ mg/L}$$

Table 7-2  
Risk Reduction Standard Equations for Exposure to Groundwater  
HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
Hunter Army Airfield, Savannah, Georgia

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**Inhalation:**

$$(RRS)_C = \frac{10^{-5} \times 70 \text{ kg} \times 25,550 \text{ days}}{0.5 \text{ L/m}^3 \times 250 \text{ days/yr} \times 25 \text{ yrs} \times 20 \text{ m}^3/\text{day} \times (9.1 \times 10^{-4} \text{ kg-day/mg})}$$

$$= 0.314 \text{ mg/L}$$

**CANCER EFFECTS RRS:**

$$RRS_C = \frac{1}{\frac{1}{1.36 \text{ mg/L}} + \frac{1}{0.314 \text{ mg/L}}} = 0.26 \text{ mg/L}$$

**NON-CANCER EFFECTS:****Oral:**

$$(RRS)_{NC} = \frac{1 \times 70 \text{ kg} \times 9,125 \text{ days}}{1 \text{ L/day} \times 250 \text{ days/yr} \times 25 \text{ yrs} \times [1/6.0 \times 10^3 \text{ mg/kg-day}]}$$

$$= 0.61 \text{ mg/L}$$

**Inhalation:**

$$(RRS)_{NC} = \frac{1 \times 70 \text{ kg} \times 9,125 \text{ days}}{0.5 \text{ L/m}^3 \times 250 \text{ days/yr} \times 25 \text{ yrs} \times 20 \text{ m}^3/\text{day} \times (1/1.1 \times 10^2 \text{ kg-day/mg})}$$

$$= 0.11 \text{ mg/L}$$

**NON-CANCER EFFECTS RRS:**

$$RRS_{NC} = \frac{1}{\frac{1}{0.61 \text{ mg/L}} + \frac{1}{0.11 \text{ mg/L}}} = 0.095 \text{ mg/L}$$

$$RRS = \text{Minimum result of } RRS_C (0.26 \text{ mg/L}) \text{ and } RRS_{NC} (0.095 \text{ mg/L}) = 0.095 \text{ mg/L}$$



**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects				Weight of Evidence	Noncancer Effects			
	Cancer Slope Factors (CSF)					Reference Doses (RfD)			
	CSFo		CSFi			RfDo		RfDi	
Oral	ref	Inhalation	ref	Oral	ref	Inhalation	ref		
	(kg-day/mg)		(kg-day/mg)		(mg/kg/day)		(mg/kg/day)		
<b>Volatile Organic Compounds</b>									
Acetone	NA		NA		D	9.00E-01	I	8.86E+00	A
Benzene	5.50E-02	I	2.73E-02	I	A	4.00E-03	I	8.57E-03	I
2-Butanone	NA		NA		D	6.00E-01	I	1.43E+00	I
Carbon disulfide	NA		NA		NA	1.00E-01	I	2.00E-01	I
Carbon tetrachloride	7.00E-02	I	2.10E-02	I	B2	4.00E-03	I	2.86E-02	I
CFC-11	NA		NA		NA	3.00E-01	I	2.00E-01	H
Chlorobenzene	NA		NA		D	2.00E-02	I	1.43E-02	P
Chloroform	3.10E-02	C	8.05E-02	I	B2	1.00E-02	I	2.80E-02	A
Chloromethane	NA		NA		D	NA		2.57E-02	I
Cyclohexane	NA		NA		NA	NA		1.71E+00	I
Dibromochloromethane	8.40E-02	I	9.45E-02	C	C	2.00E-02	I	NA	
1,2-Dichlorobenzene	NA		NA		D	9.00E-02	I	5.71E-02	H
1,3-Dichlorobenzene	NA		NA		D	2.00E-02	A	NA	
1,4-Dichlorobenzene	5.40E-03	C	3.85E-02	C	C	7.00E-02	A	2.29E-01	I
Dichlorodifluoromethane	NA		NA		NA	2.00E-01	I	2.86E-02	X
1,2-Dichloroethane	9.10E-02	I	9.10E-02	I	B2	6.00E-03	X	2.00E-03	P
1,2-Dichloropropane	3.60E-02	C	3.50E-02	C	B2	9.00E-02	A	1.14E-03	I
Ethylbenzene	1.10E-02	C	8.75E-03	C	D	1.00E-01	I	2.86E-01	I
Methylene chloride	7.50E-03	I	1.65E-03	I	B2	6.00E-02	I	2.86E-01	A
1-Methylethylbenzene	NA		NA		D	1.00E-01	I	1.14E-01	I
4-Methyl-2-pentanone	NA		NA		NA	8.00E-02	H	8.57E-01	I
Nitrobenzene	NA		1.40E-01	I	D	2.00E-03	I	2.57E-03	I
Styrene	NA		NA		NA	2.00E-01	I	2.86E-01	I

**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects					Noncancer Effects			
	Cancer Slope Factors (CSF)				Weight of Evidence	Reference Doses (RfD)			
	CSFo		CSFi			RfDo		RfDi	
Oral	ref	Inhalation	ref	Oral	ref	Inhalation	ref		
	(kg-day/mg)		(kg-day/mg)		(mg/kg/day)		(mg/kg/day)		
1,1,2,2-Tetrachloroethane	2.00E-01	I	2.03E-01	C	C	2.00E-02	I	NA	
Tetrachloroethene	2.10E-03	I	9.10E-04	I	likely to be carcinogenic in humans	6.00E-03	I	1.14E-02	I
Toluene	NA		NA		D	8.00E-02	I	1.43E+00	I
1,2,4-Trichlorobenzene	2.90E-02	P	NA		D	1.00E-02	I	5.71E-04	P
1,1,2-Trichloroethane	5.70E-02	I	5.60E-02	I	C	4.00E-03	I	5.71E-05	X
Trichloroethylene	4.60E-02	I	1.44E-05	I	carcinogenic to humans	5.00E-04	I	5.71E-04	I
Vinyl chloride	7.2E-01/1.4E+0	I	.5E-02/3.0E-0	I	A	3.00E-03	I	2.86E-02	I
Xylene, Mixture	NA		NA		D	2.00E-01	I	2.86E-02	I
<b>Semi Volatile Organic Compounds</b>									
Acenaphthene	NA		NA		NA	6.00E-02	I	NA	
Acenaphthylene	NA		NA		D	NA		NA	
Anthracene	NA		NA		D	3.00E-01	I	NA	
Benz[a]anthracene	7.30E-01	E	3.85E-01	C	B2	NA		NA	
Benzo[a]pyrene	7.30E+00	I	3.85E+00	C	B2	NA		NA	
Benzo[b]fluoranthene	7.30E-01	E	3.85E-01	C	B2	NA		NA	
Benzo[g,h,i]perylene	NA		NA		D	NA		NA	
Benzo[k]fluoranthene	7.30E-02	E	3.85E-01	C	B2	NA		NA	
Benzoic Acid	NA		NA		D	4.00E+00	I	NA	
Bis(2-chloroethoxy)methane	NA		NA		D	3.00E-03	P	NA	
4-Bromophenyl phenyl ether	NA		NA		D	NA		NA	
Butyl benzyl phthalate	1.90E-03	P	NA		C	2.00E-01	I	NA	

**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects					Noncancer Effects			
	Cancer Slope Factors (CSF)				Weight of Evidence	Reference Doses (RfD)			
	CSFo		CSFi			RfDo		RfDi	
Oral	ref	Inhalation	ref	Oral	ref	Inhalation	ref		
	(kg-day/mg)		(kg-day/mg)		(mg/kg/day)		(mg/kg/day)		
4-Chlorobenzeneamine	2.00E-01	P	NA		NA	4.00E-03	I	NA	
4-Chloro-3-methylphenol	NA		NA		NA	1.00E-01	X	NA	
2-Chloronaphthalene	NA		NA		NA	8.00E-02	I	NA	
2-Chlorophenol	NA		NA		NA	5.00E-03	I	NA	
4-Chlorophenyl phenyl ether	NA		NA		NA	NA		NA	
Chrysene	7.30E-03	E	3.85E-02	C	B2	NA		NA	
Dibenz[a,h]anthracene	7.30E+00	E	4.20E+00	C	B2	NA		NA	
Dibenzofuran	NA		NA		D	1.00E-03	X	NA	
Di-n-butyl phthalate	NA		NA		D	1.00E-01	I	NA	
3,3'-Dichlorobenzidine	4.50E-01	I	1.19E+00	C	B2	NA		NA	
2,4-Dichlorophenol	NA		NA		NA	3.00E-03	I	NA	
Diethyl phthalate	NA		NA		D	8.00E-01	I	NA	
2,4-Dimethylphenol	NA		NA		NA	2.00E-02	I	NA	
Dimethyl phthalate	NA		NA		D	1.00E+01	H	NA	
2,4-Dinitrophenol	NA		NA		NA	2.00E-03	I	NA	
2,4-Dinitrotoluene	3.10E-01	C	3.12E-01	C	NA	2.00E-03	I	NA	
2,6-Dinitrotoluene	NA		NA		NA	1.00E-03	P	NA	
Di-n-octylphthalate	NA		NA		D	4.00E-01	A	NA	
Hexachlorobenzene	1.60E+00	I	1.61E+00	I	B2	8.00E-04	I	NA	
Hexachlorobutadiene	7.80E-02	I	7.70E-02	I	C	1.00E-03	P	NA	
Hexachlorocyclopentadiene	NA		NA		D	6.00E-03	I	5.71E-05	I
Hexachloroethane	4.00E-02	I	1.40E-02	I	C	7.00E-04	I	8.57E-03	I
Indeno[1,2,3-cd]pyrene	7.30E-01	E	3.85E-01	C	B2	NA		NA	
Isophorone	9.50E-04	I	NA		C	2.00E-01	I	5.71E-01	C

**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects					Noncancer Effects			
	Cancer Slope Factors (CSF)				Weight of Evidence	Reference Doses (RfD)			
	CSFo		CSFi			RfDo		RfDi	
Oral	ref	Inhalation	ref		Oral	ref	Inhalation	ref	
	(kg-day/mg)		(kg-day/mg)			(mg/kg/day)		(mg/kg/day)	
2-Methyl-4,6-dinitrophenol	NA		NA		NA	8.00E-05	X	NA	
Naphthalene	NA		1.19E-01	C	C	2.00E-02	I	8.57E-04	I
N-Nitroso-di-n-propylamine	7.00E+00	I	7.00E+00	C	B2	NA		NA	
N-Nitrosodiphenylamine	4.90E-03	I	9.10E-03	C	B2	NA		NA	
2-Nitrophenol	NA		NA		NA	NA		1.43E-04	
4-Nitrophenol	NA		NA		NA	NA		NA	
Pentachlorophenol	4.00E-01	I	1.79E-02	C	B2	5.00E-03	I	NA	
Phenanthrene	NA		NA		D	NA		NA	
Phenol	NA		NA		D	3.00E-01	I	5.71E-02	C
Pyrene	NA		NA		D	3.00E-02	I	NA	
2,4,5-Trichlorophenol	NA		NA		NA	1.00E-01	I	NA	
2,4,6-Trichlorophenol	1.10E-02	I	1.09E-02	I	B2	1.00E-03	P	NA	
<b>Pesticides/PCBs</b>									
Aldrin	1.70E+01	I	1.72E+01	I	B2	3.00E-05	I	NA	
Aroclor 1254	2.00E+00	I	2.00E+00	I	B2	2.00E-05	I	NA	
alpha-Chlordane	3.50E-01		3.50E-01			5.00E-04		2.00E-04	
gamma-Chlordane	3.50E-01		3.50E-01			5.00E-04		2.00E-04	
4,4'-DDD	2.40E-01	I	2.42E-01	C	B2	NA		NA	
4,4'-DDE	3.40E-01	I	3.40E-01	C	B2	NA		NA	
4,4'-DDT	3.40E-01	I	3.40E-01	I	B2	5.00E-04	I	NA	
Dieldrin	1.60E+01	I	1.61E+01	I	B2	5.00E-05	I	NA	
Endosulfan I	NA		NA		NA	6.00E-03	Is	NA	
Endrin	NA		NA		D	3.00E-04	I	NA	
Endrin Aldehyde	NA		NA		D	3.00E-04	Is	NA	

**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects					Noncancer Effects				
	Cancer Slope Factors (CSF)				Weight of Evidence	Reference Doses (RfD)				
	CSFo		CSFi			RfDo		RfDi		
Oral	ref	Inhalation	ref		Oral	ref	Inhalation	ref		
	(kg-day/mg)		(kg-day/mg)			(mg/kg/day)		(mg/kg/day)		
Heptachlor epoxide	9.10E+00	I	9.10E+00	I	B2	1.30E-05	I	NA		
alpha-Hexachlorocyclohexane	6.30E+00	I	6.30E+00	I	B2	8.00E-03	A	NA		
beta-Hexachlorocyclohexane	1.80E+00	I	1.86E+00	I	C	NA		NA		
delta-Hexachlorocyclohexane	NA		NA		D	3.00E-04	Is	NA		
gamma-Hexachlorocyclohexane	1.10E+00	C	1.09E+00	C	B2-C	3.00E-04	I	NA		
Methoxychlor	NA		NA		D	5.00E-03	I	NA		
2,4,5-Trichlorophenoxyacetic acid	NA		NA		NA	1.00E-02	I	NA		
<b>Inorganics</b>										
Arsenic	1.50E+00	I	1.51E+01	I	A	3.00E-04	I	4.29E-06	C	
Barium	NA		NA		D	2.00E-01	I	1.43E-04	H	
Cadmium [a]	NA		6.30E+00	I	D/B1	1E-3/5E-4	I	NA		
Chromium, Total	NA		NA			NA		NA		
Lead	NA		NA		B2	NA		NA		
Mercury	NA		NA		C	1.60E-04	C	8.57E-05	I	
Selenium	NA		NA		D	5.00E-03	I	5.71E-03	C	
Silver	NA		NA		D	5.00E-03	I	NA		

*References [ref]:*

- A Agency for Toxic Substances Disease Registry (ATDSR) (ATSDR 2012).
- C CalEPA, Toxicity Criteria database (CalEPA 2012).
- E Environmental Criteria and Assessment Office as referenced in the USEPA Regional Screening Level Table (USEPA 2011).
- H USEPA, Health Effects Summary Table (HEAST; USEPA 1997b).
- I USEPA, Integrated Risk Information System (IRIS; USEPA 2012).
- J New Jersey Department of Environmental Protection s referenced in the USEPA Regional Screening Level Table (USEPA 2011).

**Table 7-3**  
**Toxicity Values**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Cancer Effects					Noncancer Effects			
	Cancer Slope Factors (CSF)				Weight of Evidence	Reference Doses (RfD)			
	CSFo		CSFi			RfDo		RfDi	
Oral	ref	Inhalation	ref		Oral	ref	Inhalation	ref	
	(kg-day/mg)		(kg-day/mg)		(mg/kg/day)		(mg/kg/day)		

P Provisional Peer Reviewed Toxicity Values (PPRTV) as referenced in the USEPA Regional Screening Level Table (USEPA 2011).  
X PPRTV Appendix as referenced in the USEPA Regional Screening Level Table (USEPA 2011).

USEPA cancer weight-of-evidence categories are as follows:

- Group A: Human Carcinogen (sufficient evidence of carcinogenicity in humans)
- Group B: Probable Human Carcinogen
  - B1 - limited evidence of carcinogenicity in humans
  - B2 - sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans
- Group C: Possible Human Carcinogen (limited evidence of carcinogenicity in animals and inadequate or lack of human data)
- Group D: Not Classifiable as to Human Carcinogenicity (inadequate or no evidence)
- Group E: Evidence of Noncarcinogenicity for Humans (no evidence of carcinogenicity in adequate studies)
- LI: Likely to be carcinogenic to humans.

\* The IRIS summary for ethylbenzene states that ethylbenzene is not classifiable as to human carcinogenicity due to the lack of animal bioassays and human studies.

[a] Oral RfDs for cadmium are for diet/water.

kg-day/mg Kilogram-day per milligram mg/kgç Milligram per kilogra NA Not Available. Not a carcinogen.

**Table 7-4**  
**Physical-Chemical Properties of the Detected Constituents**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Henry's Law Constant (atm-m <sup>3</sup> /mol) (25 °C) [ref]		Diffusivity in Air (cm <sup>2</sup> /sec) [ref]		Effective Diffusivity (cm <sup>2</sup> /sec) (calc)		Molecular Weight (g/mole) [ref]		Koc or Kd (cm <sup>3</sup> /g) [ref]		Kas (g/cm <sup>3</sup> ) (calc)	alpha (cm <sup>2</sup> /sec) (calc)	Volatilization Factor (VF) (m <sup>3</sup> /kg) (calc)
<b>Volatile Organic Compounds</b>													
Acetone	3.50E-05	RSL	1.06E-01	RSL	7.49E-02	58.08	RSL	2.36E+00	RSL	3.03E-02	4.58E-04	6.72E+03	
Benzene	5.55E-03	RSL	8.95E-02	RSL	6.33E-02	78.11	RSL	1.46E+02	RSL	7.78E-02	9.86E-04	4.53E+03	
2-Butanone	5.69E-05	RSL	9.14E-02	RSL	6.47E-02	72.11	RSL	4.51E+00	RSL	2.58E-02	3.37E-04	7.83E+03	
Carbon disulfide	1.44E-02	RSL	1.06E-01	RSL	7.53E-02	76.13	RSL	2.17E+01	RSL	1.36E+00	1.63E-02	8.89E+02	
Carbon tetrachloride	2.76E-02	RSL	5.71E-02	RSL	4.04E-02	153.82	RSL	4.39E+01	RSL	1.29E+00	8.37E-03	1.25E+03	
CFC-11	9.70E-02	RSL	6.54E-02	RSL	4.62E-02	137.37	RSL	4.39E+01	RSL	4.52E+00	2.21E-02	5.07E+02	
Chlorobenzene	3.11E-03	RSL	7.21E-02	RSL	5.10E-02	112.56	RSL	2.34E+02	RSL	2.72E-02	2.80E-04	8.59E+03	
Chloroform	3.67E-03	RSL	7.69E-02	RSL	5.44E-02	119.38	RSL	3.18E+01	RSL	2.36E-01	2.49E-03	2.77E+03	
Chloromethane	8.82E-03	RSL	1.24E-01	RSL	8.77E-02	50.49	RSL	1.32E+01	RSL	1.36E+00	1.90E-02	8.21E+02	
Cyclohexane	1.50E-01	RSL	8.00E-02	RSL	5.66E-02	84.16	RSL	1.46E+02	RSL	2.10E+00	1.69E-02	7.78E+02	
Dibromochloromethane	7.83E-04	RSL	3.66E-02	RSL	2.59E-02	208.28	RSL	3.18E+01	RSL	5.03E-02	2.62E-04	NV	
1,2-Dichlorobenzene	1.92E-03	RSL	5.62E-02	RSL	3.97E-02	147	RSL	3.83E+02	RSL	1.03E-02	8.26E-05	1.59E+04	
1,3-Dichlorobenzene	3.09E-03	J&E	6.92E-02	J&E	4.89E-02	147	SCDM	1.98E+03	J&E	3.20E-03	3.18E-05	2.56E+04	
1,4-Dichlorobenzene	2.41E-03	RSL	5.50E-02	RSL	3.89E-02	147	RSL	3.75E+02	RSL	1.31E-02	1.04E-04	1.42E+04	
Dichlorodifluoromethane	3.43E-01	RSL	7.60E-02	RSL	5.38E-02	120.91	RSL	4.39E+01	RSL	1.60E+01	4.11E-02	1.68E+02	
1,2-Dichloroethane	1.18E-03	RSL	8.57E-02	RSL	6.06E-02	98.96	RSL	3.96E+01	RSL	6.09E-02	7.41E-04	5.25E+03	
1,1-Dichloroethene	2.61E-02	RSL	8.63E-02	RSL	6.10E-02	96.94	RSL	3.18E+01	RSL	1.68E+00	1.55E-02	8.66E+02	
1,2-Dichloroethene	4.08E-03	RSL	8.79E-02	RSL	6.21E-02	96.94	RSL	3.96E+01	RSL	2.11E-01	2.55E-03	2.75E+03	
cis-1,2-Dichloroethene	4.08E-03	RSL	8.84E-02	RSL	6.25E-02	96.94	RSL	3.96E+01	RSL	2.11E-01	2.57E-03	2.74E+03	
trans-1,2-Dichloroethene	4.08E-03	RSL	8.76E-02	RSL	6.20E-02	96.94	RSL	3.96E+01	RSL	2.11E-01	2.54E-03	2.75E+03	
1,2-Dichloropropane	2.82E-03	RSL	7.33E-02	RSL	5.19E-02	112.99	RSL	6.07E+01	RSL	9.50E-02	9.82E-04	4.53E+03	
Ethylbenzene	7.88E-03	RSL	6.85E-02	RSL	4.84E-02	106.17	RSL	4.46E+02	RSL	3.61E-02	3.53E-04	7.64E+03	
Methylene chloride	3.25E-03	RSL	9.99E-02	RSL	7.07E-02	84.93	RSL	2.17E+01	RSL	3.06E-01	4.14E-03	2.12E+03	
1-Methylethylbenzene	1.15E-02	RSL	6.03E-02	RSL	4.26E-02	120.2	RSL	6.98E+02	RSL	3.37E-02	2.90E-04	8.43E+03	
4-Methyl-2-pentanone	1.38E-04	RSL	6.98E-02	RSL	4.93E-02	100.16	RSL	1.26E+01	RSL	2.24E-02	2.24E-04	9.63E+03	
Nitrobenzene	2.40E-05	RSL	6.81E-02	RSL	4.81E-02	123.11	RSL	2.26E+02	RSL	2.17E-04	2.12E-06	9.93E+04	

**Table 7-4**  
**Physical-Chemical Properties of the Detected Constituents**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Henry's Law Constant (atm-m <sup>3</sup> /mol) (25 °C)		Diffusivity in Air (cm <sup>2</sup> /sec)		Effective Diffusivity (cm <sup>2</sup> /sec)	Molecular Weight (g/mole)		Koc or Kd (cm <sup>3</sup> /g)		Kas (g/cm <sup>3</sup> )	alpha (cm <sup>2</sup> /sec)	Volatilization Factor (VF) (m <sup>3</sup> /kg)
	[ref]	[ref]	[ref]	[ref]	(calc)	[ref]	[ref]	(calc)	(calc)	(calc)	(calc)	
Styrene	2.75E-03	RSL	7.11E-02	RSL	5.03E-02	104.15	RSL	4.46E+02	RSL	1.26E-02	1.28E-04	1.27E+04
1,1,2,2-Tetrachloroethane	3.67E-04	RSL	4.89E-02	RSL	3.46E-02	167.85	RSL	9.49E+01	RSL	7.91E-03	5.55E-05	1.94E+04
Tetrachloroethene	1.77E-02	RSL	5.05E-02	RSL	3.57E-02	165.83	RSL	9.49E+01	RSL	3.81E-01	2.57E-03	2.65E+03
Toluene	6.64E-03	RSL	7.78E-02	RSL	5.50E-02	92.14	RSL	2.34E+02	RSL	5.81E-02	6.41E-04	5.64E+03
1,2,4-Trichlorobenzene	1.42E-03	RSL	3.96E-02	RSL	2.80E-02	181.45	RSL	1.36E+03	RSL	2.14E-03	1.22E-05	4.14E+04
1,1,2-Trichloroethane	8.24E-04	RSL	6.69E-02	RSL	4.73E-02	133.41	RSL	6.07E+01	RSL	2.78E-02	2.65E-04	8.83E+03
Trichloroethylene	9.85E-03	RSL	6.87E-02	RSL	4.86E-02	131.39	RSL	6.07E+01	RSL	3.32E-01	3.07E-03	2.45E+03
Vinyl chloride	2.78E-02	RSL	1.07E-01	RSL	7.58E-02	62.5	RSL	2.17E+01	RSL	2.62E+00	2.63E-02	5.82E+02
Xylene, Mixture	5.18E-03	RSL	8.47E-02	RSL	5.99E-02	106.17	RSL	3.83E+02	RSL	2.77E-02	3.35E-04	7.86E+03
<b>Semi Volatile Organic Compounds</b>												
Acenaphthene	1.84E-04	RSL	5.06E-02	RSL	3.58E-02	154.21	RSL	5.03E+03	RSL	7.49E-05	5.44E-07	1.96E+05
Acenaphthylene	1.13E-04	SCDM	4.39E-02	RAIS	3.10E-02	152.2	SCDM	3.09E+03	SCDM	7.48E-05	4.72E-07	2.11E+05
Anthracene	5.56E-05	RSL	3.90E-02	RSL	2.76E-02	178.24	RSL	1.64E+04	RSL	6.95E-06	3.89E-08	7.33E+05
Benz[a]anthracene	1.20E-05	RSL	5.09E-02	RSL	3.60E-02	228.3	RSL	1.77E+05	RSL	1.39E-07	1.01E-09	NV
Benzo[a]pyrene	4.57E-07	RSL	4.76E-02	RSL	3.37E-02	252.32	RSL	5.87E+05	RSL	1.59E-09	1.09E-11	NV
Benzo[b]fluoranthene	6.57E-07	RSL	4.76E-02	RSL	3.37E-02	252.32	RSL	5.99E+05	RSL	2.24E-09	1.53E-11	NV
Benzo[g,h,i]perylene	1.41E-07	SCDM	4.20E-02	L90-calc	2.97E-02	276.34	SCDM	3.86E+06	SCDM	7.47E-11	4.51E-13	NV
Benzo[k]fluoranthene	5.84E-07	RSL	4.76E-02	RSL	3.37E-02	252.32	RSL	5.87E+05	RSL	2.03E-09	1.39E-11	NV
Benzoic Acid	3.81E-08	RSL	7.02E-02	RSL	4.96E-02	122.12	RSL	1.66E+01	RSL	4.71E-06	4.75E-08	NV
Bis(2-chloroethoxy)methane	3.85E-06	RSL	6.12E-02	RSL	4.33E-02	173.04	RSL	1.44E+01	RSL	5.48E-04	4.81E-06	NV
Bis(2-chloroethyl)ether	1.70E-05	RSL	5.67E-02	RSL	4.01E-02	143.01	RSL	3.22E+01	RSL	1.08E-03	8.79E-06	4.88E+04
Bis(2-ethylhexyl)phthalate	2.70E-07	RSL	1.73E-02	RSL	1.23E-02	390.57	RSL	1.20E+05	RSL	4.62E-09	1.15E-11	NV
4-Bromophenyl phenyl ether	1.17E-04	SCDM	5.61E-02	L90-calc	3.97E-02	249.11	SCDM	8.23E+04	SCDM	2.91E-06	2.34E-08	NV
Butyl benzyl phthalate	1.26E-06	RSL	2.08E-02	RSL	1.47E-02	312.37	RSL	7.16E+03	RSL	3.60E-07	1.08E-09	NV
4-Chlorobenzeneamine	1.16E-06	RSL	7.04E-02	RSL	4.98E-02	127.57	RSL	1.13E+02	RSL	2.10E-05	2.13E-07	NV
4-Chloro-3-methylphenol	2.45E-06	RSL	6.96E-02	RSL	4.92E-02	142.59	RSL	4.92E+02	RSL	1.02E-05	1.02E-07	NV
2-Chloronaphthalene	3.20E-04	RSL	4.47E-02	RSL	3.16E-02	162.62	RSL	2.48E+03	RSL	2.64E-04	1.70E-06	1.11E+05
2-Chlorophenol	1.12E-05	RSL	6.61E-02	RSL	4.68E-02	128.56	RSL	3.07E+02	RSL	7.47E-05	7.10E-07	1.72E+05
4-Chlorophenyl phenyl ether	1.28E-04	EPI	5.42E-02	L90-calc	3.83E-02	204.66	SCDM	7.35E+04	SCDM	3.57E-06	2.78E-08	NV
Chrysene	5.23E-06	RSL	2.61E-02	RSL	1.85E-02	228.3	RSL	1.81E+05	RSL	5.93E-08	2.22E-10	NV



**Table 7-4**  
**Physical-Chemical Properties of the Detected Constituents**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Henry's Law Constant (atm·m <sup>3</sup> /mol) (25 °C)		Diffusivity in Air (cm <sup>2</sup> /sec)		Effective Diffusivity (cm <sup>2</sup> /sec)	Molecular Weight (g/mole)		Koc or Kd (cm <sup>3</sup> /g)		Kas (g/cm <sup>3</sup> )	alpha (cm <sup>2</sup> /sec)	Volatilization Factor (VF) (m <sup>3</sup> /kg)
	[ref]	[ref]	[ref]	[ref]	(calc)	[ref]	[ref]	(calc)	(calc)	(calc)	(calc)	
Dibenz[a,h]anthracene	1.41E-07	RSL	4.46E-02	RSL	3.15E-02	278.36	RSL	1.91E+06	RSL	1.51E-10	9.66E-13	NV
Dibenzofuran	2.13E-04	RSL	4.10E-02	RSL	2.90E-02	168.2	RSL	9.16E+03	RSL	4.75E-05	2.80E-07	2.73E+05
Di-n-butyl phthalate	1.81E-06	RSL	2.14E-02	RSL	1.52E-02	278.35	RSL	1.16E+03	RSL	3.20E-06	9.85E-09	NV
3,3'-Dichlorobenzidine	4.01E-09	RSL	4.75E-02	RSL	3.36E-02	253.13	RSL	3.19E+03	RSL	2.57E-09	1.75E-11	NV
2,4-Dichlorophenol	4.29E-06	RSL	4.86E-02	RSL	3.44E-02	163	RSL	4.92E+02	RSL	1.78E-05	1.25E-07	NV
Diethyl phthalate	6.10E-07	RSL	2.61E-02	RSL	1.84E-02	222.24	RSL	1.05E+02	RSL	1.19E-05	4.46E-08	NV
2,4-Dimethylphenol	9.51E-07	RSL	6.22E-02	RSL	4.40E-02	122.17	RSL	4.92E+02	RSL	3.95E-06	3.54E-08	NV
Dimethyl phthalate	1.05E-07	SCDM	5.68E-02	RAIS	4.02E-02	194.19	SCDM	3.50E+01	SCDM	6.13E-06	5.01E-08	NV
2,4-Dinitrophenol	8.60E-08	RSL	4.07E-02	RSL	2.88E-02	184.11	RSL	4.61E+02	RSL	3.82E-07	2.23E-09	NV
2,4-Dinitrotoluene	5.40E-08	RSL	3.75E-02	RSL	2.65E-02	182.14	RSL	5.76E+02	RSL	1.92E-07	1.03E-09	NV
2,6-Dinitrotoluene	7.47E-07	RSL	3.70E-02	RSL	2.62E-02	182.14	RSL	5.87E+02	RSL	2.60E-06	1.38E-08	NV
Di-n-octylphthalate	6.68E-05	SCDM	1.51E-02	J&E	1.07E-02	390.56	SCDM	8.38E+07	SCDM	1.63E-09	3.54E-12	NV
Fluoranthene	8.86E-06	RSL	2.76E-02	RSL	1.95E-02	202.26	RSL	5.55E+04	RSL	3.27E-07	1.30E-09	NV
Fluorene	9.62E-05	RSL	4.40E-02	RSL	3.11E-02	166.22	RSL	9.16E+03	RSL	2.15E-05	1.36E-07	3.93E+05
Hexachlorobenzene	1.70E-03	RSL	2.90E-02	RSL	2.05E-02	284.78	RSL	6.20E+03	RSL	5.61E-04	2.34E-06	NV
Hexachlorobutadiene	1.03E-02	RSL	2.67E-02	RSL	1.89E-02	260.76	RSL	8.45E+02	RSL	2.49E-02	9.53E-05	NV
Hexachlorocyclopentadiene	2.70E-02	RSL	2.72E-02	RSL	1.93E-02	272.77	RSL	1.40E+03	RSL	3.93E-02	1.53E-04	NV
Hexachloroethane	3.89E-03	RSL	3.21E-02	RSL	2.27E-02	236.74	RSL	1.97E+02	RSL	4.04E-02	1.85E-04	NV
Indeno[1,2,3-cd]pyrene	3.48E-07	RSL	4.48E-02	RSL	3.17E-02	276.34	RSL	1.95E+06	RSL	3.65E-10	2.35E-12	NV
Isophorone	6.64E-06	RSL	5.25E-02	RSL	3.71E-02	138.21	RSL	6.52E+01	RSL	2.08E-04	1.57E-06	NV
2-Methyl-4,6-dinitrophenol	1.40E-06	RSL	5.59E-02	RSL	3.95E-02	198.14	RSL	7.54E+02	RSL	3.80E-06	3.05E-08	NV
2-Methylphenol	1.20E-06	RSL	7.28E-02	RSL	5.15E-02	108.14	RSL	3.07E+02	RSL	8.01E-06	8.38E-08	NV
4-Methylphenol	1.00E-06	RSL	7.24E-02	RSL	5.12E-02	108.14	RSL	3.00E+02	RSL	6.81E-06	7.08E-08	NV
Naphthalene	4.40E-04	RSL	6.05E-02	RSL	4.28E-02	128.18	RSL	1.54E+03	RSL	5.83E-04	5.07E-06	6.42E+04
N-Nitroso-di-n-propylamine	5.38E-06	RSL	5.64E-02	RSL	3.99E-02	130.19	RSL	2.75E+02	RSL	3.99E-05	3.24E-07	NV
N-Nitrosodiphenylamine	5.01E-06	RSL	5.59E-02	RSL	3.95E-02	198.23	RSL	2.63E+03	RSL	3.90E-06	3.13E-08	NV
2-Nitrophenol	9.47E-06	SCDM	7.15E-02	L90-calc	5.06E-02	139.11	SCDM	5.50E+01	SCDM	3.52E-04	3.62E-06	NV
4-Nitrophenol	4.15E-10	SCDM	4.30E-02	RAIS	3.04E-02	139.11	SCDM	4.89E+01	SCDM	1.74E-08	1.07E-10	NV
Pentachlorophenol	2.45E-08	RSL	2.95E-02	RSL	2.09E-02	266.34	RSL	4.96E+03	RSL	1.01E-08	4.29E-11	NV
Phenanthrene	2.33E-05	SCDM	5.43E-02	L90-calc	3.84E-02	178.23	SCDM	2.97E+04	SCDM	1.60E-06	1.25E-08	1.29E+06
Phenol	3.33E-07	RSL	8.34E-02	RSL	5.90E-02	94.11	RSL	1.87E+02	RSL	3.64E-06	4.36E-08	NV
Pyrene	1.19E-05	RSL	2.78E-02	RSL	1.97E-02	202.26	RSL	5.43E+04	RSL	4.48E-07	1.79E-09	NV

**Table 7-4**  
**Physical-Chemical Properties of the Detected Constituents**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Henry's Law Constant (atm·m <sup>3</sup> /mol) (25 °C)		Diffusivity in Air (cm <sup>2</sup> /sec)		Effective Diffusivity (cm <sup>2</sup> /sec)	Molecular Weight (g/mole)		Koc or Kd (cm <sup>3</sup> /g)		Kas (g/cm <sup>3</sup> )	alpha (cm <sup>2</sup> /sec)	Volatilization Factor (VF) (m <sup>3</sup> /kg)
	[ref]	[ref]	[ref]	[ref]	(calc)	[ref]	[ref]	[ref]	(calc)	(calc)	(calc)	
2,4,5-Trichlorophenol	1.62E-06	RSL	3.14E-02	RSL	2.22E-02	197.45	RSL	1.78E+03	RSL	1.86E-06	8.41E-09	NV
2,4,6-Trichlorophenol	2.60E-06	RSL	3.14E-02	RSL	2.22E-02	197.45	RSL	1.78E+03	RSL	2.99E-06	1.35E-08	NV
<b>Pesticides/PCBs</b>												
Aldrin	4.40E-05	RSL	3.72E-02	RSL	2.63E-02	364.92	RSL	8.20E+04	RSL	1.10E-06	5.87E-09	NV
Aroclor 1254	2.83E-04	RSL	4.01E-02	RSL	2.83E-02	326.44	RSL	1.31E+05	RSL	4.43E-06	2.55E-08	NV
alpha-Chlordane	4.86E-05	EPI	4.50E-02	L90-calc	3.18E-02	409.78	SCDM	6.90E+04	SCDM	1.44E-06	9.31E-09	NV
gamma-Chlordane	4.86E-05	EPI	4.50E-02	L90-calc	3.18E-02	409.78	SCDM	8.66E+04	EPI	1.15E-06	7.42E-09	NV
4,4'-DDD	6.60E-06	RSL	4.06E-02	RSL	2.87E-02	320.05	RSL	1.18E+05	RSL	1.15E-07	6.70E-10	NV
4,4'-DDE	4.16E-05	RSL	4.08E-02	RSL	2.88E-02	318.03	RSL	1.18E+05	RSL	7.24E-07	4.24E-09	NV
4,4'-DDT	8.32E-06	RSL	3.79E-02	RSL	2.68E-02	354.49	RSL	1.69E+05	RSL	1.01E-07	5.50E-10	NV
Dieldrin	1.00E-05	RSL	2.33E-02	RSL	1.65E-02	380.91	RSL	2.01E+04	RSL	1.02E-06	3.41E-09	NV
Endosulfan I	1.05E-05	CFATE	1.15E-02	J&E	8.13E-03	406.93	SCDM	6.32E+03	CFATE	3.40E-06	5.61E-09	NV
Endrin	1.00E-05	RSL	3.62E-02	RSL	2.56E-02	380.91	RSL	2.01E+04	RSL	1.02E-06	5.29E-09	NV
Endrin Aldehyde	2.90E-09	HSDB	4.64E-02	L90-calc	3.28E-02	380.91	EPI	3.27E+03	EPI	1.81E-09	1.21E-11	NV
Heptachlor epoxide	2.10E-05	RSL	3.56E-02	RSL	2.52E-02	389.32	RSL	1.01E+04	RSL	4.25E-06	2.18E-08	NV
alpha-Hexachlorocyclohexane	5.14E-06	RSL	4.33E-02	RSL	3.06E-02	290.83	RSL	2.81E+03	RSL	3.74E-06	2.33E-08	NV
beta-Hexachlorocyclohexane	5.14E-06	RSL	2.77E-02	RSL	1.96E-02	290.83	RSL	2.81E+03	RSL	3.74E-06	1.49E-08	NV
delta-Hexachlorocyclohexane	4.29E-07	SCDM	5.58E-02	RAIS	3.94E-02	290.83	SCDM	1.17E+04	RAIS	7.47E-08	5.99E-10	NV
gamma-Hexachlorocyclohexane	5.14E-06	RSL	4.33E-02	RSL	3.06E-02	290.83	RSL	2.81E+03	RSL	3.74E-06	2.33E-08	NV
Methoxychlor	2.03E-07	RSL	2.21E-02	RSL	1.56E-02	345.66	RSL	2.69E+04	RSL	1.54E-08	4.90E-11	NV
2,4,5-Trichlorophenoxyacetic acid	4.66E-08	RSL	4.72E-02	RSL	3.34E-02	255.49	RSL	1.07E+02	RSL	8.91E-07	6.04E-09	NV
<b>Inorganics</b>												
Arsenic	—	—	—	—	—	74.922	RSL	2.90E+01	Kd-SCD			NV
Barium	—	—	—	—	—	137.33	RSL	4.10E+01	Kd-SCD			NV
Cadmium	—	—	—	—	—	112.41	RSL	7.50E+01	Kd-SCD			NV
Chromium, Total	—	—	—	—	—	52	RSL	1.90E+01	Kd-SCD			NV
Lead	—	—	—	—	—	207.2	RSL	9.00E+02	Kd-SCD			NV
Mercury	1.14E-02	RSL	3.07E-02	RSL	2.17E-02	200.59	RSL	5.20E+01	J&E	4.49E-01	1.82E-03	NV

**Table 7-4**  
**Physical-Chemical Properties of the Detected Constituents**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Henry's Law Constant (atm-m <sup>3</sup> /mol) (25 °C) [ref]		Diffusivity in Air (cm <sup>2</sup> /sec) [ref]		Effective Diffusivity (cm <sup>2</sup> /sec) (calc)	Molecular Weight (g/mole) [ref]	Koc or Kd (cm <sup>3</sup> /g) [ref]		Kas (g/cm <sup>3</sup> ) (calc)	alpha (cm <sup>2</sup> /sec) (calc)	Volatilization Factor (VF) (m <sup>3</sup> /kg) (calc)
	Selenium	—	—	—	—	—	78.96 RSL	3.00E+02	Kd-SCD		
Silver	—	—	—	—	—	107.87 RSL	8.30E+00	Kd-SCD			NV

Notes:

Parameters were obtained from USEPA Regional Screening Level (RSL) Table ( 2011) where available, otherwise, they were obtained from literature sources cited as follows: CFATE (SRC 2008); HSDB (NLM 2008); J&E (USEPA 2003); Lyman, et al. (L90, 1990); RAIS (ORNL 2009); SCDM (USEPA 2004).

alpha	attenuation coefficient - calculation intermediate.	cm <sup>3</sup> /g	Cubic centimeter per gram.	m <sup>3</sup> /kg	Cubic meter per kilogram.
atm-m <sup>3</sup> /mole	Atmosphere - cubic meter per mole.	g/cm <sup>3</sup>	Gram per cubic centimeter.	NA	Not available or applicable.
calc	Calculated.	Koc	Organic carbon partition coefficient.	NV	Not volatile.
cm <sup>2</sup> /sec	Square centimeter per second.	Kas	Soil-air partition coefficient.	ref	Reference.

**Table 7-5**  
**Comparison of Maximum Concentrations Detected in Soil to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 1 RRS [a] (mg/kg)	Source of Type 1 Standard	Type 2 RRS [b] (mg/kg)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
<b>Volatile Organic Compounds</b>								
Acetone	27	HSB-5( 5 - 8)	400	A-III	400	Type 1	no	no
Benzene	18	FTASB-10( 9 - 10.4)	0.50	A-III	0.50	Type 1	YES	YES
2-Butanone	15.1	HSB-5( 5 - 8)	200	A-III	200	Type 1	no	no
Carbon disulfide	0.0080	HA01-MW-16( 10 - 11)	400	A-III	400	Type 1	no	no
Carbon tetrachloride	0.0047	HA01-MW-17( 6 - 7)	0.50	A-III	0.50	Type 1	no	no
CFC-11	0.031	PSB-1( 0 - 1)	200	A-III	200	Type 1	no	no
Chlorobenzene	0.0070	FTASB-11( 9.5 - 10)	10	A-III	10	Type 1	no	no
Chloroform	NA	NA	3.9	PRGc-Res	3.9	Type 1	no	no
Chloromethane	39	HSB-5( 5 - 8)	0.30	A-III	0.30	Type 1	YES	YES
Cyclohexane	NA	NA	20	A-I	74	SSL	no	no
Dibromochloromethane	NA	NA	8.0	A-III	8.0	Type 1	no	no
1,2-Dichlorobenzene	0.0036	HA01-MW-15( 5 - 6),HA01-MW-17( 1 - 2)	60	A-III	60	Type 1	no	no
1,3-Dichlorobenzene	NA	NA	60	A-III	60	Type 1	no	no
1,4-Dichlorobenzene	NA	NA	7.5	A-III	8	Type 1	no	no
Dichlorodifluoromethane	NA	NA	23	PRGnc-Res	23	Type 1	no	no
1,2-Dichloroethane	NA	NA	0.50	A-III	0.50	Type 1	no	no
1,1-Dichloroethene	NA	NA	0.70	GW	0.71	SSL	no	no
1,2-Dichloroethene	NA	NA	0.0014	DL	0.17	SSL	no	no
cis-1,2-Dichloroethene	0.27	HMW-14R( 7 - 9)	7.0	GW	7.0	Type 1	no	no
trans-1,2-Dichloroethene	0.013	HMW-14R( 7 - 9)	10	GW	10	Type 1	no	no
1,2-Dichloropropane	NA	NA	0.50	A-III	0.50	Type 1	no	no
Ethylbenzene	120	FTASB-10( 9 - 10.4)	70	GW	70	Type 1	YES	YES
Methylene chloride	0.0067	HSB-6( 8 - 10)	0.50	A-III	0.50	Type 1	no	no
1-Methylethylbenzene	0.0084	HA01-MW-10( 3 - 4)	21.88	A-I	22	Type 1	no	no
4-Methyl-2-pentanone	NA	NA	200	GW	200	Type 1	no	no
Nitrobenzene	NA	NA	2.0	A-III	2.0	Type 1	no	no
Styrene	0.0010	FTASB-13( 2.5 - 4.5),HMW-12( 1.5 - 3)	14	A-I	14	Type 1	no	no
1,1,2,2-Tetrachloroethane	NA	NA	0.13	A-I	0.13	Type 1	no	no
Tetrachloroethene	0.0061	SB-018( 0 - 1.5)	0.50	A-III	0.50	Type 1	no	no
Toluene	32	EB-K7( 8.11)	100	A-III	100	Type 1	no	no
1,2,4-Trichlorobenzene	0.0024	HA01-MW-17( 1 - 2)	10.8	A-I	11	Type 1	no	no
1,1,2-Trichloroethane	NA	NA	0.50	A-I	0.50	Type 1	no	no
Trichloroethylene	NA	NA	0.50	A-III	0.50	Type 1	no	no
Vinyl chloride	NA	NA	0.20	A-III	0.20	Type 1	no	no

**Table 7-5**  
**Comparison of Maximum Concentrations Detected in Soil to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 1 RRS [a] (mg/kg)	Source of Type 1 Standard	Type 2 RRS [b] (mg/kg)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
Xylene, Mixture	310	HMW-13( 2 - 4)	1,000	A-III	1,000	Type 1	no	no
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	2.3	SB-030( 6 - 8)	300	A-I	410	SSL	no	no
Acenaphthylene	6.6	SB-030( 6 - 8)	130	A-I	130	Type 1	no	no
Anthracene	7.5	HMW-16A( 0 - 1.5)	500	A-I	3090	SSL	no	no
Benz[a]anthracene	34	HMW-16A( 0 - 1.5)	5.0	A-I	8.5	SSL	YES	YES
Benzo[a]pyrene	26	HMW-16A( 0 - 1.5)	1.64	A-I	1.6	Type 1	YES	YES
Benzo[b]fluoranthene	28	HMW-16A( 0 - 1.5)	5.0	A-I	12	RRSc	YES	YES
Benzo[g,h,i]perylene	14	HMW-16A( 0 - 1.5)	500	A-I	500	Type 1	no	no
Benzo[k]fluoranthene	27	HMW-16A( 0 - 1.5)	5.0	A-I	120	RRSc	YES	no
Benzoic Acid	0.64	FTASB-13( 2.5 - 4.5)	1,000	A-I	1000	Type 1	no	no
Bis(2-chloroethoxy)methane	NA	NA	0.071	DL	0.22	SSL	no	no
Bis(2-chloroethyl)ether	NA	NA	0.071	DL	0.071	Type 1	no	no
Bis(2-ethylhexyl)phthalate	2	FTASB-10( 9 - 10.4)	50	A-I	292	SSL	no	no
4-Bromophenyl phenyl ether	0.021	HA01SB002( 6 - 6.5)	0.078	DL	3.3	SSL	no	no
Butyl benzyl phthalate	0.33	HMW-11( 6 - 8)	50	A-I	131	SSL	no	no
4-Chlorobenzeneamine	NA	NA	10	A-III	10	Type 1	no	no
4-Chloro-3-methylphenol	NA	NA	13.2	A-I	38	SSL	no	no
2-Chloronaphthalene	NA	NA	25	A-I	134	SSL	no	no
2-Chlorophenol	NA	NA	4.0	A-III	4.0	Type 1	no	no
4-Chlorophenyl phenyl ether	NA	NA	0.071	DL	2.9	SSL	no	no
Chrysene	33	HMW-16A( 0 - 1.5)	5.0	A-I	867	SSL	YES	no
Dibenz[a,h]anthracene	4.2	SB-030( 6 - 8)	2.0	PRGc-Res	2.0	Type 1	YES	YES
Dibenzofuran	2.3	FTASB-10( 9 - 10.4)	0.071	DL	5.9	SSL	YES	no
Di-n-butyl phthalate	2.4	BH-12( 6.5 - 7.5)	400	A-III	400	Type 1	no	no
3,3'-Dichlorobenzidine	NA	NA	25	A-I	25	Type 1	no	no
2,4-Dichlorophenol	NA	NA	2.0	A-III	2.0	Type 1	no	no
Diethyl phthalate	0.2	BH-12( 6.5 - 7.5)	0.74	A-I	107	SSL	no	no
2,4-Dimethylphenol	NA	NA	70	A-III	70	Type 1	no	no
Dimethyl phthalate	NA	NA	40,000	A-III	40,000	Type 1	no	no
2,4-Dinitrophenol	NA	NA	7.0	A-III	7.0	Type 1	no	no
2,4-Dinitrotoluene	0.65	FTASB-14( 4.5 - 6.5)	0.66	A-I	0.66	Type 1	no	no
2,6-Dinitrotoluene	NA	NA	0.76	A-I	0.76	Type 1	no	no
Di-n-octylphthalate	0.11	HMW-13( 8 - 10)	70	A-III	31,000	RRSc	no	no
Fluoranthene	72	HMW-16A( 0 - 1.5)	500	A-I	2,220	SSL	no	no
Fluorene	3.9	SB-038( 0 - 2)	360	A-I	370	SSL	no	no
Hexachlorobenzene	NA	NA	2.14	A-I	2.1	Type 1	no	no

**Table 7-5**  
**Comparison of Maximum Concentrations Detected in Soil to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 1 RRS [a] (mg/kg)	Source of Type 1 Standard	Type 2 RRS [b] (mg/kg)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
Hexachlorobutadiene	NA	NA	17.5	A-I	18	Type 1	no	no
Hexachlorocyclopentadiene	NA	NA	15.2	A-I	15	Type 1	no	no
Hexachloroethane	NA	NA	9.99	A-I	10	Type 1	no	no
Indeno[1,2,3-cd]pyrene	16	HMW-16A( 0 - 1.5)	5	A-I	12	RRSc	YES	YES
Isophorone	NA	NA	10	A-III	10	Type 1	no	no
2-Methyl-4,6-dinitrophenol	NA	NA	0.35	DL	0.35	Type 1	no	no
2-Methylphenol	NA	NA	3.8	A-I	13	SSL	no	no
4-Methylphenol	NA	NA	3.8	A-I	3.8	Type 1	no	no
Naphthalene	79	FTASB-10( 9 - 10.4)	61	PRGc-Res	61	Type 1	YES	YES
N-Nitroso-di-n-propylamine	NA	NA	1.71	A-I	1.7	Type 1	no	no
N-Nitrosodiphenylamine	0.96	HA01SB002( 6 - 6.5)	6.46	A-I	19	SSL	no	no
2-Nitrophenol	NA	NA	0.14	DL	0.14	Type 1	no	no
4-Nitrophenol	NA	NA	6.0	A-III	6.0	Type 1	no	no
Pentachlorophenol	NA	NA	3.3	A-I	3.3	Type 1	no	no
Phenanthrene	39	SB-038( 0 - 2)	110	A-I	110	Type 1	no	no
Phenol	NA	NA	400	A-III	400	Type 1	no	no
Pyrene	49	HMW-16A( 0 - 1.5)	500	A-I	2,180	SSL	no	no
2,4,5-Trichlorophenol	NA	NA	400	A-III	400	Type 1	no	no
2,4,6-Trichlorophenol	NA	NA	3.0	A-III	3.0	Type 1	no	no
<b>Pesticides/PCBs</b>								
Aldrin	NA	NA	0.66	A-I	0.66	Type 1	no	no
Aroclor 1254	0.081	EW-L8-B( 3.8)	1.55	PCB	1.6	RRSc	no	no
alpha-Chlordane	NA	NA	0.0018	DL	6.6	SSL	no	no
gamma-Chlordane	NA	NA	0.0018	DL	8.3	SSL	no	no
4,4'-DDD	0.015	EB-L5( 5.43)	0.66	A-I	16	SSL	no	no
4,4'-DDE	0.024	EB-L5( 5.43)	0.66	A-I	12	SSL	no	no
4,4'-DDT	0.0049	HA01-MW-14( 1 - 2)	0.66	A-I	4.3	SSL	no	no
Dieldrin	0.043	SB-027( 0 - 1.5)	0.66	A-I	0.66	Type 1	no	no
Endosulfan I	NA	NA	0.010	DL	0.010	DL	no	no
Endrin	NA	NA	10	A-I	10	Type 1	no	no
Endrin Aldehyde	NA	NA	10	A-I	10	Type 1	no	no
Heptachlor epoxide	NA	NA	0.02	A-III	0.082	SSL	no	no
alpha-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 1	no	no
beta-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 1	no	no
delta-Hexachlorocyclohexane	NA	NA	0.0018	DL	2.2	SSL	no	no
gamma-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 1	no	no
Methoxychlor	0.14	SB-026( 0 - 1.5)	10	A-I	84	SSL	no	no

**Table 7-5**  
**Comparison of Maximum Concentrations Detected in Soil to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 1 RRS [a] (mg/kg)	Source of Type 1 Standard	Type 2 RRS [b] (mg/kg)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
2,4,5-Trichlorophenoxyacetic acid	NA	NA	7.0	A-III	7.0	Type 1	no	no
<b>Inorganics</b>								
Arsenic	13.9	BH-13( 6.5 - 7.5)	20	A-III	20	Type 1	no	no
Barium	69	FTASB-13( 2.5 - 4.5)	1,000	A-III	2,550	SSL	no	no
Cadmium	3.87	FTASB-09( .5 - 1)	2.0	A-III	7.5	SSL	YES	no
Chromium, Total	31.7	HMW-13( 8 - 10)	100	A-III	100	Type 1	no	no
Lead	1180	FTASB-09( 6 - 7)	75	A-III	270	SSL	YES	YES
		BH-10( 7.5 - 8.5),BH-13( 6.5 - 7.5)	0.50	A-III	2.6	SSL	YES	no
Mercury	0.79							
Selenium	1.2	FTASB-16( 6.5 - 8.1)	2.0	A-III	390	RRSc	no	no
Silver	2.5	FTASB-09( .5 - 1)	2.0	A-III	17	SSL	YES	no

Maximum exceeds Risk Reduction Standard.

mg/kg Milligrams per kilogram.  
 NA Not applicable.  
 RRS Risk Reduction Standard.

[a] Source of Type 1 RRS:  
 A-I: Appendix I notification requirement (NC) ("App I NC").  
 A-III: Appendix III.  
 DL: Detection limit.  
 GW: Appendix III Table 1 times 100.  
 PCB: Appendix I value for PCBs.  
 PRGc-Res: Calculated default residential carcinogenic preliminary remediation goal.  
 PRGnc-Res: Calculated default residential non-carcinogenic preliminary remediation goal.

[b] Source of Type 2 RRS:  
 RRSa: Calculated site-specific residential risk reduction standard based on adult exposure.  
 RRSc: Calculated site-specific residential risk reduction standard based on child exposure.  
 SSL: Soil screening level for Migration to Groundwater.  
 Type 1 RRS.

[c] Constituent detected in a composite sample but not in the grab samples. Therefore, a concentration is not reported.

**Table 7-6**  
**Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		RRSc (mg/kg)	Route-Specific RRS (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
<b>Volatile Organic Compounds</b>								
Acetone	NA	NA	NA	5.8E+05	2.9E+05	1.9E+05	1.9E+05	N
Benzene	2.7E+02	1.9E+01	1.8E+01	2.6E+03	1.9E+02	1.8E+02	1.8E+01	C
2-Butanone	NA	NA	NA	3.8E+05	5.4E+04	4.8E+04	4.8E+04	N
Carbon disulfide	NA	NA	NA	6.4E+04	8.7E+02	8.5E+02	8.5E+02	N
Carbon tetrachloride	2.1E+02	6.8E+00	6.6E+00	2.6E+03	1.7E+02	1.6E+02	6.6E+00	C
CFC-11	NA	NA	NA	1.9E+05	4.9E+02	4.9E+02	4.9E+02	N
Chlorobenzene	NA	NA	NA	1.3E+04	6.0E+02	5.7E+02	5.7E+02	N
Chloroform	4.8E+02	3.9E+00	3.9E+00	6.4E+03	3.8E+02	3.6E+02	3.9E+00	C
Chloromethane	NA	NA	NA	NA	1.0E+02	1.0E+02	1.0E+02	N
Cyclohexane	NA	NA	NA	NA	6.5E+03	6.5E+03	6.5E+03	N
Dibromochloromethane	1.8E+02	5.6E+06	1.8E+02	1.3E+04	NA	1.3E+04	1.8E+02	C
1,2-Dichlorobenzene	NA	NA	NA	5.8E+04	4.4E+03	4.1E+03	4.1E+03	N
1,3-Dichlorobenzene	NA	NA	NA	1.3E+04	NA	1.3E+04	1.3E+04	N
1,4-Dichlorobenzene	2.8E+03	4.2E+01	4.1E+01	4.5E+04	1.6E+04	1.2E+04	4.1E+01	C
Dichlorodifluoromethane	NA	NA	NA	1.3E+05	2.3E+01	2.3E+01	2.3E+01	N
1,2-Dichloroethane	1.6E+02	6.5E+00	6.3E+00	3.8E+03	5.1E+01	5.0E+01	6.3E+00	C
1,1-Dichloroethene	NA	NA	NA	3.2E+04	2.4E+02	2.4E+02	2.4E+02	N
1,2-Dichloroethene	NA	NA	NA	5.8E+03	2.3E+02	2.2E+02	2.2E+02	N
cis-1,2-Dichloroethene	NA	NA	NA	1.3E+03	NA	1.3E+03	1.3E+03	N
trans-1,2-Dichloroethene	NA	NA	NA	1.3E+04	2.3E+02	2.3E+02	2.3E+02	N
1,2-Dichloropropane	4.2E+02	1.5E+01	1.4E+01	5.8E+04	2.5E+01	2.5E+01	1.4E+01	C
Ethylbenzene	1.4E+03	9.9E+01	9.2E+01	6.4E+04	1.1E+04	9.1E+03	9.2E+01	C
Methylene chloride	2.0E+03	1.5E+02	1.4E+02	3.8E+04	2.9E+03	2.7E+03	1.4E+02	C
1-Methylethylbenzene	NA	NA	NA	6.4E+04	4.7E+03	4.4E+03	4.4E+03	N
4-Methyl-2-pentanone	NA	NA	NA	5.1E+04	4.0E+04	2.3E+04	2.3E+04	N
Nitrobenzene	NA	8.1E+01	8.1E+01	1.3E+03	1.2E+03	6.3E+02	8.1E+01	C
Styrene	NA	NA	NA	1.3E+05	1.8E+04	1.6E+04	1.6E+04	N



**Table 7-6**  
**Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		RRSc (mg/kg)	Route-Specific RRS (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
1,1,2,2-Tetrachloroethane	7.5E+01	1.1E+01	9.5E+00	1.3E+04	NA	1.3E+04	9.5E+00	C
Tetrachloroethene	7.1E+03	3.3E+02	3.2E+02	3.8E+03	1.5E+02	1.4E+02	1.4E+02	N
Toluene	2.1E+01	4.3E+01	1.4E+01	5.1E+04	3.9E+04	2.2E+04	1.4E+01	C
1,2,4-Trichlorobenzene	5.2E+02	NA	5.2E+02	6.4E+03	1.2E+02	1.1E+02	1.1E+02	N
1,1,2-Trichloroethane	2.6E+02	1.8E+01	1.7E+01	2.6E+03	2.5E+00	2.5E+00	2.5E+00	N
Trichloroethylene	3.2E+02	1.9E+04	3.2E+02	3.2E+02	6.8E+00	6.7E+00	6.7E+00	N
Vinyl chloride	2.1E+01	4.4E+00	3.6E+00	1.9E+03	8.1E+01	7.8E+01	3.6E+00	C
Xylene, Mixture	NA	NA	NA	1.3E+05	1.1E+03	1.1E+03	1.1E+03	N
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	NA	NA	NA	3.8E+04	NA	3.8E+04	3.8E+04	N
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	
Anthracene	NA	NA	NA	1.9E+05	NA	1.9E+05	1.9E+05	N
Benz[a]anthracene	2.0E+01	1.4E+06	2.0E+01	NA	NA	NA	2.0E+01	C
Benzo[a]pyrene	2.0E+00	1.4E+05	2.0E+00	NA	NA	NA	2.0E+00	C
Benzo[b]fluoranthene	2.0E+01	1.4E+06	2.0E+01	NA	NA	NA	2.0E+01	C
Benzo[g,h,i]perylene	NA	NA	NA	NA	NA	NA	NA	
Benzo[k]fluoranthene	2.0E+02	1.4E+06	2.0E+02	NA	NA	NA	2.0E+02	C
Benzoic Acid	NA	NA	NA	2.6E+06	NA	2.6E+06	2.6E+06	N
Bis(2-chloroethoxy)methane	NA	NA	NA	1.9E+03	NA	1.9E+03	1.9E+03	N
Bis(2-chloroethyl)ether	1.4E+01	4.8E+00	3.5E+00	NA	NA	NA	3.5E+00	C
Bis(2-ethylhexyl)phthalate	1.1E+03	6.3E+07	1.1E+03	1.3E+04	NA	1.3E+04	1.1E+03	C
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	
Butyl benzyl phthalate	7.9E+03	NA	7.9E+03	1.3E+05	NA	1.3E+05	7.9E+03	C
4-Chlorobenzeneamine	7.5E+01	NA	7.5E+01	2.6E+03	NA	2.6E+03	7.5E+01	C
4-Chloro-3-methylphenol	NA	NA	NA	6.4E+04	NA	6.4E+04	6.4E+04	N
2-Chloronaphthalene	NA	NA	NA	5.1E+04	NA	5.1E+04	5.1E+04	N
2-Chlorophenol	NA	NA	NA	3.2E+03	NA	3.2E+03	3.2E+03	N
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	

**Table 7-6**  
**Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		RRSc (mg/kg)	Route-Specific RRS (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Chrysene	2.0E+03	1.4E+07	2.0E+03	NA	NA	NA	2.0E+03	C
Dibenz[a,h]anthracene	2.0E+00	1.3E+05	2.0E+00	NA	NA	NA	2.0E+00	C
Dibenzofuran	NA	NA	NA	6.4E+02	NA	6.4E+02	6.4E+02	N
Di-n-butyl phthalate	NA	NA	NA	6.4E+04	NA	6.4E+04	6.4E+04	N
3,3'-Dichlorobenzidine	3.3E+01	4.4E+05	3.3E+01	NA	NA	NA	3.3E+01	C
2,4-Dichlorophenol	NA	NA	NA	1.9E+03	NA	1.9E+03	1.9E+03	N
Diethyl phthalate	NA	NA	NA	5.1E+05	NA	5.1E+05	5.1E+05	N
2,4-Dimethylphenol	NA	NA	NA	1.3E+04	NA	1.3E+04	1.3E+04	N
Dimethyl phthalate	NA	NA	NA	6.4E+06	NA	6.4E+06	6.4E+06	N
2,4-Dinitrophenol	NA	NA	NA	1.3E+03	NA	1.3E+03	1.3E+03	N
2,4-Dinitrotoluene	4.8E+01	1.7E+06	4.8E+01	1.3E+03	NA	1.3E+03	4.8E+01	C
2,6-Dinitrotoluene	NA	NA	NA	6.4E+02	NA	6.4E+02	6.4E+02	N
Di-n-octylphthalate	NA	NA	NA	2.6E+05	NA	2.6E+05	2.6E+05	N
Fluoranthene	NA	NA	NA	2.6E+04	NA	2.6E+04	2.6E+04	N
Fluorene	NA	NA	NA	2.6E+04	NA	2.6E+04	2.6E+04	N
Hexachlorobenzene	9.3E+00	3.3E+05	9.3E+00	5.1E+02	NA	5.1E+02	9.3E+00	C
Hexachlorobutadiene	1.9E+02	6.8E+06	1.9E+02	6.4E+02	NA	6.4E+02	1.9E+02	C
Hexachlorocyclopentadiene	NA	NA	NA	3.8E+03	1.3E+06	3.8E+03	3.8E+03	N
Hexachloroethane	3.7E+02	3.8E+07	3.7E+02	4.5E+02	1.9E+08	4.5E+02	3.7E+02	C
Indeno[1,2,3-cd]pyrene	2.0E+01	1.4E+06	2.0E+01	NA	NA	NA	2.0E+01	C
Isophorone	1.6E+04	NA	1.6E+04	1.3E+05	1.3E+10	1.3E+05	1.6E+04	C
2-Methyl-4,6-dinitrophenol	NA	NA	NA	5.1E+01	NA	5.1E+01	5.1E+01	N
2-Methylphenol	NA	NA	NA	3.2E+04	3.9E+09	3.2E+04	3.2E+04	N
4-Methylphenol	NA	NA	NA	3.2E+03	3.9E+09	3.2E+03	3.2E+03	N
Naphthalene	NA	6.1E+01	6.1E+01	1.3E+04	2.7E+02	2.6E+02	6.1E+01	C
N-Nitroso-di-n-propylamine	2.1E+00	7.5E+04	2.1E+00	NA	NA	NA	2.1E+00	C
N-Nitrosodiphenylamine	3.0E+03	5.8E+07	3.0E+03	NA	NA	NA	3.0E+03	C
2-Nitrophenol	NA	NA	NA	NA	3.2E+06	3.2E+06	3.2E+06	N

**Table 7-6**  
**Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		RRSc (mg/kg)	Route-Specific RRS (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	
Pentachlorophenol	3.7E+01	2.9E+07	3.7E+01	3.2E+03	NA	3.2E+03	3.7E+01	C
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	
Phenol	NA	NA	NA	1.9E+05	1.3E+09	1.9E+05	1.9E+05	N
Pyrene	NA	NA	NA	1.9E+04	NA	1.9E+04	1.9E+04	N
2,4,5-Trichlorophenol	NA	NA	NA	6.4E+04	NA	6.4E+04	6.4E+04	N
2,4,6-Trichlorophenol	1.4E+03	4.8E+07	1.4E+03	6.4E+02	NA	6.4E+02	6.4E+02	N
<b>Pesticides/PCBs</b>								
Aldrin	8.8E-01	3.1E+04	8.8E-01	1.9E+01	NA	1.9E+01	8.8E-01	C
Aroclor 1254	7.5E+00	2.6E+05	7.5E+00	1.3E+01	NA	1.3E+01	7.5E+00	C
alpha-Chlordane	4.3E+01	1.5E+06	4.3E+01	3.2E+02	4.5E+06	3.2E+02	4.3E+01	C
gamma-Chlordane	4.3E+01	1.5E+06	4.3E+01	3.2E+02	4.5E+06	3.2E+02	4.3E+01	C
4,4'-DDD	6.2E+01	2.2E+06	6.2E+01	NA	NA	NA	6.2E+01	C
4,4'-DDE	4.4E+01	1.5E+06	4.4E+01	NA	NA	NA	4.4E+01	C
4,4'-DDT	4.4E+01	1.5E+06	4.4E+01	3.2E+02	NA	3.2E+02	4.4E+01	C
Dieldrin	9.3E-01	3.3E+04	9.3E-01	3.2E+01	NA	3.2E+01	9.3E-01	C
Endosulfan I	NA	NA	NA	3.8E+03	NA	3.8E+03	3.8E+03	N
Endrin	NA	NA	NA	1.9E+02	NA	1.9E+02	1.9E+02	N
Endrin Aldehyde	NA	NA	NA	1.9E+02	NA	1.9E+02	1.9E+02	N
Heptachlor epoxide	1.6E+00	5.8E+04	1.6E+00	8.3E+00	NA	8.3E+00	1.6E+00	C
alpha-Hexachlorocyclohexane	2.4E+00	8.3E+04	2.4E+00	5.1E+03	NA	5.1E+03	2.4E+00	C
beta-Hexachlorocyclohexane	8.3E+00	2.8E+05	8.3E+00	NA	NA	NA	8.3E+00	C
delta-Hexachlorocyclohexane	NA	NA	NA	1.9E+02	NA	1.9E+02	1.9E+02	N
gamma-Hexachlorocyclohexane	1.4E+01	4.8E+05	1.4E+01	1.9E+02	NA	1.9E+02	1.4E+01	C
Methoxychlor	NA	NA	NA	3.2E+03	NA	3.2E+03	3.2E+03	N
2,4,5-Trichlorophenoxyacetic acid	NA	NA	NA	6.4E+03	NA	6.4E+03	6.4E+03	N
<b>Inorganics</b>								
Arsenic	1.0E+01	3.5E+04	1.0E+01	1.9E+02	9.7E+04	1.9E+02	1.0E+01	C

**Table 7-6**  
**Risk Reduction Standards for Potential Adult Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		RRSc (mg/kg)	Route-Specific RRS (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Barium	NA	NA	NA	1.3E+05	3.2E+06	1.2E+05	1.2E+05	N
Cadmium	NA	8.3E+04	8.3E+04	6.4E+02	NA	6.4E+02	6.4E+02	N
Chromium, Total	NA	NA	NA	NA	NA	NA	NA	
Lead	NA	NA	NA	NA	NA	NA	NA	
Mercury	NA	NA	NA	1.0E+02	1.9E+06	1.0E+02	1.0E+02	N
Selenium	NA	NA	NA	3.2E+03	1.3E+08	3.2E+03	3.2E+03	N
Silver	NA	NA	NA	3.2E+03	NA	3.2E+03	3.2E+03	N

RRSc (for carcinogens) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (for noncarcinogens) is calculated using a target hazard index (THI) of 1.

mg/kg      Milligram per kilogram.  
NA          Not available.  
RRS        Risk reduction standard.

**Table 7-7**  
**Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
<b>Volatile Organic Compounds</b>								
Acetone	NA	NA	NA	7.0E+04	6.2E+04	3.3E+04	3.3E+04	N
Benzene	1.7E+02	2.0E+01	1.8E+01	3.1E+02	4.1E+01	3.6E+01	1.8E+01	C
2-Butanone	NA	NA	NA	4.7E+04	1.2E+04	9.3E+03	9.3E+03	N
Carbon disulfide	NA	NA	NA	7.8E+03	1.9E+02	1.8E+02	1.8E+02	N
Carbon tetrachloride	1.3E+02	7.3E+00	6.9E+00	3.1E+02	3.7E+01	3.3E+01	6.9E+00	C
CFC-11	NA	NA	NA	2.3E+04	1.1E+02	1.1E+02	1.1E+02	N
Chlorobenzene	NA	NA	NA	1.6E+03	1.3E+02	1.2E+02	1.2E+02	N
Chloroform	2.9E+02	4.2E+00	4.1E+00	7.8E+02	8.1E+01	7.3E+01	4.1E+00	C
Chloromethane	NA	NA	NA	NA	2.2E+01	2.2E+01	2.2E+01	N
Cyclohexane	NA	NA	NA	NA	1.4E+03	1.4E+03	1.4E+03	N
Dibromochloromethane	1.1E+02	6.0E+06	1.1E+02	1.6E+03	NA	1.6E+03	1.1E+02	C
1,2-Dichlorobenzene	NA	NA	NA	7.0E+03	9.5E+02	8.3E+02	8.3E+02	N
1,3-Dichlorobenzene	NA	NA	NA	1.6E+03	NA	1.6E+03	1.6E+03	N
1,4-Dichlorobenzene	1.7E+03	4.5E+01	4.4E+01	5.5E+03	3.4E+03	2.1E+03	4.4E+01	C
Dichlorodifluoromethane	NA	NA	NA	1.6E+04	5.0E+00	5.0E+00	5.0E+00	N
1,2-Dichloroethane	1.0E+02	7.0E+00	6.6E+00	4.7E+02	1.1E+01	1.1E+01	6.6E+00	C
1,1-Dichloroethene	NA	NA	NA	3.9E+03	5.2E+01	5.1E+01	5.1E+01	N
1,2-Dichloroethene	NA	NA	NA	7.0E+02	4.9E+01	4.6E+01	4.6E+01	N
cis-1,2-Dichloroethene	NA	NA	NA	1.6E+02	NA	1.6E+02	1.6E+02	N
trans-1,2-Dichloroethene	NA	NA	NA	1.6E+03	4.9E+01	4.8E+01	4.8E+01	N
1,2-Dichloropropane	2.5E+02	1.6E+01	1.5E+01	7.0E+03	5.4E+00	5.4E+00	5.4E+00	N
Ethylbenzene	8.3E+02	1.1E+02	9.4E+01	7.8E+03	2.3E+03	1.8E+03	9.4E+01	C
Methylene chloride	1.2E+03	1.6E+02	1.4E+02	4.7E+03	6.3E+02	5.6E+02	1.4E+02	C
1-Methylethylbenzene	NA	NA	NA	7.8E+03	1.0E+03	8.9E+02	8.9E+02	N
4-Methyl-2-pentanone	NA	NA	NA	6.3E+03	8.6E+03	3.6E+03	3.6E+03	N
Nitrobenzene	NA	8.6E+01	8.6E+01	1.6E+02	2.7E+02	9.9E+01	8.6E+01	C
Styrene	NA	NA	NA	1.6E+04	3.8E+03	3.1E+03	3.1E+03	N

**Table 7-7**  
**Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)		
	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)			
	Oral	Inhalation		Oral	Inhalation				
1,1,2,2-Tetrachloroethane	4.6E+01	1.2E+01	9.3E+00	1.6E+03	NA	1.6E+03	9.3E+00	C	
Tetrachloroethene	4.3E+03	3.5E+02	3.3E+02	4.7E+02	3.2E+01	3.0E+01	3.0E+01	N	
Toluene	6.5E+00	2.3E+01	5.1E+00	6.3E+03	8.4E+03	3.6E+03	5.1E+00	C	
1,2,4-Trichlorobenzene	3.1E+02	NA	3.1E+02	7.8E+02	2.5E+01	2.4E+01	2.4E+01	N	
1,1,2-Trichloroethane	1.6E+02	1.9E+01	1.7E+01	3.1E+02	5.3E-01	5.3E-01	5.3E-01	N	
Trichloroethylene	2.0E+02	2.1E+04	2.0E+02	3.9E+01	1.5E+00	1.4E+00	1.4E+00	N	
Vinyl chloride	6.5E+00	2.4E+00	1.7E+00	2.3E+02	1.7E+01	1.6E+01	1.7E+00	C	
Xylene, Mixture	NA	NA	NA	1.6E+04	2.3E+02	2.3E+02	2.3E+02	N	
<b>Semi Volatile Organic Compounds</b>									
Acenaphthene	NA	NA	NA	4.7E+03	NA	4.7E+03	4.7E+03	N	
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA		
Anthracene	NA	NA	NA	2.3E+04	NA	2.3E+04	2.3E+04	N	
Benz[a]anthracene	1.3E+01	1.5E+06	1.2E+01	NA	NA	NA	1.2E+01	C	
Benzo[a]pyrene	1.3E+00	1.5E+05	1.2E+00	NA	NA	NA	1.2E+00	C	
Benzo[b]fluoranthene	1.3E+01	1.5E+06	1.2E+01	NA	NA	NA	1.2E+01	C	
Benzo[g,h,i]perylene	NA	NA	NA	NA	NA	NA	NA		
Benzo[k]fluoranthene	1.3E+02	1.5E+06	1.2E+02	NA	NA	NA	1.2E+02	C	
Benzoic Acid	NA	NA	NA	3.1E+05	NA	3.1E+05	3.1E+05	N	
Bis(2-chloroethoxy)methane	NA	NA	NA	2.3E+02	NA	2.3E+02	2.3E+02	N	
Bis(2-chloroethyl)ether	8.3E+00	5.1E+00	3.2E+00	NA	NA	NA	3.2E+00	C	
Bis(2-ethylhexyl)phthalate	6.5E+02	6.7E+07	6.5E+02	1.6E+03	NA	1.6E+03	6.5E+02	C	
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA		
Butyl benzyl phthalate	4.8E+03	NA	4.8E+03	1.6E+04	NA	1.6E+04	4.8E+03	C	
4-Chlorobenzeneamine	4.6E+01	NA	4.6E+01	3.1E+02	NA	3.1E+02	4.6E+01	C	
4-Chloro-3-methylphenol	NA	NA	NA	7.8E+03	NA	7.8E+03	7.8E+03	N	
2-Chloronaphthalene	NA	NA	NA	6.3E+03	NA	6.3E+03	6.3E+03	N	
2-Chlorophenol	NA	NA	NA	3.9E+02	NA	3.9E+02	3.9E+02	N	
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA		

**Table 7-7**  
**Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Chrysene	1.3E+03	1.5E+07	1.2E+03	NA	NA	NA	1.2E+03	C
Dibenz[a,h]anthracene	1.3E+00	1.3E+05	1.2E+00	NA	NA	NA	1.2E+00	C
Dibenzofuran	NA	NA	NA	7.8E+01	NA	7.8E+01	7.8E+01	N
Di-n-butyl phthalate	NA	NA	NA	7.8E+03	NA	7.8E+03	7.8E+03	N
3,3'-Dichlorobenzidine	2.0E+01	4.7E+05	2.0E+01	NA	NA	NA	2.0E+01	C
2,4-Dichlorophenol	NA	NA	NA	2.3E+02	NA	2.3E+02	2.3E+02	N
Diethyl phthalate	NA	NA	NA	6.3E+04	NA	6.3E+04	6.3E+04	N
2,4-Dimethylphenol	NA	NA	NA	1.6E+03	NA	1.6E+03	1.6E+03	N
Dimethyl phthalate	NA	NA	NA	7.8E+05	NA	7.8E+05	7.8E+05	N
2,4-Dinitrophenol	NA	NA	NA	1.6E+02	NA	1.6E+02	1.6E+02	N
2,4-Dinitrotoluene	2.9E+01	1.8E+06	2.9E+01	1.6E+02	NA	1.6E+02	2.9E+01	C
2,6-Dinitrotoluene	NA	NA	NA	7.8E+01	NA	7.8E+01	7.8E+01	N
Di-n-octylphthalate	NA	NA	NA	3.1E+04	NA	3.1E+04	3.1E+04	N
Fluoranthene	NA	NA	NA	3.1E+03	NA	3.1E+03	3.1E+03	N
Fluorene	NA	NA	NA	3.1E+03	NA	3.1E+03	3.1E+03	N
Hexachlorobenzene	5.7E+00	3.5E+05	5.7E+00	6.3E+01	NA	6.3E+01	5.7E+00	C
Hexachlorobutadiene	1.2E+02	7.3E+06	1.2E+02	7.8E+01	NA	7.8E+01	7.8E+01	N
Hexachlorocyclopentadiene	NA	NA	NA	4.7E+02	2.8E+05	4.7E+02	4.7E+02	N
Hexachloroethane	2.3E+02	4.0E+07	2.3E+02	5.5E+01	4.1E+07	5.5E+01	5.5E+01	N
Indeno[1,2,3-cd]pyrene	1.3E+01	1.5E+06	1.2E+01	NA	NA	NA	1.2E+01	C
Isophorone	9.6E+03	NA	9.6E+03	1.6E+04	2.8E+09	1.6E+04	9.6E+03	C
2-Methyl-4,6-dinitrophenol	NA	NA	NA	6.3E+00	NA	6.3E+00	6.3E+00	N
2-Methylphenol	NA	NA	NA	3.9E+03	8.3E+08	3.9E+03	3.9E+03	N
4-Methylphenol	NA	NA	NA	3.9E+02	8.3E+08	3.9E+02	3.9E+02	N
Naphthalene	NA	6.6E+01	6.6E+01	1.6E+03	5.7E+01	5.5E+01	5.5E+01	N
N-Nitroso-di-n-propylamine	1.3E+00	8.0E+04	1.3E+00	NA	NA	NA	1.3E+00	C
N-Nitrosodiphenylamine	1.9E+03	6.2E+07	1.9E+03	NA	NA	NA	1.9E+03	C
2-Nitrophenol	NA	NA	NA	NA	6.9E+05	6.9E+05	6.9E+05	N

**Table 7-7**  
**Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	
Pentachlorophenol	2.3E+01	3.2E+07	2.3E+01	3.9E+02	NA	3.9E+02	2.3E+01	C
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	
Phenol	NA	NA	NA	2.3E+04	2.8E+08	2.3E+04	2.3E+04	N
Pyrene	NA	NA	NA	2.3E+03	NA	2.3E+03	2.3E+03	N
2,4,5-Trichlorophenol	NA	NA	NA	7.8E+03	NA	7.8E+03	7.8E+03	N
2,4,6-Trichlorophenol	8.3E+02	5.2E+07	8.3E+02	7.8E+01	NA	7.8E+01	7.8E+01	N
<b>Pesticides/PCBs</b>								
Aldrin	5.4E-01	3.3E+04	5.4E-01	2.3E+00	NA	2.3E+00	5.4E-01	C
Aroclor 1254	4.6E+00	2.8E+05	4.6E+00	1.6E+00	NA	1.6E+00	1.6E+00	N
alpha-Chlordane	2.6E+01	1.6E+06	2.6E+01	3.9E+01	9.7E+05	3.9E+01	2.6E+01	C
gamma-Chlordane	2.6E+01	1.6E+06	2.6E+01	3.9E+01	9.7E+05	3.9E+01	2.6E+01	C
4,4'-DDD	3.8E+01	2.3E+06	3.8E+01	NA	NA	NA	3.8E+01	C
4,4'-DDE	2.7E+01	1.7E+06	2.7E+01	NA	NA	NA	2.7E+01	C
4,4'-DDT	2.7E+01	1.7E+06	2.7E+01	3.9E+01	NA	3.9E+01	2.7E+01	C
Dieldrin	5.7E-01	3.5E+04	5.7E-01	3.9E+00	NA	3.9E+00	5.7E-01	C
Endosulfan I	NA	NA	NA	4.7E+02	NA	4.7E+02	4.7E+02	N
Endrin	NA	NA	NA	2.3E+01	NA	2.3E+01	2.3E+01	N
Endrin Aldehyde	NA	NA	NA	2.3E+01	NA	2.3E+01	2.3E+01	N
Heptachlor epoxide	1.0E+00	6.2E+04	1.0E+00	1.0E+00	NA	1.0E+00	1.0E+00	C
alpha-Hexachlorocyclohexane	1.4E+00	8.9E+04	1.4E+00	6.3E+02	NA	6.3E+02	1.4E+00	C
beta-Hexachlorocyclohexane	5.1E+00	3.0E+05	5.1E+00	NA	NA	NA	5.1E+00	C
delta-Hexachlorocyclohexane	NA	NA	NA	2.3E+01	NA	2.3E+01	2.3E+01	N
gamma-Hexachlorocyclohexane	8.3E+00	5.2E+05	8.3E+00	2.3E+01	NA	2.3E+01	8.3E+00	C
Methoxychlor	NA	NA	NA	3.9E+02	NA	3.9E+02	3.9E+02	N
2,4,5-Trichlorophenoxyacetic acid	NA	NA	NA	7.8E+02	NA	7.8E+02	7.8E+02	N
<b>Inorganics</b>								
Arsenic	6.1E+00	3.7E+04	6.1E+00	2.3E+01	2.1E+04	2.3E+01	6.1E+00	C



**Table 7-7**  
**Risk Reduction Standards for Potential Child Residential Exposure (Type 2) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/kg)	
	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)	Route-Specific RRS (mg/kg)		Calculated Goal (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Barium	NA	NA	NA	1.6E+04	6.9E+05	1.5E+04	1.5E+04	N
Cadmium	NA	8.9E+04	8.9E+04	7.8E+01	NA	7.8E+01	7.8E+01	N
Chromium, Total	NA	NA	NA	NA	NA	NA	NA	
Lead	NA	NA	NA	NA	NA	NA	NA	
Mercury	NA	NA	NA	1.3E+01	4.1E+05	1.3E+01	1.3E+01	N
Selenium	NA	NA	NA	3.9E+02	2.8E+07	3.9E+02	3.9E+02	N
Silver	NA	NA	NA	3.9E+02	NA	3.9E+02	3.9E+02	N

RRSc (for carcinogens) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (for noncarcinogens) is calculated using a target hazard index (THI) of 1.

mg/kg            Milligram per kilogram.  
NA                Not available.  
RRS               Risk reduction standard.

**Table 7-8**  
**Comparison of Maximum Concentrations Detected in Soil to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 3 RRS [a] (mg/kg)	Source of Type 3 Standard [a]	Type 4 RRS [b] (mg/kg)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
<b>Volatile Organic Compounds</b>								
Acetone	27	HSB-5( 5 - 8)	400	A-III	400	Type 3	no	no
Benzene	18	FTASB-10( 9 - 10.4)	0.5	A-III	0.5	Type 3	YES	YES
2-Butanone	15.1	HSB-5( 5 - 8)	200	A-III	200	Type 3	no	no
Carbon disulfide	0.008	HA01-MW-16( 10 - 11)	400	A-III	400	Type 3	no	no
Carbon tetrachloride	0.0047	HA01-MW-17( 6 - 7)	0.5	A-III	0.5	Type 3	no	no
CFC-11	0.031	PSB-1( 0 - 1)	200	A-III	200	Type 3	no	no
Chlorobenzene	0.007	FTASB-11( 9.5 - 10)	10	A-III	10	Type 3	no	no
Chloroform	NA	NA	8	A-III	8	Type 3	no	no
Chloromethane	39	HSB-5( 5 - 8)	0.3	A-III	1.3	SSL	YES	YES
Cyclohexane	NA	NA	20	A-I	368	SSL	no	no
Dibromochloromethane	NA	NA	8	A-III	8	Type 3	no	no
1,2-Dichlorobenzene	0.0036	HA01-MW-15( 5 - 6),HA01-MW-17( 1 - 2)	60	A-III	60	Type 3	no	no
1,3-Dichlorobenzene	NA	NA	60	A-III	167	SSL	no	no
1,4-Dichlorobenzene	NA	NA	8	A-III	8	Type 3	no	no
Dichlorodifluoromethane	NA	NA	100	A-III	100	Type 3	no	no
1,2-Dichloroethane	NA	NA	0.5	A-III	0.5	Type 3	no	no
1,1-Dichloroethene	NA	NA	0.7	A-III	3.7	SSL	no	no
1,2-Dichloroethene	NA	NA	0.00137	DL	0.88	SSL	no	no
cis-1,2-Dichloroethene	0.27	HMW-14R( 7 - 9)	7	A-III	7	Type 3	no	no
trans-1,2-Dichloroethene	0.013	HMW-14R( 7 - 9)	10	A-III	10	Type 3	no	no
1,2-Dichloropropane	NA	NA	0.5	A-III	0.5	Type 3	no	no
Ethylbenzene	120	FTASB-10( 9 - 10.4)	70	A-III	70	Type 3	YES	YES
Methylene chloride	0.0067	HSB-6( 8 - 10)	0.5	A-III	0.61	SSL	no	no
1-Methylethylbenzene	0.0084	HA01-MW-10( 3 - 4)	21.88	A-I	33	SSL	no	no
4-Methyl-2-pentanone	NA	NA	200	A-III	200	Type 3	no	no
Nitrobenzene	NA	NA	2.0	A-III	2	Type 3	no	no
Styrene	0.001	FTASB-13( 2.5 - 4.5),HMW-12( 1.5 - 3)	14	A-I	57	SSL	no	no
1,1,2,2-Tetrachloroethane	NA	NA	0.13	A-I	0	Type 3	no	no
Tetrachloroethene	0.0061	SB-018( 0 - 1.5)	0.50	A-III	0.89	SSL	no	no
Toluene	32	EB-K7( 8.11)	100	A-III	100	Type 3	no	no
1,2,4-Trichlorobenzene	0.0024	HA01-MW-17( 1 - 2)	11	A-I	11	Type 3	no	no
1,1,2-Trichloroethane	NA	NA	0.50	A-I	0.5	Type 3	no	no

**Table 7-8**  
**Comparison of Maximum Concentrations Detected in Soil to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 3 RRS [a] (mg/kg)	Source of Type 3 Standard [a]	Type 4 RRS [b] (mg/kg)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
Trichloroethylene	NA	NA	0.50	A-III	1	Type 3	no	no
Vinyl chloride	NA	NA	0.20	A-III	0.2	Type 3	no	no
Xylene, Mixture	310	HMW-13( 2 - 4)	1,000	A-III	1,000	Type 3	no	no
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	2.3	SB-030( 6 - 8)	300	A-I	1,250	SSL	no	no
Acenaphthylene	6.6	SB-030( 6 - 8)	130	A-I	130	Type 3	no	no
Anthracene	7.5	HMW-16A( 0 - 1.5)	500	A-I	20400	SSL	no	no
Benz[a]anthracene	34	HMW-16A( 0 - 1.5)	5.0	A-I	28	SSL	YES	YES
Benzo[a]pyrene	26	HMW-16A( 0 - 1.5)	1.64	A-I	7.8	RRS	YES	YES
Benzo[b]fluoranthene	28	HMW-16A( 0 - 1.5)	5.0	A-I	78	RRS	YES	no
Benzo[g,h,i]perylene	14	HMW-16A( 0 - 1.5)	500	A-I	500	Type 3	no	no
Benzo[k]fluoranthene	27	HMW-16A( 0 - 1.5)	5.0	A-I	780	RRS	YES	no
Benzoic Acid	0.64	FTASB-13( 2.5 - 4.5)	1,000	A-I	1,910	SSL	no	no
Bis(2-chloroethoxy)methane	NA	NA	0.071	DL	1.4	SSL	no	no
Bis(2-chloroethyl)ether	NA	NA	0.071	DL	0.071	Type 3	no	no
Bis(2-ethylhexyl)phthalate	2	FTASB-10( 9 - 10.4)	50	A-I	50,000	Type 3	no	no
4-Bromophenyl phenyl ether	0.021	HA01SB002( 6 - 6.5)	0.078	DL	3.3	SSL	no	no
Butyl benzyl phthalate	0.33	HMW-11( 6 - 8)	50	A-I	435	SSL	no	no
4-Chlorobenzeneamine	NA	NA	10	A-III	10	Type 3	no	no
4-Chloro-3-methylphenol	NA	NA	13.2	A-I	237	SSL	no	no
2-Chloronaphthalene	NA	NA	25	A-I	846	SSL	no	no
2-Chlorophenol	NA	NA	4.0	A-III	8.3	SSL	no	no
4-Chlorophenyl phenyl ether	NA	NA	0.071	DL	2.9	SSL	no	no
Chrysene	33	HMW-16A( 0 - 1.5)	5.0	A-I	2,820	SSL	YES	no
Dibenz[a,h]anthracene	4.2	SB-030( 6 - 8)	5.0	A-I	7.8	RRS	no	no
Dibenzofuran	2.3	FTASB-10( 9 - 10.4)	0.071	DL	37	SSL	YES	no
Di-n-butyl phthalate	2.4	BH-12( 6.5 - 7.5)	400	A-III	503	SSL	no	no
3,3'-Dichlorobenzidine	NA	NA	25	A-I	25	Type 3	no	no
2,4-Dichlorophenol	NA	NA	2.0	A-III	7.3	SSL	no	no
Diethyl phthalate	0.2	BH-12( 6.5 - 7.5)	0.74	A-I	672	SSL	no	no
2,4-Dimethylphenol	NA	NA	70	A-III	70	Type 3	no	no
Dimethyl phthalate	NA	NA	40,000	A-III	40,000	Type 3	no	no
2,4-Dinitrophenol	NA	NA	7.0	A-III	7.0	Type 3	no	no
2,4-Dinitrotoluene	0.65	FTASB-14( 4.5 - 6.5)	0.66	A-I	0.66	Type 3	no	no
2,6-Dinitrotoluene	NA	NA	0.76	A-I	2.7	SSL	no	no
Di-n-octylphthalate	0.11	HMW-13( 8 - 10)	70	A-III	820,000	RRS	no	no

**Table 7-8**  
**Comparison of Maximum Concentrations Detected in Soil to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 3 RRS [a] (mg/kg)	Source of Type 3 Standard [a]	Type 4 RRS [b] (mg/kg)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
Fluoranthene	72	HMW-16A( 0 - 1.5)	500	A-I	9,110	SSL	no	no
Fluorene	3.9	SB-038( 0 - 2)	360	A-I	1,520	SSL	no	no
Hexachlorobenzene	NA	NA	2.14	A-I	2.1	Type 3	no	no
Hexachlorobutadiene	NA	NA	17.5	A-I	18	Type 3	no	no
Hexachlorocyclopentadiene	NA	NA	15.2	A-I	38	SSL	no	no
Hexachloroethane	NA	NA	9.99	A-I	10	Type 3	no	no
Indeno[1,2,3-cd]pyrene	16	HMW-16A( 0 - 1.5)	5.0	A-I	78	RRS	YES	no
Isophorone	NA	NA	10	A-III	20	SSL	no	no
2-Methyl-4,6-dinitrophenol	NA	NA	0.35	DL	0.35	Type 3	no	no
2-Methylphenol	NA	NA	3.8	A-I	83	SSL	no	no
4-Methylphenol	NA	NA	3.8	A-I	8.2	SSL	no	no
Naphthalene	79	FTASB-10( 9 - 10.4)	100	A-I	100	Type 3	no	no
N-Nitroso-di-n-propylamine	NA	NA	1.71	A-I	1.7	Type 3	no	no
N-Nitrosodiphenylamine	0.96	HA01SB002( 6 - 6.5)	6.46	A-I	63	SSL	no	no
2-Nitrophenol	NA	NA	0.14	DL	0.14	Type 3	no	no
4-Nitrophenol	NA	NA	6.0	A-III	6.0	Type 3	no	no
Pentachlorophenol	NA	NA	3.3	A-I	3.3	Type 3	no	no
Phenanthrene	39	SB-038( 0 - 2)	110	A-I	110	Type 3	no	no
Phenol	NA	NA	400	A-III	400	Type 3	no	no
Pyrene	49	HMW-16A( 0 - 1.5)	500	A-I	6,750	SSL	no	no
2,4,5-Trichlorophenol	NA	NA	400	A-III	751	SSL	no	no
2,4,6-Trichlorophenol	NA	NA	3.0	A-III	7.5	SSL	no	no
<b>Pesticides/PCBs</b>								
Aldrin	NA	NA	0.66	A-I	0.66	Type 3	no	no
Aroclor 1254	0.081	EW-L8-B( 3.8)	1.55	PCB	7.3	SSL	no	no
alpha-Chlordane	NA	NA	0.0018	DL	23	SSL	no	no
gamma-Chlordane	NA	NA	0.0018	DL	28	SSL	no	no
4,4'-DDD	0.015	EB-L5( 5.43)	0.66	A-I	56	SSL	no	no
4,4'-DDE	0.024	EB-L5( 5.43)	0.66	A-I	40	SSL	no	no
4,4'-DDT	0.0049	HA01-MW-14( 1 - 2)	0.7	A-I	57	SSL	no	no
Dieldrin	0.043	SB-027( 0 - 1.5)	0.66	A-I	0.66	Type 3	no	no
Endosulfan I	NA	NA	0.010	DL	0.010	DL	no	no
Endrin	NA	NA	10	A-I	25	SSL	no	no

**Table 7-8**  
**Comparison of Maximum Concentrations Detected in Soil to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 3 RRS [a] (mg/kg)	Source of Type 3 Standard [a]	Type 4 RRS [b] (mg/kg)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
Endrin Aldehyde	NA	NA	10	A-I	10	Type 3	no	no
Heptachlor epoxide	NA	NA	0.02	A-III	0.13	SSL	no	no
alpha-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 3	no	no
beta-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 3	no	no
delta-Hexachlorocyclohexane	NA	NA	0.0018	DL	15	SSL	no	no
gamma-Hexachlorocyclohexane	NA	NA	0.66	A-I	0.66	Type 3	no	no
Methoxychlor	0.14	SB-026( 0 - 1.5)	10	A-I	551	SSL	no	no
2,4,5-Trichlorophenoxyacetic acid	NA	NA	7.0	BK	8.3	SSL	no	no
<b>Inorganics</b>								
Arsenic	13.9	BH-13( 6.5 - 7.5)	20	A-III	20	Type 3	no	no
Barium	69	FTASB-13( 2.5 - 4.5)	1,000	A-III	1,340	RRS	no	no
Cadmium	3.87	FTASB-09( .5 - 1)	2.0	A-III	77	SSL	YES	no
Chromium, Total	31.7	HMW-13( 8 - 10)	100	A-III	100	Type 3	no	no
Lead	1,180	FTASB-09( 6 - 7)	75	A-III	270	SSL	YES	YES
Mercury	0.79	BH-10( 7.5 - 8.5),BH-13( 6.5 - 7.5)	0.50	A-III	2.1	SSL	YES	no
Selenium	1.2	FTASB-16( 6.5 - 8.1)	2.0	A-III	312	SSL	no	no
Silver	2.5	FTASB-09( .5 - 1)	2.0	A-III	87	SSL	YES	no

Risk Reduction Standard exceeded.

mg/kg

Milligrams per kilogram.

NA

Not applicable.

RRS

Risk Reduction Standard.

[a]

Source of Type 3 RRS:

A-1: Appendix I notification requirement (NC) ("App I NC").

A-III: Appendix III.

DL: Detection limit.

GW: Appendix III Table 1 times 100.

PCB: Appendix I value for PCBs.

PRGc-Res: Calculated default industrial carcinogenic preliminary remediation goal.

PRGnc-Res: Calculated default industrial non-carcinogenic preliminary remediation goal.

BK: Background.

[b]

Source of Type 4 RRS:

RRS: Calculated site-specific industrial risk reduction standard.

SSL: Soil screening level for Migration to Groundwater.

Type 3 RRS.

[c]

Constituent detected in a composite sample but not in the grab samples. Therefore, a concentration is not reported.

**Table 7-9**  
**Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil**  
**Human Health Risk Assessment**

**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			Calculated Goal (mg/kg)		
	Route-Specific RRSs (mg/kg)		RRSc (mg/kg)	Route-Specific RRSs (mg/kg)		RRSnc (mg/kg)			
	Oral	Inhalation		Oral	Inhalation				
<b>Volatile Organic Compounds</b>									
Acetone	NA	NA	NA	1.8E+06	3.0E+05	2.6E+05	2.6E+05	N	
Benzene	1.0E+03	2.4E+01	2.3E+01	8.2E+03	2.0E+02	1.9E+02	2.3E+01	C	
2-Butanone	NA	NA	NA	1.2E+06	5.7E+04	5.5E+04	5.5E+04	N	
Carbon disulfide	NA	NA	NA	2.0E+05	9.1E+02	9.0E+02	9.0E+02	N	
Carbon tetrachloride	8.2E+02	8.5E+00	8.4E+00	8.2E+03	1.8E+02	1.8E+02	8.4E+00	C	
CFC-11	NA	NA	NA	6.1E+05	5.2E+02	5.2E+02	5.2E+02	N	
Chlorobenzene	NA	NA	NA	4.1E+04	6.3E+02	6.2E+02	6.2E+02	N	
Chloroform	1.8E+03	4.9E+00	4.9E+00	2.0E+04	4.0E+02	3.9E+02	4.9E+00	C	
Chloromethane	NA	NA	NA	NA	1.1E+02	1.1E+02	1.1E+02	N	
Cyclohexane	NA	NA	NA	NA	6.8E+03	6.8E+03	6.8E+03	N	
Dibromochloromethane	6.8E+02	7.0E+06	6.8E+02	4.1E+04	NA	4.1E+04	6.8E+02	C	
1,2-Dichlorobenzene	NA	NA	NA	1.8E+05	4.6E+03	4.5E+03	4.5E+03	N	
1,3-Dichlorobenzene	NA	NA	NA	4.1E+04	NA	4.1E+04	4.1E+04	N	
1,4-Dichlorobenzene	1.1E+04	5.3E+01	5.2E+01	1.4E+05	1.7E+04	1.5E+04	5.2E+01	C	
Dichlorodifluoromethane	NA	NA	NA	4.1E+05	2.5E+01	2.5E+01	2.5E+01	N	
1,2-Dichloroethane	6.3E+02	8.2E+00	8.1E+00	1.2E+04	5.4E+01	5.3E+01	8.1E+00	C	
1,1-Dichloroethene	NA	NA	NA	1.0E+05	2.5E+02	2.5E+02	2.5E+02	N	
1,2-Dichloroethene	NA	NA	NA	1.8E+04	2.4E+02	2.4E+02	2.4E+02	N	
cis-1,2-Dichloroethene	NA	NA	NA	4.1E+03	NA	4.1E+03	4.1E+03	N	
trans-1,2-Dichloroethene	NA	NA	NA	4.1E+04	2.4E+02	2.4E+02	2.4E+02	N	
1,2-Dichloropropane	1.6E+03	1.9E+01	1.8E+01	1.8E+05	2.6E+01	2.6E+01	1.8E+01	C	
Ethylbenzene	5.2E+03	1.2E+02	1.2E+02	2.0E+05	1.1E+04	1.1E+04	1.2E+02	C	
Methylene chloride	7.6E+03	1.8E+02	1.8E+02	1.2E+05	3.1E+03	3.0E+03	1.8E+02	C	
1-Methylethylbenzene	NA	NA	NA	2.0E+05	4.9E+03	4.8E+03	4.8E+03	N	
4-Methyl-2-pentanone	NA	NA	NA	1.6E+05	4.2E+04	3.4E+04	3.4E+04	N	
Nitrobenzene	NA	1.0E+02	1.0E+02	4.1E+03	1.3E+03	9.9E+02	1.0E+02	C	
Styrene	NA	NA	NA	4.1E+05	1.9E+04	1.8E+04	1.8E+04	N	
1,1,2,2-Tetrachloroethane	2.9E+02	1.4E+01	1.3E+01	4.1E+04	NA	4.1E+04	1.3E+01	C	

**Table 7-9**  
**Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil**  
**Human Health Risk Assessment**

**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			Calculated Goal (mg/kg)	
	Route-Specific RRSs (mg/kg)		RRSc (mg/kg)	Route-Specific RRSs (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Tetrachloroethene	2.7E+04	4.2E+02	4.1E+02	1.2E+04	1.5E+02	1.5E+02	1.5E+02	N
Toluene	NA	NA	NA	1.6E+05	4.1E+04	3.3E+04	3.3E+04	N
1,2,4-Trichlorobenzene	2.0E+03	NA	2.0E+03	2.0E+04	1.2E+02	1.2E+02	1.2E+02	N
1,1,2-Trichloroethane	1.0E+03	2.3E+01	2.2E+01	8.2E+03	2.6E+00	2.6E+00	2.6E+00	N
Trichloroethylene	1.2E+03	2.4E+04	1.2E+03	1.0E+03	7.1E+00	7.1E+00	7.1E+00	N
Vinyl chloride	7.9E+01	5.6E+00	5.2E+00	6.1E+03	8.5E+01	8.4E+01	5.2E+00	C
Xylene, Mixture	NA	NA	NA	4.1E+05	1.1E+03	1.1E+03	1.1E+03	N
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	NA	NA	NA	1.2E+05	NA	1.2E+05	1.2E+05	N
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	
Anthracene	NA	NA	NA	6.1E+05	NA	6.1E+05	6.1E+05	N
Benz[a]anthracene	7.8E+01	1.7E+06	7.8E+01	NA	NA	NA	7.8E+01	C
Benzo[a]pyrene	7.8E+00	1.7E+05	7.8E+00	NA	NA	NA	7.8E+00	C
Benzo[b]fluoranthene	7.8E+01	1.7E+06	7.8E+01	NA	NA	NA	7.8E+01	C
Benzo[g,h,i]perylene	NA	NA	NA	NA	NA	NA	NA	
Benzo[k]fluoranthene	7.8E+02	1.7E+06	7.8E+02	NA	NA	NA	7.8E+02	C
Benzoic Acid	NA	NA	NA	8.2E+06	NA	8.2E+06	8.2E+06	N
Bis(2-chloroethoxy)methane	NA	NA	NA	6.1E+03	NA	6.1E+03	6.1E+03	N
Bis(2-chloroethyl)ether	5.2E+01	6.0E+00	5.4E+00	NA	NA	NA	5.4E+00	C
Bis(2-ethylhexyl)phthalate		7.9E+07			NA			
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	
Butyl benzyl phthalate	3.0E+04	NA	3.0E+04	4.1E+05	NA	4.1E+05	3.0E+04	C
4-Chlorobenzeneamine	2.9E+02	NA	2.9E+02	8.2E+03	NA	8.2E+03	2.9E+02	C
4-Chloro-3-methylphenol	NA	NA	NA	2.0E+05	NA	2.0E+05	2.0E+05	N
2-Chloronaphthalene	NA	NA	NA	1.6E+05	NA	1.6E+05	1.6E+05	N
2-Chlorophenol	NA	NA	NA	1.0E+04	NA	1.0E+04	1.0E+04	N
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	NA	
Chrysene	7.8E+03	1.7E+07	7.8E+03	NA	NA	NA	7.8E+03	C
Dibenz[a,h]anthracene	7.8E+00	1.6E+05	7.8E+00	NA	NA	NA	7.8E+00	C

**Table 7-9**  
**Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil**  
**Human Health Risk Assessment**

**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			Calculated Goal (mg/kg)	
	Route-Specific RRSs (mg/kg)		RRSc (mg/kg)	Route-Specific RRSs (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Dibenzofuran	NA	NA	NA	2.0E+03	NA	2.0E+03	2.0E+03	N
Di-n-butyl phthalate	NA	NA	NA	2.0E+05	NA	2.0E+05	2.0E+05	N
3,3'-Dichlorobenzidine	1.3E+02	5.6E+05	1.3E+02	NA	NA	NA	1.3E+02	C
2,4-Dichlorophenol	NA	NA	NA	6.1E+03	NA	6.1E+03	6.1E+03	N
Diethyl phthalate	NA	NA	NA	1.6E+06	NA	1.6E+06	1.6E+06	N
2,4-Dimethylphenol	NA	NA	NA	4.1E+04	NA	4.1E+04	4.1E+04	N
Dimethyl phthalate	NA	NA	NA	2.0E+07	NA	2.0E+07	2.0E+07	N
2,4-Dinitrophenol	NA	NA	NA	4.1E+03	NA	4.1E+03	4.1E+03	N
2,4-Dinitrotoluene	1.8E+02	2.1E+06	1.8E+02	4.1E+03	NA	4.1E+03	1.8E+02	C
2,6-Dinitrotoluene	NA	NA	NA	2.0E+03	NA	2.0E+03	2.0E+03	N
Di-n-octylphthalate	NA	NA	NA	8.2E+05	NA	8.2E+05	8.2E+05	N
Fluoranthene	NA	NA	NA	8.2E+04	NA	8.2E+04	8.2E+04	N
Fluorene	NA	NA	NA	8.2E+04	NA	8.2E+04	8.2E+04	N
Hexachlorobenzene	3.6E+01	4.1E+05	3.6E+01	1.6E+03	NA	1.6E+03	3.6E+01	C
Hexachlorobutadiene	7.3E+02	8.6E+06	7.3E+02	2.0E+03	NA	2.0E+03	7.3E+02	C
Hexachlorocyclopentadiene	NA	NA	NA	1.2E+04	1.4E+06	1.2E+04	1.2E+04	N
Hexachloroethane	1.4E+03	4.7E+07	1.4E+03	1.4E+03	2.0E+08	1.4E+03	1.4E+03	C
Indeno[1,2,3-cd]pyrene	7.8E+01	1.7E+06	7.8E+01	NA	NA	NA	7.8E+01	C
Isophorone	6.0E+04	NA	6.0E+04	4.1E+05	1.4E+10	4.1E+05	6.0E+04	C
2-Methyl-4,6-dinitrophenol	NA	NA	NA	1.6E+02	NA	1.6E+02	1.6E+02	N
2-Methylphenol	NA	NA	NA	1.0E+05	4.1E+09	1.0E+05	1.0E+05	N
4-Methylphenol	NA	NA	NA	1.0E+04	4.1E+09	1.0E+04	1.0E+04	N
Naphthalene	NA	7.7E+01	7.7E+01	4.1E+04	2.8E+02	2.8E+02	7.7E+01	C
N-Nitroso-di-n-propylamine	8.2E+00	9.5E+04	8.2E+00	NA	NA	NA	8.2E+00	C
N-Nitrosodiphenylamine	1.2E+04	7.3E+07	1.2E+04	NA	NA	NA	1.2E+04	C
2-Nitrophenol	NA	NA	NA	NA	3.4E+06	3.4E+06	3.4E+06	N
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	
Pentachlorophenol	1.4E+02	3.7E+07	1.4E+02	1.0E+04	NA	1.0E+04	1.4E+02	C
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	



**Table 7-9**  
**Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil**  
**Human Health Risk Assessment**

**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			Calculated Goal (mg/kg)		
	Route-Specific RRSs (mg/kg)		RRSc (mg/kg)	Route-Specific RRSs (mg/kg)		RRSnc (mg/kg)			
	Oral	Inhalation		Oral	Inhalation				
Phenol	NA	NA	NA	6.1E+05	1.4E+09	6.1E+05	6.1E+05	N	
Pyrene	NA	NA	NA	6.1E+04	NA	6.1E+04	6.1E+04	N	
2,4,5-Trichlorophenol	NA	NA	NA	2.0E+05	NA	2.0E+05	2.0E+05	N	
2,4,6-Trichlorophenol	5.2E+03	6.1E+07	5.2E+03	2.0E+03	NA	2.0E+03	2.0E+03	N	
<b>Pesticides/PCBs</b>									
Aldrin	3.4E+00	3.9E+04	3.4E+00	6.1E+01	NA	6.1E+01	3.4E+00	C	
Aroclor 1254	2.9E+01	3.3E+05	2.9E+01	4.1E+01	NA	4.1E+01	2.9E+01	C	
alpha-Chlordane	1.6E+02	1.9E+06	1.6E+02	1.0E+03	4.7E+06	1.0E+03	1.6E+02	C	
gamma-Chlordane	1.6E+02	1.9E+06	1.6E+02	1.0E+03	4.7E+06	1.0E+03	1.6E+02	C	
4,4'-DDD	2.4E+02	2.7E+06	2.4E+02	NA	NA	NA	2.4E+02	C	
4,4'-DDE	1.7E+02	2.0E+06	1.7E+02	NA	NA	NA	1.7E+02	C	
4,4'-DDT	1.7E+02	2.0E+06	1.7E+02	1.0E+03	NA	1.0E+03	1.7E+02	C	
Dieldrin	3.6E+00	4.1E+04	3.6E+00	1.0E+02	NA	1.0E+02	3.6E+00	C	
Endosulfan I	NA	NA	NA	1.2E+04	NA	1.2E+04	1.2E+04	N	
Endrin	NA	NA	NA	6.1E+02	NA	6.1E+02	6.1E+02	N	
Endrin Aldehyde	NA	NA	NA	6.1E+02	NA	6.1E+02	6.1E+02	N	
Heptachlor epoxide	6.3E+00	7.3E+04	6.3E+00	2.7E+01	NA	2.7E+01	6.3E+00	C	
alpha-Hexachlorocyclohexane	9.1E+00	1.1E+05	9.1E+00	1.6E+04	NA	1.6E+04	9.1E+00	C	
beta-Hexachlorocyclohexane	3.2E+01	3.6E+05	3.2E+01	NA	NA	NA	3.2E+01	C	
delta-Hexachlorocyclohexane	NA	NA	NA	6.1E+02	NA	6.1E+02	6.1E+02	N	
gamma-Hexachlorocyclohexane	5.2E+01	6.1E+05	5.2E+01	6.1E+02	NA	6.1E+02	5.2E+01	C	
Methoxychlor	NA	NA	NA	1.0E+04	NA	1.0E+04	1.0E+04	N	
2,4,5-Trichlorophenoxyacetic acid	NA	NA	NA	2.0E+04	NA	2.0E+04	2.0E+04	N	
<b>Inorganics</b>									
Arsenic	3.8E+01	4.4E+04	3.8E+01	6.1E+02	1.0E+05	6.1E+02	3.8E+01	C	
Barium	NA	NA	NA	4.1E+05	3.4E+06	3.6E+05	1.3E+03	N	
Cadmium	NA	1.1E+05	1.1E+05	2.0E+03	NA	2.0E+03	2.0E+03	N	
Chromium, Total	NA	NA	NA	NA	NA	NA	NA		

**Table 7-9**  
**Risk Reduction Standards for Potential Adult Industrial Exposure (Type 4) to Soil**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			Calculated Goal (mg/kg)	
	Route-Specific RRSs (mg/kg)		RRSc (mg/kg)	Route-Specific RRSs (mg/kg)		RRSnc (mg/kg)		
	Oral	Inhalation		Oral	Inhalation			
Lead	NA	NA	NA	NA	NA	NA	9.3E+02	N
Mercury	NA	NA	NA	3.3E+02	2.0E+06	3.3E+02	3.3E+02	N
Selenium	NA	NA	NA	1.0E+04	1.4E+08	1.0E+04	1.0E+04	N
Silver	NA	NA	NA	1.0E+04	NA	1.0E+04	1.0E+04	N

The Type 4 RRSc (for carcinogens) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (for noncarcinogens) is calculated using a target hazard index (THI) of 1.

The lead Type 4 RRS is presented in Table 7-20.

mg/kg      Milligram per kilogram.    NA                      Not available.                      RRS                      Risk Reduction Standard for Soil.

**Table 7-10**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 1 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 1 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
<b>Volatile Organic Compounds</b>						
Acetone	4.0E+00	8.0E+01	2.4E+00	3.5E-05	1.4E-03	1.6E+01
Benzene	5.0E-03	1.0E-01	1.5E+02	5.6E-03	2.3E-01	5.1E-02
2-Butanone	2.0E+00	4.0E+01	4.5E+00	5.7E-05	2.3E-03	8.4E+00
Carbon disulfide	4.0E+00	8.0E+01	2.2E+01	1.4E-02	5.9E-01	2.4E+01
Carbon tetrachloride	5.0E-03	1.0E-01	4.4E+01	2.8E-02	1.1E+00	3.9E-02
CFC-11	2.0E+00	4.0E+01	4.4E+01	9.7E-02	4.0E+00	2.5E+01
Chlorobenzene	1.0E-01	2.0E+00	2.3E+02	3.1E-03	1.3E-01	1.4E+00
Chloroform	8.0E-02	1.6E+00	3.2E+01	3.7E-03	1.5E-01	4.4E-01
Chloromethane	3.0E-03	6.0E-02	1.3E+01	8.8E-03	3.6E-01	1.5E-02
Cyclohexane	5.0E-04	1.0E-02	1.5E+02	1.5E-01	6.1E+00	1.0E-02
Dibromochloromethane	8.0E-02	1.6E+00	3.2E+01	7.8E-04	3.2E-02	4.3E-01
1,2-Dichlorobenzene	6.0E-01	1.2E+01	3.8E+02	1.9E-03	7.8E-02	1.2E+01
1,3-Dichlorobenzene	6.0E-01	1.2E+01	2.0E+03	3.1E-03	1.3E-01	5.0E+01
1,4-Dichlorobenzene	7.5E-02	1.5E+00	3.8E+02	2.4E-03	9.8E-02	1.4E+00
Dichlorodifluoromethane	1.0E+00	2.0E+01	4.4E+01	3.4E-01	1.4E+01	3.0E+01
1,2-Dichloroethane	5.0E-03	1.0E-01	4.0E+01	1.2E-03	4.8E-02	2.8E-02
1,1-Dichloroethene	7.0E-03	1.4E-01	3.2E+01	2.6E-02	1.1E+00	5.0E-02
1,2-Dichloroethene	1.0E-03	2.0E-02	4.0E+01	4.1E-03	1.7E-01	5.9E-03
cis-1,2-Dichloroethene	7.0E-02	1.4E+00	4.0E+01	4.1E-03	1.7E-01	4.1E-01
trans-1,2-Dichloroethene	1.0E-01	2.0E+00	4.0E+01	4.1E-03	1.7E-01	5.9E-01
1,2-Dichloropropane	5.0E-03	1.0E-01	6.1E+01	2.8E-03	1.2E-01	3.3E-02
Ethylbenzene	7.0E-01	1.4E+01	4.5E+02	7.9E-03	3.2E-01	1.6E+01
Methylene chloride	5.0E-03	1.0E-01	2.2E+01	3.3E-03	1.3E-01	2.5E-02
1-Methylethylbenzene	1.0E-04	2.0E-03	7.0E+02	1.2E-02	4.7E-01	3.3E-03
4-Methyl-2-pentanone	2.0E+00	4.0E+01	1.3E+01	1.4E-04	5.6E-03	9.0E+00
Nitrobenzene	2.0E-02	4.0E-01	2.3E+02	2.4E-05	9.8E-04	2.6E-01
Styrene	1.0E-01	2.0E+00	4.5E+02	2.8E-03	1.1E-01	2.2E+00
1,1,2,2-Tetrachloroethane	2.0E-04	4.0E-03	9.5E+01	3.7E-04	1.5E-02	1.6E-03
Tetrachloroethene	5.0E-03	1.0E-01	9.5E+01	1.8E-02	7.2E-01	4.5E-02
Toluene	1.0E+00	2.0E+01	2.3E+02	6.6E-03	2.7E-01	1.4E+01
1,2,4-Trichlorobenzene	7.0E-02	1.4E+00	1.4E+03	1.4E-03	5.8E-02	4.1E+00
1,1,2-Trichloroethane	5.0E-03	1.0E-01	6.1E+01	8.2E-04	3.4E-02	3.2E-02
Trichloroethylene	5.0E-03	1.0E-01	6.1E+01	9.9E-03	4.0E-01	3.6E-02
Vinyl chloride	2.0E-03	4.0E-02	2.2E+01	2.8E-02	1.1E+00	1.4E-02
Xylene, Mixture	1.0E+01	2.0E+02	3.8E+02	5.2E-03	2.1E-01	2.0E+02

**Table 7-10**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 1 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 1 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
<b>Semi Volatile Organic Compounds</b>						
Acenaphthene	2.0E+00	4.0E+01	5.0E+03	1.8E-04	7.5E-03	4.1E+02
Acenaphthylene	6.4E-04	1.3E-02	3.1E+03	1.1E-04	4.6E-03	8.2E-02
Anthracene	6.4E-04	1.3E-02	1.6E+04	5.6E-05	2.3E-03	4.2E-01
Benz[a]anthracene	1.0E-04	2.0E-03	1.8E+05	1.2E-05	4.9E-04	7.1E-01
Benzo[a]pyrene	2.0E-04	4.0E-03	5.9E+05	4.6E-07	1.9E-05	4.7E+00
Benzo[b]fluoranthene	2.0E-04	4.0E-03	6.0E+05	6.6E-07	2.7E-05	4.8E+00
Benzo[g,h,i]perylene	6.4E-04	1.3E-02	3.9E+06	1.4E-07	5.8E-06	9.9E+01
Benzo[k]fluoranthene	6.4E-04	1.3E-02	5.9E+05	5.8E-07	2.4E-05	1.5E+01
Benzoic Acid	1.9E-02	3.8E-01	1.7E+01	3.8E-08	1.6E-06	8.8E-02
Bis(2-chloroethoxy)methane	1.0E-03	2.0E-02	1.4E+01	3.9E-06	1.6E-04	4.6E-03
Bis(2-chloroethyl)ether	2.0E-05	4.0E-04	3.2E+01	1.7E-05	6.9E-04	1.1E-04
Bis(2-ethylhexyl)phthalate	6.0E-03	1.2E-01	1.2E+05	2.7E-07	1.1E-05	2.9E+01
4-Bromophenyl phenyl ether	1.0E-03	2.0E-02	8.2E+04	1.2E-04	4.8E-03	3.3E+00
Butyl benzyl phthalate	1.0E-01	2.0E+00	7.2E+03	1.3E-06	5.1E-05	2.9E+01
4-Chlorobenzeneamine	1.0E-01	2.0E+00	1.1E+02	1.2E-06	4.7E-05	8.5E-01
4-Chloro-3-methylphenol	1.0E-03	2.0E-02	4.9E+02	2.5E-06	1.0E-04	2.4E-02
2-Chloronaphthalene	6.4E-04	1.3E-02	2.5E+03	3.2E-04	1.3E-02	6.6E-02
2-Chlorophenol	4.0E-02	8.0E-01	3.1E+02	1.1E-05	4.6E-04	6.5E-01
4-Chlorophenyl phenyl ether	1.0E-03	2.0E-02	7.4E+04	1.3E-04	5.2E-03	2.9E+00
Chrysene	2.0E-04	4.0E-03	1.8E+05	5.2E-06	2.1E-04	1.4E+00
Dibenz[a,h]anthracene	3.0E-04	6.0E-03	1.9E+06	1.4E-07	5.8E-06	2.3E+01
Dibenzofuran	1.0E-03	2.0E-02	9.2E+03	2.1E-04	8.7E-03	3.7E-01
Di-n-butyl phthalate	4.0E+00	8.0E+01	1.2E+03	1.8E-06	7.4E-05	2.0E+02
3,3'-Dichlorobenzidine	8.0E-05	1.6E-03	3.2E+03	4.0E-09	1.6E-07	1.1E-02
2,4-Dichlorophenol	2.0E-02	4.0E-01	4.9E+02	4.3E-06	1.8E-04	4.7E-01
Diethyl phthalate	6.0E-03	1.2E-01	1.0E+02	6.1E-07	2.5E-05	4.9E-02
2,4-Dimethylphenol	7.0E-01	1.4E+01	4.9E+02	9.5E-07	3.9E-05	1.7E+01
Dimethyl phthalate	4.0E+02	8.0E+03	3.5E+01	1.1E-07	4.3E-06	2.2E+03
2,4-Dinitrophenol	7.0E-02	1.4E+00	4.6E+02	8.6E-08	3.5E-06	1.6E+00
2,4-Dinitrotoluene	5.0E-05	1.0E-03	5.8E+02	5.4E-08	2.2E-06	1.4E-03
2,6-Dinitrotoluene	2.0E-03	4.0E-02	5.9E+02	7.5E-07	3.1E-05	5.5E-02
Di-n-octylphthalate	7.0E-01	1.4E+01	8.4E+07	6.7E-05	2.7E-03	2.3E+06
Fluoranthene	1.0E+00	2.0E+01	5.5E+04	8.9E-06	3.6E-04	2.2E+03
Fluorene	1.0E+00	2.0E+01	9.2E+03	9.6E-05	3.9E-03	3.7E+02
Hexachlorobenzene	1.0E-03	2.0E-02	6.2E+03	1.7E-03	6.9E-02	2.5E-01

**Table 7-10**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 1 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 1 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Hexachlorobutadiene	1.0E-03	2.0E-02	8.5E+02	1.0E-02	4.2E-01	3.9E-02
Hexachlorocyclopentadiene	5.0E-02	1.0E+00	1.4E+03	2.7E-02	1.1E+00	3.1E+00
Hexachloroethane	1.0E-03	2.0E-02	2.0E+02	3.9E-03	1.6E-01	1.2E-02
Indeno[1,2,3-cd]pyrene	4.0E-04	8.0E-03	2.0E+06	3.5E-07	1.4E-05	3.1E+01
Isophorone	1.0E-01	2.0E+00	6.5E+01	6.6E-06	2.7E-04	6.6E-01
2-Methyl-4,6-dinitrophenol	5.0E-03	1.0E-01	7.5E+02	1.4E-06	5.7E-05	1.7E-01
2-Methylphenol	1.0E-03	2.0E-02	3.1E+02	1.2E-06	4.9E-05	1.6E-02
4-Methylphenol	2.0E-03	4.0E-02	3.0E+02	1.0E-06	4.1E-05	3.2E-02
Naphthalene	2.0E-02	4.0E-01	1.5E+03	4.4E-04	1.8E-02	1.3E+00
N-Nitroso-di-n-propylamine	1.0E-03	2.0E-02	2.8E+02	5.4E-06	2.2E-04	1.5E-02
N-Nitrosodiphenylamine	1.0E-03	2.0E-02	2.6E+03	5.0E-06	2.0E-04	1.1E-01
2-Nitrophenol	2.0E-03	4.0E-02	5.5E+01	9.5E-06	3.9E-04	1.2E-02
4-Nitrophenol	6.0E-02	1.2E+00	4.9E+01	4.2E-10	1.7E-08	3.6E-01
Pentachlorophenol	1.0E-03	2.0E-02	5.0E+03	2.5E-08	1.0E-06	2.0E-01
Phenanthrene	6.4E-04	1.3E-02	3.0E+04	2.3E-05	9.5E-04	7.6E-01
Phenol	4.0E+00	8.0E+01	1.9E+02	3.3E-07	1.4E-05	4.6E+01
Pyrene	1.0E+00	2.0E+01	5.4E+04	1.2E-05	4.9E-04	2.2E+03
2,4,5-Trichlorophenol	4.0E+00	8.0E+01	1.8E+03	1.6E-06	6.6E-05	3.0E+02
2,4,6-Trichlorophenol	3.0E-02	6.0E-01	1.8E+03	2.6E-06	1.1E-04	2.3E+00
<b>Pesticides/PCBs</b>						
Aldrin	2.0E-05	4.0E-04	8.2E+04	4.4E-05	1.8E-03	6.6E-02
Aroclor 1254	5.0E-04	1.0E-02	1.3E+05	2.8E-04	1.2E-02	2.6E+00
alpha-Chlordane	2.5E-05	5.0E-04	6.9E+04	4.9E-05	2.0E-03	6.9E-02
gamma-Chlordane	2.5E-05	5.0E-04	8.7E+04	4.9E-05	2.0E-03	8.7E-02
4,4'-DDD	1.0E-04	2.0E-03	1.2E+05	6.6E-06	2.7E-04	4.7E-01
4,4'-DDE	1.0E-04	2.0E-03	1.2E+05	4.2E-05	1.7E-03	4.7E-01
4,4'-DDT	1.0E-04	2.0E-03	1.7E+05	8.3E-06	3.4E-04	6.7E-01
Dieldrin	2.0E-05	4.0E-04	2.0E+04	1.0E-05	4.1E-04	1.6E-02
Endosulfan I	2.5E-05	5.0E-04	6.3E+03	1.1E-05	4.3E-04	6.4E-03
Endrin	2.0E-03	4.0E-02	2.0E+04	1.0E-05	4.1E-04	1.6E+00

**Table 7-10**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 1 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 1 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Endrin Aldehyde	2.5E-05	5.0E-04	3.3E+03	2.9E-09	1.2E-07	3.4E-03
Heptachlor epoxide	2.0E-04	4.0E-03	1.0E+04	2.1E-05	8.6E-04	8.2E-02
alpha-Hexachlorocyclohexane	6.0E-06	1.2E-04	2.8E+03	5.1E-06	2.1E-04	7.0E-04
beta-Hexachlorocyclohexane	2.0E-05	4.0E-04	2.8E+03	5.1E-06	2.1E-04	2.3E-03
delta-Hexachlorocyclohexane	2.5E-05	5.0E-04	1.2E+04	4.3E-07	1.8E-05	1.2E-02
gamma-Hexachlorocyclohexane	2.0E-04	4.0E-03	2.8E+03	5.1E-06	2.1E-04	2.3E-02
Methoxychlor	4.0E-02	8.0E-01	2.7E+04	2.0E-07	8.3E-06	4.3E+01
2,4,5-Trichlorophenoxyacetic acid	7.0E-02	1.4E+00	1.1E+02	4.7E-08	1.9E-06	5.8E-01
<b>Inorganics</b>			<b>K<sub>d</sub></b>			
Arsenic	1.0E-02	2.0E-01	2.9E+01	—	—	5.8E+00
Barium	2.0E+00	4.0E+01	4.1E+01	—	—	1.6E+03
Cadmium	5.0E-03	1.0E-01	7.5E+01	—	—	7.5E+00
Chromium, Total	1.0E-01	2.0E+00	1.9E+01	—	—	3.8E+01
Lead	1.5E-02	3.0E-01	9.0E+02	—	—	2.7E+02
Mercury	2.0E-03	4.0E-02	5.2E+01	1.1E-02	4.7E-01	2.1E+00
Selenium	5.0E-02	1.0E+00	3.0E+02	—	—	3.0E+02
Silver	1.0E-01	2.0E+00	8.3E+00	—	—	1.7E+01

Equation 10 (USEPA Soil Screening Guidance, 1996):  
Screening Level in Soil (mg/kg) =

$$C_w \times \left\{ K_d + \left[ \frac{\theta_w + \theta_a H'}{\rho_b} \right] \right\}$$

C <sub>w</sub>	Type 1 GW RRS x DAF (mg/L).	=	constituent specific
DAF	Dilution attenuation factor.	=	20
K <sub>d</sub>	soil-water partition coefficient (L/kg).	=	K <sub>oc</sub> x f <sub>oc</sub>
K <sub>oc</sub>	soil organic carbon/water partition coefficient (L/kg).	=	constituent specific
f <sub>oc</sub>	fraction organic carbon in soil (g/g).	=	0.002
θ <sub>w</sub>	water-filled soil porosity (L <sub>water</sub> /L <sub>soil</sub> ).	=	0.3
θ <sub>a</sub>	air-filled soil porosity (L <sub>air</sub> /L <sub>soil</sub> ).	=	n - θ <sub>w</sub> = 0.134
ρ <sub>b</sub>	dry soil bulk density (kg/L).	=	1.5
n	soil porosity (L <sub>pore</sub> /L <sub>soil</sub> ).	=	1 - (ρ <sub>b</sub> /ρ <sub>s</sub> ) = 0.43
ρ <sub>s</sub>	soil particle density (kg/L).	=	2.65
HLC	Henry's Law Constant (atm-m <sup>3</sup> /mol).	=	constituent specific
H'	dimensionless Henry's Law Constant (unitless)	=	HLC x 41

[a] Type 1 Groundwater Risk Reduction Standard (GW RRS) from Table 7-13.

atm-m<sup>3</sup>/mole Atmosphere - cubic meter per mole.  
kg = Kilogram.

L = Liter.  
mg = Milligrams.

**Table 7-11**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 2 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
<b>Volatile Organic Compounds</b>						
Acetone	8.0E+00	1.6E+02	2.4E+00	3.5E-05	1.4E-03	3.3E+01
Benzene	5.4E-03	1.1E-01	1.5E+02	5.6E-03	2.3E-01	5.5E-02
2-Butanone	2.3E+00	4.6E+01	4.5E+00	5.7E-05	2.3E-03	9.6E+00
Carbon disulfide	4.0E+00	8.0E+01	2.2E+01	1.4E-02	5.9E-01	2.4E+01
Carbon tetrachloride	5.7E-03	1.1E-01	4.4E+01	2.8E-02	1.1E+00	4.4E-02
CFC-11	2.0E+00	4.0E+01	4.4E+01	9.7E-02	4.0E+00	2.5E+01
Chlorobenzene	1.0E-01	2.0E+00	2.3E+02	3.1E-03	1.3E-01	1.4E+00
Chloroform	8.0E-02	1.6E+00	3.2E+01	3.7E-03	1.5E-01	4.4E-01
Chloromethane	5.4E-02	1.1E+00	1.3E+01	8.8E-03	3.6E-01	2.8E-01
Cyclohexane	3.6E+00	7.2E+01	1.5E+02	1.5E-01	6.1E+00	7.4E+01
Dibromochloromethane	8.0E-02	1.6E+00	3.2E+01	7.8E-04	3.2E-02	4.3E-01
1,2-Dichlorobenzene	6.0E-01	1.2E+01	3.8E+02	1.9E-03	7.8E-02	1.2E+01
1,3-Dichlorobenzene	6.0E-01	1.2E+01	2.0E+03	3.1E-03	1.3E-01	5.0E+01
1,4-Dichlorobenzene	7.5E-02	1.5E+00	3.8E+02	2.4E-03	9.8E-02	1.4E+00
Dichlorodifluoromethane	1.0E+00	2.0E+01	4.4E+01	3.4E-01	1.4E+01	3.0E+01
1,2-Dichloroethane	5.0E-03	1.0E-01	4.0E+01	1.2E-03	4.8E-02	2.8E-02
1,2-Dichloropropane	5.0E-03	1.0E-01	6.1E+01	2.8E-03	1.2E-01	3.3E-02
Ethylbenzene	7.0E-01	1.4E+01	4.5E+02	7.9E-03	3.2E-01	1.6E+01
Methylene chloride	6.2E-02	1.2E+00	2.2E+01	3.3E-03	1.3E-01	3.2E-01
1-Methylethylbenzene	2.1E-01	4.2E+00	7.0E+02	1.2E-02	4.7E-01	6.9E+00
4-Methyl-2-pentanone	2.0E+00	4.0E+01	1.3E+01	1.4E-04	5.6E-03	9.0E+00
Nitrobenzene	2.0E-02	4.0E-01	2.3E+02	2.4E-05	9.8E-04	2.6E-01
Styrene	5.0E-01	1.0E+01	4.5E+02	2.8E-03	1.1E-01	1.1E+01
1,1,2,2-Tetrachloroethane	8.9E-04	1.8E-02	9.5E+01	3.7E-04	1.5E-02	7.0E-03
Tetrachloroethene	1.9E-02	3.8E-01	9.5E+01	1.8E-02	7.2E-01	1.7E-01
Toluene	1.0E+00	2.0E+01	2.3E+02	6.6E-03	2.7E-01	1.4E+01
1,2,4-Trichlorobenzene	7.0E-02	1.4E+00	1.4E+03	1.4E-03	5.8E-02	4.1E+00
1,1,2-Trichloroethane	5.0E-03	1.0E-01	6.1E+01	8.2E-04	3.4E-02	3.2E-02
Trichloroethylene	5.0E-03	1.0E-01	6.1E+01	9.9E-03	4.0E-01	3.6E-02
Vinyl chloride	2.0E-03	4.0E-02	2.2E+01	2.8E-02	1.1E+00	1.4E-02
Xylene, Mixture	1.0E+01	2.0E+02	3.8E+02	5.2E-03	2.1E-01	2.0E+02
<b>Semi Volatile Organic Compounds</b>						
Acenaphthene	2.0E+00	4.0E+01	5.0E+03	1.8E-04	7.5E-03	4.1E+02

**Table 7-11**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 2 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Acenaphthylene	6.4E-04	1.3E-02	3.1E+03	1.1E-04	4.6E-03	8.2E-02
Anthracene	4.7E+00	9.4E+01	1.6E+04	5.6E-05	2.3E-03	3.1E+03
Benz[a]anthracene	1.2E-03	2.4E-02	1.8E+05	1.2E-05	4.9E-04	8.5E+00
Benzo[a]pyrene	2.0E-04	4.0E-03	5.9E+05	4.6E-07	1.9E-05	4.7E+00
Benzo[b]fluoranthene	1.2E-03	2.4E-02	6.0E+05	6.6E-07	2.7E-05	2.9E+01
Benzo[g,h,i]perylene	6.4E-04	1.3E-02	3.9E+06	1.4E-07	5.8E-06	9.9E+01
Benzo[k]fluoranthene	1.2E-02	2.4E-01	5.9E+05	5.8E-07	2.4E-05	2.8E+02
Benzoic Acid	6.3E+01	1.3E+03	1.7E+01	3.8E-08	1.6E-06	2.9E+02
Bis(2-chloroethoxy)methane	4.7E-02	9.4E-01	1.4E+01	3.9E-06	1.6E-04	2.2E-01
Bis(2-chloroethyl)phthalate	1.6E-04	3.2E-03	3.2E+01	1.7E-05	6.9E-04	8.5E-04
Bis(2-ethylhexyl)phthalate	6.1E-02	1.2E+00	1.2E+05	2.7E-07	1.1E-05	2.9E+02
4-Bromophenyl phenyl ether	1.0E-03	2.0E-02	8.2E+04	1.2E-04	4.8E-03	3.3E+00
Butyl benzyl phthalate	4.5E-01	9.0E+00	7.2E+03	1.3E-06	5.1E-05	1.3E+02
4-Chlorobenzeneamine	1.0E-01	2.0E+00	1.1E+02	1.2E-06	4.7E-05	8.5E-01
4-Chloro-3-methylphenol	1.6E+00	3.2E+01	4.9E+02	2.5E-06	1.0E-04	3.8E+01
2-Chloronaphthalene	1.3E+00	2.6E+01	2.5E+03	3.2E-04	1.3E-02	1.3E+02
2-Chlorophenol	7.8E-02	1.6E+00	3.1E+02	1.1E-05	4.6E-04	1.3E+00
4-Chlorophenyl phenyl ether	1.0E-03	2.0E-02	7.4E+04	1.3E-04	5.2E-03	2.9E+00
Chrysene	1.2E-01	2.4E+00	1.8E+05	5.2E-06	2.1E-04	8.7E+02
Dibenz[a,h]anthracene	3.0E-04	6.0E-03	1.9E+06	1.4E-07	5.8E-06	2.3E+01
Dibenzofuran	1.6E-02	3.2E-01	9.2E+03	2.1E-04	8.7E-03	5.9E+00
Di-n-butyl phthalate	4.0E+00	8.0E+01	1.2E+03	1.8E-06	7.4E-05	2.0E+02
3,3'-Dichlorobenzidine	1.9E-03	3.8E-02	3.2E+03	4.0E-09	1.6E-07	2.5E-01
2,4-Dichlorophenol	4.7E-02	9.4E-01	4.9E+02	4.3E-06	1.8E-04	1.1E+00
Diethyl phthalate	1.3E+01	2.6E+02	1.0E+02	6.1E-07	2.5E-05	1.1E+02
2,4-Dimethylphenol	7.0E-01	1.4E+01	4.9E+02	9.5E-07	3.9E-05	1.7E+01
Dimethyl phthalate	4.0E+02	8.0E+03	3.5E+01	1.1E-07	4.3E-06	2.2E+03
2,4-Dinitrophenol	7.0E-02	1.4E+00	4.6E+02	8.6E-08	3.5E-06	1.6E+00
2,4-Dinitrotoluene	2.7E-03	5.4E-02	5.8E+02	5.4E-08	2.2E-06	7.3E-02
2,6-Dinitrotoluene	1.6E-02	3.2E-01	5.9E+02	7.5E-07	3.1E-05	4.4E-01
Di-n-octylphthalate	6.3E+00	1.3E+02	8.4E+07	6.7E-05	2.7E-03	2.1E+07
Fluoranthene	1.0E+00	2.0E+01	5.5E+04	8.9E-06	3.6E-04	2.2E+03
Fluorene	1.0E+00	2.0E+01	9.2E+03	9.6E-05	3.9E-03	3.7E+02
Hexachlorobenzene	1.0E-03	2.0E-02	6.2E+03	1.7E-03	6.9E-02	2.5E-01



**Table 7-11**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 2 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Hexachlorobutadiene	1.1E-02	2.2E-01	8.5E+02	1.0E-02	4.2E-01	4.2E-01
Hexachlorocyclopentadiene	9.4E-02	1.9E+00	1.4E+03	2.7E-02	1.1E+00	5.8E+00
Hexachloroethane	1.1E-02	2.2E-01	2.0E+02	3.9E-03	1.6E-01	1.3E-01
Indeno[1,2,3-cd]pyrene	1.2E-03	2.4E-02	2.0E+06	3.5E-07	1.4E-05	9.4E+01
Isophorone	9.0E-01	1.8E+01	6.5E+01	6.6E-06	2.7E-04	5.9E+00
2-Methyl-4,6-dinitrophenol	5.0E-03	1.0E-01	7.5E+02	1.4E-06	5.7E-05	1.7E-01
2-Methylphenol	7.8E-01	1.6E+01	3.1E+02	1.2E-06	4.9E-05	1.3E+01
4-Methylphenol	7.8E-02	1.6E+00	3.0E+02	1.0E-06	4.1E-05	1.2E+00
Naphthalene	2.0E-02	4.0E-01	1.5E+03	4.4E-04	1.8E-02	1.3E+00
N-Nitroso-di-n-propylamine	1.0E-03	2.0E-02	2.8E+02	5.4E-06	2.2E-04	1.5E-02
N-Nitrosodiphenylamine	1.7E-01	3.4E+00	2.6E+03	5.0E-06	2.0E-04	1.9E+01
2-Nitrophenol	2.0E-03	4.0E-02	5.5E+01	9.5E-06	3.9E-04	1.2E-02
4-Nitrophenol	6.0E-02	1.2E+00	4.9E+01	4.2E-10	1.7E-08	3.6E-01
Pentachlorophenol	2.1E-03	4.2E-02	5.0E+03	2.5E-08	1.0E-06	4.2E-01
Phenanthrene	6.4E-04	1.3E-02	3.0E+04	2.3E-05	9.5E-04	7.6E-01
Phenol	4.7E+00	9.4E+01	1.9E+02	3.3E-07	1.4E-05	5.4E+01
Pyrene	1.0E+00	2.0E+01	5.4E+04	1.2E-05	4.9E-04	2.2E+03
2,4,5-Trichlorophenol	4.0E+00	8.0E+01	1.8E+03	1.6E-06	6.6E-05	3.0E+02
2,4,6-Trichlorophenol	3.0E-02	6.0E-01	1.8E+03	2.6E-06	1.1E-04	2.3E+00
<b>Pesticides/PCBs</b>						
Aldrin	5.0E-05	1.0E-03	8.2E+04	4.4E-05	1.8E-03	1.6E-01
Aroclor 1254	5.0E-04	1.0E-02	1.3E+05	2.8E-04	1.2E-02	2.6E+00
alpha-Chlordane	2.4E-03	4.8E-02	6.9E+04	4.9E-05	2.0E-03	6.6E+00
gamma-Chlordane	2.4E-03	4.8E-02	8.7E+04	4.9E-05	2.0E-03	8.3E+00
4,4'-DDD	3.5E-03	7.0E-02	1.2E+05	6.6E-06	2.7E-04	1.6E+01
4,4'-DDE	2.5E-03	5.0E-02	1.2E+05	4.2E-05	1.7E-03	1.2E+01
4,4'-DDT	6.3E-04	1.3E-02	1.7E+05	8.3E-06	3.4E-04	4.3E+00
Dieldrin	2.0E-05	4.0E-04	2.0E+04	1.0E-05	4.1E-04	1.6E-02
Endrin	4.7E-03	9.4E-02	2.0E+04	1.0E-05	4.1E-04	3.8E+00
Endrin Aldehyde	4.7E-03	9.4E-02	3.3E+03	2.9E-09	1.2E-07	6.3E-01
Heptachlor epoxide	2.0E-04	4.0E-03	1.0E+04	2.1E-05	8.6E-04	8.2E-02
alpha-Hexachlorocyclohexane	3.4E-05	6.8E-04	2.8E+03	5.1E-06	2.1E-04	4.0E-03
delta-Hexachlorocyclohexane	4.7E-03	9.4E-02	1.2E+04	4.3E-07	1.8E-05	2.2E+00
gamma-Hexachlorocyclohexane	2.0E-04	4.0E-03	2.8E+03	5.1E-06	2.1E-04	2.3E-02

**Table 7-11**  
**Soil Screening Level Partitioning Equation for Groundwater - Type 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 2 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Methoxychlor	7.8E-02	1.6E+00	2.7E+04	2.0E-07	8.3E-06	8.4E+01
2,4,5-Trichlorophenoxyacetic acid	1.6E-01	3.2E+00	1.1E+02	4.7E-08	1.9E-06	1.3E+00
<b>Inorganics</b>			<b>K<sub>d</sub></b>			
Arsenic	1.0E-02	2.0E-01	2.9E+01	—	—	5.8E+00
Barium	3.1E+00	6.2E+01	4.1E+01	—	—	2.6E+03
Cadmium	5.0E-03	1.0E-01	7.5E+01	—	—	7.5E+00
Chromium, Total	1.0E-01	2.0E+00	1.9E+01	—	—	3.8E+01
Lead	1.5E-02	3.0E-01	9.0E+02	—	—	2.7E+02
Mercury	2.5E-03	5.0E-02	5.2E+01	1.1E-02	4.7E-01	2.6E+00
Selenium	7.8E-02	1.6E+00	3.0E+02	—	—	4.7E+02
Silver	1.0E-01	2.0E+00	8.3E+00	—	—	1.7E+01

Equation 10 (USEPA Soil Screening Guidance, 1996):  
Screening Level in Soil (mg/kg) =

$$C_w \times \left\{ K_d + \left[ \frac{\theta_w + \theta_a H'}{\rho_b} \right] \right\}$$

C <sub>w</sub>	Type 2 GW RRS x DAF (mg/L).	=	constituent specific
DAF	Dilution attenuation factor.	=	20
K <sub>d</sub>	soil-water partition coefficient (L/kg).	=	K <sub>oc</sub> x f <sub>oc</sub>
K <sub>oc</sub>	soil organic carbon/water partition coefficient (L/kg).	=	constituent specific
f <sub>oc</sub>	fraction organic carbon in soil (g/g).	=	0.002
θ <sub>w</sub>	water-filled soil porosity (L <sub>water</sub> /L <sub>soil</sub> ).	=	0.3
θ <sub>a</sub>	air-filled soil porosity (L <sub>air</sub> /L <sub>soil</sub> ).	=	n-θ <sub>w</sub> = 0.134
ρ <sub>b</sub>	dry soil bulk density (kg/L).	=	1.5
n	soil porosity (L <sub>pore</sub> /L <sub>soil</sub> ).	=	1-(ρ <sub>b</sub> /ρ <sub>s</sub> ) = 0.43
ρ <sub>s</sub>	soil particle density (kg/L).	=	2.65
HLC	Henry's Law Constant (atm-m <sup>3</sup> /mol).	=	constituent specific
H'	dimensionless Henry's Law Constant (unitless)	=	HLC x 41
[a]	Type 2 Groundwater Risk Reduction Standard (GW RRS) from Table 7-13.		
atm-m <sup>3</sup> /mole	Atmosphere - cubic meter per mole.	L = Liter.	
kg =	Kilogram.	mg = Milligrams.	

**Table 7-12**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 4 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
<b>Volatile Organic Compounds</b>						
Acetone	4.6E+01	9.2E+02	2.4E+00	3.5E-05	1.4E-03	1.9E+02
Benzene	8.7E-03	1.7E-01	1.5E+02	5.6E-03	2.3E-01	8.9E-02
2-Butanone	1.2E+01	2.4E+02	4.5E+00	5.7E-05	2.3E-03	5.0E+01
Carbon disulfide	4.0E+00	8.0E+01	2.2E+01	1.4E-02	5.9E-01	2.4E+01
Carbon tetrachloride	1.0E-02	2.0E-01	4.4E+01	2.8E-02	1.1E+00	7.7E-02
CFC-11	2.0E+00	4.0E+01	4.4E+01	9.7E-02	4.0E+00	2.5E+01
Chlorobenzene	1.4E-01	2.8E+00	2.3E+02	3.1E-03	1.3E-01	1.9E+00
Chloroform	8.0E-02	1.6E+00	3.2E+01	3.7E-03	1.5E-01	4.4E-01
Chloromethane	2.6E-01	5.2E+00	1.3E+01	8.8E-03	3.6E-01	1.3E+00
Cyclohexane	1.8E+01	3.6E+02	1.5E+02	1.5E-01	6.1E+00	3.7E+02
Dibromochloromethane	8.0E-02	1.6E+00	3.2E+01	7.8E-04	3.2E-02	4.3E-01
1,2-Dichlorobenzene	6.0E-01	1.2E+01	3.8E+02	1.9E-03	7.8E-02	1.2E+01
1,3-Dichlorobenzene	2.0E+00	4.0E+01	2.0E+03	3.1E-03	1.3E-01	1.7E+02
1,4-Dichlorobenzene	7.5E-02	1.5E+00	3.8E+02	2.4E-03	9.8E-02	1.4E+00
Dichlorodifluoromethane	1.0E+00	2.0E+01	4.4E+01	3.4E-01	1.4E+01	3.0E+01
1,2-Dichloroethane	5.0E-03	1.0E-01	4.0E+01	1.2E-03	4.8E-02	2.8E-02
1,1-Dichloroethene	5.2E-01	1.0E+01	3.2E+01	2.6E-02	1.1E+00	3.7E+00
1,2-Dichloroethene	1.5E-01	3.0E+00	4.0E+01	4.1E-03	1.7E-01	8.8E-01
cis-1,2-Dichloroethene	2.0E-01	4.0E+00	4.0E+01	4.1E-03	1.7E-01	1.2E+00
trans-1,2-Dichloroethene	1.6E-01	3.2E+00	4.0E+01	4.1E-03	1.7E-01	9.4E-01
1,2-Dichloropropane	7.4E-03	1.5E-01	6.1E+01	2.8E-03	1.2E-01	4.9E-02
Ethylbenzene	7.0E-01	1.4E+01	4.5E+02	7.9E-03	3.2E-01	1.6E+01
Methylene chloride	1.2E-01	2.4E+00	2.2E+01	3.3E-03	1.3E-01	6.1E-01
1-Methylethylbenzene	1.0E+00	2.0E+01	7.0E+02	1.2E-02	4.7E-01	3.3E+01
4-Methyl-2-pentanone	4.2E+00	8.4E+01	1.3E+01	1.4E-04	5.6E-03	1.9E+01
Nitrobenzene	2.0E-02	4.0E-01	2.3E+02	2.4E-05	9.8E-04	2.6E-01
Styrene	2.6E+00	5.2E+01	4.5E+02	2.8E-03	1.1E-01	5.7E+01
1,1,2,2-Tetrachloroethane	1.3E-03	2.6E-02	9.5E+01	3.7E-04	1.5E-02	1.0E-02
Tetrachloroethene	9.8E-02	2.0E+00	9.5E+01	1.8E-02	7.2E-01	8.9E-01
Toluene	5.2E+00	1.0E+02	2.3E+02	6.6E-03	2.7E-01	7.2E+01
1,2,4-Trichlorobenzene	7.0E-02	1.4E+00	1.4E+03	1.4E-03	5.8E-02	4.1E+00
1,1,2-Trichloroethane	5.0E-03	1.0E-01	6.1E+01	8.2E-04	3.4E-02	3.2E-02
Trichloroethylene	5.2E-03	1.0E-01	6.1E+01	9.9E-03	4.0E-01	3.7E-02
Vinyl chloride	3.3E-03	6.6E-02	2.2E+01	2.8E-02	1.1E+00	2.3E-02
Xylene, Mixture	1.0E+01	2.0E+02	3.8E+02	5.2E-03	2.1E-01	2.0E+02

**Table 7-12**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 4 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
<b>Semi Volatile Organic Compounds</b>						
Acenaphthene	6.1E+00	1.2E+02	5.0E+03	1.8E-04	7.5E-03	1.3E+03
Acenaphthylene	6.4E-04	1.3E-02	3.1E+03	1.1E-04	4.6E-03	8.2E-02
Anthracene	3.1E+01	6.2E+02	1.6E+04	5.6E-05	2.3E-03	2.0E+04
Benz[a]anthracene	3.9E-03	7.8E-02	1.8E+05	1.2E-05	4.9E-04	2.8E+01
Benzo[a]pyrene	3.9E-04	7.8E-03	5.9E+05	4.6E-07	1.9E-05	9.2E+00
Benzo[b]fluoranthene	3.9E-03	7.8E-02	6.0E+05	6.6E-07	2.7E-05	9.4E+01
Benzo[g,h,i]perylene	6.4E-04	1.3E-02	3.9E+06	1.4E-07	5.8E-06	9.9E+01
Benzo[k]fluoranthene	3.9E-02	7.8E-01	5.9E+05	5.8E-07	2.4E-05	9.2E+02
Benzoic Acid	4.1E+02	8.2E+03	1.7E+01	3.8E-08	1.6E-06	1.9E+03
Bis(2-chloroethoxy)methane	3.1E-01	6.2E+00	1.4E+01	3.9E-06	1.6E-04	1.4E+00
Bis(2-chloroethyl)ether	2.3E-04	4.6E-03	3.2E+01	1.7E-05	6.9E-04	1.2E-03
Bis(2-ethylhexyl)phthalate	2.0E-01	4.0E+00	1.2E+05	2.7E-07	1.1E-05	9.6E+02
4-Bromophenyl phenyl ether	1.0E-03	2.0E-02	8.2E+04	1.2E-04	4.8E-03	3.3E+00
Butyl benzyl phthalate	1.5E+00	3.0E+01	7.2E+03	1.3E-06	5.1E-05	4.4E+02
4-Chlorobenzeneamine	1.0E-01	2.0E+00	1.1E+02	1.2E-06	4.7E-05	8.5E-01
4-Chloro-3-methylphenol	1.0E+01	2.0E+02	4.9E+02	2.5E-06	1.0E-04	2.4E+02
2-Chloronaphthalene	8.2E+00	1.6E+02	2.5E+03	3.2E-04	1.3E-02	8.5E+02
2-Chlorophenol	5.1E-01	1.0E+01	3.1E+02	1.1E-05	4.6E-04	8.3E+00
4-Chlorophenyl phenyl ether	1.0E-03	2.0E-02	7.4E+04	1.3E-04	5.2E-03	2.9E+00
Chrysene	3.9E-01	7.8E+00	1.8E+05	5.2E-06	2.1E-04	2.8E+03
Dibenz[a,h]anthracene	3.9E-04	7.8E-03	1.9E+06	1.4E-07	5.8E-06	3.0E+01
Dibenzofuran	1.0E-01	2.0E+00	9.2E+03	2.1E-04	8.7E-03	3.7E+01
Di-n-butyl phthalate	1.0E+01	2.0E+02	1.2E+03	1.8E-06	7.4E-05	5.0E+02
3,3'-Dichlorobenzidine	6.4E-03	1.3E-01	3.2E+03	4.0E-09	1.6E-07	8.4E-01
2,4-Dichlorophenol	3.1E-01	6.2E+00	4.9E+02	4.3E-06	1.8E-04	7.3E+00
Diethyl phthalate	8.2E+01	1.6E+03	1.0E+02	6.1E-07	2.5E-05	6.7E+02
2,4-Dimethylphenol	2.0E+00	4.0E+01	4.9E+02	9.5E-07	3.9E-05	4.7E+01
Dimethyl phthalate	1.0E+03	2.0E+04	3.5E+01	1.1E-07	4.3E-06	5.4E+03
2,4-Dinitrophenol	2.0E-01	4.0E+00	4.6E+02	8.6E-08	3.5E-06	4.5E+00
2,4-Dinitrotoluene	9.2E-03	1.8E-01	5.8E+02	5.4E-08	2.2E-06	2.5E-01
2,6-Dinitrotoluene	1.0E-01	2.0E+00	5.9E+02	7.5E-07	3.1E-05	2.7E+00
Di-n-octylphthalate	4.1E+01	8.2E+02	8.4E+07	6.7E-05	2.7E-03	1.4E+08
Fluoranthene	4.1E+00	8.2E+01	5.5E+04	8.9E-06	3.6E-04	9.1E+03
Fluorene	4.1E+00	8.2E+01	9.2E+03	9.6E-05	3.9E-03	1.5E+03
Hexachlorobenzene	1.8E-03	3.6E-02	6.2E+03	1.7E-03	6.9E-02	4.5E-01

**Table 7-12**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 4 GW RRS [a] (mg/L)	C <sub>w</sub> (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm·m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Hexachlorobutadiene	3.7E-02	7.4E-01	8.5E+02	1.0E-02	4.2E-01	1.4E+00
Hexachlorocyclopentadiene	6.1E-01	1.2E+01	1.4E+03	2.7E-02	1.1E+00	3.8E+01
Hexachloroethane	7.2E-02	1.4E+00	2.0E+02	3.9E-03	1.6E-01	8.7E-01
Indeno[1,2,3-cd]pyrene	3.9E-03	7.8E-02	2.0E+06	3.5E-07	1.4E-05	3.0E+02
Isophorone	3.0E+00	6.0E+01	6.5E+01	6.6E-06	2.7E-04	2.0E+01
2-Methyl-4,6-dinitrophenol	8.2E-03	1.6E-01	7.5E+02	1.4E-06	5.7E-05	2.8E-01
2-Methylphenol	5.1E+00	1.0E+02	3.1E+02	1.2E-06	4.9E-05	8.3E+01
4-Methylphenol	5.1E-01	1.0E+01	3.0E+02	1.0E-06	4.1E-05	8.2E+00
Naphthalene	2.0E-02	4.0E-01	1.5E+03	4.4E-04	1.8E-02	1.3E+00
N-Nitroso-di-n-propylamine	1.0E-03	2.0E-02	2.8E+02	5.4E-06	2.2E-04	1.5E-02
N-Nitrosodiphenylamine	5.8E-01	1.2E+01	2.6E+03	5.0E-06	2.0E-04	6.3E+01
2-Nitrophenol	2.0E-03	4.0E-02	5.5E+01	9.5E-06	3.9E-04	1.2E-02
4-Nitrophenol	6.0E-02	1.2E+00	4.9E+01	4.2E-10	1.7E-08	3.6E-01
Pentachlorophenol	7.2E-03	1.4E-01	5.0E+03	2.5E-08	1.0E-06	1.5E+00
Phenanthrene	6.4E-04	1.3E-02	3.0E+04	2.3E-05	9.5E-04	7.6E-01
Phenol	3.1E+01	6.2E+02	1.9E+02	3.3E-07	1.4E-05	3.6E+02
Pyrene	3.1E+00	6.2E+01	5.4E+04	1.2E-05	4.9E-04	6.8E+03
2,4,5-Trichlorophenol	1.0E+01	2.0E+02	1.8E+03	1.6E-06	6.6E-05	7.5E+02
2,4,6-Trichlorophenol	1.0E-01	2.0E+00	1.8E+03	2.6E-06	1.1E-04	7.5E+00
<b>Pesticides/PCBs</b>						
Aldrin	1.7E-04	3.4E-03	8.2E+04	4.4E-05	1.8E-03	5.6E-01
Aroclor 1254	1.4E-03	2.8E-02	1.3E+05	2.8E-04	1.2E-02	7.3E+00
alpha-Chlordane	8.2E-03	1.6E-01	6.9E+04	4.9E-05	2.0E-03	2.3E+01
gamma-Chlordane	8.2E-03	1.6E-01	8.7E+04	4.9E-05	2.0E-03	2.8E+01
4,4'-DDD	1.2E-02	2.4E-01	1.2E+05	6.6E-06	2.7E-04	5.6E+01
4,4'-DDE	8.4E-03	1.7E-01	1.2E+05	4.2E-05	1.7E-03	4.0E+01
4,4'-DDT	8.4E-03	1.7E-01	1.7E+05	8.3E-06	3.4E-04	5.7E+01
Dieldrin	1.8E-04	3.6E-03	2.0E+04	1.0E-05	4.1E-04	1.5E-01
Endosulfan I	6.1E-01	1.2E+01	6.3E+03	1.1E-05	4.3E-04	1.6E+02
Endrin	3.1E-02	6.2E-01	2.0E+04	1.0E-05	4.1E-04	2.5E+01
Endrin Aldehyde	3.1E-02	6.2E-01	3.3E+03	2.9E-09	1.2E-07	4.2E+00
Heptachlor epoxide	3.1E-04	6.2E-03	1.0E+04	2.1E-05	8.6E-04	1.3E-01
alpha-Hexachlorocyclohexane	4.5E-04	9.0E-03	2.8E+03	5.1E-06	2.1E-04	5.2E-02
beta-Hexachlorocyclohexane	1.6E-03	3.2E-02	2.8E+03	5.1E-06	2.1E-04	1.9E-01
delta-Hexachlorocyclohexane	3.1E-02	6.2E-01	1.2E+04	4.3E-07	1.8E-05	1.5E+01
gamma-Hexachlorocyclohexane	2.6E-03	5.2E-02	2.8E+03	5.1E-06	2.1E-04	3.0E-01

**Table 7-12**  
**Soil Screening Level Partitioning Equation for Migration to Groundwater - Type 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Type 4 GW RRS [a] (mg/L)	Cw (mg/L)	K <sub>oc</sub> (L/kg)	Henry's Law Constant (HLC) (atm-m <sup>3</sup> /mol)	H' (unitless)	Soil Screening Level (SSL) (mg/kg)
Methoxychlor	5.1E-01	1.0E+01	2.7E+04	2.0E-07	8.3E-06	5.5E+02
2,4,5-Trichlorophenoxyacetic acid	1.0E+00	2.0E+01	1.1E+02	4.7E-08	1.9E-06	8.3E+00
<b>Inorganics</b>			K <sub>d</sub>			
Arsenic	1.0E-02	2.0E-01	2.9E+01	—	—	5.8E+00
Barium	2.0E+00	4.0E+01	4.1E+01	—	—	1.6E+03
Cadmium	5.1E-02	1.0E+00	7.5E+01	—	—	7.7E+01
Chromium, Total	1.0E-01	2.0E+00	1.9E+01	—	—	3.8E+01
Lead	1.5E-02	3.0E-01	9.0E+02	—	—	2.7E+02
Mercury	2.0E-03	4.0E-02	5.2E+01	1.1E-02	4.7E-01	2.1E+00
Selenium	5.2E-02	1.0E+00	3.0E+02	—	—	3.1E+02
Silver	5.1E-01	1.0E+01	8.3E+00	—	—	8.7E+01

Equation 10 (USEPA Soil Screening Guidance, 1996):  
Screening Level in Soil (mg/kg) =

$$C_w \times \left\{ K_d + \left[ \frac{\theta_w + \theta_a H'}{\rho_b} \right] \right\}$$

C <sub>w</sub>	Type 4 GW RRS x DAF (mg/L).	=	constituent specific
DAF	Dilution attenuation factor.	=	20
K <sub>d</sub>	soil-water partition coefficient (L/kg).	=	K <sub>oc</sub> x f <sub>oc</sub>
K <sub>oc</sub>	soil organic carbon/water partition coefficient (L/kg).	=	constituent specific
f <sub>oc</sub>	fraction organic carbon in soil (g/g).	=	0.002
θ <sub>w</sub>	water-filled soil porosity (L <sub>water</sub> /L <sub>soil</sub> ).	=	0.3
θ <sub>a</sub>	air-filled soil porosity (L <sub>air</sub> /L <sub>soil</sub> ).	=	n-θ <sub>w</sub> = 0.134
ρ <sub>b</sub>	dry soil bulk density (kg/L).	=	1.5
n	soil porosity (L <sub>pore</sub> /L <sub>soil</sub> ).	=	1-(ρ <sub>b</sub> /ρ <sub>s</sub> ) = 0.43
ρ <sub>s</sub>	soil particle density (kg/L).	=	2.65
HLC	Henry's Law Constant (atm-m <sup>3</sup> /mol).	=	constituent specific
H'	dimensionless Henry's Law Constant (unitless)	=	HLC x 41

[a] Type 4 Groundwater Risk Reduction Standard (GW RRS) from Table 7-16.

atm-m<sup>3</sup>/mole Atmosphere - cubic meter per mole.  
kg = Kilogram.

L = Liter.  
mg = Milligrams.

**Table 7-13**  
**Comparison of Maximum Concentrations in Groundwater to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 1 RRS [a] (mg/L)	Source of Type 1 Standard	Type 2 RRS [b] (mg/L)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
<b>Volatile Organic Compounds</b>								
Acetone	0.49	HMW-13(12/17/2009)	4.0	A-III	8.0	RRSc	no	no
Benzene	0.963	HMW-24(7/25/2006)	0.005	A-III	0.0054	RRSa	YES	YES
2-Butanone	0.0198	HMW-21(1/20/2007)	2.0	A-III	2.3	RRSc	no	no
Carbon disulfide	0.0149	HMW-24(7/25/2006)	4.0	A-III	4.0	Type 1	no	no
Carbon tetrachloride	NA	-	0.0050	A-III	0.0057	RRSa	no	no
CFC-11	NA	-	2.00	A-III	2.00	Type 1	no	no
Chlorobenzene	0.0012	HMW-09(1/25/2011)	0.10	A-III	0.10	Type 1	no	no
Chloroform	0.0017	COE-MW-04(2/4/2009)	0.080	A-III	0.080	Type 1	no	no
Chloromethane	0.00058	HMW-24(7/17/2005)	0.0030	A-III	0.054	RRSc	no	no
Cyclohexane	0.13	HMW-13(12/17/2009)	0.00050	DL	3.6	RRSc	YES	no
Dibromochloromethane	0.00068	HMW-09(1/25/2011)	0.080	A-III	0.080	Type 1	no	no
1,2-Dichlorobenzene	0.00073	HMW-23(1/18/2010)	0.60	A-III	0.60	Type 1	no	no
1,3-Dichlorobenzene	NA	-	0.60	A-III	0.60	Type 1	no	no
1,4-Dichlorobenzene	NA	-	0.08	A-III	0.08	Type 1	no	no
Dichlorodifluoromethane	NA	-	1.0	A-III	1.0	Type 1	no	no
1,2-Dichloroethane	0.0013	COE-MW-03(1/16/2005), COE-MW-03(1/15/2006)	0.0050	A-III	0.0050	Type 1	no	no
1,1-Dichloroethene	0.013	COE-MW-07(1/26/2011)	0.0070	A-III	0.10	RRSc	YES	no
1,2-Dichloroethene	10.6	COE-MW-03(1/15/2006)	0.0010	DL	0.029	RRSc	YES	YES
cis-1,2-Dichloroethene	9	COE-MW-03(2/3/2009)	0.070	A-III	0.070	Type 1	YES	YES
trans-1,2-Dichloroethene	0.24	COE-MW-03(2/3/2009)	0.10	A-III	0.10	Type 1	YES	YES
1,2-Dichloropropane	0.002	HMW-13(7/16/2005)	0.0050	A-III	0.0050	Type 1	no	no
Ethylbenzene	0.164	HMW-24(7/25/2006)	0.70	A-III	0.70	Type 1	no	no
Methylene chloride	0.0024	COE-MW-02(7/17/2005)	0.0050	A-III	0.062	RRSa	no	no
1-Methylethylbenzene	0.086	HMW-13(12/17/2009)	0.00010	DL	0.21	RRSc	YES	no
4-Methyl-2-pentanone	0.0024	HMW-13(12/17/2009)	2.0	A-III	2.0	Type 1	no	no
Nitrobenzene	NA	-	0.020	A-III	0.020	Type 1	no	no
Styrene	0.000294	HMW-21(1/20/2007)	0.10	A-III	0.50	RRSc	no	no
1,1,1,2-Tetrachloroethane	0.00084	HMW-13(12/17/2009)	0.00020	A-III	0.00089	RRSa	YES	no
Tetrachloroethene	NA	-	0.0050	A-III	0.019	RRSc	no	no
Toluene	0.24	HAA01-MW-14(12/16/2009)	1.0	A-III	1.0	Type 1	no	no
1,2,4-Trichlorobenzene	NA	-	0.070	A-III	0.070	Type 1	no	no
1,1,2-Trichloroethane	0.0085	HMW-13(1/25/2011)	0.0050	A-III	0.0050	Type 1	YES	YES
Trichloroethylene	0.00192	HMW-14R(1/25/2008)	0.0050	A-III	0.0050	Type 1	no	no
Vinyl chloride	1.23	COE-MW-03(7/14/2007)	0.0020	A-III	0.0020	Type 1	YES	YES
Xylene, Mixture	0.443	HMW-24(7/25/2006)	10	A-III	10	Type 1	no	no

**Table 7-13**  
**Comparison of Maximum Concentrations in Groundwater to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 1 RRS [a] (mg/L)	Source of Type 1 Standard	Type 2 RRS [b] (mg/L)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	NA	–	2.0	A-III	2.0	Type 1	no	no
Acenaphthylene	NA	–	0.00064	DL	0.00064	Type 1	no	no
Anthracene	NA	–	0.00064	DL	4.7	RRSc	no	no
Benz[a]anthracene	NA	–	0.00010	A-III	0.0012	RRSa	no	no
Benzo[a]pyrene	NA	–	0.00020	A-III	0.00020	Type 1	no	no
Benzo[b]fluoranthene	0.00025	HMW-13(12/17/2009)	0.00020	A-III	0.0012	RRSa	YES	no
Benzo[g,h,i]perylene	0.00078	HMW-13(12/17/2009)	0.00064	DL	0.00064	Type 1	YES	YES
Benzo[k]fluoranthene	0.00012	HMW-13(12/17/2009)	0.00064	DL	0.012	RRSa	no	no
Benzoic Acid	NA	–	0.0188	DL	63	RRSc	no	no
Bis(2-chloroethoxy)methane	NA	–	0.0010	DL	0.047	RRSc	no	no
Bis(2-chloroethyl)ether	NA	–	0.000020	A-III	0.00016	RRSa	no	no
Bis(2-ethylhexyl)phthalate	0.0301	HMW-02(7/26/2006)	0.0060	A-III	0.061	RRSa	YES	no
4-Bromophenyl phenyl ether	NA	–	0.0010	DL	0.0010	Type 1	no	no
Butyl benzyl phthalate	NA	–	0.10	A-III	0.45	RRSa	no	no
4-Chlorobenzeneamine	0.025	HMW-23(12/17/2009)	0.10	A-III	0.10	Type 1	no	no
4-Chloro-3-methylphenol	NA	–	0.0010	DL	1.6	RRSc	no	no
2-Chloronaphthalene	NA	–	0.00064	DL	1.3	RRSc	no	no
2-Chlorophenol	NA	–	0.040	A-III	0.078	RRSc	no	no
4-Chlorophenyl phenyl ether	NA	–	0.0010	DL	0.0010	Type 1	no	no
Chrysene	NA	–	0.00020	A-III	0.12	RRSa	no	no
Dibenz[a,h]anthracene	NA	–	0.00030	A-III	0.00030	Type 1	no	no
Dibenzofuran	NA	–	0.001	DL	0.016	c	no	no
Di-n-butyl phthalate	NA	–	4.0	A-III	4.0	Type 1	no	no
3,3'-Dichlorobenzidine	NA	–	0.00008	A-III	0.0019	RRSa	no	no
2,4-Dichlorophenol	NA	–	0.020	A-III	0.047	RRSc	no	no
Diethyl phthalate	NA	–	0.0060	A-III	13	RRSc	no	no
2,4-Dimethylphenol	NA	–	0.70	A-III	0.70	Type 1	no	no
Dimethyl phthalate	NA	–	400	A-III	400	Type 1	no	no
2,4-Dinitrophenol	NA	–	0.070	A-III	0.070	Type 1	no	no
2,4-Dinitrotoluene	NA	–	0.000050	A-III	0.0027	RRSa	no	no
2,6-Dinitrotoluene	NA	–	0.0020	DL	0.016	RRSc	no	no
Di-n-octylphthalate	NA	–	0.70	A-III	6.3	RRSc	no	no
Fluoranthene	0.00075	HMW-06(6/24/2000)	1.0	A-III	1.0	Type 1	no	no
Fluorene	0.0018	HMW-11(6/24/2000)	1.0	A-III	1.0	Type 1	no	no
Hexachlorobenzene	NA	–	0.0010	A-III	0.0010	Type 1	no	no
Hexachlorobutadiene	NA	–	0.0010	A-III	0.011	RRSa	no	no



**Table 7-13**  
**Comparison of Maximum Concentrations in Groundwater to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 1 RRS [a] (mg/L)	Source of Type 1 Standard	Type 2 RRS [b] (mg/L)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
Hexachlorocyclopentadiene	NA	-	0.050	A-III	0.094	RRSc	no	no
Hexachloroethane	NA	-	0.0010	A-III	0.011	RRSc	no	no
Indeno[1,2,3-cd]pyrene	0.00043	HMW-13(12/17/2009)	0.00040	A-III	0.0012	RRSa	YES	no
Isophorone	NA	-	0.10	A-III	0.90	RRSa	no	no
2-Methyl-4,6-dinitrophenol	NA	-	0.0050	DL	0.0050	Type 1	no	no
2-Methylphenol	NA	-	0.0010	DL	0.78	RRSc	no	no
4-Methylphenol	0.0099	HMW-13(12/17/2009)	0.0020	DL	0.078	RRSc	YES	no
Naphthalene	0.212	HMW-13(6/24/2000)	0.020	A-III	0.020	Type 1	YES	YES
N-Nitroso-di-n-propylamine	NA	-	0.0010	DL	0.0010	Type 1	no	no
N-Nitrosodiphenylamine	NA	-	0.0010	DL	0.17	RRSa	no	no
2-Nitrophenol	NA	-	0.0020	DL	0.002	Type 1	no	no
4-Nitrophenol	NA	-	0.060	A-III	0.060	Type 1	no	no
Pentachlorophenol	NA	-	0.0010	A-III	0.0021	RRSa	no	no
Phenanthrene	0.0014	HMW-11(6/24/2000)	0.00064	DL	0.00064	Type 1	YES	YES
Phenol	NA	-	4.0	A-III	4.7	RRSc	no	no
Pyrene	0.00076	HMW-11(6/24/2000)	1.0	A-III	1.0	Type 1	no	no
2,4,5-Trichlorophenol	NA	-	4.0	A-III	4.0	Type 1	no	no
2,4,6-Trichlorophenol	NA	-	0.030	A-III	0.03	Type 1	no	no
<b>Pesticides/PCBs</b>								
Aldrin	0.0046	COE-MW-01(12/16/2009)	0.000020	A-III	0.00005	RRSa	YES	YES
Aroclor 1254	NA	#N/A	0.000500	A-III	0.0005	Type 1	no	no
alpha-Chlordane	0.000077	HMW-24(2/3/2009)	0.000025	DL	0.0024	RRSa	YES	no
gamma-Chlordane	0.0039	HMW-14R(2/3/2009)	0.000025	DL	0.0024	RRSa	YES	YES
4,4'-DDD	0.000056	HMW-24(2/3/2009)	0.00010	A-III	0.0035	RRSa	no	no
4,4'-DDE	0.000044	HMW-24(2/3/2009)	0.00010	A-III	0.0025	RRSa	no	no
4,4'-DDT	0.000027	HMW-09(2/3/2009)	0.00010	A-III	0.00063	RRSc	no	no
Dieldrin	0.000028	HMW-24(2/3/2009)	0.000020	A-III	0.00002	Type 1	YES	YES
Endosulfan I	0.000057	HMW-24(2/3/2009)	0.000025	DL	0.094	RRSc	YES	no
Endrin	0.000015	HMW-24(2/3/2009)	0.0020	A-III	0.0047	RRSc	no	no
Endrin Aldehyde	0.000031	HAA01-MW-14(12/16/2009)	0.000025	DL	0.0047	RRSc	YES	no
Heptachlor epoxide	0.0025	HMW-09(2/3/2009)	0.00020	A-III	0.0002	Type 1	YES	YES
alpha-Hexachlorocyclohexane	0.000052	HMW-24(2/3/2009)	0.0000060	A-III	0.000034	RRSc	YES	YES
beta-Hexachlorocyclohexane	0.00082	COE-MW-04(2/4/2009)	0.000020	A-III	0.00012	RRSc	YES	YES
delta-Hexachlorocyclohexane	0.000057	HMW-24(2/3/2009)	0.000025	DL	0.0047	RRSc	YES	no
gamma-Hexachlorocyclohexane	0.00017	HMW-09(2/3/2009)	0.00020	A-III	0.00020	Type 1	no	no
Methoxychlor	NA	-	0.040	A-III	0.078	RRSc	no	no
2,4,5-Trichlorophenoxyacetic acid	0.0026	HMW-09(2/3/2009)	0.070	A-III	0.16	RRSc	no	no

**Table 7-13**  
**Comparison of Maximum Concentrations in Groundwater to Types 1 and 2 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 1 RRS [a] (mg/L)	Source of Type 1 Standard	Type 2 RRS [b] (mg/L)	Source of Type 2 Standard	Type 1 Standard Exceeded?	Type 2 Standard Exceeded?
<b>Inorganics</b>								
Arsenic	0.78	H-31-HAA01(11/13/2009)	0.010	A-III	0.010	Type 1	YES	YES
Barium	3.0	H-31-HAA01(11/13/2009)	2.0	A-III	3.1	RRSc	YES	no
Cadmium	0.06	H-31-HAA01(11/13/2009)	0.0050	A-III	0.0050	Type 1	YES	YES
Chromium, Total	1.9	H-31-HAA01(11/13/2009)	0.100	A-III	0.10	Type 1	YES	no
Lead	0.790	H-31-HAA01(11/13/2009)	0.015	A-III	0.015	Type 1	YES	no
Mercury	0.00050	H-23-HAA01(11/13/2009)	0.0020	A-III	0.0025	RRSc	no	no
Selenium	0.082	H-30-HAA01(11/13/2009)	0.050	A-III	0.078	RRSc	YES	YES
Silver	0.0030	COE-MW-02(12/16/2009)	0.10	A-III	0.10	Type 1	no	no

  Risk Reduction Standard exceeded.

Asbestos concentration and standard are reported in millions of fibers/structures per liter.

mg/L Milligrams per liter.

NA Not applicable.

RRS Risk Reduction Standard.

[a] Source of Type 1 RRS:  
A-III: Appendix III.

DL: Detection limit.

[b] Source of Type 2 RRS:

RRSa: Calculated site-specific residential risk reduction standard based on adult exposure.

RRSc: Calculated site-specific residential risk reduction standard based on child exposure.

Type 1 RRS.

**Table 7-14**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)	
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)		
	Oral	Inhalation		Oral	Inhalation			
<b>Volatile Organic Compounds</b>								
Acetone	NA	NA	NA	3.3E+01	8.6E+01	2.4E+01	2.4E+01	N
Benzene	1.5E-02	8.3E-03	5.4E-03	1.5E-01	8.3E-02	5.3E-02	5.4E-03	C
2-Butanone	NA	NA	NA	2.2E+01	1.4E+01	8.5E+00	8.5E+00	N
Carbon disulfide	NA	NA	NA	3.7E+00	1.9E+00	1.3E+00	1.3E+00	N
Carbon tetrachloride	1.2E-02	1.1E-02	5.7E-03	1.5E-01	2.8E-01	9.6E-02	5.7E-03	C
CFC-11	NA	NA	NA	1.1E+01	1.9E+00	1.7E+00	1.7E+00	N
Chlorobenzene	NA	NA	NA	7.3E-01	1.4E-01	1.2E-01	1.2E-01	N
Chloroform	2.7E-02	2.8E-03	2.6E-03	3.7E-01	2.7E-01	1.6E-01	2.6E-03	C
Chloromethane	NA	NA	NA	NA	2.5E-01	2.5E-01	2.5E-01	N
Cyclohexane	NA	NA	NA	NA	1.7E+01	1.7E+01	1.7E+01	N
Dibromochloromethane	1.0E-02	NV	1.0E-02	7.3E-01	NV	7.3E-01	1.0E-02	C
1,2-Dichlorobenzene	NA	NA	NA	3.3E+00	5.6E-01	4.8E-01	4.8E-01	N
1,3-Dichlorobenzene	NA	NA	NA	7.3E-01	NA	7.3E-01	7.3E-01	N
1,4-Dichlorobenzene	1.6E-01	5.9E-03	5.7E-03	2.6E+00	2.2E+00	1.2E+00	5.7E-03	C
Dichlorodifluoromethane	NA	NA	NA	7.3E+00	2.8E-01	2.7E-01	2.7E-01	N
1,2-Dichloroethane	9.4E-03	2.5E-03	2.0E-03	2.2E-01	1.9E-02	1.8E-02	2.0E-03	C
1,1-Dichloroethene	NA	NA	NA	1.8E+00	5.6E-01	4.3E-01	4.3E-01	N
1,2-Dichloroethene	NA	NA	NA	3.3E-01	1.7E-01	1.1E-01	1.1E-01	N
cis-1,2-Dichloroethene	NA	NA	NA	7.3E-02	NA	7.3E-02	7.3E-02	N
trans-1,2-Dichloroethene	NA	NA	NA	7.3E-01	1.7E-01	1.4E-01	1.4E-01	N
1,2-Dichloropropane	2.4E-02	6.5E-03	5.1E-03	3.3E+00	1.1E-02	1.1E-02	5.1E-03	C
Ethylbenzene	7.7E-02	2.6E-02	1.9E-02	3.7E+00	2.8E+00	1.6E+00	1.9E-02	C
Methylene chloride	1.1E-01	1.4E-01	6.2E-02	2.2E+00	2.8E+00	1.2E+00	6.2E-02	C
1-Methylethylbenzene	NA	NA	NA	3.7E+00	1.1E+00	8.5E-01	8.5E-01	N
4-Methyl-2-pentanone	NA	NA	NA	2.9E+00	8.3E+00	2.2E+00	2.2E+00	N
Nitrobenzene	NA	1.6E-03	1.6E-03	7.3E-02	2.5E-02	1.9E-02	1.6E-03	C

**Table 7-14**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)		
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)			
	Oral	Inhalation		Oral	Inhalation				
Styrene	NA	NA	NA	7.3E+00	2.8E+00	2.0E+00	2.0E+00	N	
1,1,2,2-Tetrachloroethane	4.3E-03	1.1E-03	8.9E-04	7.3E-01	NA	7.3E-01	8.9E-04	C	
Tetrachloroethene	4.1E-01	2.5E-01	1.5E-01	2.2E-01	1.1E-01	7.4E-02	7.4E-02	N	
Toluene	NA	NA	NA	2.9E+00	1.4E+01	2.4E+00	2.4E+00	N	
1,2,4-Trichlorobenzene	1.2E-03	1.5E-02	1.1E-03	3.7E-01	5.6E-03	5.5E-03	1.1E-03	C	
1,1,2-Trichloroethane	1.5E-02	4.1E-03	3.2E-03	1.5E-01	5.6E-04	5.5E-04	5.5E-04	N	
Trichloroethylene	1.9E-02	1.6E+01	1.8E-02	1.8E-02	5.6E-03	4.3E-03	4.3E-03	N	
Vinyl chloride	1.2E-03	1.5E-02	1.1E-03	1.1E-01	2.8E-01	7.9E-02	1.1E-03	C	
Xylene, Mixture	NA	NA	NA	7.3E+00	2.8E-01	2.7E-01	2.7E-01	N	
<b>Semi Volatile Organic Compounds</b>									
Acenaphthene	NA	NA	NA	2.2E+00	NA	2.2E+00	2.2E+00	N	
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA		
Anthracene	NA	NA	NA	1.1E+01	NA	1.1E+01	1.1E+01	N	
Benz[a]anthracene	1.2E-03	NV	1.2E-03	NA	NV	NA	1.2E-03	C	
Benzo[a]pyrene	1.2E-04	NV	1.2E-04	NA	NV	NA	1.2E-04	C	
Benzo[b]fluoranthene	1.2E-03	NV	1.2E-03	NA	NV	NA	1.2E-03	C	
Benzo[g,h,i]perylene	NA	NV	NA	NA	NV	NA	NA		
Benzo[k]fluoranthene	1.2E-02	NV	1.2E-02	NA	NV	NA	1.2E-02	C	
Benzoic Acid	NA	NV	NA	1.5E+02	NV	1.5E+02	1.5E+02	N	
Bis(2-chloroethoxy)methane	NA	NV	NA	1.1E-01	NV	1.1E-01	1.1E-01	N	
Bis(2-chloroethyl)ether	7.7E-04	2.0E-04	1.6E-04	NA	NA	NA	1.6E-04	C	
Bis(2-ethylhexyl)phthalate	6.1E-02	NV	6.1E-02	7.3E-01	NV	7.3E-01	6.1E-02	C	
4-Bromophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA		
Butyl benzyl phthalate	4.5E-01	NV	4.5E-01	7.3E+00	NV	7.3E+00	4.5E-01	C	
4-Chlorobenzeneamine	4.3E-03	NV	4.3E-03	1.5E-01	NV	1.5E-01	4.3E-03	C	
4-Chloro-3-methylphenol	NA	NV	NA	3.7E+00	NV	3.7E+00	3.7E+00	N	
2-Chloronaphthalene	NA	NA	NA	2.9E+00	NA	2.9E+00	2.9E+00	N	

**Table 7-14**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)	
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)		
	Oral	Inhalation		Oral	Inhalation			
2-Chlorophenol	NA	NA	NA	1.8E-01	NA	1.8E-01	1.8E-01	N
4-Chlorophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA	
Chrysene	1.2E-01	NV	1.2E-01	NA	NV	NA	1.2E-01	C
Dibenz[a,h]anthracene	1.2E-04	NV	1.2E-04	NA	NV	NA	1.2E-04	C
Dibenzofuran	NA	NA	NA	3.7E-02	NA	3.7E-02	3.7E-02	N
Di-n-butyl phthalate	NA	NV	NA	3.7E+00	NV	3.7E+00	3.7E+00	N
3,3'-Dichlorobenzidine	1.9E-03	NV	1.9E-03	NA	NV	NA	1.9E-03	C
2,4-Dichlorophenol	NA	NV	NA	1.1E-01	NV	1.1E-01	1.1E-01	N
Diethyl phthalate	NA	NV	NA	2.9E+01	NV	2.9E+01	2.9E+01	N
2,4-Dimethylphenol	NA	NV	NA	7.3E-01	NV	7.3E-01	7.3E-01	N
Dimethyl phthalate	NA	NV	NA	3.7E+02	NV	3.7E+02	3.7E+02	N
2,4-Dinitrophenol	NA	NV	NA	7.3E-02	NV	7.3E-02	7.3E-02	N
2,4-Dinitrotoluene	2.7E-03	NV	2.7E-03	7.3E-02	NV	7.3E-02	2.7E-03	C
2,6-Dinitrotoluene	NA	NV	NA	3.7E-02	NV	3.7E-02	3.7E-02	N
Di-n-octylphthalate	NA	NV	NA	1.5E+01	NV	1.5E+01	1.5E+01	N
Fluoranthene	NA	NV	NA	1.5E+00	NV	1.5E+00	1.5E+00	N
Fluorene	NA	NA	NA	1.5E+00	NA	1.5E+00	1.5E+00	N
Hexachlorobenzene	5.3E-04	NV	5.3E-04	2.9E-02	NV	2.9E-02	5.3E-04	C
Hexachlorobutadiene	1.1E-02	NV	1.1E-02	3.7E-02	NV	3.7E-02	1.1E-02	C
Hexachlorocyclopentadiene	NA	NV	NA	2.2E-01	NV	2.2E-01	2.2E-01	N
Hexachloroethane	2.1E-02	NV	2.1E-02	2.6E-02	NV	2.6E-02	2.1E-02	C
Indeno[1,2,3-cd]pyrene	1.2E-03	NV	1.2E-03	NA	NV	NA	1.2E-03	C
Isophorone	9.0E-01	NV	9.0E-01	7.3E+00	NV	7.3E+00	9.0E-01	C
2-Methyl-4,6-dinitrophenol	NA	NV	NA	2.9E-03	NV	2.9E-03	2.9E-03	N
2-Methylphenol	NA	NV	NA	1.8E+00	NV	1.8E+00	1.8E+00	N
4-Methylphenol	NA	NV	NA	1.8E-01	NV	1.8E-01	1.8E-01	N
Naphthalene	NA	1.9E-03	1.9E-03	7.3E-01	8.3E-03	8.2E-03	1.9E-03	C

**Table 7-14**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)		
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)			
	Oral	Inhalation		Oral	Inhalation				
N-Nitroso-di-n-propylamine	1.2E-04	NV	1.2E-04	NA	NV	NA	1.2E-04	C	
N-Nitrosodiphenylamine	1.7E-01	NV	1.7E-01	NA	NV	NA	1.7E-01	C	
2-Nitrophenol	NA	NV	NA	NA	NV	NA	NA		
4-Nitrophenol	NA	NV	NA	NA	NV	NA	NA		
Pentachlorophenol	2.1E-03	NV	2.1E-03	1.8E-01	NV	1.8E-01	2.1E-03	C	
Phenanthrene	NA	NA	NA	NA	NA	NA	NA		
Phenol	NA	NV	NA	1.1E+01	NV	1.1E+01	1.1E+01	N	
Pyrene	NA	NV	NA	1.1E+00	NV	1.1E+00	1.1E+00	N	
2,4,5-Trichlorophenol	NA	NV	NA	3.7E+00	NV	3.7E+00	3.7E+00	N	
2,4,6-Trichlorophenol	7.7E-02	NV	7.7E-02	3.7E-02	NV	3.7E-02	3.7E-02	N	
<b>Pesticides/PCBs</b>									
Aldrin	5.0E-05	NV	5.0E-05	1.1E-03	NV	1.1E-03	5.0E-05	C	
Aroclor 1254	4.3E-04	NV	4.3E-04	7.3E-04	NV	7.3E-04	4.3E-04	C	
alpha-Chlordane	2.4E-03	NV	2.4E-03	1.8E-02	NV	1.8E-02	2.4E-03	C	
gamma-Chlordane	2.4E-03	NV	2.4E-03	1.8E-02	NV	1.8E-02	2.4E-03	C	
4,4'-DDD	3.5E-03	NV	3.5E-03	NA	NV	NA	3.5E-03	C	
4,4'-DDE	2.5E-03	NV	2.5E-03	NA	NV	NA	2.5E-03	C	
4,4'-DDT	2.5E-03	NV	2.5E-03	1.8E-02	NV	1.8E-02	2.5E-03	C	
Dieldrin	5.3E-05	NV	5.3E-05	1.8E-03	NV	1.8E-03	5.3E-05	C	
Endosulfan I	NA	NV	NA	2.2E-01	NV	2.2E-01	2.2E-01	N	
Endrin	NA	NV	NA	1.1E-02	NV	1.1E-02	1.1E-02	N	
Endrin Aldehyde	NA	NV	NA	1.1E-02	NV	1.1E-02	1.1E-02	N	
Heptachlor epoxide	9.4E-05	NV	9.4E-05	4.7E-04	NV	4.7E-04	9.4E-05	C	
alpha-Hexachlorocyclohexane	1.4E-04	NV	1.4E-04	2.9E-01	NV	2.9E-01	1.4E-04	C	
beta-Hexachlorocyclohexane	4.7E-04	NV	4.7E-04	NA	NV	NA	4.7E-04	C	
delta-Hexachlorocyclohexane	NA	NV	NA	1.1E-02	NV	1.1E-02	1.1E-02	N	
gamma-Hexachlorocyclohexane	7.7E-04	NV	7.7E-04	1.1E-02	NV	1.1E-02	7.7E-04	C	

**Table 7-14**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Adult (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)		
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)			
	Oral	Inhalation		Oral	Inhalation				
Methoxychlor	NA	NV	NA	1.8E-01	NV	1.8E-01	1.8E-01	N	
2,4,5-Trichlorophenoxyacetic acid	NA	NV	NA	3.7E-01	NV	3.7E-01	3.7E-01	N	
<b>Inorganics</b>									
Arsenic	5.7E-04	NV	5.7E-04	1.1E-02	NV	1.1E-02	5.7E-04	C	
Barium	NA	NV	NA	7.3E+00	NV	7.3E+00	7.3E+00	N	
Cadmium	NA	NV	NA	1.8E-02	NV	1.8E-02	1.8E-02	N	
Chromium, Total	NA	NV	NA	NA	NV	NA	NA		
Lead	NA	NV	NA	NA	NV	NA	NA		
Mercury	NA	NV	NA	5.8E-03	NV	5.8E-03	5.8E-03	N	
Selenium	NA	NV	NA	1.8E-01	NV	1.8E-01	1.8E-01	N	
Silver	NA	NV	NA	1.8E-01	NV	1.8E-01	1.8E-01	N	

RRSc (cancer effects) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (non-cancer effects) is calculated using a target hazard index (THI) of 1.

mg/L Milligrams per liter.

NA Not available; insufficient toxicity data.

RRS Risk reduction standard (mg/L); for each constituent, the minimum of the cancer-effects (RRSc) and the non-cancer-effects (RRSnc).

**Table 7-15**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)		
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)			
	Oral	Inhalation		Oral	Inhalation				
<b>Volatile Organic Compounds</b>									
Acetone	NA	NA	NA	1.4E+01	1.8E+01	8.0E+00	8.0E+00	N	
Benzene	3.3E-02	8.9E-03	7.0E-03	6.3E-02	1.8E-02	1.4E-02	7.0E-03	C	
2-Butanone	NA	NA	NA	9.4E+00	3.0E+00	2.3E+00	2.3E+00	N	
Carbon disulfide	NA	NA	NA	1.6E+00	4.2E-01	3.3E-01	3.3E-01	N	
Carbon tetrachloride	2.6E-02	1.2E-02	8.0E-03	6.3E-02	6.0E-02	3.1E-02	8.0E-03	C	
CFC-11	NA	NA	NA	4.7E+00	4.2E-01	3.8E-01	3.8E-01	N	
Chlorobenzene	NA	NA	NA	3.1E-01	3.0E-02	2.7E-02	2.7E-02	N	
Chloroform	5.9E-02	3.0E-03	2.9E-03	1.6E-01	5.8E-02	4.3E-02	2.9E-03	C	
Chloromethane	NA	NA	NA	NA	5.4E-02	5.4E-02	5.4E-02	N	
Cyclohexane	NA	NV	NA	NA	3.6E+00	3.6E+00	3.6E+00	N	
Dibromochloromethane	2.2E-02	2.6E-03	2.3E-03	3.1E-01	NV	3.1E-01	2.3E-03	C	
1,2-Dichlorobenzene	NA	NA	NA	1.4E+00	1.2E-01	1.1E-01	1.1E-01	N	
1,3-Dichlorobenzene	NA	NA	NA	3.1E-01	NA	3.1E-01	3.1E-01	N	
1,4-Dichlorobenzene	3.4E-01	6.3E-03	6.2E-03	1.1E+00	4.8E-01	3.3E-01	6.2E-03	C	
Dichlorodifluoromethane	NA	NA	NA	3.1E+00	6.0E-02	5.8E-02	5.8E-02	N	
1,2-Dichloroethane	2.0E-02	2.7E-03	2.4E-03	9.4E-02	4.2E-03	4.0E-03	2.4E-03	C	
1,1-Dichloroethene	NA	NA	NA	7.8E-01	1.2E-01	1.0E-01	1.0E-01	N	
1,2-Dichloroethene	NA	NA	NA	1.4E-01	3.6E-02	2.9E-02	2.9E-02	N	
cis-1,2-Dichloroethene	NA	NA	NA	3.1E-02	NA	3.1E-02	3.1E-02	N	
trans-1,2-Dichloroethene	NA	NA	NA	3.1E-01	3.6E-02	3.2E-02	3.2E-02	N	
1,2-Dichloropropane	5.1E-02	7.0E-03	6.1E-03	1.4E+00	2.4E-03	2.4E-03	2.4E-03	N	
Ethylbenzene	1.7E-01	2.8E-02	2.4E-02	1.6E+00	6.0E-01	4.3E-01	2.4E-02	C	
Methylene chloride	2.4E-01	1.5E-01	9.2E-02	9.4E-01	6.0E-01	3.6E-01	9.2E-02	C	
1-Methylethylbenzene	NA	NA	NA	1.6E+00	2.4E-01	2.1E-01	2.1E-01	N	
4-Methyl-2-pentanone	NA	NA	NA	1.3E+00	1.8E+00	7.4E-01	7.4E-01	N	
Nitrobenzene	NA	1.7E-03	1.7E-03	3.1E-02	5.4E-03	4.6E-03	1.7E-03	C	
Styrene	NA	NA	NA	3.1E+00	6.0E-01	5.0E-01	5.0E-01	N	
1,1,2,2-Tetrachloroethane	9.1E-03	1.2E-03	1.1E-03	3.1E-01	NA	3.1E-01	1.1E-03	C	
Tetrachloroethene	8.7E-01	2.7E-01	2.0E-01	9.4E-02	2.4E-02	1.9E-02	1.9E-02	N	



**Table 7-15**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)		
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)			
	Oral	Inhalation		Oral	Inhalation				
Toluene	NA	NA	NA	1.3E+00	3.0E+00	8.8E-01	8.8E-01	N	
1,2,4-Trichlorobenzene	1.3E-03	8.1E-03	1.1E-03	1.6E-01	1.2E-03	1.2E-03	1.1E-03	C	
1,1,2-Trichloroethane	3.2E-02	4.3E-03	3.8E-03	6.3E-02	1.2E-04	1.2E-04	1.2E-04	N	
Trichloroethylene	4.0E-02	1.7E+01	4.0E-02	7.8E-03	1.2E-03	1.0E-03	1.0E-03	N	
Vinyl chloride	1.3E-03	8.1E-03	1.1E-03	4.7E-02	6.0E-02	2.6E-02	1.1E-03	C	
Xylene, Mixture	NA	NV	NA	3.1E+00	6.0E-02	5.8E-02	5.8E-02	N	
<b>Semi Volatile Organic Compounds</b>									
Acenaphthene	NA	NA	NA	9.4E-01	NA	9.4E-01	9.4E-01	N	
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA		
Anthracene	NA	NV	NA	4.7E+00	NA	4.7E+00	4.7E+00	N	
Benz[a]anthracene	2.5E-03	NV	2.5E-03	NA	NV	NA	2.5E-03	C	
Benzo[a]pyrene	2.5E-04	NV	2.5E-04	NA	NV	NA	2.5E-04	C	
Benzo[b]fluoranthene	2.5E-03	NV	2.5E-03	NA	NV	NA	2.5E-03	C	
Benzo[g,h,i]perylene	NA	NV	NA	NA	NV	NA	NA		
Benzo[k]fluoranthene	2.5E-02	NV	2.5E-02	NA	NV	NA	2.5E-02	C	
Benzoic Acid	NA	NV	NA	6.3E+01	NV	6.3E+01	6.3E+01	N	
Bis(2-chloroethoxy)methane	NA	NA	NA	4.7E-02	NV	4.7E-02	4.7E-02	N	
Bis(2-chloroethyl)ether	1.7E-03	NV	1.7E-03	NA	NA	NA	1.7E-03	C	
Bis(2-ethylhexyl)phthalate	1.3E-01	NV	1.3E-01	3.1E-01	NV	3.1E-01	1.3E-01	C	
4-Bromophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA		
Butyl benzyl phthalate	9.6E-01	NV	9.6E-01	3.1E+00	NV	3.1E+00	9.6E-01	C	
4-Chlorobenzeneamine	9.1E-03	NV	9.1E-03	6.3E-02	NV	6.3E-02	9.1E-03	C	
4-Chloro-3-methylphenol	NA	NA	NA	1.6E+00	NV	1.6E+00	1.6E+00	N	
2-Chloronaphthalene	NA	NA	NA	1.3E+00	NA	1.3E+00	1.3E+00	N	
2-Chlorophenol	NA	NV	NA	7.8E-02	NA	7.8E-02	7.8E-02	N	
4-Chlorophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA		
Chrysene	2.5E-01	NV	2.5E-01	NA	NV	NA	2.5E-01	C	
Dibenz[a,h]anthracene	2.5E-04	NV	2.5E-04	NA	NV	NA	2.5E-04	C	
Dibenzofuran	NA	NV	NA	1.6E-02	NA	1.6E-02	1.6E-02	N	
Di-n-butyl phthalate	NA	NV	NA	1.6E+00	NV	1.6E+00	1.6E+00	N	

**Table 7-15**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)	
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)		
	Oral	Inhalation		Oral	Inhalation			
3,3'-Dichlorobenzidine	4.1E-03	NV	4.1E-03	NA	NV	NA	4.1E-03	C
2,4-Dichlorophenol	NA	NV	NA	4.7E-02	NV	4.7E-02	4.7E-02	N
Diethyl phthalate	NA	NV	NA	1.3E+01	NV	1.3E+01	1.3E+01	N
2,4-Dimethylphenol	NA	NV	NA	3.1E-01	NV	3.1E-01	3.1E-01	N
Dimethyl phthalate	NA	NV	NA	1.6E+02	NV	1.6E+02	1.6E+02	N
2,4-Dinitrophenol	NA	NV	NA	3.1E-02	NV	3.1E-02	3.1E-02	N
2,4-Dinitrotoluene	5.9E-03	NV	5.9E-03	3.1E-02	NV	3.1E-02	5.9E-03	C
2,6-Dinitrotoluene	NA	NV	NA	1.6E-02	NV	1.6E-02	1.6E-02	N
Di-n-octylphthalate	NA	NV	NA	6.3E+00	NV	6.3E+00	6.3E+00	N
Fluoranthene	NA	NA	NA	6.3E-01	NV	6.3E-01	6.3E-01	N
Fluorene	NA	NV	NA	6.3E-01	NA	6.3E-01	6.3E-01	N
Hexachlorobenzene	1.1E-03	NV	1.1E-03	1.3E-02	NV	1.3E-02	1.1E-03	C
Hexachlorobutadiene	2.3E-02	NV	2.3E-02	1.6E-02	NV	1.6E-02	1.6E-02	N
Hexachlorocyclopentadiene	NA	NV	NA	9.4E-02	NV	9.4E-02	9.4E-02	N
Hexachloroethane	4.6E-02	NV	4.6E-02	1.1E-02	NV	1.1E-02	1.1E-02	N
Indeno[1,2,3-cd]pyrene	2.5E-03	NV	2.5E-03	NA	NV	NA	2.5E-03	C
Isophorone	1.9E+00	NV	1.9E+00	3.1E+00	NV	3.1E+00	1.9E+00	C
2-Methyl-4,6-dinitrophenol	NA	NV	NA	1.3E-03	NV	1.3E-03	1.3E-03	N
2-Methylphenol	NA	NV	NA	7.8E-01	NV	7.8E-01	7.8E-01	N
4-Methylphenol	NA	NA	NA	7.8E-02	NV	7.8E-02	7.8E-02	N
Naphthalene	NA	NV	NA	3.1E-01	1.8E-03	1.8E-03	1.8E-03	N
N-Nitroso-di-n-propylamine	2.6E-04	NV	2.6E-04	NA	NV	NA	2.6E-04	C
N-Nitrosodiphenylamine	3.7E-01	NV	3.7E-01	NA	NV	NA	3.7E-01	C
2-Nitrophenol	NA	NV	NA	NA	NV	NA	NA	
4-Nitrophenol	NA	NV	NA	NA	NV	NA	NA	
Pentachlorophenol	4.6E-03	1.4E-02	3.4E-03	7.8E-02	NV	7.8E-02	3.4E-03	C
Phenanthrene	NA	NV	NA	NA	NA	NA	NA	
Phenol	NA	NV	NA	4.7E+00	NV	4.7E+00	4.7E+00	N
Pyrene	NA	NV	NA	4.7E-01	NV	4.7E-01	4.7E-01	N
2,4,5-Trichlorophenol	NA	NV	NA	1.6E+00	NV	1.6E+00	1.6E+00	N

**Table 7-15**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)	
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)		
	Oral	Inhalation		Oral	Inhalation			
2,4,6-Trichlorophenol	1.7E-01	NV	1.7E-01	1.6E-02	NV	1.6E-02	1.6E-02	N
<b>Pesticides/PCBs</b>								
Aldrin	1.1E-04	NV	1.1E-04	4.7E-04	NV	4.7E-04	1.1E-04	C
Aroclor 1254	9.1E-04	NV	9.1E-04	3.1E-04	NV	3.1E-04	3.1E-04	N
alpha-Chlordane	5.2E-03	NV	5.2E-03	7.8E-03	NV	7.8E-03	5.2E-03	C
gamma-Chlordane	5.2E-03	NV	5.2E-03	7.8E-03	NV	7.8E-03	5.2E-03	C
4,4'-DDD	7.6E-03	NV	7.6E-03	NA	NV	NA	7.6E-03	C
4,4'-DDE	5.4E-03	NV	5.4E-03	NA	NV	NA	5.4E-03	C
4,4'-DDT	5.4E-03	7.2E-04	0.00063	7.8E-03	NV	0.0078	0.00063	C
Dieldrin	1.1E-04	1.5E-05	1.3E-05	7.8E-04	NV	0.00078	0.000013	C
Endosulfan I	NA	NA	NA	9.4E-02	NV	0.094	0.094	N
Endrin	NA	NA	NA	4.7E-03	NV	0.0047	0.0047	N
Endrin Aldehyde	NA	NA	NA	4.7E-03	NV	0.0047	0.0047	N
Heptachlor epoxide	2.0E-04	2.7E-05	2.4E-05	2.0E-04	NV	0.0002	0.000024	C
alpha-Hexachlorocyclohexane	2.9E-04	3.9E-05	3.4E-05	1.3E-01	NV	0.13	0.000034	C
beta-Hexachlorocyclohexane	1.0E-03	1.3E-04	0.00012	NA	NV	NA	0.00012	C
delta-Hexachlorocyclohexane	NA	NA	NA	4.7E-03	NV	0.0047	0.0047	N
gamma-Hexachlorocyclohexane	1.7E-03	2.2E-04	0.0002	4.7E-03	NV	0.0047	0.0002	C
Methoxychlor	NA	NA	NA	7.8E-02	NV	0.078	0.078	N
2,4,5-Trichlorophenoxyacetic acid	NA	NA	NA	1.6E-01	NV	0.16	0.16	N
<b>Inorganics</b>								
Arsenic	1.2E-03	1.6E-05	1.6E-05	4.7E-03	NV	0.0047	0.000016	C
Barium	NA	NA	NA	3.1E+00	NV	3.1	3.1	N
Cadmium	NA	3.9E-05	3.9E-05	7.8E-03	NV	0.0078	0.000039	C
Chromium, Total	NA	NA	NA	NA	NV	NA	NA	
Lead	NA	NA	NA	NA	NV	NA	NA	
Mercury	NA	NA	NA	2.5E-03	NV	0.0025	0.0025	N
Selenium	NA	NA	NA	7.8E-02	NV	0.078	0.078	N
Silver	NA	NA	NA	7.8E-02	NV	0.078	0.078	N

**Table 7-15**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Residential Child (Type 2) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	<b>CANCER EFFECTS</b>			<b>NON-CANCER EFFECTS</b>			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		

RRSc (cancer effects) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (non-cancer effects) is calculated using a target hazard index (THI) of 1.

- mg/L      Milligrams per liter.
- NA        Not available; insufficient toxicity data.
- NC        Not a suspected carcinogen.
- RRS      Risk reduction standard (mg/L); for each constituent, the minimum of the cancer-effects (RRSc) and the non-cancer-effects (RRSnc).

**Table 7-16**  
**Comparison of Maximum Concentrations in Groundwater to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 3 RRS [a] (mg/L)	Source of Type 3 Standard	Type 4 RRS [b] (mg/L)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
<b>Volatile Organic Compounds</b>								
Acetone	0.49	HMW-13(12/17/2009)	4.0	A-III	46	RRS	no	no
Benzene	0.963	HMW-24(7/25/2006)	0.0050	A-III	0.0087	RRS	YES	YES
2-Butanone	0.0198	HMW-21(1/20/2007)	2.0	A-III	12	RRS	no	no
Carbon disulfide	0.0149	HMW-24(7/25/2006)	4.0	A-III	4.0	Type 3	no	no
Carbon tetrachloride	NA	-	0.0050	A-III	0.010	RRS	no	no
CFC-11	NA	-	2.0	A-III	2.0	Type 3	no	no
Chlorobenzene	0.0012	HMW-09(1/25/2011)	0.10	A-III	0.14	RRS	no	no
Chloroform	0.0017	COE-MW-04(2/4/2009)	0.080	A-III	0.080	Type 3	no	no
Chloromethane	0.00058	HMW-24(7/17/2005)	0.0030	A-III	0.26	RRS	no	no
Cyclohexane	0.13	HMW-13(12/17/2009)	0.00050	DL	18	RRS	YES	no
Dibromochloromethane	0.00068	HMW-09(1/25/2011)	0.080	A-III	0.080	Type 3	no	no
1,2-Dichlorobenzene	0.00073	HMW-23(1/18/2010)	0.60	A-III	0.60	Type 3	no	no
1,3-Dichlorobenzene	NA	-	0.60	A-III	2.0	RRS	no	no
1,4-Dichlorobenzene	NA	-	0.075	A-III	0.075	Type 3	no	no
Dichlorodifluoromethane	NA	-	1.0	A-III	1.0	Type 3	no	no
1,2-Dichloroethane	0.0013	N-03(1/16/2005), COE-MW-03(1/1	0.0050	A-III	0.0050	Type 3	no	no
1,1-Dichloroethene	0.013	COE-MW-07(1/26/2011)	0.0070	A-III	0.52	RRS	YES	no
1,2-Dichloroethene	10.6	COE-MW-03(1/15/2006)	0.0010	DL	0.15	RRS	YES	YES
cis-1,2-Dichloroethene	9	COE-MW-03(2/3/2009)	0.070	A-III	0.20	RRS	YES	YES
trans-1,2-Dichloroethene	0.24	COE-MW-03(2/3/2009)	0.10	A-III	0.16	RRS	YES	YES
1,2-Dichloropropane	0.002	HMW-13(7/16/2005)	0.0050	A-III	0.0074	RRS	no	no
Ethylbenzene	0.164	HMW-24(7/25/2006)	0.70	A-III	0.70	Type 3	no	no
Methylene chloride	0.0024	COE-MW-02(7/17/2005)	0.0050	A-III	0.12	RRS	no	no
1-Methylethylbenzene	0.086	HMW-13(12/17/2009)	0.00010	DL	1.0	RRS	YES	no
4-Methyl-2-pentanone	0.0024	HMW-13(12/17/2009)	2.0	A-III	4.2	RRS	no	no
Nitrobenzene	NA	-	0.020	A-III	0.020	Type 3	no	no
Styrene	0.000294	HMW-21(1/20/2007)	0.10	A-III	2.6	RRS	no	no
1,1,2,2-Tetrachloroethane	0.00084	HMW-13(12/17/2009)	0.00020	A-III	0.0013	RRS	YES	no
Tetrachloroethene	NA	-	0.0050	A-III	0.098	RRS	no	no
Toluene	0.24	HAA01-MW-14(12/16/2009)	1.0	A-III	5.2	RRS	no	no
1,2,4-Trichlorobenzene	NA	-	0.070	A-III	0.070	Type 3	no	no
1,1,2-Trichloroethane	0.0085	HMW-13(1/25/2011)	0.0050	A-III	0.0050	Type 3	YES	YES
Trichloroethylene	0.00192	HMW-14R(1/25/2008)	0.0050	A-III	0.0052	RRS	no	no
Vinyl chloride	1.23	COE-MW-03(7/14/2007)	0.0020	A-III	0.0033	RRS	YES	YES
Xylene, Mixture	0.443	HMW-24(7/25/2006)	10	A-III	10	Type 3	no	no

**Table 7-16**  
**Comparison of Maximum Concentrations in Groundwater to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 3 RRS [a] (mg/L)	Source of Type 3 Standard	Type 4 RRS [b] (mg/L)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
<b>Semi Volatile Organic Compounds</b>								
Acenaphthene	NA	–	2.0	A-III	6.1	RRS	no	no
Acenaphthylene	NA	–	0.00064	DL	0.00064	Type 3	no	no
Anthracene	NA	–	0.00064	DL	31	RRS	no	no
Benz[a]anthracene	NA	–	0.00010	A-III	0.0039	RRS	no	no
Benzo[a]pyrene	NA	–	0.00020	A-III	0.00039	RRS	no	no
Benzo[b]fluoranthene	0.00025	HMW-13(12/17/2009)	0.00020	A-III	0.0039	RRS	YES	no
Benzo[g,h,i]perylene	0.00078	HMW-13(12/17/2009)	0.00064	DL	0.00064	Type 3	YES	YES
Benzo[k]fluoranthene	0.00012	HMW-13(12/17/2009)	0.00064	DL	0.039	RRS	no	no
Benzoic Acid	NA	–	0.0188	DL	410	RRS	no	no
Bis(2-chloroethoxy)methane	NA	–	0.0010	DL	0.31	RRS	no	no
Bis(2-chloroethyl)ether	NA	–	0.000020	A-III	0.00023	RRS	no	no
Bis(2-ethylhexyl)phthalate	0.0301	HMW-02(7/26/2006)	0.0060	A-III	0.20	RRS	YES	no
4-Bromophenyl phenyl ether	NA	–	0.0010	DL	0.0010	Type 3	no	no
Butyl benzyl phthalate	NA	–	0.10	A-III	1.5	RRS	no	no
4-Chlorobenzeneamine	0.025	HMW-23(12/17/2009)	0.10	A-III	0.10	Type 3	no	no
4-Chloro-3-methylphenol	NA	–	0.0010	DL	10	RRS	no	no
2-Chloronaphthalene	NA	–	0.00064	DL	8.2	RRS	no	no
2-Chlorophenol	NA	–	0.040	A-III	0.51	RRS	no	no
4-Chlorophenyl phenyl ether	NA	–	0.0010	DL	0.0010	Type 3	no	no
Chrysene	NA	–	0.00020	A-III	0.39	RRS	no	no
Dibenz[a,h]anthracene	NA	–	0.00030	A-III	0.00039	RRS	no	no
Dibenzofuran	NA	–	0.00100	DL	0.1	RRS	no	no
Di-n-butyl phthalate	NA	–	4.0	A-III	10	RRS	no	no
3,3'-Dichlorobenzidine	NA	–	0.000080	A-III	0.0064	RRS	no	no
2,4-Dichlorophenol	NA	–	0.020	A-III	0.31	RRS	no	no
Diethyl phthalate	NA	–	0.0060	A-III	82	RRS	no	no
2,4-Dimethylphenol	NA	–	0.70	A-III	2.0	RRS	no	no
Dimethyl phthalate	NA	–	400	A-III	1,000	RRS	no	no
2,4-Dinitrophenol	NA	–	0.070	A-III	0.20	RRS	no	no
2,4-Dinitrotoluene	NA	–	0.000050	A-III	0.0092	RRS	no	no
2,6-Dinitrotoluene	NA	–	0.0020	DL	0.10	RRS	no	no
Di-n-octylphthalate	NA	–	0.70	A-III	41	RRS	no	no
Fluoranthene	0.00075	HMW-06(6/24/2000)	1.0	A-III	4.1	RRS	no	no
Fluorene	0.0018	HMW-11(6/24/2000)	1.0	A-III	4.1	RRS	no	no
Hexachlorobenzene	NA	–	0.0010	A-III	0.0018	RRS	no	no

**Table 7-16**  
**Comparison of Maximum Concentrations in Groundwater to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 3 RRS [a] (mg/L)	Source of Type 3 Standard	Type 4 RRS [b] (mg/L)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
Hexachlorobutadiene	NA	–	0.0010	A-III	0.037	RRS	no	no
Hexachlorocyclopentadiene	NA	–	0.050	A-III	0.61	RRS	no	no
Hexachloroethane	NA	–	0.0010	A-III	0.072	RRS	no	no
Indeno[1,2,3-cd]pyrene	0.00043	HMW-13(12/17/2009)	0.00040	A-III	0.0039	RRS	YES	no
Isophorone	NA	–	0.10	A-III	3.0	RRS	no	no
2-Methyl-4,6-dinitrophenol	NA	–	0.0050	DL	0.0082	RRS	no	no
2-Methylphenol	NA	–	0.0010	DL	5.1	RRS	no	no
4-Methylphenol	0.0099	HMW-13(12/17/2009)	0.0020	DL	0.51	RRS	YES	no
Naphthalene	0.212	HMW-13(6/24/2000)	0.020	A-III	0.020	Type 3	YES	YES
N-Nitroso-di-n-propylamine	NA	–	0.0010	DL	0.0010	Type 3	no	no
N-Nitrosodiphenylamine	NA	–	0.0010	DL	0.58	RRS	no	no
2-Nitrophenol	NA	–	0.0020	DL	0.0020	Type 3	no	no
4-Nitrophenol	NA	–	0.060	A-III	0.060	Type 3	no	no
Pentachlorophenol	NA	–	0.0010	A-III	0.0072	RRS	no	no
Phenanthrene	0.0014	HMW-11(6/24/2000)	0.00064	DL	0.00064	Type 3	YES	YES
Phenol	NA	–	4.0	A-III	31	RRS	no	no
Pyrene	0.00076	HMW-11(6/24/2000)	1.0	A-III	3.1	RRS	no	no
2,4,5-Trichlorophenol	NA	–	4.0	A-III	10	RRS	no	no
2,4,6-Trichlorophenol	NA	–	0.030	A-III	0.10	RRS	no	no
<b>Pesticides/PCBs</b>								
Aldrin	0.0046	COE-MW-01(12/16/2009)	0.000020	A-III	0.00017	RRS	YES	YES
Aroclor 1254	NA	#N/A	0.000500	A-III	0.0014	RRS	no	no
alpha-Chlordane	0.000077	HMW-24(2/3/2009)	0.000025	DL	0.0082	RRS	YES	no
gamma-Chlordane	0.0039	HMW-14R(2/3/2009)	0.000025	DL	0.0082	RRS	YES	no
4,4'-DDD	0.000056	HMW-24(2/3/2009)	0.00010	A-III	0.012	RRS	no	no
4,4'-DDE	0.000044	HMW-24(2/3/2009)	0.00010	A-III	0.0084	RRS	no	no
4,4'-DDT	0.000027	HMW-09(2/3/2009)	0.00010	A-III	0.0084	RRS	no	no
Dieldrin	0.000028	HMW-24(2/3/2009)	0.000020	A-III	0.00018	RRS	YES	no
Endosulfan I	0.000057	HMW-24(2/3/2009)	0.000025	DL	0.61	RRS	YES	no
Endrin	0.000015	HMW-24(2/3/2009)	0.0020	A-III	0.031	RRS	no	no
Endrin Aldehyde	0.000031	HAA01-MW-14(12/16/2009)	0.000025	DL	0.031	RRS	YES	no
Heptachlor epoxide	0.0025	HMW-09(2/3/2009)	0.00020	A-III	0.00031	RRS	YES	YES
alpha-Hexachlorocyclohexane	0.000052	HMW-24(2/3/2009)	0.0000060	A-III	0.00045	RRS	YES	no
beta-Hexachlorocyclohexane	0.00082	COE-MW-04(2/4/2009)	0.000020	A-III	0.0016	RRS	YES	no
delta-Hexachlorocyclohexane	0.000057	HMW-24(2/3/2009)	0.000025	DL	0.031	RRS	YES	no
gamma-Hexachlorocyclohexane	0.00017	HMW-09(2/3/2009)	0.00020	A-III	0.0026	RRS	no	no

**Table 7-16**  
**Comparison of Maximum Concentrations in Groundwater to Types 3 and 4 Risk Reduction Standards**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration Detected (mg/L)	Location of Maximum Detection	Type 3 RRS [a] (mg/L)	Source of Type 3 Standard	Type 4 RRS [b] (mg/L)	Source of Type 4 Standard	Type 3 Standard Exceeded?	Type 4 Standard Exceeded?
Methoxychlor	NA	–	0.040	A-III	0.51	RRS	no	no
2,4,5-Trichlorophenoxyacetic acid	0.0026	HMW-09(2/3/2009)	0.070	A-III	1.0	RRS	no	no
<b>Inorganics</b>								
Arsenic	0.78	H-31-HAA01(11/13/2009)	0.010	A-III	0.010	Type 3	YES	YES
Barium	3.0	H-31-HAA01(11/13/2009)	2.0	A-III	2.0	Type 3	YES	YES
Cadmium	0.060	H-31-HAA01(11/13/2009)	0.0050	A-III	0.051	RRS	YES	YES
Chromium, Total	1.9	H-31-HAA01(11/13/2009)	0.10	A-III	0.10	Type 3	YES	YES
Lead	0.79	H-31-HAA01(11/13/2009)	0.015	A-III	0.015	Type 3	YES	YES
Mercury	0.00050	H-23-HAA01(11/13/2009)	0.0020	A-III	0.0020	Type 3	no	no
Selenium	0.082	H-30-HAA01(11/13/2009)	0.050	A-III	0.05	RRS	YES	YES
Silver	0.0030	COE-MW-02(12/16/2009)	0.10	A-III	0.51	RRS	no	no

Risk Reduction Standard exceeded.  
mg/L Milligrams per liter.  
NA Not applicable.  
RRS Risk Reduction Standard.

[a] Source of Type 3 RRS:  
A-III: Appendix III.  
DL: Detection limit.  
[b] Source of Type 4 RRS:  
RRS: Calculated site-specific industrial risk reduction standard.  
Type 3 RRS.



**Table 7-17**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		
<b>Volatile Organic Compounds</b>							
Acetone	NA	NA	NA	9.2E+01	9.1E+01	4.6E+01	4.6E+01
Benzene	5.2E-02	1.0E-02	8.7E-03	4.1E-01	8.8E-02	7.2E-02	8.7E-03
2-Butanone	NA	NA	NA	6.1E+01	1.5E+01	1.2E+01	1.2E+01
Carbon disulfide	NA	NA	NA	1.0E+01	2.0E+00	1.7E+00	1.7E+00
Carbon tetrachloride	4.1E-02	1.4E-02	1.0E-02	4.1E-01	2.9E-01	1.7E-01	1.0E-02
CFC-11	NA	NA	NA	3.1E+01	2.0E+00	1.9E+00	1.9E+00
Chlorobenzene	NA	NA	NA	2.0E+00	1.5E-01	1.4E-01	1.4E-01
Chloroform	9.2E-02	3.6E-03	3.4E-03	1.0E+00	2.9E-01	2.2E-01	3.4E-03
Chloromethane	NA	NA	NA	NA	2.6E-01	2.6E-01	2.6E-01
Cyclohexane	NA	NA	NA	NA	1.8E+01	1.8E+01	1.8E+01
Dibromochloromethane	3.4E-02	NV	3.4E-02	2.0E+00	NV	2.0E+00	3.4E-02
1,2-Dichlorobenzene	NA	NA	NA	9.2E+00	5.8E-01	5.5E-01	5.5E-01
1,3-Dichlorobenzene	NA	NA	NA	2.0E+00	NA	2.0E+00	2.0E+00
1,4-Dichlorobenzene	5.3E-01	7.4E-03	7.3E-03	7.2E+00	2.3E+00	1.8E+00	7.3E-03
Dichlorodifluoromethane	NA	NA	NA	2.0E+01	2.9E-01	2.9E-01	2.9E-01
1,2-Dichloroethane	3.1E-02	3.1E-03	2.9E-03	6.1E-01	2.0E-02	2.0E-02	2.9E-03
1,1-Dichloroethene	NA	NA	NA	5.1E+00	5.8E-01	5.2E-01	5.2E-01
1,2-Dichloroethene	NA	NA	NA	9.2E-01	1.8E-01	1.5E-01	1.5E-01
cis-1,2-Dichloroethene	NA	NA	NA	2.0E-01	NA	2.0E-01	2.0E-01
trans-1,2-Dichloroethene	NA	NA	NA	2.0E+00	1.8E-01	1.6E-01	1.6E-01
1,2-Dichloropropane	7.9E-02	8.2E-03	7.4E-03	9.2E+00	1.2E-02	1.2E-02	7.4E-03
Ethylbenzene	2.6E-01	3.3E-02	2.9E-02	1.0E+01	2.9E+00	2.3E+00	2.9E-02
Methylene chloride	3.8E-01	1.7E-01	1.2E-01	6.1E+00	2.9E+00	2.0E+00	1.2E-01
1-Methylethylbenzene	NA	NA	NA	1.0E+01	1.2E+00	1.0E+00	1.0E+00
4-Methyl-2-pentanone	NA	NA	NA	8.2E+00	8.8E+00	4.2E+00	4.2E+00
Nitrobenzene	NA	2.0E-03	2.0E-03	2.0E-01	2.6E-02	2.3E-02	2.0E-03

**Table 7-17**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		
Styrene	NA	NA	NA	2.0E+01	2.9E+00	2.6E+00	2.6E+00
1,1,2,2-Tetrachloroethane	1.4E-02	1.4E-03	1.3E-03	2.0E+00	NA	2.0E+00	1.3E-03
Tetrachloroethene	1.4E+00	3.1E-01	2.6E-01	6.1E-01	1.2E-01	9.8E-02	9.8E-02
Toluene	NA	NA	NA	8.2E+00	1.5E+01	5.2E+00	5.2E+00
1,2,4-Trichlorobenzene	9.9E-02	NA	9.9E-02	1.0E+00	5.8E-03	5.8E-03	5.8E-03
1,1,2-Trichloroethane	5.0E-02	5.1E-03	4.6E-03	4.1E-01	5.8E-04	5.8E-04	5.8E-04
Trichloroethylene	6.2E-02	2.0E+01	6.2E-02	5.1E-02	5.8E-03	5.2E-03	5.2E-03
Vinyl chloride	4.0E-03	1.9E-02	3.3E-03	3.1E-01	2.9E-01	1.5E-01	3.3E-03
Xylene, Mixture	NA	NA	NA	2.0E+01	2.9E-01	2.9E-01	2.9E-01
<b>Semi Volatile Organic Compounds</b>							
Acenaphthene	NA	NA	NA	6.1E+00	NA	6.1E+00	6.1E+00
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	3.1E+01	NA	3.1E+01	3.1E+01
Benz[a]anthracene	3.9E-03	NV	3.9E-03	NA	NV	NA	3.9E-03
Benzo[a]pyrene	3.9E-04	NV	3.9E-04	NA	NV	NA	3.9E-04
Benzo[b]fluoranthene	3.9E-03	NV	3.9E-03	NA	NV	NA	3.9E-03
Benzo[g,h,i]perylene	NA	NV	NA	NA	NV	NA	NA
Benzo[k]fluoranthene	3.9E-02	NV	3.9E-02	NA	NV	NA	3.9E-02
Benzoic Acid	NA	NV	NA	4.1E+02	NV	4.1E+02	4.1E+02
Bis(2-chloroethoxy)methane	NA	NV	NA	3.1E-01	NV	3.1E-01	3.1E-01
Bis(2-chloroethyl)ether	2.6E-03	2.5E-04	2.3E-04	NA	NA	NA	2.3E-04
Bis(2-ethylhexyl)phthalate	2.0E-01	NV	2.0E-01	2.0E+00	NV	2.0E+00	2.0E-01
4-Bromophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA
Butyl benzyl phthalate	1.5E+00	NV	1.5E+00	2.0E+01	NV	2.0E+01	1.5E+00
4-Chlorobenzeneamine	1.4E-02	NV	1.4E-02	4.1E-01	NV	4.1E-01	1.4E-02
4-Chloro-3-methylphenol	NA	NV	NA	1.0E+01	NV	1.0E+01	1.0E+01
2-Chloronaphthalene	NA	NA	NA	8.2E+00	NA	8.2E+00	8.2E+00
2-Chlorophenol	NA	NA	NA	5.1E-01	NA	5.1E-01	5.1E-01

**Table 7-17**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		
4-Chlorophenyl phenyl ether	NA	NV	NA	NA	NV	NA	NA
Chrysene	3.9E-01	NV	3.9E-01	NA	NV	NA	3.9E-01
Dibenz[a,h]anthracene	3.9E-04	NV	3.9E-04	NA	NV	NA	3.9E-04
Dibenzofuran	NA	NA	NA	1.0E-01	NA	1.0E-01	1.0E-01
Di-n-butyl phthalate	NA	NV	NA	1.0E+01	NV	1.0E+01	1.0E+01
3,3'-Dichlorobenzidine	6.4E-03	NV	6.4E-03	NA	NV	NA	6.4E-03
2,4-Dichlorophenol	NA	NV	NA	3.1E-01	NV	3.1E-01	3.1E-01
Diethyl phthalate	NA	NV	NA	8.2E+01	NV	8.2E+01	8.2E+01
2,4-Dimethylphenol	NA	NV	NA	2.0E+00	NV	2.0E+00	2.0E+00
Dimethyl phthalate	NA	NV	NA	1.0E+03	NV	1.0E+03	1.0E+03
2,4-Dinitrophenol	NA	NV	NA	2.0E-01	NV	2.0E-01	2.0E-01
2,4-Dinitrotoluene	9.2E-03	NV	9.2E-03	2.0E-01	NV	2.0E-01	9.2E-03
2,6-Dinitrotoluene	NA	NV	NA	1.0E-01	NV	1.0E-01	1.0E-01
Di-n-octylphthalate	NA	NV	NA	4.1E+01	NV	4.1E+01	4.1E+01
Fluoranthene	NA	NV	NA	4.1E+00	NV	4.1E+00	4.1E+00
Fluorene	NA	NA	NA	4.1E+00	NA	4.1E+00	4.1E+00
Hexachlorobenzene	1.8E-03	NV	1.8E-03	8.2E-02	NV	8.2E-02	1.8E-03
Hexachlorobutadiene	3.7E-02	NV	3.7E-02	1.0E-01	NV	1.0E-01	3.7E-02
Hexachlorocyclopentadiene	NA	NV	NA	6.1E-01	NV	6.1E-01	6.1E-01
Hexachloroethane	7.2E-02	NV	7.2E-02	7.2E-02	NV	7.2E-02	7.2E-02
Indeno[1,2,3-cd]pyrene	3.9E-03	NV	3.9E-03	NA	NV	NA	3.9E-03
Isophorone	3.0E+00	NV	3.0E+00	2.0E+01	NV	2.0E+01	3.0E+00
2-Methyl-4,6-dinitrophenol	NA	NV	NA	8.2E-03	NV	8.2E-03	8.2E-03
2-Methylphenol	NA	NV	NA	5.1E+00	NV	5.1E+00	5.1E+00
4-Methylphenol	NA	NV	NA	5.1E-01	NV	5.1E-01	5.1E-01
Naphthalene	NA	2.4E-03	2.4E-03	2.0E+00	8.8E-03	8.7E-03	2.4E-03
N-Nitroso-di-n-propylamine	4.1E-04	NV	4.1E-04	NA	NV	NA	4.1E-04
N-Nitrosodiphenylamine	5.8E-01	NV	5.8E-01	NA	NV	NA	5.8E-01

**Table 7-17**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		
2-Nitrophenol	NA	NV	NA	NA	NV	NA	NA
4-Nitrophenol	NA	NV	NA	NA	NV	NA	NA
Pentachlorophenol	7.2E-03	NV	7.2E-03	5.1E-01	NV	5.1E-01	7.2E-03
Phenanthrene	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NV	NA	3.1E+01	NV	3.1E+01	3.1E+01
Pyrene	NA	NV	NA	3.1E+00	NV	3.1E+00	3.1E+00
2,4,5-Trichlorophenol	NA	NV	NA	1.0E+01	NV	1.0E+01	1.0E+01
2,4,6-Trichlorophenol	2.6E-01	NV	2.6E-01	1.0E-01	NV	1.0E-01	1.0E-01
<b>Pesticides/PCBs</b>							
Aldrin	1.7E-04	NV	1.7E-04	3.1E-03	NV	3.1E-03	1.7E-04
Aroclor 1254	1.4E-03	NV	1.4E-03	2.0E-03	NV	2.0E-03	1.4E-03
alpha-Chlordane	8.2E-03	NV	8.2E-03	5.1E-02	NV	5.1E-02	8.2E-03
gamma-Chlordane	8.2E-03	NV	8.2E-03	5.1E-02	NV	5.1E-02	8.2E-03
4,4'-DDD	1.2E-02	NV	1.2E-02	NA	NV	NA	1.2E-02
4,4'-DDE	8.4E-03	NV	8.4E-03	NA	NV	NA	8.4E-03
4,4'-DDT	8.4E-03	NV	8.4E-03	5.1E-02	NV	5.1E-02	8.4E-03
Dieldrin	1.8E-04	NV	1.8E-04	5.1E-03	NV	5.1E-03	1.8E-04
Endosulfan I	NA	NV	NA	6.1E-01	NV	6.1E-01	6.1E-01

**Table 7-17**  
**Risk Reduction Standards for Potential Groundwater Ingestion Based on Industrial (Type 4) Exposure**  
**Human Health Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	CANCER EFFECTS			NON-CANCER EFFECTS			RRS (mg/L)
	Route-Specific RRS (mg/L)		RRSc (mg/L)	Route-Specific RRS (mg/L)		RRSnc (mg/L)	
	Oral	Inhalation		Oral	Inhalation		
Endrin	NA	NV	NA	3.1E-02	NV	3.1E-02	3.1E-02
Endrin Aldehyde	NA	NV	NA	3.1E-02	NV	3.1E-02	3.1E-02
Heptachlor epoxide	3.1E-04	NV	3.1E-04	1.3E-03	NV	1.3E-03	3.1E-04
alpha-Hexachlorocyclohexane	4.5E-04	NV	4.5E-04	8.2E-01	NV	8.2E-01	4.5E-04
beta-Hexachlorocyclohexane	1.6E-03	NV	1.6E-03	NA	NV	NA	1.6E-03
delta-Hexachlorocyclohexane	NA	NV	NA	3.1E-02	NA	3.1E-02	3.1E-02
gamma-Hexachlorocyclohexane	2.6E-03	NV	2.6E-03	3.1E-02	NA	3.1E-02	2.6E-03
Methoxychlor	NA	NV	NA	5.1E-01	NA	5.1E-01	5.1E-01
2,4,5-Trichlorophenoxyacetic acid	NA	NV	NA	1.0E+00	NA	1.0E+00	1.0E+00
<b>Inorganics</b>							
Arsenic	1.9E-03	NV	1.9E-03	3.1E-02	4.4E-05	4.4E-05	4.4E-05
Barium	NA	NV	NA	2.0E+01	1.5E-03	1.5E-03	1.5E-03
Cadmium	NA	NV	NA	5.1E-02	NA	5.1E-02	5.1E-02
Chromium, Total	NA	NV	NA	NA	NA	NA	NA
Lead	NA	NV	NA	NA	NA	NA	NA
Mercury	NA	NV	NA	1.6E-02	8.8E-04	8.3E-04	8.3E-04
Selenium	NA	NV	NA	5.1E-01	5.8E-02	5.2E-02	5.2E-02
Silver	NA	NV	NA	5.1E-01	NA	5.1E-01	5.1E-01

RRSc (cancer effects) is calculated using a target cancer risk (TCR) of 1E-05; RRSnc (non-cancer effects) is calculated using a target hazard index (THI) of 1.

mg/L Milligrams per liter.

NA Not available; insufficient toxicity data.

NC Not a suspected carcinogen.

RRS Risk reduction standard (mg/L); for each constituent, the minimum of the cancer-effects (RRSc) and the non-cancer-effects (RRSnc)

**Table 7-18**  
**Comparison of Maximum Concentrations Detected in Sediment to Types 1, 2, 3, and 4 Risk Reduction Standards**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Detected Regulated Substance	Maximum Concentration (mg/kg)	Location of Maximum Detection	Type 1 RRS (mg/kg)	Source of Type 1 Standard	Type 2 RRS (mg/kg)	Source of Type 2 Standard *	Type 3 RRS (mg/kg)	Source of Type 3 Standard	Type 4 RRS (mg/kg)	Source of Type 4 Standard
<b>Volatile Organic Compounds</b>										
Acetone	#REF!	SD-3(2/12/1990)	400	A-III	33,000	c	400	A-III	260,000	N
Benzene	0.031	SD-3(2/12/1990)	0.50	A-III	18	c	0.5	A-III	23	C
Carbon disulfide	0.023	SD-2(2/12/1990)	400	A-III	400	t	400	A-III	900	N
CFC-11	0.0074	HSD-2(3/3/1992)	200	A-III	200	t	200	A-III	520	N
Methylene chloride	0.012	SD-2(2/12/1990)	0.50	A-III	140	c	0.5	A-III	180	C
Toluene	0.0032	SD-2(2/12/1990)	100	A-III	100	t	100	A-III	33,000	N
<b>Semi Volatile Organic Compounds</b>										
Acenaphthene	4.9	SD-3(2/12/1990)	300	A-I	4,700	c	300	A-I	120,000	N
Acenaphthylene	3.1	SD-3(2/12/1990)	130	A-I	130	t	130	A-I	130	A-I
Anthracene	9.3	SD-3(2/12/1990)	500	A-I	23,000	c	500	A-I	610,000	N
Benz[a]anthracene	33	SD-3(2/12/1990)	5.0	A-I	12	c	5.0	A-I	78	C
Benzo[a]pyrene	27	SD-3(2/12/1990)	1.6	A-I	1.64	t	1.64	A-I	28	r
Benzo[b]fluoranthene	27	SD-3(2/12/1990)	5.0	A-I	12	c	5.0	A-I	78	C
Benzo[g,h,i]perylene	17	SD-3(2/12/1990)	500	A-I	500	t	500	A-I	500	A-I
Benzo[k]fluoranthene	29	SD-3(2/12/1990)	5.0	A-I	120	c	5.0	A-I	780	C
Chrysene	52	SD-3(2/12/1990)	5.0	A-I	1,200	c	5.0	A-I	7,800	C
Dibenz[a,h]anthracene	11	SD-3(2/12/1990)	2.0	PRGc-Res	2.0	t	2.0	PRGc-Res	28	r
Fluoranthene	62	SD-3(2/12/1990)	500	A-I	3,100	c	500	A-I	82,000	N
Fluorene	8.3	SD-3(2/12/1990)	360	A-I	3,100	c	360	A-I	82,000	N
Indeno[1,2,3-cd]pyrene	23	SD-3(2/12/1990)	5.0	A-I	12	c	5.0	A-I	78	C
Naphthalene	0.39	SD-3(2/12/1990)	61	PRGc-Res	61	t	61	PRGc-Res	77	C
Phenanthrene	62	SD-3(2/12/1990)	110	A-I	110	t	110	A-I	110	A-I
Pyrene	58	SD-3(2/12/1990)	500	A-I	2,300	c	500	A-I	61,000	N
<b>Inorganics</b>										
Arsenic	1.05	HSD-4(3/3/1992)	20	A-III	20	t	20	A-III	38	C
Barium	229	SD-3(2/12/1990)	1,000	A-III	15,000	c	1,000	A-III	1,340	N
Chromium, Total	70	SD-3(2/12/1990)	100	A-III	100	t	100	A-III	100	A-III
Lead	362	SD-3(2/12/1990)	75	A-III	418	IEUBK	75	A-III	930	GAPb

<input type="checkbox"/>	Risk Reduction Standard exceeded.
A-I	Appendix I notification requirement (NC) ("App I NC").
A-III	Appendix III Table 2 (16 metals).
GAPb	The lead Type 4 RRS is presented in Table 7-20.
IEUBK	Integrated Exposure Uptake Biokinetic Model.
mg/kg	Milligrams per kilogram.
PRGc-Res	Calculated default residential carcinogenic preliminary remediation goal using Equation 6 from USEPA's Risk Assessment Guidance for Superfund, Part B (USEPA 1991).
C	Type 4 standard is based on cancer endpoint (Table 7-9).
N	Type 4 standard is based on noncancer endpoint (Table 7-9).
r	Recreational user (Youth Wader) RRS derived on Table 7-25
RRS	Risk Reduction Standard.

**Table 7-19**  
**Comparison of Maximum Concentrations Detected in Surface Water to Types 1 and Type 4**  
**Risk Reduction Standards**  
**HAA-01 Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituents	Maximum Detected Concentration (mg/L)	Location of Maximum Concentration (Sample Date)	Georgia Instream Water Standards (mg/L) [a]	Type 1 RRS (mg/L)	Source of Type 1 Standard [b]	Standard Exceeded? [c]	Type 4 RRS (mg/L)	Source of Type 4 Standard [d]	Standard Exceeded? [e]
<b>Volatile Organic Compounds</b>									
Acetone	0.0033	HSW-2(10/31/2001)	NA	4.0	A-III	no	31,588	r	no
Benzene	0.013	HSW-1(10/31/2001)	0.051	0.0050	A-III	no	3.9	r	no
Ethylbenzene	0.0085	HSW-1(10/31/2001)	2.10	0.70	A-III	no	7.3	r	no
2-Hexanone	0.0011	HSW-4(10/31/2001)	NA	0.0025	DL	YES	55	r	no
Isopropyl benzene	0.0019	HSW-1(10/31/2001)	NA	0.0025	DL	YES	66	r	no
Naphthalene	0.0099	HSW-1(10/31/2001)	NA	0.020	A-III	no	3.6	r	no
n-Propylbenzene	0.0021	HSW-1(10/31/2001)	NA	0.0025	DL	YES	45	r	no
Toluene	0.014	HSW-1(10/31/2001)	5.980	1.0	A-III	no	189	r	no
1,2,4-Trimethylbenzene	0.0045	HSW-1(10/31/2001)	NA	0.0025	DL	YES	3.3	r	no
Xylenes, Mixture	0.067	HSW-1(10/31/2001)	NA	10	A-III	no	85	r	no
<b>Semi Volatile Organic Compounds</b>									
1-Methylnaphthalene	0.0022	HSW-1(10/31/2001)	NA	0.0050	DL	YES	0.98	r	no
<b>Inorganics</b>									
Barium	0.030	HSW-1(10/31/2001)	NA	2.0	A-III	no	1,633	r	no
Cadmium	0.00030	HSW-5(10/31/2001)	0.00015	0.0050	A-III	YES	1.6	r	no
Chromium, Total	[f]	HSW-5(10/31/2001)	0.011	0.10	A-III	YES	0.2	r	no
Mercury	0.00087	HSW-6(10/31/2001)	0.000012	0.0020	A-III	YES	0.51	r	no

Georgia Instream Water Standard exceeded.

[a] Georgia Instream Water Quality Standards, Rule 391-3-6-03, Effective June 5, 2011. Chronic freshwater values used.

[b] Source of Type 1 RRS:

DL: Detection limit.

A-III: Appendix III.

[c] The standard referenced is the Georgia Instream Water Standard. If a standard is not available, the Type 1 RRS were used. Constituents that had a maximum detected concentration less than the detection limit were considered to exceed the standard.

[d] Source of Type 4 RRS:

r: Recreational user (Youth Wader) RRS derived on Table 7-28.

A-III: Appendix III.

[e] The standard referenced is the Type 4 RRS. Although mercury does not have a Type 4 RRS available, mercury did not exceed the Type 1 RRS.

[f] Chromium VI was used as a surrogate.

mg/L Milligrams per liter.

NA Not available.

RRS Risk Reduction Standard.

**Table 7-20**  
**Type 4 Risk Reduction Standard for Lead in Soil Based on Adult Worker Exposure Scenario**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart/Hunter Army Airfield - Savannah, Georgia**

$$RRS_{lead} = \left[ \frac{(PbB - PbB_b) \times AT}{BSF \times EF} - C_w \times I_w \times A_w \right] (I_s \times A_s)^{-1}$$

where:

$$PbB = \frac{PbB_{fetal}}{GSD^{1.645} \times R}$$

where:

$A_s$	=	0.12	=	Absolute gastrointestinal absorption factor for ingested lead in soil and lead in dust derived from soil (unitless).
AT	=	365	=	Averaging time (days/year).
$A_w$	=	0.2	=	Absolute gastrointestinal absorption factor for ingested lead in drinking water (unitless).
BSF	=	0.4	=	Biokinetic slope factor relating increase in typical adult blood lead concentration to average daily lead uptake ( $\mu\text{g}/\text{dL}$ blood lead increase per $\mu\text{g}/\text{day}$ lead uptake).
$C_w$	=	15	=	Concentration of lead in the groundwater ( $\mu\text{g}/\text{L}$ , Type 3 risk reduction standard).
EF	=	219	=	Exposure frequency (days/year).
GSD	=	2.04	=	Geometric standard deviation.
$I_s$	=	0.05	=	Ingestion rate for indoor soil-derived dust ( $\text{g}/\text{day}$ ).
$I_w$	=	1	=	Ingestion rate of groundwater ( $\text{L}/\text{day}$ ).
$PbB_{fetal}$	=	10	=	Goal for the 95th percentile blood lead concentration among fetuses born to female workers exposed to site soils ( $\mu\text{g}/\text{dL}$ ).
PbB	=	Calc.	=	Goal for the central estimate of blood lead concentration in female workers exposed to site soils, intended to ensure that the fetal blood lead concentration does not exceed 10 $\mu\text{g}/\text{dL}$ ( $\mu\text{g}/\text{dL}$ ).
$PbB_b$	=	1.38	=	Typical blood lead concentration in adults in the absence of site exposures ( $\mu\text{g}/\text{dL}$ ).
R	=	0.9	=	Constant of proportionality between fetal blood lead concentration at birth and maternal blood lead concentration (unitless).
$RRS_{lead}$	=	Calc.	=	Risk reduction standard for lead in soil based on adult worker exposure ( $\text{mg}/\text{kg}$ ).

**CALCULATION:**

$$PbB = \frac{(10 \mu\text{g}/\text{dL})}{(2.04)^{1.645} \times 0.9} = 3.44 \mu\text{g}/\text{dL}$$

$$RGO_{lead} = \left[ \frac{(3.44 \mu\text{g}/\text{dL} - 1.38 \mu\text{g}/\text{dL}) \times (365 \text{ days/year})}{0.4 (\mu\text{g}/\text{dL})/(\mu\text{g}/\text{day}) \times (219 \text{ days/year})} - 2.8 \mu\text{g}/\text{L} \times 1 \text{ L}/\text{day} \times 0.2 \right] \times (0.05 \text{ g}/\text{day} \times 0.12)^{-1}$$

$$= 930 \text{ mg}/\text{kg}$$

Source: Appendix IV, Georgia Adult Lead Model, of the HSRA regulation.



**Table 7-21**  
**Site-Specific Standard / Health-Based Concentration Goal Equations for Sediment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

ROUTE-SPECIFIC CONCENTRATION GOALS:

Oral:  $(HBG_o)_{C \text{ or } NC} = \frac{(TCR \text{ or } THQ) \times BW \times (AT_C \text{ or } AT_{NC}) \times (10^6 \text{ mg/kg})}{IR_{sed} \times EF \times ED \times (CSF_o \text{ or } [1/RfD_o])}$

Dermal:  $(HBG_d)_{C \text{ or } NC} = \frac{(TCR \text{ or } THQ) \times BW \times (AT_C \text{ or } AT_{NC}) \times (10^6 \text{ mg/kg})}{SSA_{sed} \times SedAR \times ABSd \times EF \times ED \times (CSF_a \text{ or } [1/RfD_a])}$

HBG BASED ON CANCER EFFECTS: (combining all exposure routes)

$$HBG_C = \frac{1}{[1 / (HBG_o)_C] + [1 / (HBG_d)_C]}$$

HBG BASED ON NON-CANCER EFFECTS: (combining all exposure routes)

$$HBG_{NC} = \frac{1}{[1 / (HBG_o)_{NC}] + [1 / (HBG_d)_{NC}]}$$

HBG = MINIMUM of  $HBG_C$  and  $HBG_{NC}$

Variable Definitions:

ABSd	Dermal absorption efficiency (unitless) (Table 7-23).
AT <sub>C</sub>	Averaging time for cancer effects (days) (Table 7-22).
AT <sub>NC</sub>	Averaging time for non-cancer effects (days) (Table 7-22).
BW	Body weight (kg) (Table 7-22).
CSF	Cancer slope factor for oral (CSF <sub>o</sub> ) or dermal (adjusted to an absorbed dose, CSF <sub>a</sub> ) exposure (kg-day/mg [inverse mg/kg/day]) (Table 7-24)
ED	Exposure duration (years) (Table 7-22).
EF	Exposure frequency (days/year) (Table 7-22).
IR <sub>sed</sub>	Ingestion rate of sediment (mg/day) (Table 7-22).
HBG	Health-based concentration goal for sediment (mg/kg).
RfD	Reference dose for oral (RfD <sub>o</sub> ) or dermal (adjusted to an absorbed dose, RfD <sub>a</sub> ) exposure (mg/kg/day) (Table 7-24).
SedAR	Sediment-to-skin adherence rate (mg/cm <sup>2</sup> /day) (Table 7-22).
SSA <sub>sed</sub>	Exposed skin surface area for sediment contact (cm <sup>2</sup> ) (Table 7-22).
TCR	Target cancer risk (unitless).
THQ	Target hazard quotient for non-cancer effects (unitless).

**Table 7-22**  
**Receptor Exposure Parameters**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Parameter	Symbol	Units	Recreational Receptor-Wader	
			Youth (6 to 16 years)	[ref]
<i>General Factors</i>				
Averaging Time (cancer)	ATc	days	25,550	[1,2,a]
Averaging Time (noncancer)	ATnc	days	3,650	[1,2,a]
Body Weight	BW	kg	45	PJ
Exposure Duration	ED	years	10	PJ
<i>Sediment - Ingestion (Oral)</i>				
Incidental Sediment Ingestion Rate	IRsed	mg/day	50	[5,b]
<i>Sediment - Dermal Contact</i>				
Exposed Skin Surface Area	SSAsed	cm <sup>2</sup>	2,583	[3,d]
Exposure Frequency	EFsed	days/year	48	[PJ,c]
Sediment-to-Skin Adherence Rate	SedAR	mg/cm <sup>2</sup> /day	0.2	[3,e]
<i>Surface Water - Ingestion (Oral) and Dermal Contact</i>				
Surface water Ingestion Rate	IRsw	L/hour	0.005	[5,f]
Exposed Skin Surface Area	SSAsw	cm <sup>2</sup>	2,583	[3,d]
Exposure Frequency	EFsw	days/year	48	[PJ,c]
Exposure Time	ETsw	hours/day	1	[f]

References:

[1]	USEPA 1989	[4]	USEPA 1997a
[2]	USEPA 1991	[5]	USEPA 2002
[3]	USEPA 2004c	[6]	USEPA 2008

- [a] The averaging time for cancer risk is the expected lifespan of 70 years expressed in days.  
The averaging time for non-cancer hazard is the total exposure duration (ED) expressed in days.
- [b] The IRsed was set at 50 mg/day equal to that of the site worker.
- [c] EFsed and EFsw were set at 48 days/year for the recreational receptor assuming twice a week during the six warm months of the year.
- [d] SSAsed and SSAsw is the average surface area of feet and lower legs.
- [e] The sediment-to-skin adherence factor is equal to that of a child exposed to wet soil.  
The surface water exposure was assumed to be one hour per day; the surface water ingestion rate is equal to one tenth of the swimming ingestion rate.
- [f]

cm <sup>2</sup>	Centimeter squared.
kg	Kilogram.
L	Liter.
mg	Milligram.
PJ	Professional judgment (see text).
–	Not applicable.

**Table 7-23**  
**Dermal Absorption Parameters**  
**HAA-01 Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituent	ABSd [a]	Permeability Constant		Non-Steady State Dermal Absorption Parameters [c]				DA_1hr [d]	
		Kp (cm/hour) [b]	[Ref]	FA (unitless)	$\tau$ (hour)	t* (hour)	B (unitless)		Source
<b>Volatile Organic Compounds</b>									
Acetone	0	5.1E-04	calc	1.0	0.22	0.53	0.0015	calc	7.37E-07 [2]
Benzene	0	1.5E-02	DRA	1.0	0.29	0.70	0.05	DRA	2.33E-05 [2]
Ethylbenzene	0	4.9E-02	DRA	1.0	0.42	1.01	0.192	DRA	8.83E-05 [1]
2-Hexanone	0	3.5E-03	calc	1.0	0.38	0.91	0.0137	calc	6.23E-06 [2]
Isopropyl benzene	0	9.0E-02	EPI	1.0	0.49	1.18	0.59	calc	1.74E-04 [1]
Naphthalene	0.13	4.7E-02	DRA	1.0	0.56	1.34	0.205	DRA	9.72E-05 [1]
n-Propylbenzene	0	1.5E-01	EPI	1.0	0.49	1.96	0.62	calc	2.84E-04 [1]
Toluene	0	3.1E-02	DRA	1.0	0.35	0.84	0.113	DRA	5.21E-05 [2]
1,2,4-Trimethylbenzene	0	1.3E-01	EPI	1.0	0.49	1.18	0.561	calc	2.57E-04 [1]
Xylenes, Mixture	0	5.3E-02	DRA	1.0	0.42	1.01	0.21	DRA	9.49E-05 [1]
<b>Semi Volatile Organic Compounds</b>									
Benz[a]anthracene	0.13	4.7E-01	DRA	1.0	2.03	8.53	2.8	DRA	1.85E-03 [1]
Benzo[a]pyrene	0.13	7.0E-01	DRA	1.0	2.69	11.67	4.28	DRA	3.17E-03 [1]
Benzo[b]fluoranthene	0.13	7.0E-01	DRA	1.0	2.77	12.03	4.28	DRA	3.22E-03 [1]
Dibenz[a,h]anthracene	0.13	1.5E+00	DRA	0.6	3.88	17.57	9.7	DRA	4.90E-03 [1]
Indeno[1,2,3-cd]pyrene	0.13	1.0E+00	DRA	0.6	3.78	16.83	6.7	DRA	3.22E-03 [1]
1-Methylnaphthalene	0.13	1.5E-01	EPI	1.0	0.66	2.59	0.665	calc	3.26E-04 [1]
<b>Inorganics</b>									
Barium	0	1.0E-03	W	—	—	—	—	—	1.00E-06 [0]
Cadmium	0.001	1.0E-03	DRA	—	—	—	—	—	1.00E-06 [0]
Chromium, Total	0	1.0E-03	DRA	—	—	—	—	—	1.00E-06 [0]
Mercury	0	1.0E-03	DRA	—	—	—	—	—	1.00E-06 [0]

References [ref]:

- calc Calculated value (USEPA 2004c).
- DRA Dermal Risk Assessment Guidance (USEPA 2004c). The B values are calculated but are consistent with values presented in the guidance manual.
- EPI USEPA 2011b
- RAIS Oak Ridge National Laboratory (ORNL), Risk Assessment Information System (RAIS; ORNL 2012).
- W Assumed to be equal to the value for water (USEPA 2004c).

cm Centimeter.  
mg milligram.

[a] Dermal absorption efficiency for uptake of constituents from a soil matrix (unitless) (USEPA 2004c).  
[b] Permeability coefficient for dermal contact with constituents in water (centimeters per hour).

[c] Absorption parameters for use in the non-steady state model for dermal contact with constituents in water.  
 $\tau$  = Lag time for dermal absorption through the skin.  
t\* = Time required to reach steady state.

B = Ratio of the permeability coefficient through the stratus corneum relative to the permeability coefficient across the viable epidermis.  
FA = Fraction of absorbed water.

[d] DA calculated according to equations presented in USEPA 2004 (using Equation [0], [1], or [2] as indicated in Table 7-22 based on exposure time (ET) = 1 hour.

**Table 7-24  
Toxicity Values  
HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent  
Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituent	Oral RfD (mg/kg/day)		Dermal RfD (mg/kg/day) [a]		Inhalation RfC (mg/m <sup>3</sup> )		Oral CSF (mg/kg/day) <sup>1</sup>		Dermal CSF (mg/kg/day) <sup>-1</sup> [a]		Inhalation Unit Risk (mg/m <sup>3</sup> ) <sup>-1</sup>		ABS <sub>GI</sub> [a]
	Chronic value	[ref]	Chronic value	[ref]	Chronic value	[ref]	Chronic value	[ref]	Chronic value	[ref]	Chronic value	[ref]	
<b>Volatile Organic Compounds</b>													
Acetone	9.0E-01	I	9.0E-01		3.1E+01	A	NA		NA		NA		1
Benzene	4.0E-03	I	4.0E-03		3.0E-02	I	5.5E-02	I	5.5E-02		7.8E-03	I	1
Ethylbenzene	1.0E-01	I	1.0E-01		1.0E+00	I	1.1E-02	C	1.1E-02		2.5E-03	C	1
2-Hexanone	5.0E-03	I	5.0E-03		3.0E-02	I	NA		NA		NA		1
Isopropyl benzene	1.0E-01	I	1.0E-01		4.0E-01	I	NA		NA		NA		1
Naphthalene	2.0E-02	I	2.0E-02		3.0E-03	I	NA		NA		3.4E-02	C	1
n-Propylbenzene	1.0E-01	X	1.0E-01		1.0E+00	X	NA		NA		NA		1
Toluene	8.0E-02	I	8.0E-02		5.0E+00	I	NA		NA		NA		1
1,2,4-Trimethylbenzene	[c] 1.0E-02	Ps	1.0E-02		7.0E-03	P	NA		NA		NA		1
Xylenes, Mixture	2.0E-01	I	2.0E-01		1.0E-01	I	NA		NA		NA		1
<b>Semi Volatile Organic Compounds</b>													
Benz[a]anthracene	NA		NA		NA		7.3E-01	E	7.3E-01		1.1E-01	C	1
Benzo[a]pyrene	NA		NA		NA		7.3E+00	I	7.3E+00		1.1E+00	C	1
Benzo[b]fluoranthene	NA		NA		NA		7.3E-01	E	7.3E-01		1.1E-01	C	1
Dibenz[a,h]anthracene	NA		NA		NA		7.3E+00	E	7.3E+00		1.2E+00	C	1
Indeno[1,2,3-cd]pyrene	NA		NA		NA		7.3E-01	E	7.3E-01		1.1E-01	C	1
1-Methylnaphthalene	7.0E-02	A	7.0E-02		NA		2.9E-02	P	2.9E-02		NA		1
<b>Inorganics</b>													
Barium	2.0E-01	I	1.4E-02		5.0E-04	H	NA		NA		NA		0.07
Cadmium	5.0E-04	I	1.3E-05		NA		NA		NA		1.8E+00	I	0.025
Chromium, Total	[d] 3.0E-03	I	3.9E-05		1.0E-04	I	5.0E-01	J	3.8E+01		8.4E+01	I	0.013
Mercury	1.6E-04	C	1.1E-05		3.0E-04	I	NA		NA		NA		0.1

References [ref]:

- A Agency for Toxic Substances Disease Registry (ATDSR 2012).
- C CalEPA, Toxicity Criteria database (CalEPA 2012).
- E Environmental Criteria and Assessment Office (USEPA 2011b).
- H USEPA, Health Effects Summary Table (HEAST; USEPA 1997b).
- I USEPA, Integrated Risk Information System (IRIS; USEPA 2012).
- J New Jersey Department of Environmental Protection (NJDEP 2009).
- P Provisional Peer Reviewed Toxicity Values (PPRTV; USEPA 2011b).
- s Surrogate used.
- X Provisional Peer Reviewed Toxicity Values Appendix (PPRTV; USEPA 2011b).

- mg/kg/day Milligrams per kilogram per day.
- mg/m<sup>3</sup> Milligrams per cubic meter.
- (mg/kg/day)<sup>-1</sup> Inverse milligrams per kilogram per day (risk per unit dose).
- (mg/m<sup>3</sup>)<sup>-1</sup> Inverse milligrams per cubic meter.

- [a] Toxicity values were obtained per USEPA hierarchy (USEPA 2003).
- [a] The oral-to-dermal adjustment factor (oral absorption efficiency (ABS<sub>GI</sub>)) was used to calculate the dermal RfD values.  
RfD (dermal) = RfD (oral) × Adjustment Factor (oral absorption efficiency).  
CSF (dermal) = CSF (oral) / Adjustment Factor (oral absorption efficiency).
- [c] Value used is 1,3,5-trimethylbenzene.
- [d] Value used is chromium VI.

**Table 7-25**  
**Health-Based Concentration Goal Calculations for Exposure to Sediment of a Youth Wader**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituent	CANCER EFFECTS			NON-CANCER EFFECTS			Minimum HBG [a] (mg/kg)
	Route-Specific HBG (mg/kg)		HBG <sub>C</sub> (mg/kg) TCR = 1E-05	Route-Specific HBG (mg/kg)		HBG <sub>NC</sub> (mg/kg) THQ = 1	
	Oral (HBG <sub>o</sub> ) <sub>C</sub>	Dermal (HBG <sub>d</sub> ) <sub>C</sub>		Oral (HBG <sub>o</sub> ) <sub>NC</sub>	Dermal (HBG <sub>d</sub> ) <sub>NC</sub>		
<b>Semi Volatile Organic Compounds</b>							
Benz[a]anthracene	6.6E+02	4.9E+02	2.8E+02	NA	NA	NA	280 C
Benzo[a]pyrene	6.6E+01	4.9E+01	2.8E+01	NA	NA	NA	28 C
Benzo[b]fluoranthene	6.6E+02	4.9E+02	2.8E+02	NA	NA	NA	280 C
Dibenz[a,h]anthracene	6.6E+01	4.9E+01	2.8E+01	NA	NA	NA	28 C
Indeno[1,2,3-cd]pyrene	6.6E+02	4.9E+02	2.8E+02	NA	NA	NA	280 C

[a] Minimum of the HBG<sub>C</sub> (identified by "C") and hBG<sub>NC</sub> (identified by "N").

HBG	Health-based concentration goal.	TCR	Target cancer risk.
mg/kg	Milligrams per kilogram.	THQ	Target hazard quotient for non-cancer effects.
NA	Not available; insufficient data.		

Equations:

$$(HBG_o)_c = (TCR \times 45 \times 25,550 \times 1,000,000) / (50 \times 48 \times 10 \times CSF_o)$$

$$(HBG_d)_c = (TCR \times 45 \times 25,550 \times 1,000,000) / (2,583 \times 0.2 \times ABS_d \times 48 \times 10 \times CSF_a)$$

$$(HBG_o)_{nc} = (THQ \times 45 \times 3,650 \times 1,000,000) / (50 \times 48 \times 10 \times [1/RfD_o])$$

$$(HBG_d)_{nc} = (THQ \times 45 \times 3,650 \times 1,000,000) / (2,583 \times 0.2 \times ABS_d \times 48 \times 10 \times [1/RfD_a])$$

**Table 7-26**  
**Site-Specific Standard / Health-Based Concentration Goal Equations for Wading in Surface Water**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

ROUTE-SPECIFIC CONCENTRATION GOALS:

$$\text{Oral: } (HBG_o)_{C \text{ or } NC} = \frac{(TCR \text{ or } THQ) \times BW \times (AT_C \text{ or } AT_{NC})}{IR_{sw} \times EF \times ED \times [CSF_o \text{ or } (1/RfD_o)]}$$

$$\text{Dermal: } (HBG_d)_{C \text{ or } NC} = \frac{(TCR \text{ or } THQ) \times BW \times (AT_C \text{ or } AT_{NC})}{SSA_{sw} \times DA \times EF \times ED \times [CSF_a \text{ or } (1/RfD_a)]}$$

$$\text{Inorganics: } DA [0] = \frac{K_p \times ET_{sw}}{1000 \text{ cm}^3/\text{L}}$$

$$\text{Organics: } DA [1] = \frac{2 FA \times K_p}{1000 \text{ cm}^3/\text{L}} \times \sqrt{(6 \tau \times ET_{sw}) / \pi} \quad \text{if } ET_{sw} \leq t^*$$

$$\text{or } DA [2] = \frac{FA \times K_p}{1000 \text{ cm}^3/\text{L}} \times \left( \frac{ET_{sw}}{1+B} + \frac{2 \tau (1+3B+3B^2)}{(1+B)^2} \right) \quad \text{if } ET_{sw} > t^*$$

$$\text{Inhalation: } (HBG_i)_{C \text{ or } NC} = \frac{(TCR \text{ or } THQ) \times (AT_C \text{ or } AT_{NC})}{VF_{sw} \times ET_{sw} \times CF \times EF \times ED \times [IUR \text{ or } (1/RfC)]}$$

$$\text{where: } VF_{sw} = \frac{(1000 \text{ L/m}^3)}{(1/k_i) + [1/(H_o \times k_g)]} \times \frac{SA}{H_b \times W_b \times U_m} \quad (\text{USEPA 1988})$$

HBG BASED ON CANCER EFFECTS: (combining all exposure routes)

$$HBG_C = \frac{1}{[1 / (HBG_o)_C] + [1 / (HBG_d)_C] + [1 / (HBG_i)_C]}$$

HBG BASED ON NON-CANCER EFFECTS: (combining all exposure routes)

$$HBG_{NC} = \frac{1}{[1 / (HBG_o)_{NC}] + [1 / (HBG_d)_{NC}] + [1 / (HBG_i)_{NC}]}$$

HBG = MINIMUM of  $HBG_C$  and  $HBG_{NC}$

Variable Definitions:

$\tau$	Lag time for dermal absorption through the skin (hour) (Table 7-23).
$AT_C$	Averaging time for cancer effects (days) (Table 7-22).
$AT_{NC}$	Averaging time for non-cancer effects (days) (Table 7-22).
B	Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (unitless) (Table 7-23).
BW	Body weight (kg) (Table 7-22).
CF	Conversion Factor 0.042 day/hour.
CSF	Cancer slope factor for oral (CSF <sub>o</sub> ) or dermal (adjusted to an absorbed dose, CSF <sub>a</sub> ) (Table 7-24).
DA	Dermal absorption factor (L/cm <sup>2</sup> /day), calculated using Equation [0], [1], or [2], as appropriate.
ED	Exposure duration (years) (Table 7-22).
EF	Exposure frequency (days/year) (Table 7-22).

**Table 7-26**  
**Site-Specific Standard / Health-Based Concentration Goal Equations for Wading in Surface Water**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

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ET <sub>sw</sub>	Exposure time for wading water contact (hours/day) (Table 7-22).
FA	Fraction of absorbed water (unitless) (Table 7-23).
H	Henry's law constant (atm-m <sup>3</sup> /mol) (Table 7-4).
H <sub>b</sub>	Height of mixing zone (2 m).
HBG	Health-based concentration goal for groundwater (mg/L).
H <sub>o</sub>	Dimensionless Henry's law constant (unitless); calculated as H <sub>o</sub> = H/RT.
IR <sub>sw</sub>	Incidental ingestion rate of surface water (L/day) (Table 7-22).
IUR	Inhalation Unit Risk (m <sup>3</sup> /mg) (Table 7-24).
k <sub>g</sub>	Gas-phase mass transfer coefficient (m/sec) $\approx (8.3 \times 10^{-3} \text{ m/sec}) \times [(18 \text{ g/mol})/\text{MW}]^{0.335} \times (T/298)^{1.005}$ .
k <sub>l</sub>	Liquid-phase mass transfer coefficient (m/sec) $\approx (2.0 \times 10^{-5} \text{ m/sec}) \times (T/298) \times [(32 \text{ g/mol})/\text{MW}]^{1/2}$ .
K <sub>p</sub>	Permeability coefficient (cm/hour) (Table 7-23).
MW	Molecular weight (g/mol) (Table 7-4).
RfC	Reference concentration (mg/m <sup>3</sup> ) (Table 7-24).
RfD	Reference dose for oral (RfDo), or dermal (adjusted to an absorbed dose, RfDa), exposure (mg/kg/day) (Table 7-2)
RT	Product of the universal gas constant (R = 8.206 × 10 <sup>-5</sup> atm-m <sup>3</sup> /mol/K) and the relevant Kelvin temperature (T = 298.15 K); RT = 0.02447 atm-m <sup>3</sup> /mol.
SA	Source area (1 m <sup>2</sup> ).
SSA <sub>sw</sub>	Exposed skin surface area for surface water contact (cm <sup>2</sup> ) (Table 7-22).
t*	Time required to reach steady state (hour) (Table 7-23).
TCR	Target cancer risk (unitless).
THQ	Target hazard quotient for noncancer effects (unitless).
U <sub>m</sub>	Mean wind speed (m/sec).
VF <sub>sw</sub>	Volatilization factor from surface water (L/m <sup>3</sup> ).
W <sub>b</sub>	Width of mixing zone (1 m).

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**Table 7-27**  
**Water Volatilization Factors**  
**Human Health Risk Assessment**  
**HAA-01 Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituent	Enthalpy of vaporization at at soil temp. [a] (cal/mol) ( $\Delta H_v$ )	Henry's Law Constant at soil temp. [a] (unitless) ( $H_o'$ )	Gas-Phase Mass Transfer Coefficient (cm/s) ( $K_g$ )	Liquid-Phase Mass Transfer Coefficient (cm/s) ( $K_L$ )	Overall Mass Transfer Coefficient (cm/s) ( $K_i$ )	Exposed Water Volatilization Factor [b] (L/m <sup>3</sup> ) (VF <sub>sw</sub> )
<b>Volatile Organic Compounds</b>						
Acetone	5.64E+03	9.10E-04	5.3E-01	1.41E-03	1.3E-03	5.19E-02
Benzene	6.23E+03	1.37E-01	4.8E-01	1.22E-03	1.2E-03	1.71E-01
Ethylbenzene	7.62E+03	1.72E-01	4.4E-01	1.04E-03	1.0E-03	1.48E-01
2-Hexanone	2.04E+04	6.47E-04	4.5E-01	1.07E-03	9.9E-04	3.26E-02
Isopropyl benzene	9.39E+03	2.14E-01	4.2E-01	9.80E-04	9.8E-04	1.39E-01
Naphthalene	9.97E+03	7.76E-03	4.1E-01	9.49E-04	9.4E-04	1.05E-01
n-Propylbenzene	8.32E+03	2.15E-01	4.2E-01	9.80E-04	9.8E-04	1.39E-01
Toluene	6.94E+03	1.54E-01	4.6E-01	1.12E-03	1.1E-03	1.58E-01
1,2,4-Trimethylbenzene	8.64E+03	1.22E-01	4.2E-01	9.80E-04	9.8E-04	1.38E-01
Xylenes, Mixture	7.67E+03	1.12E-01	4.4E-01	1.04E-03	1.0E-03	1.47E-01
<b>Semi Volatile Organic Compounds</b>						
1-Methylnaphthalene	1.23E+04	7.37E-03	4.0E-01	9.01E-04	9.0E-04	9.88E-02
<b>Inorganics</b>						
Barium	—	—	—	—	—	—
Cadmium	—	—	—	—	—	—
Chromium, Total	—	—	—	—	—	—
Mercury	1.43E+04	1.36E-01	3.5E-01	7.59E-04	7.6E-04	1.07E-01

cal/mol      Calories per mol.  
cm/s          Centimeter per second.  
L/m<sup>3</sup>         Liters per cubic meter.

[a] Enthalpy of vaporization and Henry's constant were adjusted for soil temperature based on USEPA recommended methods (USEPA 2001).

[b] Volatilization factors for exposed water were calculated using equations from USEPA 1988.

Mean annual wind speed (m/sec) for Savannah, Georgia (<http://www.climate-zone.com/climate/united-states/georgia/savannah/>).  
Assuming dispersion is occurring within a box that is a square meter in area and 2 meters high.

3.5
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**Table 7-28**  
**Health-Based Concentration Goal Calculations for Exposure to Surface Water of a Youth Wader**  
**HAA-01 Former Fire Training Area and Departure/Arrival Airfield Control Group (DACG) Chlorinated Solvent**  
**Fort Stewart / Hunter Army Airfield - Savannah, Georgia**

Constituent	DA [a] (L/cm <sup>2</sup> /day)	VFsw [b] (L/m <sup>3</sup> )	CANCER EFFECTS				NON-CANCER EFFECTS				Minimum HBG [c] (mg/L)	
			Route-Specific HBG (mg/L)			HBG <sub>C</sub> (mg/L) TCR = 1E-05	Route-Specific HBG (mg/L)			HBG <sub>NC</sub> (mg/L) THQ = 1		
			Oral (HBG <sub>o</sub> ) <sub>C</sub>	Dermal (HBG <sub>d</sub> ) <sub>C</sub>	Inhalation (HBG <sub>i</sub> ) <sub>C</sub>		Oral (HBG <sub>o</sub> ) <sub>NC</sub>	Dermal (HBG <sub>d</sub> ) <sub>NC</sub>	Inhalation (HBG <sub>i</sub> ) <sub>NC</sub>			
<b>Volatile Organic Compounds</b>												
Acetone	7.37E-07 [2]	5.19E-02	NA	NA	NA	NA	6.2E+04	1.6E+05	1.1E+05	3.2E+04	31,588	N
Benzene	2.33E-05 [2]	1.71E-01	8.7E+01	7.2E+00	9.5E+00	3.9E+00	2.7E+02	2.3E+01	3.2E+01	1.3E+01	3.9	C
Ethylbenzene	8.83E-05 [1]	1.48E-01	4.4E+02	9.5E+00	3.4E+01	7.3E+00	6.8E+03	1.5E+02	1.2E+03	1.3E+02	7.3	C
2-Hexanone	6.23E-06 [2]	3.26E-02	NA	NA	NA	NA	3.4E+02	1.1E+02	1.7E+02	5.5E+01	55	N
Isopropyl benzene	1.74E-04 [1]	1.39E-01	NA	NA	NA	NA	6.8E+03	7.6E+01	5.2E+02	6.6E+01	66	N
Naphthalene	9.72E-05 [1]	1.05E-01	NA	NA	3.6E+00	3.6E+00	1.4E+03	2.7E+01	5.2E+00	4.3E+00	3.6	C
n-Propylbenzene	2.84E-04 [1]	1.39E-01	NA	NA	NA	NA	6.8E+03	4.7E+01	1.3E+03	4.5E+01	45	N
Toluene	5.21E-05 [2]	1.58E-01	NA	NA	NA	NA	5.5E+03	2.0E+02	5.7E+03	1.9E+02	189	N
1,2,4-Trimethylbenzene	2.57E-04 [1]	1.38E-01	NA	NA	NA	NA	6.8E+02	5.1E+00	9.2E+00	3.3E+00	3.3	N
Xylenes, Mixture	9.49E-05 [1]	1.47E-01	NA	NA	NA	NA	1.4E+04	2.8E+02	1.2E+02	8.5E+01	85	N
<b>Semi Volatile Organic Compounds</b>												
1-Methylnaphthalene	3.26E-04 [1]	9.88E-02	1.7E+02	9.8E-01	NA	9.8E-01	4.8E+03	2.8E+01	NA	2.8E+01	0.98	C
<b>Inorganics</b>												
Barium	1.00E-06 [0]	—	NA	NA	—	NA	1.4E+04	1.9E+03	—	1.6E+03	1,633	N
Cadmium	1.00E-06 [0]	—	NA	NA	—	NA	3.4E+01	1.7E+00	—	1.6E+00	1.6	N
Chromium, Total	1.00E-06 [0]	—	9.6E+00	2.4E-01	—	2.4E-01	2.1E+02	5.2E+00	—	5.0E+00	0.24	C
Mercury	1.00E-06 [0]	1.07E-01	NA	NA	NA	NA	NA	NA	5.1E-01	5.1E-01	0.51	N

[a] The dermal absorption factor was calculated using Equation [0], [1], or [2], as indicated, from Table 7-23

[b] The volatilization factor [VF] calculated in Table 7-27

[c] Minimum of the HBG<sub>C</sub> (identified by "C") and HBG<sub>NC</sub> (identified by "N").

HBG Health-based concentration goal for groundwater

L/cm<sup>2</sup>/day Liter per cubic centimeter per day.

L/m<sup>3</sup> Liters per cubic meter.

mg/L Milligrams per liter.

TCR Target cancer risk.

THQ Target hazard quotient for noncancer effects.

Equations:

$$(HBGo)_c = (TCR \times 45 \times 25,550) / (0.005 \times 48 \times 10 \times CSFo)$$

$$(HBGd)_c = (TCR \times 45 \times 25,550) / (2,583 \times DA \times 48 \times 10 \times CSFa)$$

$$(HBGi)_c = (TCR \times 25,550) / (VFsw \times 0.042 \times 1.0 \times 48 \times 10 \times IUR)$$

$$(HBGo)_{nc} = (THQ \times 45 \times 3,650) / (0.005 \times 48 \times 10 \times [1/RfDo])$$

$$(HBGd)_{nc} = (THQ \times 45 \times 3,650) / (2,583 \times DA \times 48 \times 10 \times [1/RfDa])$$

$$(HBGi)_{nc} = (THQ \times 3,650) / (VFsw \times 0.042 \times 1.0 \times 48 \times 10 \times [1/RfC])$$



Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	PSB-1	PSB-2	PSB-3	PSB-5	FTASB-04	FTASB-06	FTASB-09	FTASB-13	FTASB-14	FTASB-15	FTASB-16	FTASB-17	HMW-10	HMW-12	HMW-14	HMW-14R	HMW-15
	3/3/1992	3/3/1992	3/4/1992	3/4/1992	8/23/1995	8/23/1995	8/23/1995	10/3/1995	10/4/1995	10/4/1995	10/4/1995	10/4/1995	10/3/1995	10/2/1995	7/28/1999	1/5/2000	7/28/1999
Semi-Volatile Organic Compounds (SVOCs) (mg/kg)	0 - 1	0 - 1	0 - 1	0 - 1	.5 - 1	.5 - 1	.5 - 1	.5 - 2.5	.5 - 2.5	.5 - 2.5	.5 - 2.5	.5 - 2.5	0 - 2	1.5 - 3	0 - 1.5	0 - 2	0 - 1.5
1,2,4-Trichlorobenzene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
1,2-Dichlorobenzene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	< 0.38 U	< 0.074 U	< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	<b>0.099 JQ</b>	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
1,3-Dichlorobenzene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	< 0.38 U	< 0.074 U	< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
1,4-Dichlorobenzene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	< 0.38 U	< 0.074 U	< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
1-Methylnaphthalene																	
2,4,5-Trichlorophenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2,4,6-Tribromophenol																	
2,4,6-Trichlorophenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2,4-Dichlorophenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2,4-Dimethylphenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2,4-Dinitrophenol					< 0.92 U	< 0.86 U	< 1.1 U	< 0.92 U	< 0.92 U	< 0.9 U	< 0.88 U	< 0.89 U	< 0.94 U	< 1 U			
2,4-Dinitrotoluene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2,6-Dinitrotoluene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Chloronaphthalene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Chlorophenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Fluorobiphenyl																	
2-Fluorophenol																	
2-Methyl-4,6-dinitrophenol					< 0.92 U	< 0.86 U	< 1.1 U	< 0.92 U	< 0.92 U	< 0.9 U	< 0.88 U	< 0.89 U	< 0.94 U	< 1 U			
2-Methylnaphthalene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Methylphenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Nitrobenzenamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
2-Nitrophenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
3,3'-Dichlorobenzidine					< 0.75 U	< 0.7 U	< 0.85 U	< 0.74 U	< 0.75 U	< 0.72 U	< 0.71 U	< 0.72 U	< 0.76 U	< 0.82 U			
3-Nitrobenzenamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Bromofluorobenzene																	
4-Bromophenyl phenyl ether					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Chloro-3-methylphenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Chlorobenzenamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Chlorophenyl phenyl ether					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Methylphenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Nitrobenzenamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
4-Nitrophenol					< 0.92 U	< 0.86 U	< 1.1 U	< 0.92 U	< 0.92 U	< 0.9 U	< 0.88 U	< 0.89 U	< 0.94 U	< 1 U			
Acenaphthene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	< 0.38 U	< 0.074 U	< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U	< 0.36 U	< 0.34 U	< 0.38 U
Acenaphthylene	< 0.17 U	< 0.17 U [ $< 0.081$ U]	< 0.81 U	< 0.074 U	< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	<b>0.15 JQ</b>	<b>0.26 JQ</b>	< 0.35 U	<b>0.24 JQ</b>	< 0.37 U	<b>0.11 JQ</b>	< 0.36 U	< 0.34 U	< 0.38 U
Acetophenone																	
Anthracene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	<b>0.67</b>	< 0.074 U	< 0.37 U	<b>0.14 J</b>	< 0.42 U	< 0.36 U	<b>0.13 JQ</b>	<b>0.15 JQ</b>	< 0.35 U	<b>0.15 JQ</b>	<b>0.042 JQ</b>	<b>0.11 JQ</b>	< 0.36 U	< 0.34 U	< 0.38 U
Atrazine																	
Benz(a)anthracene	<b>0.37</b>	0.17 [0.14]	<b>5.3</b>	< 0.11 U	< 0.37 U	<b>0.17 J</b>	< 0.42 U	<b>0.16 JQ</b>	<b>0.93</b>	<b>0.73</b>	< 0.35 U	<b>0.63</b>	<b>0.34 JQ</b>	<b>0.84</b>	< 0.36 U	< 0.34 U	< 0.38 U
Benzaldehyde																	
Benzenemethanol					< 0.75 U	< 0.7 U	< 0.85 U	< 0.74 U	< 0.75 U	< 0.72 U	< 0.71 U	< 0.72 U	< 0.76 U	< 0.82 U			
Benzo(a)pyrene	<b>0.32</b>	0.22 [0.18]	<b>4.8</b>	< 0.15 U	< 0.37 U	<b>0.24 JL</b>	< 0.42 JL	<b>0.16 JQ</b>	<b>1.2</b>	<b>0.79</b>	< 0.35 U	<b>0.76</b>	<b>0.3 JQ</b>	<b>0.91</b>	< 0.36 U	< 0.34 U	< 0.38 U
Benzo(b)fluoranthene	<b>0.56</b>	0.37 [0.16]	<b>6.9</b>	< 0.11 U	< 0.37 U	<b>0.47 LJL</b>	< 0.42 JL	<b>0.32 JQ</b>	<b>2.6</b>	<b>2.2</b>	< 0.35 U	<b>2</b>	<b>0.72</b>	<b>1.8</b>	< 0.36 U	< 0.34 U	< 0.38 U
Benzo(ghi)perylene	< 0.18 U	< 0.18 U [ $< 0.18$ U]	< 0.87 U	< 0.17 U	< 0.37 U	<b>0.16 JL</b>	< 0.42 JL	<b>0.095 JQ</b>	<b>0.85</b>	<b>0.66</b>	< 0.35 U	<b>0.58</b>	<b>0.21 JQ</b>	<b>0.44</b>	< 0.36 U	< 0.34 U	< 0.38 U
Benzo(k)fluoranthene	<b>0.25</b>	0.15 [0.15]	<b>2.7</b>	< 0.11 U	< 0.37 U	< 0.34 JL	< 0.42 JL	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U	< 0.36 U	< 0.34 U	< 0.38 U
Benzoic acid					< 1.9 U	< 1.8 U	< 2.2 U	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U	< 1.8 U	<b>0.51 JQ</b>	< 2.1 U			
Bis(2-chloroethoxy)methane					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Bis(2-chloroethyl) ether					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Bis(2-chloroisopropyl) ether					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Bis(2-ethylhexyl)phthalate					<b>0.086 J</b>	<b>0.16 JL</b>	<b>0.23 J</b>	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	<b>0.16 JQ</b>	<b>0.14 JQ</b>	<b>0.39 J</b>	< 0.36 U	< 0.34 U	< 0.38 U
Butyl benzyl phthalate					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	<b>0.1 JQ</b>			
Caprolactam																	
Carbazole																	
Chrysene	<b>0.56</b>	0.2 [0.13]	<b>5.3</b>	< 0.11 U	< 0.37 U	<b>0.26 J</b>	< 0.42 U	<b>0.2 JQ</b>	<b>1</b>	<b>0.75</b>	< 0.35 U	<b>0.71</b>	<b>0.39</b>	<b>0.83</b>	< 0.36 U	< 0.34 U	< 0.38 U
Dibenz(a,h)anthracene	< 0.18 U	< 0.18 U [ $< 0.16$ U]	< 0.87 U	< 0.17 U	< 0.37 U	< 0.34 JL	< 0.42 JL	< 0.36 U	< 0.37 U	<b>0.2 JQ</b>	< 0.35 U	<b>0.091 JQ</b>	< 0.37 U	<b>0.16 JQ</b>	< 0.36 U	< 0.34 U	< 0.38 U
Dibenzofuran					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Dichlorobenzene	< 0.011 U	< 0.012 U [ $< 0.012$ U]	< 0.011 U	< 0.011 U													
Diethyl phthalate					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Dimethyl phthalate					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Di-n-butyl phthalate					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Di-n-octylphthalate					< 0.37 U	< 0.34 JL	< 0.42 JL	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Fluoranthene	<b>0.69</b>	0.12 [0.16]	<b>8.1</b>	< 0.077 U	< 0.37 U	<b>0.36</b>	< 0.42 U	<b>0.22 JQ</b>	<b>0.73</b>	<b>0.67</b>	< 0.35 U	<b>1.1</b>	<b>0.51</b>	<b>0.87</b>	< 0.36 U	< 0.34 U	< 0.38 U
Fluorene	< 0.078 U	< 0.081 U [ $< 0.081$ U]	< 0.38 U	< 0.074 U	< 0.37 U	<b>0.16 JL</b>	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U	< 0.36 U	< 0.34 U	< 0.38 U
Hexachlorobenzene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Hexachlorobutadiene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Hexachlorocyclopentadiene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Hexachloroethane					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35						

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	PSB-1	PSB-2	PSB-3	PSB-5	FTASB-04	FTASB-06	FTASB-09	FTASB-13	FTASB-14	FTASB-15	FTASB-16	FTASB-17	HMW-10	HMW-12	HMW-14	HMW-14R	HMW-15
	3/3/1992	3/3/1992	3/4/1992	3/4/1992	8/23/1995	8/23/1995	8/23/1995	10/3/1995	10/4/1995	10/4/1995	10/4/1995	10/4/1995	10/3/1995	10/2/1995	7/28/1999	1/5/2000	7/28/1999
	0 - 1	0 - 1	0 - 1	0 - 1	.5 - 1	.5 - 1	.5 - 1	.5 - 2.5	.5 - 2.5	.5 - 2.5	.5 - 2.5	.5 - 2.5	0 - 2	1.5 - 3	0 - 1.5	0 - 2	0 - 1.5
Nitrobenzene					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
N-Nitroso-di-n-propylamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
N-Nitrosodiphenylamine					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Pentachlorophenol					< 0.92 U	< 0.86 U	< 1.1 U	< 0.92 U	< 0.92 U	< 0.9 U	< 0.88 U	< 0.89 U	< 0.94 U	< 1 U			
Phenanthrene	<b>0.44</b>	< 0.081 U [ $< 0.081$ U]	<b>0.67</b>	< 0.074 U	< 0.37 U	<b>0.3 J</b>	< 0.42 U	<b>0.049 JQ</b>	<b>0.098 JQ</b>	<b>0.062 JQ</b>	< 0.35 U	<b>0.3 JQ</b>	<b>0.17 JQ</b>	<b>0.071 JQ</b>	< 0.36 U	< 0.34 U	< 0.38 U
Phenol					< 0.37 U	< 0.34 U	< 0.42 U	< 0.36 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.35 U	< 0.37 U	< 0.4 U			
Pyrene	<b>0.58</b>	0.19 [0.13]	<b>5.2</b>	< 0.074 U	< 0.37 U	<b>0.47</b>	< 0.42 U	<b>0.26 JQ</b>	<b>1.2</b>	<b>0.78</b>	< 0.35 U	<b>1</b>	<b>0.67</b>	<b>0.9</b>	< 0.36 U	< 0.34 U	< 0.38 U
<b>Metals (mg/kg)</b>																	
Arsenic	<b>1.02</b>	1.28 [1.32]	<b>0.51</b>	<b>0.61</b>	<b>0.82</b>	<b>0.56</b>	<b>0.66</b>	<b>1.56</b>	<b>1.28</b>	<b>1.95</b>	<b>1.43</b>	<b>2.14</b>	<b>1.64</b>	<b>0.51 JQ</b>			
Barium	<b>11.4</b>	14.9 [19.1]	<b>18.3</b>	<b>16.2</b>	<b>11</b>	<b>7.45</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>18</b>	<b>11</b>	<b>18</b>	<b>16</b>	<b>5.96 JQ</b>			
Cadmium	< 0.52 U	< 0.54 U [ $< 0.54$ U]	< 0.51 U	< 0.5 U	<b>2.2</b>	<b>2.1</b>	<b>2.5</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.1</b>	<b>2.2</b>	<b>2.3</b>	< 2.4 U			
Chromium	<b>5.61</b>	5.88 [6.64]	<b>3.55</b>	<b>3.68</b>	<b>3</b>	<b>5.1</b>	<b>2.4</b>	<b>5.7</b>	<b>4.4</b>	<b>4.1</b>	<b>3.4</b>	<b>4.7</b>	<b>7.7</b>	<b>3.6 JQ</b>			
Lead	<b>28</b>	17.3 [15.8]	<b>7.39</b>	< 6.7 U	<b>2.7</b>	<b>15</b>	<b>4.7</b>	<b>7.7</b>	<b>11.4</b>	<b>13.9</b>	<b>3.4</b>	<b>12.4</b>	<b>17</b>	<b>2.5</b>			
Mercury	< 0.09 U	< 0.1 U [ $< 0.1$ U]	< 0.09 U	< 0.09 U	<b>0.02</b>	<b>0.035</b>	<b>0.025</b>	<b>0.045</b>	<b>0.032</b>	<b>0.026</b>	<b>0.019</b>	<b>0.045</b>	<b>0.046</b>	<b>0.035</b>			
Selenium	< 0.27 U	< 0.28 U [ $< 0.28$ U]	< 0.26 U	< 0.26 U	<b>0.35</b>	<b>0.438</b>	<b>0.59</b>	<b>0.17</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>0.2</b>	<b>0.23</b>			
Silver	< 0.78 U	< 0.81 U [ $< 0.81$ U]	< 0.77 U	< 0.75 U	<b>2.2</b>	<b>2.1</b>	<b>2.5</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.1</b>	<b>2.2</b>	<b>2.3</b>	< 2.4 U			
<b>Other (mg/kg)</b>																	
Kerosene					<b>8</b>	<b>100</b>	<b>100</b>	<b>8</b>	<b>10</b>	<b>30</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>			
TPH (as Diesel)					<b>8</b>	<b>100</b>	<b>100</b>	<b>8</b>	<b>10</b>	<b>30</b>	<b>7</b>	<b>8</b>	<b>50</b>	<b>9</b>			
TPH (as Gasoline)					<b>8</b>	<b>100</b>	<b>100</b>	<b>8</b>	<b>10</b>	<b>30</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>			
<b>Pesticides (mg/kg)</b>																	
Aldrin																	
alpha-Chlordane																	
Aroclor 1254																	
DDD																	
DDE, p,p'																	
DDT																	
delta BHC																	
Dieldrin																	
Endosulfan I																	
Endosulfan II																	
Endosulfan Sulfate																	
Endrin																	
Endrin Aldehyde																	
Endrin ketone																	
gamma-Chlordane																	
Heptachlor																	
Heptachlor epoxide																	
Hexachlorocyclohexane, Alpha-																	
Hexachlorocyclohexane, Beta-																	
Lindane																	
Methoxychlor																	
Toxaphene																	

NOTES ON LAST PAGE

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	HMW-16A	HMW-17	SB-018	SB-019	SB-020	SB-021	SB-022	SB-023	SB-024	SB-025	SB-026	SB-027	SB-028	SB-029	SB-030	SB-031
	7/29/1999	7/28/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/29/1999	7/29/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	1/5/2000	1/5/2000
	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 2	.5 - 2
<b>VOCs (mg/kg)</b>																
1,1,1-Trichloroethane																
1,1,2,2-Tetrachloroethane																
1,1,2-Trichloro-1,2,2-Trifluoroethane																
1,1,2-Trichloroethane																
1,1-Dichloroethane																
1,1-Dichloroethene																
1,2,4-Trichlorobenzene																
1,2-Dibromo-3-chloropropane (DBCP)																
1,2-Dibromoethane																
1,2-Dichlorobenzene																
1,2-Dichloroethane																
1,2-Dichloroethene																
1,2-Dichloropropane																
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
2-Butanone																
2-Chloroethyl vinyl ether																
2-Hexanone																
4-Methyl-2-pentanone																
Acetone	0.17	< 0.06 U	< 0.0056 U	< 0.064 U	< 0.062 U	< 0.064 U	< 0.066 U	< 0.064 U	0.16	< 0.056 U	0.079	< 0.065 U	< 0.067 U	< 0.064 U	< 0.053 U	< 0.053 U
Benzene																
Benzene, 1-methylethyl																
Bromodichloromethane																
Bromomethane																
Carbon disulfide																
Carbon tetrachloride																
CFC-11																
CFC-12																
Chlorobenzene																
Chloroethane																
Chloroform																
Chloromethane																
cis-1,2-Dichloroethene	< 0.0062 U	< 0.006 U	< 0.0056 U	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
cis-1,3-Dichloropropene																
Cyclohexane																
Dibromochloromethane																
Diethyl ether																
Ethylbenzene	< 0.0062 U	< 0.006 U	< 0.0056 U	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
Methyl acetate																
Methyl tert-butyl ether																
Methylcyclohexane																
Methylene chloride																
Styrene																
Tetrachloroethene	< 0.0062 U	< 0.006 U	0.0061	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
Toluene	< 0.0062 U	< 0.006 U	< 0.0056 U	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
TPH																
trans-1,2-Dichloroethene	< 0.0062 U	< 0.006 U	< 0.0056 U	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
trans-1,3-Dichloropropene																
Tribromomethane																
Trichloroethene																
Vinyl acetate																
Vinyl chloride																
Xylenes (total)	< 0.0062 U	< 0.006 U	< 0.0056 U	< 0.0064 U	< 0.0062 U	< 0.0064 U	< 0.0066 U	< 0.0064 U	< 0.011 U	< 0.0056 U	< 0.0069 U	< 0.0065 U	< 0.0067 U	< 0.0064 U	< 0.053 U	< 0.053 U
1,1'-Biphenyl																

NOTES ON LAST PAGE

Table 8-1  
 Historical Soil Sampling Summary  
 HAA-01 former FTA and DAACG Area

	HMW-16A	HMW-17	SB-018	SB-019	SB-020	SB-021	SB-022	SB-023	SB-024	SB-025	SB-026	SB-027	SB-028	SB-029	SB-030	SB-031
	7/29/1999	7/28/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/29/1999	7/29/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	1/5/2000	1/5/2000
	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 2	.5 - 2
<b>Semi-Volatile Organic Compounds (SVOCs) (mg/kg)</b>																
1,2,4-Trichlorobenzene																
1,2-Dichlorobenzene																
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
1-Methylnaphthalene																
2,4,5-Trichlorophenol																
2,4,6-Tribromophenol																
2,4,6-Trichlorophenol																
2,4-Dichlorophenol																
2,4-Dimethylphenol																
2,4-Dinitrophenol																
2,4-Dinitrotoluene																
2,6-Dinitrotoluene																
2-Chloronaphthalene																
2-Chlorophenol																
2-Fluorobiphenyl																
2-Fluorophenol																
2-Methyl-4,6-dinitrophenol																
2-Methylnaphthalene																
2-Methylphenol																
2-Nitrobenzenamine																
2-Nitrophenol																
3,3'-Dichlorobenzidine																
3-Nitrobenzenamine																
4-Bromofluorobenzene																
4-Bromophenyl phenyl ether																
4-Chloro-3-methylphenol																
4-Chlorobenzenamine																
4-Chlorophenyl phenyl ether																
4-Methylphenol																
4-Nitrobenzenamine																
4-Nitrophenol																
Acenaphthene	< 3.5 U	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	< 0.37 U	< 0.41 U	< 1.4 U	< 0.37 U	< 0.36 U	< 0.35 U	
Acenaphthylene	<b>3.6</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	<b>1.6</b>	<b>0.83</b>	<b>2.4</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Acetophenone																
Anthracene	<b>7.5</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	<b>1.5</b>	<b>2.2</b>	<b>2.8</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Atrazine																
Benz(a)anthracene	<b>34</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.51</b>	< 0.48 U	<b>7.4</b>	<b>6.8</b>	<b>17</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Benzaldehyde																
Benzenemethanol																
Benzo(a)pyrene	<b>26</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.75</b>	< 0.48 U	<b>6.2</b>	<b>5.2</b>	<b>16</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Benzo(b)fluoranthene	<b>28</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.74</b>	< 0.48 U	<b>7</b>	<b>5.8</b>	<b>17</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Benzo(ghi)perylene	<b>14</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.56</b>	< 0.48 U	<b>3.8</b>	<b>3</b>	<b>9.5</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Benzo(k)fluoranthene	<b>27</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.63</b>	< 0.48 U	<b>5.6</b>	<b>4.9</b>	<b>14</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Benzoic acid																
Bis(2-chloroethoxy)methane																
Bis(2-chloroethyl) ether																
Bis(2-chloroisopropyl) ether																
Bis(2-ethylhexyl)phthalate	< 3.5 U	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	< 0.37 U	< 0.41 U	< 1.4 U	< 0.37 U	< 0.36 U	< 0.35 U	
Butyl benzyl phthalate																
Caprolactam																
Carbazole																
Chrysene	<b>33</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.56</b>	< 0.48 U	<b>7.2</b>	<b>6.4</b>	<b>16</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Dibenz(a,h)anthracene	< 3.5 U	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	<b>1.8</b>	<b>0.47</b>	<b>3.9</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Dibenzofuran																
Dichlorobenzene																
Diethyl phthalate																
Dimethyl phthalate																
Di-n-butyl phthalate																
Di-n-octylphthalate																
Fluoranthene	<b>72</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.52</b>	< 0.48 U	<b>11</b>	<b>13</b>	<b>22</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Fluorene	< 3.5 U	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	< 0.37 U	<b>0.45</b>	< 1.4 U	< 0.37 U	< 0.36 U	< 0.35 U	
Hexachlorobenzene																
Hexachlorobutadiene																
Hexachlorocyclopentadiene																
Hexachloroethane																
Indeno(1,2,3-cd)pyrene	<b>16</b>	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	<b>0.52</b>	< 0.48 U	<b>4.6</b>	<b>3.5</b>	<b>11</b>	< 0.37 U	< 0.36 U	< 0.35 U	
Isophorone																
Naphthalene	< 3.5 U	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	< 0.37 U	< 0.41 U	< 1.4 U	< 0.37 U	< 0.36 U	< 0.35 U	

NOTES ON LAST PAGE

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	HMW-16A	HMW-17	SB-018	SB-019	SB-020	SB-021	SB-022	SB-023	SB-024	SB-025	SB-026	SB-027	SB-028	SB-029	SB-030	SB-031
	7/29/1999	7/28/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/29/1999	7/29/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	1/5/2000	1/5/2000
	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 1.5	0 - 2	.5 - 2
Nitrobenzene																
N-Nitroso-di-n-propylamine																
N-Nitrosodiphenylamine																
Pentachlorophenol																
Phenanthrene	32	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	< 0.36 U	< 0.48 U	2	7.3	7.1	< 0.37 U	< 0.36 U	< 0.35 U	
Phenol																
Pyrene	49	< 0.36 U	< 0.34 U	< 0.37 U	< 0.36 U	< 0.34 U	< 0.4 U	0.53	< 0.48 U	8.5	8.7	18	< 0.37 U	< 0.36 U	< 0.35 U	
<b>Metals (mg/kg)</b>																
Arsenic																
Barium																
Cadmium																
Chromium																
Lead																
Mercury																
Selenium																
Silver																
<b>Other (mg/kg)</b>																
Kerosene																
TPH (as Diesel)																
TPH (as Gasoline)																
<b>Pesticides (mg/kg)</b>																
Aldrin																
alpha-Chlordane																
Aroclor 1254																
DDD																
DDE, p,p'																
DDT																
delta BHC																
Dieldrin							< 0.004 U	< 0.0073 U	< 0.0048 U	0.038 J	0.026 J	0.043				
Endosulfan I																
Endosulfan II																
Endosulfan Sulfate																
Endrin																
Endrin Aldehyde																
Endrin ketone																
gamma-Chlordane																
Heptachlor																
Heptachlor epoxide																
Hexachlorocyclohexane, Alpha-																
Hexachlorocyclohexane, Beta-																
Lindane																
Methoxychlor							< 0.02 U	< 0.038 U	< 0.025 U	< 0.19 U	0.14 J	< 0.18 U				
Toxaphene																

NOTES ON LAST PAGE

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	SB-033	SB-034	SB-035	SB-036	SB-036	SB-037	SB-038	SB-039	SB-040	HMW-18	SB-041	SB-042	SB-043	SB-043A	SB-045	SB-049	SB-050
	1/5/2000	1/5/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/4/2000	1/4/2000	1/4/2000	1/6/2000	1/31/2000	1/31/2000	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001
<b>VOCs (mg/kg)</b>	.5 - 2	0 - 2	0 - 2	0 - 2	2 - 3	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2
1,1,1-Trichloroethane																	
1,1,2,2-Tetrachloroethane																	
1,1,2-Trichloro-1,2,2-Trifluoroethane																	
1,1,2-Trichloroethane																	
1,1-Dichloroethane																	
1,1-Dichloroethene																	
1,2,4-Trichlorobenzene																	
1,2-Dibromo-3-chloropropane (DBCP)																	
1,2-Dibromoethane																	
1,2-Dichlorobenzene																	
1,2-Dichloroethane																	
1,2-Dichloroethene																	
1,2-Dichloropropane																	
1,3-Dichlorobenzene																	
1,4-Dichlorobenzene																	
2-Butanone																	
2-Chloroethyl vinyl ether																	
2-Hexanone																	
4-Methyl-2-pentanone																	
Acetone	< 0.053 U	< 0.054 U	< 0.055 U	< 0.055 U	< 0.06 U	< 0.056 U	< 0.057 U	< 0.059 U	< 0.057 U	< 0.054 U			<b>0.088 JB</b>	< 0.06 U			
Benzene																	
Benzene, 1-methylethyl																	
Bromodichloromethane																	
Bromomethane																	
Carbon disulfide																	
Carbon tetrachloride																	
CFC-11																	
CFC-12																	
Chlorobenzene																	
Chloroethane																	
Chloroform																	
Chloromethane																	
cis-1,2-Dichloroethene	< 0.0053 U	< 0.0054 U	< 0.0055 U	< 0.0055 U	< 0.006 U	< 0.0056 U	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 U			< 0.0058 U	< 0.006 U			
cis-1,3-Dichloropropene																	
Cyclohexane																	
Dibromochloromethane																	
Diethyl ether																	
Ethylbenzene	< 0.0053 U	< 0.0054 U	< 0.0055 U	< 0.0055 U	< 0.006 U	< 0.0056 U	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 U			< 0.0058 U	< 0.006 U			
Methyl acetate																	
Methyl tert-butyl ether																	
Methylcyclohexane																	
Methylene chloride																	
Styrene																	
Tetrachloroethene	< 0.0053 U	< 0.0054 U	< 0.0055 U	< 0.0055 U	< 0.006 U	< 0.0056 U	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 U			< 0.0058 U	< 0.006 U			
Toluene	< 0.0053 UJ	< 0.0054 UJ	< 0.0055 UJ	< 0.0055 UJ	< 0.006 UJ	< 0.0056 UJ	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 UJ			< 0.0058 U	< 0.006 U			
TPH																	
trans-1,2-Dichloroethene	< 0.0053 U	< 0.0054 U	< 0.0055 U	< 0.0055 U	< 0.006 U	< 0.0056 U	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 U			< 0.0058 U	< 0.006 U			
trans-1,3-Dichloropropene																	
Tribromomethane																	
Trichloroethene																	
Vinyl acetate																	
Vinyl chloride																	
Xylenes (total)	< 0.0053 U	< 0.0054 U	< 0.0055 U	< 0.0055 U	< 0.006 U	< 0.0056 U	< 0.0057 U	< 0.0059 U	< 0.0057 U	< 0.0064 U			< 0.012 U	< 0.012 U			
1,1'-Biphenyl																	

NOTES ON LAST PAGE



Table 8-1  
 Historical Soil Sampling Summary  
 HAA-01 former FTA and DAACG Area

	SB-033	SB-034	SB-035	SB-036	SB-036	SB-037	SB-038	SB-039	SB-040	HMW-18	SB-041	SB-042	SB-043	SB-043A	SB-045	SB-049	SB-050
	1/5/2000	1/5/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/4/2000	1/4/2000	1/4/2000	1/6/2000	1/31/2000	1/31/2000	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001
	.5 - 2	0 - 2	0 - 2	0 - 2	2 - 3	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2
<b>Semi-Volatile Organic Compounds (SVOCs) (mg/kg)</b>																	
1,2,4-Trichlorobenzene																	
1,2-Dichlorobenzene																	
1,3-Dichlorobenzene																	
1,4-Dichlorobenzene																	
1-Methylnaphthalene																	
2,4,5-Trichlorophenol																	
2,4,6-Tribromophenol																	
2,4,6-Trichlorophenol																	
2,4-Dichlorophenol																	
2,4-Dimethylphenol																	
2,4-Dinitrophenol																	
2,4-Dinitrotoluene																	
2,6-Dinitrotoluene																	
2-Chloronaphthalene																	
2-Chlorophenol																	
2-Fluorobiphenyl																	
2-Fluorophenol																	
2-Methyl-4,6-dinitrophenol																	
2-Methylnaphthalene																	
2-Methylphenol																	
2-Nitrobenzenamine																	
2-Nitrophenol																	
3,3'-Dichlorobenzidine																	
3-Nitrobenzenamine																	
4-Bromofluorobenzene																	
4-Bromophenyl phenyl ether																	
4-Chloro-3-methylphenol																	
4-Chlorobenzenamine																	
4-Chlorophenyl phenyl ether																	
4-Methylphenol																	
4-Nitrobenzenamine																	
4-Nitrophenol																	
Acenaphthene			< 0.36 U	< 0.36 U	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Acenaphthylene			< 0.36 U	<b>0.97</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Acetophenone																	
Anthracene			< 0.36 U	<b>0.87</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Atrazine																	
Benz(a)anthracene			< 0.36 U	<b>8.7</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Benzaldehyde																	
Benzenemethanol																	
Benzo(a)pyrene			< 0.36 U	<b>8.9</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Benzo(b)fluoranthene			< 0.36 U	<b>8.7</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Benzo(ghi)perylene			< 0.36 U	<b>5.7</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Benzo(k)fluoranthene			< 0.36 U	<b>8.6</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Benzoic acid																	
Bis(2-chloroethoxy)methane																	
Bis(2-chloroethyl) ether																	
Bis(2-chloroisopropyl) ether																	
Bis(2-ethylhexyl)phthalate			< 0.36 U	< 0.36 U	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 UJ		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Butyl benzyl phthalate																	
Caprolactam																	
Carbazole																	
Chrysene			< 0.36 U	<b>8.9</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Dibenz(a,h)anthracene			< 0.36 U	< 0.36 U	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Dibenzofuran																	
Dichlorobenzene																	
Diethyl phthalate																	
Dimethyl phthalate																	
Di-n-butyl phthalate																	
Di-n-octylphthalate																	
Fluoranthene			<b>0.5</b>	<b>11</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Fluorene			< 0.36 U	< 0.36 U	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Hexachlorobenzene																	
Hexachlorobutadiene																	
Hexachlorocyclopentadiene																	
Hexachloroethane																	
Indeno(1,2,3-cd)pyrene			< 0.36 U	<b>5.7</b>	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Isophorone																	
Naphthalene			< 0.36 U	< 0.36 U	< 0.39 U	< 0.37 U				< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U

NOTES ON LAST PAGE

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	SB-033	SB-034	SB-035	SB-036	SB-036	SB-037	SB-038	SB-039	SB-040	HMW-18	SB-041	SB-042	SB-043	SB-043A	SB-045	SB-049	SB-050
	1/5/2000	1/5/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/4/2000	1/4/2000	1/4/2000	1/6/2000	1/31/2000	1/31/2000	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001
	.5 - 2	0 - 2	0 - 2	0 - 2	2 - 3	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2
Nitrobenzene																	
N-Nitroso-di-n-propylamine																	
N-Nitrosodiphenylamine																	
Pentachlorophenol																	
Phenanthrene			< 0.36 U	2.4 J	< 0.39 U	< 0.37 U	39			< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 U		< 0.34 UJL	< 0.33 UJL	< 0.34 U
Phenol																	
Pyrene			< 0.36 U	10 J	< 0.39 U	< 0.37 U	25 J			< 0.42 U	< 0.43 U	< 0.44 U	< 0.35 UJ		< 0.34 UJL	< 0.33 UJL	< 0.34 U
<b>Metals (mg/kg)</b>																	
Arsenic																	
Barium																	
Cadmium																	
Chromium													2.4				
Lead																	
Mercury																	
Selenium																	
Silver																	
<b>Other (mg/kg)</b>																	
Kerosene																	
TPH (as Diesel)																	
TPH (as Gasoline)																	
<b>Pesticides (mg/kg)</b>																	
Aldrin																	
alpha-Chlordane																	
Aroclor 1254																	
DDD																	
DDE, p,p'																	
DDT																	
delta BHC																	
Dieldrin		< 0.0036 U	< 0.0035 U	< 0.0036 U		< 0.0037 U				< 0.0042 U							
Endosulfan I																	
Endosulfan II																	
Endosulfan Sulfate																	
Endrin																	
Endrin Aldehyde																	
Endrin ketone																	
gamma-Chlordane																	
Heptachlor																	
Heptachlor epoxide																	
Hexachlorocyclohexane, Alpha-																	
Hexachlorocyclohexane, Beta-																	
Lindane																	
Methoxychlor		< 0.018 U	< 0.018 U	< 0.019 U		< 0.019 U				< 0.022 U							
Toxaphene																	

NOTES ON LAST PAGE

Table 8-1  
Historical Soil Sampling Summary  
HAA-01 former FTA and DAACG Area

	HA01-MW-09	HA01-MW-10	HA01-MW-11	HA01-MW-12	HA01-MW-13	HA01-MW-14	HA01-MW-15	HA01-MW-16	HA01-MW-17	HA01SB005
	11/4/2009	11/9/2009	11/9/2009	11/6/2009	11/10/2009	11/6/2009	11/5/2009	11/4/2009	11/4/2009	11/3/2009
	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	0 - 2
<b>VOCs (mg/kg)</b>										
1,1,1-Trichloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,1,2,2-Tetrachloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,1,2-Trichloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,1-Dichloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,1-Dichloroethene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,2,4-Trichlorobenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	<b>0.0024 J</b>	
1,2-Dibromo-3-chloropropane (DBCP)	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,2-Dibromoethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,2-Dichlorobenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	<b>0.0036 J</b>	
1,2-Dichloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,2-Dichloroethene										
1,2-Dichloropropane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,3-Dichlorobenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
1,4-Dichlorobenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
2-Butanone	< 0.011 U	< 0.018 U	< 0.013 U	< 0.014 U	< 0.014 U	< 0.012 U	< 0.013 U	< 0.011 U	< 0.012 U	
2-Chloroethyl vinyl ether										
2-Hexanone	< 0.011 U	< 0.018 U	< 0.013 U	< 0.014 U	< 0.014 U	< 0.012 U	< 0.013 U	< 0.011 U	< 0.012 U	
4-Methyl-2-pentanone	< 0.011 U	< 0.018 U	< 0.013 U	< 0.014 U	< 0.014 U	< 0.012 U	< 0.013 U	< 0.011 U	< 0.012 U	
Acetone	< 0.022 U	< 0.035 U	< 0.027 U	<b>0.024 UB</b>	< 0.028 U	< 0.025 U	< 0.025 U	< 0.022 U	< 0.025 U	
Benzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Benzene, 1-methylethyl	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Bromodichloromethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Bromomethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Carbon disulfide	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Carbon tetrachloride	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
CFC-11	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
CFC-12	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Chlorobenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Chloroethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Chloroform	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Chloromethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	<b>0.0069 J</b>	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
cis-1,2-Dichloroethene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
cis-1,3-Dichloropropene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Cyclohexane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Dibromochloromethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Diethyl ether										
Ethylbenzene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Methyl acetate	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Methyl tert-butyl ether	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Methylcyclohexane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Methylene chloride	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Styrene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Tetrachloroethene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Toluene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	<b>0.013</b>	
TPH										
trans-1,2-Dichloroethene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
trans-1,3-Dichloropropene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Tribromomethane	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Trichloroethene	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Vinyl acetate										
Vinyl chloride	< 0.0055 U	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	< 0.0061 U	
Xylenes (total)	<b>0.0035 J</b>	< 0.0088 U	< 0.0067 U	< 0.0069 U	< 0.0069 U	< 0.0062 U	< 0.0063 U	< 0.0054 U	<b>0.012</b>	
1,1'-Biphenyl										

NOTES ON LAST PAGE

Table 8-1  
 Historical Soil Sampling Summary  
 HAA-01 former FTA and DAACG Area

	HA01-MW-09	HA01-MW-10	HA01-MW-11	HA01-MW-12	HA01-MW-13	HA01-MW-14	HA01-MW-15	HA01-MW-16	HA01-MW-17	HA01SB005
	11/4/2009	11/9/2009	11/9/2009	11/6/2009	11/10/2009	11/6/2009	11/5/2009	11/4/2009	11/4/2009	11/3/2009
	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	0 - 2
<b>Semi-Volatile Organic Compounds (SVOCs) (mg/kg)</b>										
1,2,4-Trichlorobenzene										
1,2-Dichlorobenzene										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1-Methylnaphthalene										
2,4,5-Trichlorophenol										
2,4,6-Tribromophenol										
2,4,6-Trichlorophenol										
2,4-Dichlorophenol										
2,4-Dimethylphenol										
2,4-Dinitrophenol										
2,4-Dinitrotoluene										
2,6-Dinitrotoluene										
2-Chloronaphthalene										
2-Chlorophenol										
2-Fluorobiphenyl										
2-Fluorophenol										
2-Methyl-4,6-dinitrophenol										
2-Methylnaphthalene										
2-Methylphenol										
2-Nitrobenzenamine										
2-Nitrophenol										
3,3'-Dichlorobenzidine										
3-Nitrobenzenamine										
4-Bromofluorobenzene										
4-Bromophenyl phenyl ether										
4-Chloro-3-methylphenol										
4-Chlorobenzenamine										
4-Chlorophenyl phenyl ether										
4-Methylphenol										
4-Nitrobenzenamine										
4-Nitrophenol										
Acenaphthene										
Acenaphthylene										
Acetophenone										
Anthracene										
Atrazine										
Benz(a)anthracene										
Benzaldehyde										
Benzenemethanol										
Benzo(a)pyrene										
Benzo(b)fluoranthene										
Benzo(ghi)perylene										
Benzo(k)fluoranthene										
Benzoic acid										
Bis(2-chloroethoxy)methane										
Bis(2-chloroethyl) ether										
Bis(2-chloroisopropyl) ether										
Bis(2-ethylhexyl)phthalate										
Butyl benzyl phthalate										
Caprolactam										
Carbazole										
Chrysene										
Dibenz(a,h)anthracene										
Dibenzofuran										
Dichlorobenzene										
Diethyl phthalate										
Dimethyl phthalate										
Di-n-butyl phthalate										
Di-n-octylphthalate										
Fluoranthene										
Fluorene										
Hexachlorobenzene										
Hexachlorobutadiene										
Hexachlorocyclopentadiene										
Hexachloroethane										
Indeno(1,2,3-cd)pyrene										
Isophorone										
Naphthalene										

NOTES ON LAST PAGE

Table 8-1  
 Historical Soil Sampling Summary  
 HAA-01 former FTA and DAACG Area

	HA01-MW-09	HA01-MW-10	HA01-MW-11	HA01-MW-12	HA01-MW-13	HA01-MW-14	HA01-MW-15	HA01-MW-16	HA01-MW-17	HA01SB005
	11/4/2009	11/9/2009	11/9/2009	11/6/2009	11/10/2009	11/6/2009	11/5/2009	11/4/2009	11/4/2009	11/3/2009
	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2	0 - 2
Nitrobenzene										
N-Nitroso-di-n-propylamine										
N-Nitrosodiphenylamine										
Pentachlorophenol										
Phenanthrene										
Phenol										
Pyrene										
<b>Metals (mg/kg)</b>										
Arsenic	0.67	1	0.3 J	0.47 J	0.25 J	1.7	1.4	0.57	0.73	
Barium	23	10	8.2	4.3	2.4	25	13	3.6	3.6	
Cadmium	< 0.11 U	< 0.12 U	< 0.12 U	0.014 J	< 0.11 U	0.02 J	< 0.11 U	0.017 J	0.017 J	
Chromium	4	2	3.2	1.7	0.91	8.6	6.8	3	1.8	2.6
Lead	3.8	6	4.5	4.2	2.1	6.8	3.6	2.9	2.3	
Mercury	0.017 J	0.035 J	0.025 J	0.038 J	< 0.094 U	0.013 J	0.028 J	0.03 J	0.032 J	0.021 J
Selenium	< 0.53 U	< 0.58 U	< 0.62 U	< 0.55 U	< 0.57 U	< 0.53 U	< 0.57 U	< 0.53 U	< 0.57 U	
Silver	< 0.27 U	< 0.29 U	0.095 J	< 0.28 U	< 0.29 U	< 0.26 U	< 0.29 U	0.2 J	0.054 J	
<b>Other (mg/kg)</b>										
Kerosene										
TPH (as Diesel)										
TPH (as Gasoline)										
<b>Pesticides (mg/kg)</b>										
Aldrin	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
alpha-Chlordane	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Aroclor 1254										
DDD	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
DDE, p,p'	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
DDT	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	0.0049	< 0.0019 U	< 0.0018 U	< 0.0019 U	
delta BHC	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Dieldrin	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endosulfan I	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endosulfan II	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endosulfan Sulfate	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endrin	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endrin Aldehyde	< 0.0018 UJ	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Endrin ketone	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
gamma-Chlordane	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Heptachlor	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Heptachlor epoxide	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Hexachlorocyclohexane, Alpha-	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Hexachlorocyclohexane, Beta-	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Lindane	< 0.0018 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0019 U	
Methoxychlor	< 0.007 U	< 0.0079 U	< 0.0079 U	< 0.0075 U	< 0.0072 U	< 0.0071 U	< 0.0074 U	< 0.0073 U	< 0.0074 U	
Toxaphene	< 0.086 U	< 0.098 U	< 0.098 U	< 0.093 U	< 0.089 U	< 0.087 U	< 0.092 U	< 0.09 U	< 0.092 U	

NOTES ON LAST PAGE

Notes:

[ ] - Duplicate sample

**BOLD** - indicates the analyte was detected.

B - Analyte was detected in an associated blank as well as in the sample.

D - Sample was diluted for analysis.

U - The analyte was not detected above the reporting limit.

UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

mg/kg - Milligrams per Kilogram

SVOCs - Semi-volatile Organic Compounds

VOCs - Volatile Organic Compounds

**Table 8-2**  
**Federal- and State-Listed and Candidate Species of Potential Occurrence**  
**Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group (DAACG) Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Habitat	Habitat Present?
<b>Amphibians</b>							
<i>Ambystoma cingulatum</i>	Frosted Flatwoods Salamander	G2	S2	LT	T	Pine flatwoods; moist savannas; isolated cypress/gum ponds	no
<i>Pseudacris brimleyi</i>	Brimley's Chorus Frog	G5	S1			Moist forests; swamps; bottomlands	no
<i>Rana capito</i>	Gopher Frog	G3	S3		R	Sandhills; dry pine flatwoods; breed in isolated wetlands	no
<i>Stereochilus marginatus</i>	Many-lined Salamander	G5	S3			Sluggish, swampy streams and bayheads with substrate of leaf litter	no
<b>Birds</b>							
<i>Ammodramus maritimus</i>	Seaside Sparrow	G4	S3			Salt marshes	no
<i>Charadrius melodus</i>	Piping Plover	G3	S1	LT	T	Sandy beaches; tidal flats	no
<i>Charadrius wilsonia</i>	Wilson's Plover	G5	S2		T	Sandy beaches; tidal flats	no
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2		R	Sandy beaches; tidal flats; salt marshes	no
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S2		T	Edges of lakes & large rivers; seacoasts	no
<i>Himantopus mexicanus</i>	Black-necked Stilt	G5	S3			Shallow ponds; lagoons	no
<i>Lanius ludovicianus migrans</i>	Migrant Loggerhead Shrike	G4T3Q	S3			Open woods; field edges	no
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	E	Cypress/gum ponds; marshes; river swamps; bays	no
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	G5	S3S4			River swamps; marshes; cypress/gum ponds	no
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	G5	S4			River swamps; marshes; cypress/gum ponds	no
<i>Passerina ciris</i>	Painted Bunting	G5	S3			Lower coastal plain in thickets, woodland borders, and brushy areas	no
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	LE	E	Open pine woods; pine savannas	no
<i>Rynchops niger</i>	Black Skimmer	G5	S1		R	Tidal ponds; sandy beaches	no
<i>Sterna antillarum</i>	Least Tern	G4	S3		R	Sandy beaches; sandbars	no
<i>Tyto alba</i>	Barn owl	G5	S3S4			Georgia habitat information not available	no
<b>Fish</b>							
<i>Acipenser brevirostrum</i>	Shortnose Sturgeon	G3	S2	LE	E	Estuaries; lower end of large rivers in deep pools with soft substrates	no
<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic Sturgeon	G3T3	S3			Georgia habitat information not available	no
<i>Moxostoma robustum</i>	Robust Redhorse	G1	S1		E	Medium to large rivers, shallow riffles to deep flowing water; moderately swift current	no
<i>Umbra pygmaea</i>	Eastern Mudminnow	G5	S2S3			Sluggish streams, ponds, and sloughs with mud bottoms and heavy vegetation	no
<b>Invertebrates</b>							
<i>Toxolasma pullus</i>	Savannah Lilliput	G2	S2		T	Large rivers to small creeks, oxbows, and sloughs	no
<b>Mammals</b>							
<i>Eubalaena glacialis</i>	Northern Atlantic Right Whale	G1	S1	LE	E	Open ocean	no
<i>Lasiurus intermedius</i>	Northern Yellow Bat	G4G5	S2S3			Wooded areas near open water or fields	no
<i>Pseudorca crassidens</i>	False Killer Whale	G4	SNRN			Open ocean	no
<i>Trichechus manatus</i>	Manatee	G2	S1S2	LE	E	Open ocean; estuaries; tidal rivers	no
<b>Reptiles</b>							
<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S2	LT	E	Open ocean; sounds; coastal rivers; beaches	no
<i>Chelonia mydas</i>	Green Sea Turtle	G3	S1	LT	T	Open ocean; sounds; coastal rivers; beaches	no
<i>Clemmys guttata</i>	Spotted Turtle	G5	S3		U	Heavily vegetated swamps, marshes, bogs, and small ponds; nest and possibly hibernate in surrounding uplands	no
<i>Crotalus adamanteus</i>	Eastern Diamond-backed Rattlesnake	G4	S4			Early successional habitats on barrier islands and mainland; pine flatwoods; sandhills	no
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	G2	S1	LE	E	Open ocean; sounds; coastal beaches	no
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S2		T	Sandhills; dry hammocks; longleaf pine-turkey oak woods; old fields	no
<i>Lepidochelys kempii</i>	Kemp's or Atlantic Ridley	G1	S1	LE	E	Open ocean; sounds; coastal rivers; beaches	no
<i>Malaclemys terrapin</i>	Diamondback Terrapin	G4	S3		U	Entire coast, estuarine and marine edge; All saltmarsh, beaches	no

Notes:

Global rarity rank: 1 = very rare to 5 = very common globally.

State rarity rank: 1 = very rare to 5 = very common.

Data from:

US Fish and Wildlife Service (USFWS) Endangered Species Program online database <http://www.fws.gov/endangered/>

Georgia Department of Natural Resources Protected Species List by County (May 2010), online at <http://www.georgiawildlife.com/node/1370>

State protection status: E = Endangered, T = Threatened, R = Rare, U = Unusual.  
U.S. protection status: LE = Listed Endangered, LT = Listed Threatened, Candidate.

**Table 8-3**  
**SLERA - Constituents of Potential Ecological Concern in Surface Soil**  
**Screening Level Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Constituent	Frequency of Detection		Maximum Concentration (mg/kg)	Ecological Screening Value (ESVs) [a]		Maximum HQ [b] (unitless)	Screening Level Constituent of Potential Ecological Concern? [c]	
				Value	Source		(YES/no)	Rationale
<b>Volatile Organic Compounds</b>								
1,2,4-Trichlorobenzene	1 - 9	11%	0.0024	-		NA	YES	NSV
1,2-Dichlorobenzene	1 - 9	11%	0.0036	0.01	R4	0.4	no	HQ ≤ 1
2-Butanone	0 - 23	0%	-	-	R4	NA	no	
Acetone	8 - 50	16%	0.17	-		NA	YES	NSV
Benzene	0 - 23	0%	-	0.05	R4	NA	NA	HQ ≤ 1
CFC-11	3 - 13	23%	0.014	-		NA	YES	NSV
Chloromethane	1 - 23	4%	0.0069	-		NA	YES	NSV
Ethylbenzene	0 - 54	0%	-	0.05	R4	NA	NA	HQ ≤ 1
Kerosene	10 - 10	100%	100	-		NA	YES	NSV
Methylene chloride	3 - 23	13%	0.004	2	R4	0.002	no	HQ ≤ 1
Styrene	1 - 19	5%	0.001	0.1	R4	0.01	no	HQ ≤ 1
Tetrachloroethene	3 - 54	6%	0.0061	0.01	R4	0.6	no	HQ ≤ 1
Toluene	5 - 54	9%	0.02	0.05	R4	0.4	no	HQ ≤ 1
Xylenes (total)	3 - 54	6%	0.012	0.05	R4	0.2	no	HQ ≤ 1
<b>Semi-Volatile Organic Compounds</b>								
2-Methylnaphthalene	0 - 10	0%	-	-		NA	NA	
Acenaphthene	1 - 44	2%	1.7	20	R4	0.09	no	HQ ≤ 1
Acenaphthylene	10 - 44	23%	3.6	-		NA	YES	NSV
Anthracene	13 - 44	30%	7.5	0.1	R4	80	YES	HQ > 1
Benz(a)anthracene	17 - 44	39%	34	-		NA	YES	NSV
Benzo(a)pyrene	17 - 44	39%	26	0.1	R4	300	YES	HQ > 1
Benzo(b)fluoranthene	17 - 44	39%	28	-		NA	YES	NSV
Benzo(ghi)perylene	14 - 44	32%	14	-		NA	YES	NSV
Benzoic acid	1 - 10	10%	0.51	-		NA	YES	NSV
Benzo(k)fluoranthene	10 - 44	23%	27	-		NA	YES	NSV
Bis(2-ethylhexyl)phthalate	6 - 40	15%	0.39	0.1	R4	4	YES	HQ > 1
Butyl benzyl phthalate	1 - 10	10%	0.1	-		NA	YES	NSV
Chrysene	17 - 44	39%	33	-		NA	YES	NSV
Dibenz(a,h)anthracene	7 - 44	16%	3.9	-		NA	YES	NSV
Dibenzofuran	0 - 10	0%	-	-		NA	NA	
Di-n-butyl phthalate [d]	0 - 10	0%	-	200	R4	NA	NA	HQ ≤ 1
Fluoranthene	18 - 44	41%	72	0.1	R4	700	YES	HQ > 1
Fluorene	3 - 44	7%	3.9	30	R4	0.1	no	HQ ≤ 1
Indeno(1,2,3-cd)pyrene	14 - 44	32%	16	-		NA	YES	NSV
Naphthalene	2 - 44	5%	0.53	0.1	R4	5	YES	HQ > 1
Phenanthrene	15 - 44	34%	39	0.1	R4	400	YES	HQ > 1
Pyrene	17 - 44	39%	49	0.1	R4	500	YES	HQ > 1

**Table 8-3**  
**SLERA - Constituents of Potential Ecological Concern in Surface Soil**  
**Screening Level Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Constituent	Frequency of Detection		Maximum Concentration (mg/kg)	Ecological Screening Value (ESVs) [a] (mg/kg)		Maximum HQ [b] (unitless)	Screening Level Constituent of Potential Ecological Concern? [c]	
				Value	Source		(YES/no)	Rationale
<b>Pesticides</b>								
DDT	1 - 9	11%	0.0049	0.0025	R4	2	YES	HQ > 1
Dieldrin	3 - 20	15%	0.043	0.0005	R4	90	YES	HQ > 1
Methoxychlor	1 - 20	5%	0.14	-		NA	YES	NSV
<b>Metals, Total</b>								
Arsenic	23 - 23	100%	2.14	10	R4	0.2	no	HQ ≤ 1
Barium	23 - 23	100%	25	165	R4	0.2	no	HQ ≤ 1
Cadmium	13 - 23	57%	2.5	1.6	R4	2	YES	HQ > 1
Chromium	25 - 25	100%	8.6	0.4	R4	20	YES	HQ > 1
Lead	22 - 23	96%	28	50	R4	0.6	no	HQ ≤ 1
Mercury	19 - 24	79%	0.046	0.1	R4	0.5	no	HQ ≤ 1
Selenium	10 - 23	43%	1.1	0.81	R4	1	no	HQ ≤ 1
Silver	12 - 23	52%	2.5	2	R4	1	no	HQ ≤ 1

Notes:

- Not available.
- mg/kg Milligrams per kilogram.
- NA Not applicable.
- NSV No screening value

- [a] Ecological soil screening values from the following sources:  
USEPA Region 4 Ecological Screening Values (USEPA 2001b; R4).
- [b] The maximum hazard quotient (HQ) is the ratio of the maximum constituent concentration to the screening value. HQs are rounded to one significant figure.
- [c] Constituents with a hazard quotient (HQ) greater than 1 (HQ > 1) or without a screening value (NSV) were considered constituents of potential ecological concern (COPECs) for screening level assessment.
- [d] The screening value is based on phthalates.



**Table 8-4**  
**BERA - Constituents of Potential Ecological Concern in Surface Soil**  
**Screening Level Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Constituent	Frequency of Detection	Maximum Concentration (mg/kg)	Refined			Alternative Ecological Screening Value (ASVs) [c]		Refined HQ [d] (unitless)	Baseline Level		Bioaccumulative? [f] (YES/no)	
			Concentration [a] (mg/kg)	Exposure Point Concentration [a] (mg/kg)	Background Concentration [b] (mg/kg)	Value			Constituent of Potential Ecological Concern? [e] (YES/no)	Rationale		
						Value	Source					
<b>Volatile Organic Compounds</b>												
1,2,4-Trichlorobenzene	1 - 9	11%	0.0024	0.0024	m	NA	11.1	R5	0.0002	no	HQ ≤ 1	YES
Acetone	8 - 50	16%	0.17	0.17	m	NA	2.5	R5	0.07	no	HQ ≤ 1	no
CFC-11	3 - 13	23%	0.014	0.014	m	NA	16.4	R5	0.0009	no	HQ ≤ 1	no
Chloromethane	1 - 23	4%	0.0069	0.0069	m	NA	10.4	R5	0.0007	no	FOD<5%	no
<b>Semi-Volatile Organic Compounds</b>												
Acenaphthylene	10 - 44	23%	3.6	3.6	m	NA	682	R5	0.005	no	HQ ≤ 1	YES
Anthracene	13 - 44	30%	7.5	1.021		NA	1,480	R5	0.0007	no	HQ ≤ 1	YES
Benz(a)anthracene	17 - 44	39%	34	6.488		NA	5.21	R5	1	no	HQ ≤ 1	YES
Benzo(a)pyrene	17 - 44	39%	26	3.281		NA	1.52	R5	2	YES	HQ > 1	YES
Benzo(b)fluoranthene	17 - 44	39%	28	3.657		NA	59.8	R5	0.06	no	HQ ≤ 1	YES
Benzo(ghi)perylene	14 - 44	32%	14	14	m	NA	119	R5	0.1	no	HQ ≤ 1	YES
Benzoic acid	1 - 10	10%	0.51	0.51	m	NA	-		NA	YES	NSL	no
Benzo(k)fluoranthene	10 - 44	23%	27	3.085		NA	148	R5	0.02	no	HQ ≤ 1	YES
Bis(2-ethylhexyl)phthalate	6 - 40	15%	0.39	0.202		NA	0.925	R5	0.2	no	HQ ≤ 1	no
Chrysene	17 - 44	39%	33	6.287		NA	4.73	R5	1	no	HQ ≤ 1	YES
Dibenz(a,h)anthracene	7 - 44	16%	3.9	3.9	m	NA	18.4	R5	0.2	no	HQ ≤ 1	YES
Fluoranthene	18 - 44	41%	72	12.33		NA	122	R5	0.1	no	HQ ≤ 1	YES
Indeno(1,2,3-cd)pyrene	14 - 44	32%	16	16.00	m	NA	109	R5	0.1	no	HQ ≤ 1	YES
Naphthalene	2 - 44	5%	0.53	0.53	m	NA	0.0994	R5	5	no	FOD<5%	no
Phenanthrene	15 - 44	34%	39	4.13		NA	45.7	R5	0.09	no	HQ ≤ 1	YES
Pyrene	17 - 44	39%	49	8.89		NA	78.5	R5	0.1	no	HQ ≤ 1	YES
<b>Pesticides</b>												
DDT	1 - 9	11%	0.0049	0.0049	m	NA	0.021	EcoSSL	0.2	no	HQ ≤ 1	YES
Dieldrin	3 - 20	15%	0.043	0.04	m	NA	0.0049	EcoSSL	9	YES	HQ > 1	YES
Methoxychlor	1 - 20	5%	0.14	0.14	m	NA	0.0199	R5	7	no	FOD<5%	YES
<b>Metals, Total</b>												
Cadmium	13 - 23	57%	2.5	2.50	m	2.6	0.36	EcoSSL	7	no	Max ≤ BKGD	YES
Chromium	25 - 25	100%	8.6	4.69		7.7	26	EcoSSL	0.2	no	HQ ≤ 1	no

Notes:

- Not available.
- mg/kg Milligrams per kilogram.
- NA Not applicable.

- [a] Exposure point concentration (EPCs) are the lower of either the upper confidence limit (UCL) on the mean or the maximum concentration. EPCs marked with "m" are the maximum concentration.
- [b] Background concentrations were from the Revised Final Compliance Status Report for the Fire Training Station at HAAF (Law, 2002).
- [c] Alternative ecological soil screening values were from the following source:  
USEPA Eco SSLs; USEPA Region 5 Ecological Screening Levels.
- [d] The refined hazard quotient (HQ) is the ratio of the EPC to the screening value. HQs are rounded to one significant figure.
- [e] Constituents with a refined hazard quotient (HQ) greater than 1 (HQ > 1) or without a screening value (NSV) were considered constituents of potential ecological concern (COPECs) for baseline level assessment.
- [f] The following source was consulted to identify bioaccumulation potential: USEPA (2000b).

**Table 8-5**  
**Food Chain Modeling for the Short-tailed Shrew**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Parameter	Value	
Body Weight (kg):	0.017	EPA (1993). Mean of male and female BWs.
Total dietary intake (kg/d):	0.01	EPA (1993).
Soil Ingestion Rate (kg/d):	0.00004008	Beyer et al. (1994) assumes 2.4%
Insect Ingestion Rate (kg/d):	0.01	EPA (1993). Assumed to be 100% of total dietary intake.
SiteUse Factor:	1	Conservative assumption

Constituent	EPC [a] (mg/kg)	Soil Bioconcentration Factors or Regression Equations [b]		Estimated Dietary Tissue Concentrations [c] (mg (wet weight)/kg)	Maximum Estimated Dietary Ingestion [d] mg/kg-BW-day	Toxicity Reference Values [e] mg/kg-BW-day		Maximum Scenario HQ [f]	
		Invertebrate		Invertebrate		NOAEL	LOAEL	NOAEL	LOAEL
Benzo[a]pyrene	3.281		1.33	0.73	0.44	1	10	0.04	0.4
Dieldrin	0.043	m	14.7	0.11	0.06	0.015	0.15	4	0.4

Notes:

HQ Hazard Quotient.  
mg/kg Milligrams per kilogram.  
mg/kg-BW-day Milligrams per kilogram of body weight each day.

- [a] The exposure point concentrations (EPCs) for the maximum scenario were set at the lower of the UCL or the maximum. EPCs marked with "m" are the maximum concentration  
[b] Soil bioconcentration factors or regression equations are from USEPA EcoSSLs documents (USEPA 2012).  
[c] Estimated tissue concentration = concentration in soil x BCF x tissue percent dry weight (16.7% for invertebrates).  
[d] ((Cs x IRs)+(Cf x IRf))/BW  
[e] TRVs for benzo(a)pyrene from EcoSSL, based on 7,12- Dimethylbenz(a)anthracene from Trust et al. (1994); EcoSSL for dieldrin  
[f] HQ = (Estimated Dietary Dose/TRV). Bolded values exceed an HQ of 1

**Table 8-6**  
**Food Chain Modeling for the American Robin**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Parameter	Value	
Body Weight (kg):	0.081	EPA (1993). Mean of male and female BWs.
Total dietary intake (kg/d):	0.098	EPA (1993).
Soil Ingestion Rate (kg/d):	0.0011583	Beyer et al, (1994) as cited in EPA (1999), uses 10% soil in diet from range of values.
Insect Ingestion Rate (kg/d):	0.098	EPA (1993). Assumed to be 100% of total dietary intake.
Site Use Factor:	1	Conservative assumption

Constituent	EPC [a] (mg/kg)	Soil Bioconcentration Factors or Regression Equations [b]		Estimated Dietary Tissue Concentrations [c]	Maximum Estimated Dietary Ingestion [d]	Toxicity Reference Values [e]		Maximum Scenario HQ [f]	
		Invertebrate		Invertebrate	mg/kg-BW-day	NOAEL	LOAEL	NOAEL	LOAEL
Benzo[a]pyrene	3.281		1.33	0.73	10.72	10	100	1	0.1
Dieldrin	0.043	m	14.7	0.11	1.12	0.0709	0.709	16	2

Notes:

HQ Hazard Quotient.  
mg/kg Milligrams per kilogram.  
mg/kg-BW-day Milligrams per kilogram of body weight each day.

- [a] EPCs equivalent to the lower of the UCL or maximum concentration. EPCs marked with "m" are the maximum concentration.  
[b] Soil bioconcentration factors or regression equations are from USEPA EcoSSLs documents (USEPA 2012).  
[c] Estimated tissue concentration = concentration in soil x BCF x tissue percent dry weight (16.7% for invertebrates).  
[d]  $((C_s \times IR_s) + (C_f \times IR_f)) / BW$   
[e] TRVs for benzo(a)pyrene from EcoSSL, based on 7,12- Dimethylbenz(a)anthracene from Trust et al. (1994); EcoSSL for dieldrin  
[f] HQ = (Estimated Dietary Dose/TRV). Bolded values exceed an HQ of 1

**Table 8-7**  
**SLERA - Constituents of Potential Ecological Concern in Sediment as Soil**  
**Screening Level Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Constituent	Frequency of Detection		Maximum Concentration (mg/kg)	Ecological Screening Value (ESVs) [a]		Maximum HQ [b] (unitless)	Screening Level Constituent of Potential Ecological Concern? [c]	
				Value	Source		(YES/no)	Rationale
<b>Volatile Organic Compounds</b>								
Acetone	3 - 3	100%	0.12	–		NA	YES	NSV
Benzene	1 - 7	14%	0.031	0.05	R4	0.6	no	HQ ≤ 1
Carbon disulfide	1 - 7	14%	0.023	–		NA	YES	NSL
CFC-11	2 - 4	50%	0.0074	–		NA	YES	NSV
Methylene chloride	2 - 7	29%	0.012	2	R4	0.006	no	HQ ≤ 1
Toluene	1 - 7	14%	0.0032	0.05	R4	0.06	no	HQ ≤ 1
<b>Semi-Volatile Organic Compounds</b>								
2,4,6-Tribromophenol	3 - 3	100%	7,820	–		NA	YES	NSL
2-Fluorobiphenyl	3 - 3	100%	4.53	–		NA	YES	NSL
2-Fluorophenol	3 - 3	100%	10	–		NA	YES	NSL
4-Bromofluorobenzene	3 - 3	100%	0.067	–		NA	YES	NSL
Acenaphthene	3 - 7	43%	4.9	20	R4	0.2	no	HQ ≤ 1
Acenaphthylene	1 - 7	14%	3.1	–		NA	YES	NSV
Anthracene	5 - 7	71%	9.3	0.1	R4	90	YES	HQ > 1
Benz(a)anthracene	6 - 7	86%	33	–		NA	YES	NSV
Benzo(a)pyrene	5 - 7	71%	27	0.1	R4	300	YES	HQ > 1
Benzo(b)fluoranthene	5 - 7	71%	27	–		NA	YES	NSV
Benzo(ghi)perylene	3 - 7	43%	17	–		NA	YES	NSV
Benzo(k)fluoranthene	6 - 7	86%	29	–		NA	YES	NSV
Chrysene	6 - 7	86%	52	–		NA	YES	NSV
Dibenz(a,h)anthracene	2 - 7	29%	11	–		NA	YES	NSV
Fluoranthene	6 - 7	86%	62	0.1	R4	600	YES	HQ > 1
Fluorene	4 - 7	57%	8.3	–		NA	YES	NSV
Indeno(1,2,3-cd)pyrene	4 - 7	57%	23	–		NA	YES	NSV
Naphthalene	1 - 7	14%	0.39	0.1	R4	4	YES	HQ > 1
Phenanthrene	5 - 7	71%	62	0.1	R4	600	YES	HQ > 1
Pyrene	6 - 7	86%	58	0.1	R4	600	YES	HQ > 1
<b>Metals, Total</b>								
Arsenic	4 - 7	57%	1.05	10	R4	0.1	no	HQ ≤ 1
Barium	7 - 7	100%	229	165	R4	1	no	HQ ≤ 1
Chromium	7 - 7	100%	69.7	0.4	R4	200	YES	HQ > 1
Lead	5 - 7	71%	362	11	EcoSSL	30	YES	HQ > 1

Notes:

– Not available.

mg/kg Milligrams per kilogram.

NA Not applicable.

NSV No screening value

[a] Ecological soil screening values from the following sources:

USEPA Region 4 Ecological Screening Values (USEPA 2001b; R4).

[b] The maximum hazard quotient (HQ) is the ratio of the maximum constituent concentration to the screening value. HQs are rounded to one significant figure.

[c] Constituents with a hazard quotient (HQ) greater than 1 (HQ > 1) or without a screening value (NSV) were considered constituents of potential ecological concern (COPECs) for screening level assessment.

[d] The screening value is based on phthalates.

**Table 8-8**  
**BERA - Constituents of Potential Ecological Concern in Sediment as Soil**  
**Screening Level Ecological Risk Assessment**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Constituent	Frequency of Detection	Maximum Concentration (mg/kg)	Refined		Background Concentration [b] (mg/kg)	Alternative Ecological Screening Value (ASVs) [c] (mg/kg)		Refined HQ [d] (unitless)	Baseline Level Constituent of Potential Ecological Concern? [e]		Bioaccumulative? [f] (YES/no)	
			Exposure Point Concentration [a] (mg/kg)	m		Value	Source		YES/no	Rationale		
<b>Volatile Organic Compounds</b>												
Acetone	3 - 3	100%	0.12	0.12	m	NA	2.5	R5	0.05	no	HQ ≤ 1	
Carbon disulfide	1 - 7	14%	0.023	0.023	m	NA	0.0941	R5	0.2	no	HQ ≤ 1	
CFC-11	2 - 4	50%	0.0074	0.0074	m	NA	16.4	R5	0.0005	no	HQ ≤ 1	
<b>Semi-Volatile Organic Compounds</b>												
2,4,6-Tribromophenol	3 - 3	100%	7,820	7,820	m	NA	-		NA	YES	NSL	no
2-Fluorobiphenyl	3 - 3	100%	4.53	4.53	m	NA	-		NA	YES	NSL	no
2-Fluorophenol	3 - 3	100%	10	10	m	NA	-		NA	YES	NSL	no
4-Bromofluorobenzene	3 - 3	100%	0.067	0.067	m	NA	-		NA	YES	NSL	no
Acenaphthylene	1 - 7	14%	3.1	3.1	m	NA	682	R5	0.005	no	HQ ≤ 1	
Anthracene	5 - 7	71%	9.3	4.743		NA	1,480	R5	0.003	no	HQ ≤ 1	
Benz(a)anthracene	6 - 7	86%	33	17.796		NA	5.21	R5	3	YES	HQ > 1	YES
Benzo(a)pyrene	5 - 7	71%	27	14.769		NA	1.52	R5	10	YES	HQ > 1	YES
Benzo(b)fluoranthene	5 - 7	71%	27	27	m	NA	59.8	R5	0.5	no	HQ ≤ 1	
Benzo(ghi)perylene	3 - 7	43%	17	17	m	NA	119	R5	0.1	no	HQ ≤ 1	
Benzo(k)fluoranthene	6 - 7	86%	29	1.508		NA	148	R5	0.01	no	HQ ≤ 1	
Chrysene	6 - 7	86%	52	27.362		NA	4.73	R5	6	YES	HQ > 1	YES
Dibenz(a,h)anthracene	2 - 7	29%	11	11	m	NA	18.4	R5	0.6	no	HQ ≤ 1	
Fluoranthene	6 - 7	86%	62	37.816		NA	122	R5	0.3	no	HQ ≤ 1	
Fluorene	4 - 7	57%	8.3	8.3	m	NA	122	R5	0.07	no	HQ ≤ 1	
Indeno(1,2,3-cd)pyrene	4 - 7	57%	23	23	m	NA	109	R5	0.2	no	HQ ≤ 1	
Naphthalene	1 - 7	14%	0.39	0.39	m	NA	0.0994	R5	4	YES	HQ > 1	no
Phenanthrene	5 - 7	71%	62	32.085		NA	45.7	R5	0.7	no	HQ ≤ 1	
Pyrene	6 - 7	86%	58	31.767		NA	78.5	R5	0.4	no	HQ ≤ 1	
<b>Metals, Total</b>												
Chromium	7 - 7	100%	69.7	54.155		7.7	26	EcoSSL	2	YES	HQ > 1	no
Lead	5 - 7	71%	362	362	m	53	0.05373	R5	7,000	YES	HQ > 1	YES

Notes:

- Not available.
- mg/kg Milligrams per kilogram.
- NA Not applicable.
- [a] Exposure point concentration (EPCs) are the lower of either the upper confidence limit (UCL) on the mean or the maximum concentration. EPCs marked with "m" are the maximum concentration.
- [b] Background concentrations were from the Revised Final Compliance Status Report for the Fire Training Station at HAAF (Law, 2002).
- [c] Alternative ecological soil screening values were from the following source:  
USEPA Eco SSLs; USEPA Region 5 Ecological Screening Levels.
- [d] The refined hazard quotient (HQ) is the ratio of the EPC to the screening value. HQs are rounded to one significant figure.
- [e] Constituents with a refined hazard quotient (HQ) greater than 1 (HQ > 1) or without a screening value (NSV) were considered constituents of potential ecological concern (COPECs) for baseline level assessment.
- [f] The following source was consulted to identify bioaccumulation potential: USEPA (2000b).

**Table 8-9**  
**Food Chain Modeling for the Short-tailed Shrew Using Sediment as Soil**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Parameter	Value	Source
Body Weight (kg):	0.017	EPA (1993). Mean of male and female BWs.
Total dietary intake (kg/d):	0.01	EPA (1993).
Soil Ingestion Rate (kg/d):	4.008E-05	Beyer et al, (1994) assumes 2.4%
Insect Ingestion Rate (kg/d):	0.01	EPA (1993). Assumed to be 100% of total dietary intake.
Site Use Factor:	1	

Constituent	EPC [a] (mg/kg)	Soil	Estimated Dietary Tissue	Maximum	Toxicity		Maximum	
		Bioconcentration Factors [b]	Concentrations [c] (mg/kg)	Estimated Dietary	Reference Values [e] mg/kg-BW-day		Scenario HQ [f]	
		Invertebrate	Invertebrate	Ingestion [d] mg/kg-BW-day	NOAEL	LOAEL	NOAEL	LOAEL
Benz[a]anthracene	17.80	1.59	4.73	2.86	1	10	3	0.3
Benzo[a]pyrene	14.77	1.33	3.28	1.99	1	10	2	0.2
Chrysene	27.36	2.29	10.46	6.29	1	10	6	0.6
Lead	362	m $\ln(Ci) = 0.807 * \ln(Cs) - 0.218$	16.26	10.54	4.7	8.9	2	1

Notes:

HQ Hazard Quotient.

mg/kg Milligrams per kilogram.

mg/kg-BW-da Milligrams per kilogram of body weight each day.

[a] The exposure point concentrations (EPCs) for the maximum scenario were set at the lower of the UCL or the maximum. EPCs marked with "m" are the maximum concentration.

[b] Soil bioconcentration factors or regression equations are from USEPA EcoSSLs documents (USEPA 2012).

[c] Estimated tissue concentration = concentration in soil x BCF x tissue percent dry weight (16.7% for invertebrates).

[d]  $((Cs \times IRs) + (Cf \times IRf)) / BW$

[e] TRVs for polycyclic aromatic hydrocarbons from EcoSSL, based on 7,12- Dimethylbenz(a)anthracene from Trust et al. (1994); EcoSSL for dieldrin

[f]  $HQ = (Estimated\ Dietary\ Dose / TRV)$ . Bolded values exceed an HQ of 1

**Table 8-10**  
**Food Chain Modeling for the American Robin Using Sediment as Soil**  
**HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)**  
**Hunter Army Airfield - Savannah, Georgia**

Parameter	Value	
Body Weight (kg):	0.081	EPA (1993). Mean of male and female BWs.
Total dietary intake (kg/d):	0.098	EPA (1993).
Soil Ingestion Rate (kg/d):	0.0011583	Beyer et al. (1994) as cited in EPA (1999), uses 10% soil in diet from range of values.
Insect Ingestion Rate (kg/d):	0.098	EPA (1993). Assumed to be 100% of total dietary intake.
Site Use Factor:	1	

Constituent	EPC [a] (mg/kg)	Soil Bioconcentration Factors [b]		Estimated Dietary Tissue Concentrations [c]	Maximum Estimated Dietary Ingestion [d]	Toxicity Reference Values [e]		Maximum Scenario HQ [f]	
		Invertebrate		Invertebrate	mg/kg-BW-day	NOAEL	LOAEL	NOAEL	LOAEL
Benz[a]anthracene	17.80	1.59		4.73	5.97	2	20	3	0.3
Benzo[a]pyrene	14.77	1.33		3.28	4.18	2	20	2	0.2
Chrysene	27.36	2.29		10.46	13.05	2	20	7	0.7
Lead	362 m	ln(Ci) = 0.807 * ln(Cs) - 0.218		16.26	24.85	1.63	3.3	15	8

Notes:

HQ Hazard Quotient.  
mg/kg Milligrams per kilogram.  
mg/kg-BW-day Milligrams per kilogram of body weight each day.

- [a] EPCs equivalent to the lower of the UCL or maximum concentration. EPCs marked with "m" are the maximum concentration.  
[b] Soil bioconcentration factors or regression equations are from USEPA EcoSSLs documents (USEPA 2012).  
[c] Estimated tissue concentration = concentration in soil x BCF x tissue percent dry weight (16.7% for invertebrates).  
[d] ((Cs x IRs)+(Cf x IRf))/BW  
[e] TRVs for polycyclic aromatic hydrocarbons from EcoSSL, based on 7,12- Dimethylbenz(a)anthracene from Trust et al. (1994); EcoSSL for dieldrin  
[f] HQ = (Estimated Dietary Dose/TRV). Bolded values exceed an HQ of 1

**Table 8-11**  
**Uncertainties in the Ecological Risk Assessment**  
**Ecological Risk Assessment**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Assumptions	Description And Discussion Related To Uncertainties in ERA	Level of Uncertainty
<b><u>Analytical Sampling and Data Analysis</u></b>		
Limited number of samples	Frequently, there are only a limited number of samples used in ERAs, and very often they are collected in a biased manner (i.e., targeting "hot spots"). This type of sampling often lacks statistical power and does not likely represent the concentrations in the environment in which wildlife exposure occurs. Similarly, limited data used to estimate uptake into organisms may overestimate exposure via the food web.	Overestimate of exposure and risk
Use of maximum concentrations	Maximum concentrations are used to represent the upper estimate exposures. This practice compensates for uncertainty contributed by limited numbers of samples, but overestimates exposure and risk.	Overestimate of exposure and risk
Detection limits	Detection limits may exceed ESVs (e.g., PAHs) or thresholds for adverse impacts are well below the analytical methods used in ERA (e.g., compounds that are known or suspected to cause endocrine effects).	May underestimate risk or effect on risk estimate unknown
Degradation of chemicals not considered	ERAs are almost exclusively based on concentrations of target compounds, and little if any attention is given to degradation compounds that could be more toxic than the original chemical. Conversely, chemical concentrations may decrease over time due to natural physical processes.	Effect on risk estimate unknown
<b><u>Toxicology and ESVs</u></b>		
Toxicity and exposure data for a limited number of species	Uncertainties exist in many aspects of the toxicology relied upon for conducting ERAs (Newman 1998; Lovett Doust et al. 1993). Toxicity and wildlife exposure data are only available for a limited number of species (most of them laboratory test species) under a strictly defined set of test conditions that deviate from natural conditions (Sample et al. 1996; Suter 1996; Sample et al. 1997).	Effect on risk estimate unknown
Laboratory testing	In current practice, more than 95 percent of the resources in toxicology are focused toward the study of single chemicals (Cassee et al. 1998), while wildlife exposures rarely occur on a chemical-specific basis. Simplistic extrapolations from laboratory species to wildlife species and testing conditions to field conditions are not likely accurate, and are rarely, if ever, validated against natural conditions (Power 1996; Tannenbaum 2003).	Effect on risk estimate unknown
Adaptation and tolerance	There is little consistency and no quantitative methodology for the consideration of the diminished bioavailability (and, thereby, diminished toxicity) even though this process is well documented (e.g., Alexander and Alexander 1999; Alexander 2000). Similarly, tolerance and adaptation are not considered directly (Millward and Klerks 2002; Grant 2002). Furthermore, the white rat often used in toxicological testing is bred to minimize differences between lab animals, thereby diminishing the genetic variability that gives wildlife some capability for adaptation and tolerance (Tannenbaum 2003).	Overestimate of risk
Predator-prey interactions	There are relatively few studies that actually evaluate the effects of toxicity on predator-prey interactions, or on competition for scarce resources (Atchison et al. 1996), the very conditions within which all wildlife exists (Kapustka and Landis 1998).	Effect on risk estimate unknown

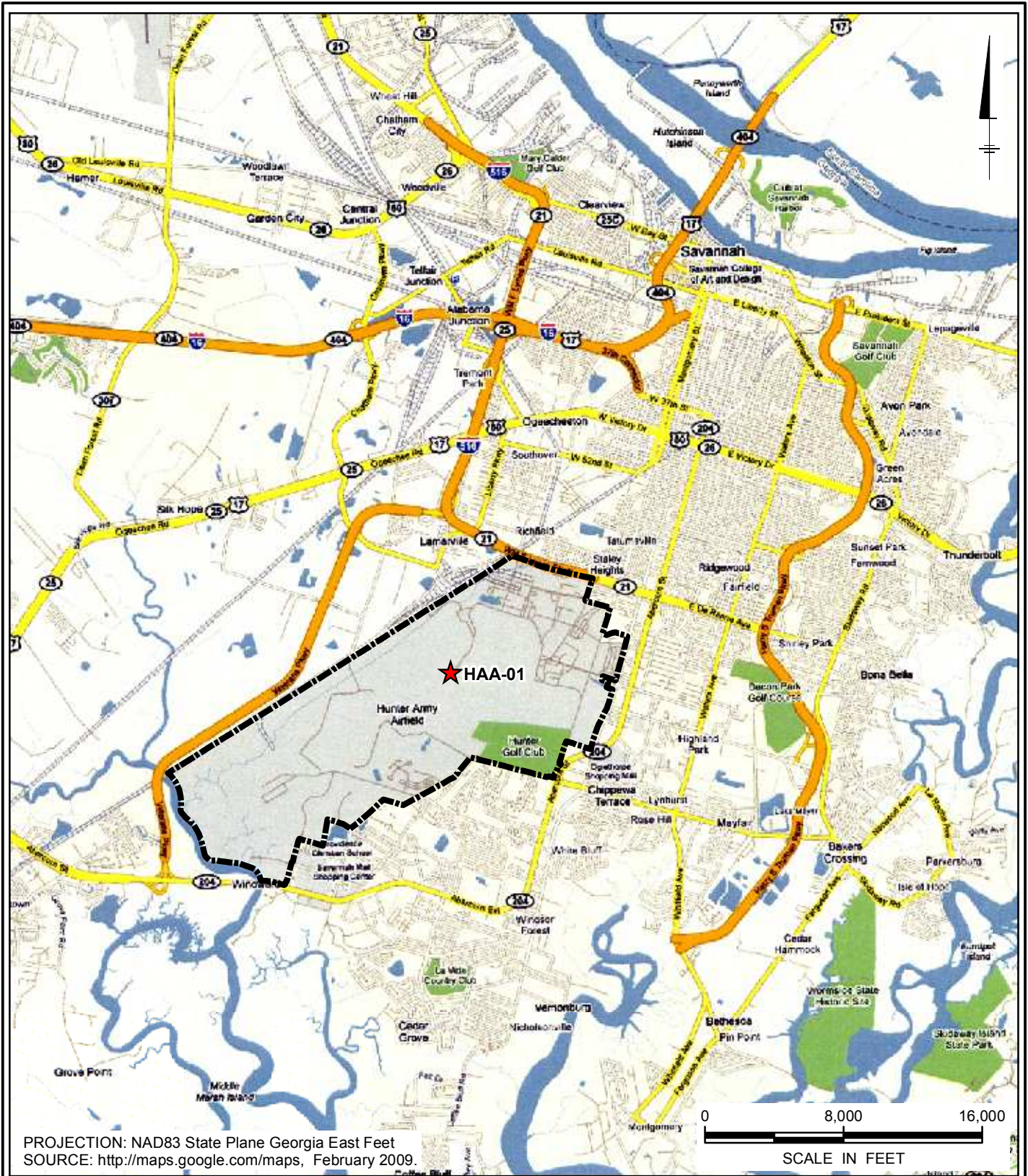


**Table 8-11**  
**Uncertainties in the Ecological Risk Assessment**  
**Ecological Risk Assessment**  
**HAA-01 - Former Fire Training Area and DAACG Chlorinated Solvents Area**  
**Hunter Army Airfield, Georgia**

Assumptions	Description And Discussion Related To Uncertainties in ERA	Level of Uncertainty
<b><u>Hazard Quotients</u></b>		
HQs based on maximum	The SLERA HQ is based on the maximum detected concentrations and the most conservative ESVs available (USEPA 1997; 2000). HQs in the BERA are based on the exposure point concentration (minimum of the UCL and the maximum concentration).	Overestimate of risk
Elevated HQs for background concentrations	HQs may exceed a value of 1 for background concentrations of naturally occurring metals (Tannenbaum 2003). This is due to many of the toxicology and ESV uncertainties already discussed.	Overestimate of risk
Interpretation of HQs	An HQ less than or equal to a value of 1 indicates that adverse impacts to wildlife are considered unlikely (USEPA 2001c). However, there is no clear guidance for interpreting the HQs that exceed a value of 1, except that this point of departure indicates that adverse effects of some kind may have occurred or may occur in the future.	Effect on risk estimate unknown
HQs for individual used to evaluate risks to populations	HQs are based on the types of impacts that could occur to individuals (i.e., those individuals exposed to maximum concentrations) and they completely fail to address ecological exposure and risk at spatial scale of populations (Tannenbaum 2003; Durda and Preziosi 1999).	Overestimate of risk to wildlife populations
HQs with unrealistic magnitudes	HQs are seen at magnitudes that suggest that every animal should die upon acute exposure (i.e., in the hundreds or thousands) (Tannenbaum et al. 2003). Often, physical conditions at a site demonstrate that this is not the case.	Overestimate of risk
No evaluation of dermal or inhalation pathways	The dermal and inhalation exposure pathways are generally considered "insignificant" due to protective fur and feathers. Under certain conditions, these exposure pathways may occur, but adequate information is rarely available by which to evaluate them.	Potentially an underestimate of risk

BERA	Baseline Ecological Risk Assessment.
COPC	Constituent of potential concern
ERA	Ecological risk assessment.
ESV	Ecological screening value.
HQ	Hazard quotient.
PAH	Polynuclear aromatic hydrocarbon
RTV	Reference toxicity value.
SLERA	Screening level ecological risk assessment.

CITY:(KNOXVILLE) DIV:(GROUP:(ENV)) DB:(B.ALTO) PIC:(T.TALE) PM:(C.BERTZ) APM:(S.GIBBONS) TM:(A.DAVIS)  
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GEORGIA

Chatham County

HUNTER ARMY AIRFIELD, GEORGIA  
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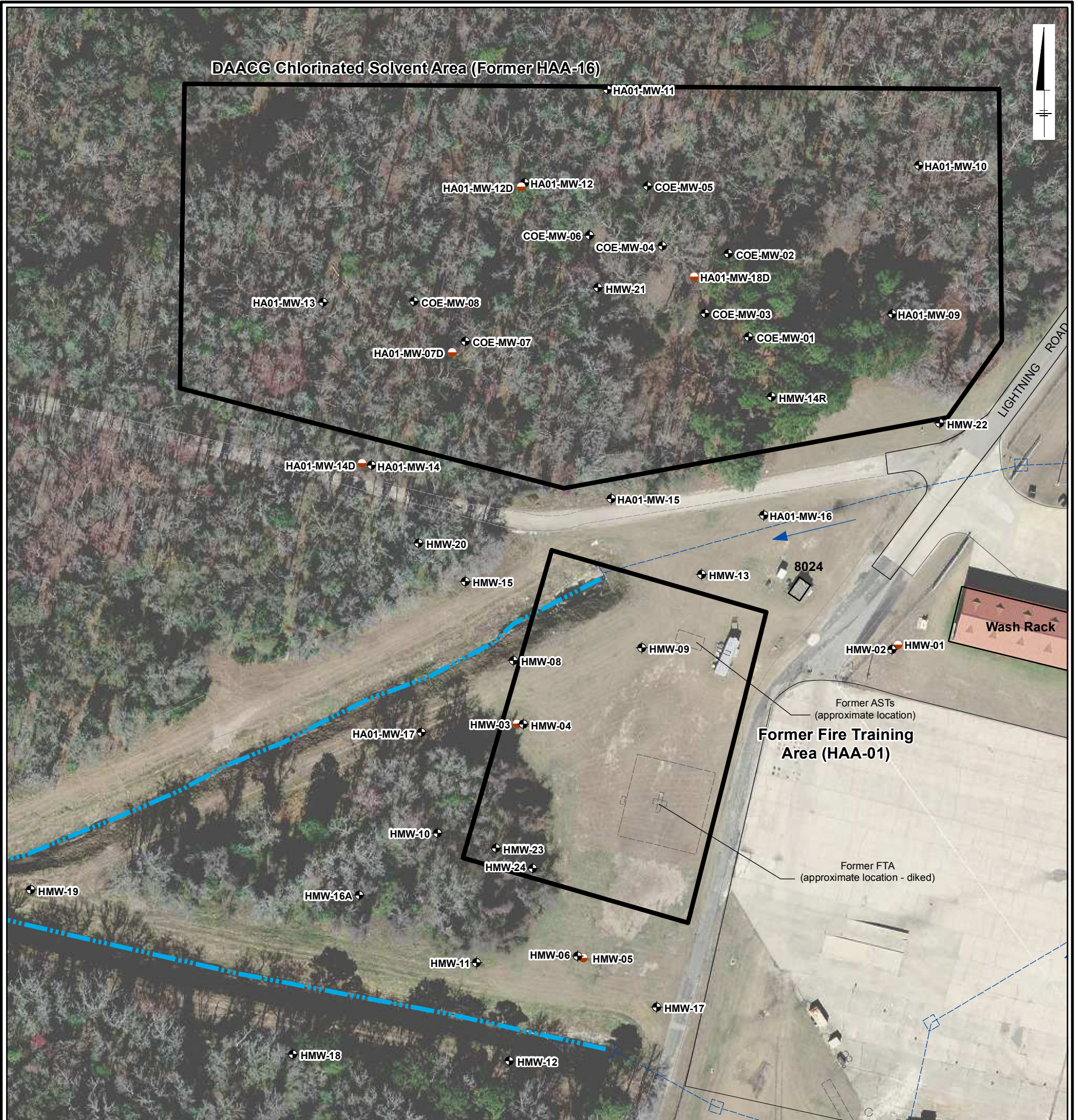
Site Location Map



FIGURE

4-1





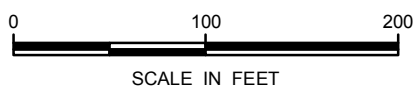
Well Identification	Screened Interval (ft bgs)	TOC Elevation (ft msl)	Northing (GA SP EAST)	Easting (GA SP EAST)	Well Identification	Screened Interval (ft bgs)	TOC Elevation (ft msl)	Northing (GA SP EAST)	Easting (GA SP EAST)	Well Identification	Screened Interval (ft bgs)	TOC Elevation (ft msl)	Northing (GA SP EAST)	Easting (GA SP EAST)
<b>Shallow Zone Wells of the Upper Aquifer</b>														
COE-MW-01	15.0-20.0	34.67	735187.44	972442.15	HA01-MW-14	3.0 - 13.0	23.22	735065.10	972084.42	HMW-14R	9.2-18.9	34.67	735130.32	972463.46
COE-MW-02	14.9-19.9	31.28	735266.60	972422.67	HA01-MW-15	4.5 - 14.5	28.11	735033.32	972311.79	HMW-15	4.7 - 14.7	23.84	734954.99	972173.27
COE-MW-03	15.0-20.0	32.66	735209.97	972400.71	HA01-MW-16	9.0 - 19.0	35.95	735017.97	972456.13	HMW-16A	4.3 - 14.3	29.06	734656.70	972072.59
COE-MW-04	10.0-15.0	22.67	735274.25	972359.94	HA01-MW-17	4.5 - 14.5	24.86	734811.24	972131.72	HMW-17	4.3 - 14.3	33.29	734550.77	972354.76
COE-MW-05	10.0-15.0	21.18	735330.83	972346.01	HMW-02	4.6-14.6	37.93	734889.91	972577.82	HMW-18	3.7 - 13.5	29.87	734505.69	972009.95
COE-MW-06	10.0-15.0	22.34	735283.70	972291.03	HMW-04	3.0-13.0	30.42	734819.28	972228.32	HMW-19	4.2 - 14.0	24.50	734661.92	971761.25
COE-MW-07	10.0-15.0	22.92	735183.39	972173.19	HMW-06	3.0-13.0	31.53	734599.49	972279.58	HMW-20	3.7 - 13.4	23.19	734991.42	972129.08
COE-MW-08	10.0-15.0	22.53	735221.29	972124.58	HMW-08	3.0-13.0	27.5	734880.03	972218.88	HMW-21	2.0-11.5	22.28	735234.28	972299.08
HA01-MW-09	7.0 - 17.0	33.66	735209.55	972577.98	HMW-09	5.0-15.0	34.39	734891.76	972340.58	HMW-22	11.0 - 20.5	38.19	735105.25	972622.91
HA01-MW-10	2.0 - 12.0	23.51	735350.72	972603.33	HMW-10	2.7-12.8	27.51	734715.70	972146.97	HMW-23	5.0-15.0	29.46	734701.53	972202.19
HA01-MW-11	2.0 - 12.0	19.74	735422.52	972307.95	HMW-11	4.7-14.8	31.05	734592.57	972183.89	HMW-24	7.0-12.0	31.92	734682.81	972236.88
HA01-MW-12	2.0 - 12.0	21.22	735333.97	972229.69	HMW-12	5.1 - 15.2	31.78	734499.73	972215.03					
HA01-MW-13	2.0 - 12.0	20.13	735220.19	972038.26	HMW-13	7.5-17.6	34.88	734961.87	972397.25					
<b>Deep Zone Wells of the Upper Aquifer</b>														
HMW-01	38.0 - 48.0	38.42	734894.61	972583.44	HA01-MW-07D	50.0 - 60.0	NS	735172.68	972160.98	HA01-MW-18D	56.0 - 66.0	29.58	735244.77	972390.49
HMW-03	39.0 - 49.0	29.75	734820.01	972222.48	HA01-MW-12D	40.0 - 50.0	21.00	735329.99	972226.29					
HMW-05	39.0 - 49.0	31.94	734597.42	972285.12	HA01-MW-14D	39.0 - 49.0	23.92	735067.33	972075.32					

ft bgs - feet below ground surface  
 ft BTOC - feet below top of casing  
 NS - Not Surveyed  
 NAVD - North American Vertical Datum

PROJECTION: NAD83 State Plane Georgia East Feet  
 REFERENCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)



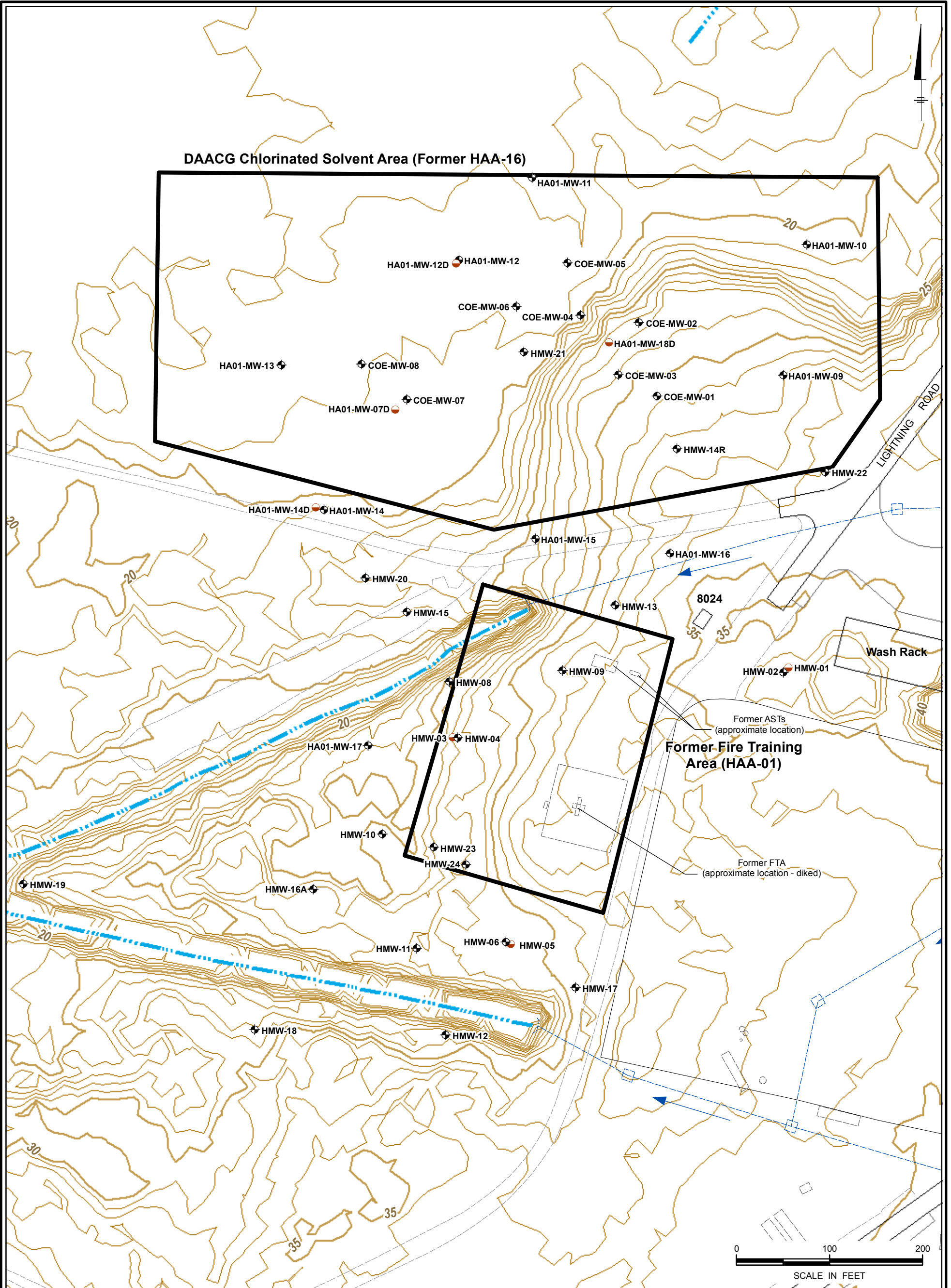
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**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Site Map**



FIGURE  
**4-2**





PROJECTION: NAD83 State Plane Georgia East Feet  
 REFERENCE: SAGIS (2008).

**LEGEND**

- +—+—+— Storm Water Drainage Canal
- - - - - Storm Water Drainage System
- ▶ Drainage Flow Direction
- Topographic Contour (ft amsl)
- ◆ Monitor Well (shallow)
- ◆ Monitor Well (deep)

NOTE: Contour Interval = 1 foot.

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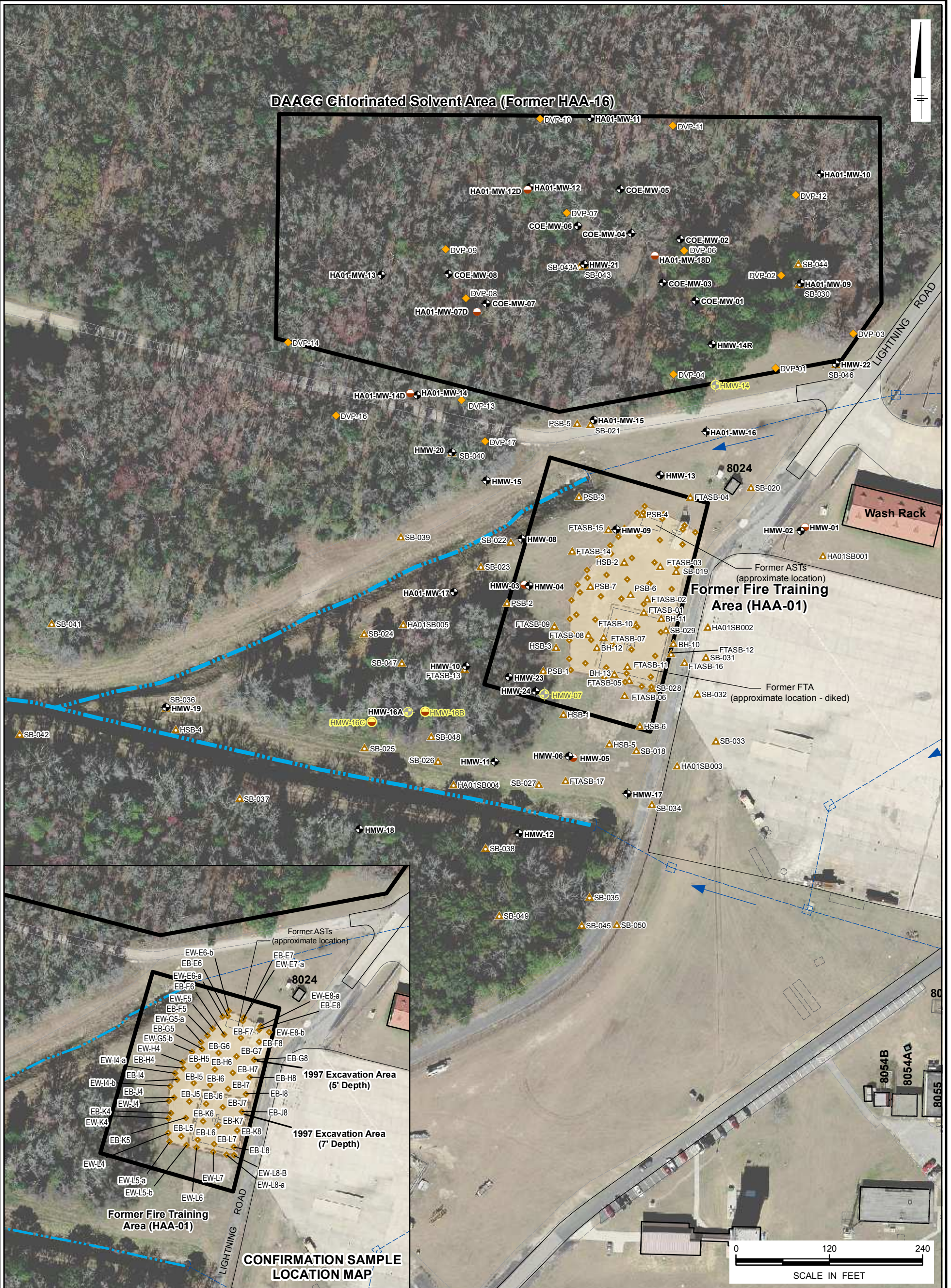
**Topographic Map**



FIGURE  
**4-3**



**DAACG Chlorinated Solvent Area (Former HAA-16)**



PROJECTION: NAD83 State Plane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

Storm Water Drainage Canal	Monitor Well (shallow)
Storm Water Drainage System	Monitor Well (deep)
Drainage Flow Direction	Destroyed/Abandoned Monitor Well (shallow)
Approximate Excavation Area	Destroyed/Abandoned Monitor Well (deep)
Confirmation Soil Sample (November 1997)	Soil Boring (1987 - 2009)
	Groundwater Vertical Profile (August - December 2002)

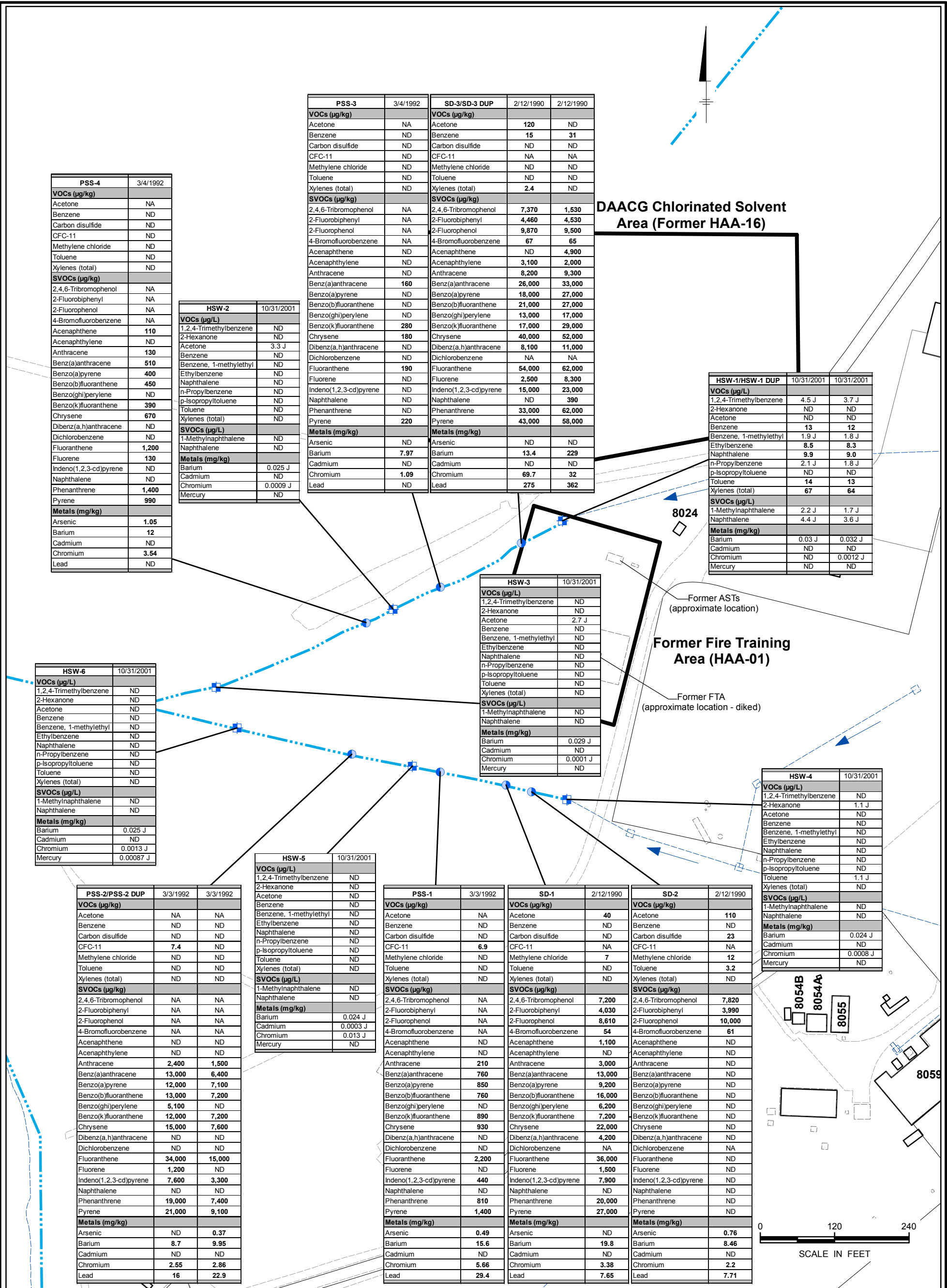
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**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Historical Soil Boring, Vertical Aquifer Profile, and Monitor Well Location Map**



FIGURE  
**5-1**





PROJECTION: NAD83 State Plane Georgia East Feet  
 BASE SOURCE: SAGIS (2008).

- LEGEND**
- Storm Water Drainage Canal
  - Storm Water Drainage System
  - Drainage Flow Direction
  - Sediment Sample (February 1990)
  - Sediment Sample (March 1992)
  - Surface Water Sample (October 2001)

- NOTES:**
- 1) NA - Not analyzed
  - 2) ND - The analyte was not detected above the reporting limit.
  - 3) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 4) **BOLD** - constituent detected above laboratory detection limit above the laboratory PQL.

µg/kg - micrograms per kilogram  
 mg/kg - milligrams per kilogram  
 µg/L - micrograms per liter  
 mg/L - milligrams per liter

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**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

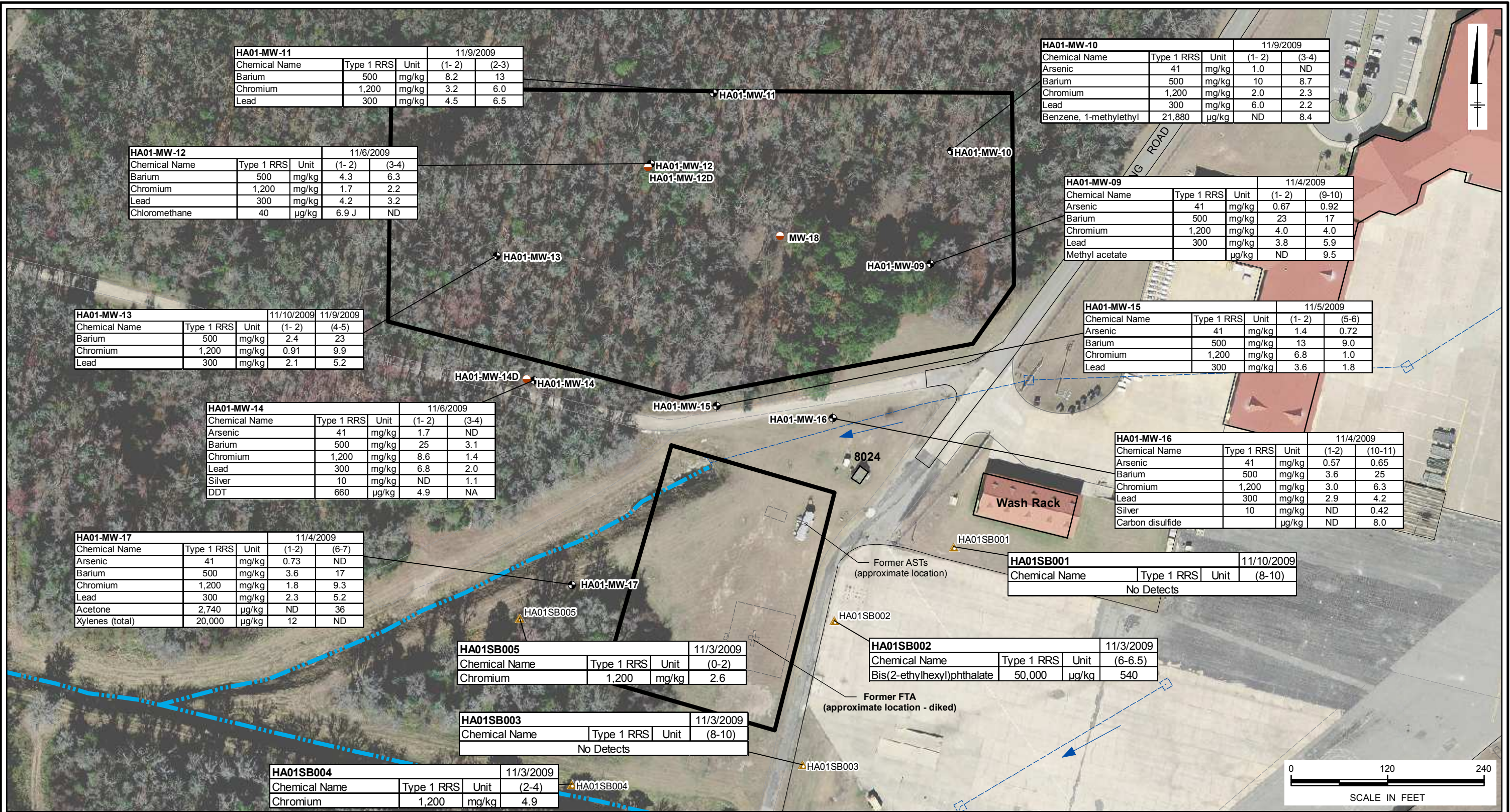
**Surface Water and Sediment  
 Sample Location Map**



FIGURE  
**5-2**



CITY:(KNOXVILLE) DIV:(GROUP:(ENV)) DB:(C:SMITH) PIC:(T:TALELE) PM:(C:BERTZ) APM:(S:GIBBONS) TM:(A:DAVIS)  
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HA01-MW-11			11/9/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(2-3)
Barium	500	mg/kg	8.2	13
Chromium	1,200	mg/kg	3.2	6.0
Lead	300	mg/kg	4.5	6.5

HA01-MW-12			11/6/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(3-4)
Barium	500	mg/kg	4.3	6.3
Chromium	1,200	mg/kg	1.7	2.2
Lead	300	mg/kg	4.2	3.2
Chloromethane	40	µg/kg	6.9 J	ND

HA01-MW-10			11/9/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(3-4)
Arsenic	41	mg/kg	1.0	ND
Barium	500	mg/kg	10	8.7
Chromium	1,200	mg/kg	2.0	2.3
Lead	300	mg/kg	6.0	2.2
Benzene, 1-methylethyl	21,880	µg/kg	ND	8.4

HA01-MW-09			11/4/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(9-10)
Arsenic	41	mg/kg	0.67	0.92
Barium	500	mg/kg	23	17
Chromium	1,200	mg/kg	4.0	4.0
Lead	300	mg/kg	3.8	5.9
Methyl acetate		µg/kg	ND	9.5

HA01-MW-13			11/10/2009	11/9/2009
Chemical Name	Type 1 RRS	Unit	(1-2)	(4-5)
Barium	500	mg/kg	2.4	23
Chromium	1,200	mg/kg	0.91	9.9
Lead	300	mg/kg	2.1	5.2

HA01-MW-15			11/5/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(5-6)
Arsenic	41	mg/kg	1.4	0.72
Barium	500	mg/kg	13	9.0
Chromium	1,200	mg/kg	6.8	1.0
Lead	300	mg/kg	3.6	1.8

HA01-MW-14			11/6/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(3-4)
Arsenic	41	mg/kg	1.7	ND
Barium	500	mg/kg	25	3.1
Chromium	1,200	mg/kg	8.6	1.4
Lead	300	mg/kg	6.8	2.0
Silver	10	mg/kg	ND	1.1
DDT	660	µg/kg	4.9	NA

HA01-MW-16			11/4/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(10-11)
Arsenic	41	mg/kg	0.57	0.65
Barium	500	mg/kg	3.6	25
Chromium	1,200	mg/kg	3.0	6.3
Lead	300	mg/kg	2.9	4.2
Silver	10	mg/kg	ND	0.42
Carbon disulfide		µg/kg	ND	8.0

HA01-MW-17			11/4/2009	
Chemical Name	Type 1 RRS	Unit	(1-2)	(6-7)
Arsenic	41	mg/kg	0.73	ND
Barium	500	mg/kg	3.6	17
Chromium	1,200	mg/kg	1.8	9.3
Lead	300	mg/kg	2.3	5.2
Acetone	2,740	µg/kg	ND	36
Xylenes (total)	20,000	µg/kg	12	ND

HA01SB001			11/10/2009	
Chemical Name	Type 1 RRS	Unit	(8-10)	
No Detects				

HA01SB005			11/3/2009	
Chemical Name	Type 1 RRS	Unit	(0-2)	
Chromium	1,200	mg/kg	2.6	

HA01SB002			11/3/2009	
Chemical Name	Type 1 RRS	Unit	(6-6.5)	
Bis(2-ethylhexyl)phthalate	50,000	µg/kg	540	

HA01SB003			11/3/2009	
Chemical Name	Type 1 RRS	Unit	(8-10)	
No Detects				

HA01SB004			11/3/2009	
Chemical Name	Type 1 RRS	Unit	(2-4)	
Chromium	1,200	mg/kg	4.9	

PROJECTION: NAD83 State Plane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- Soil Boring (November 2009)

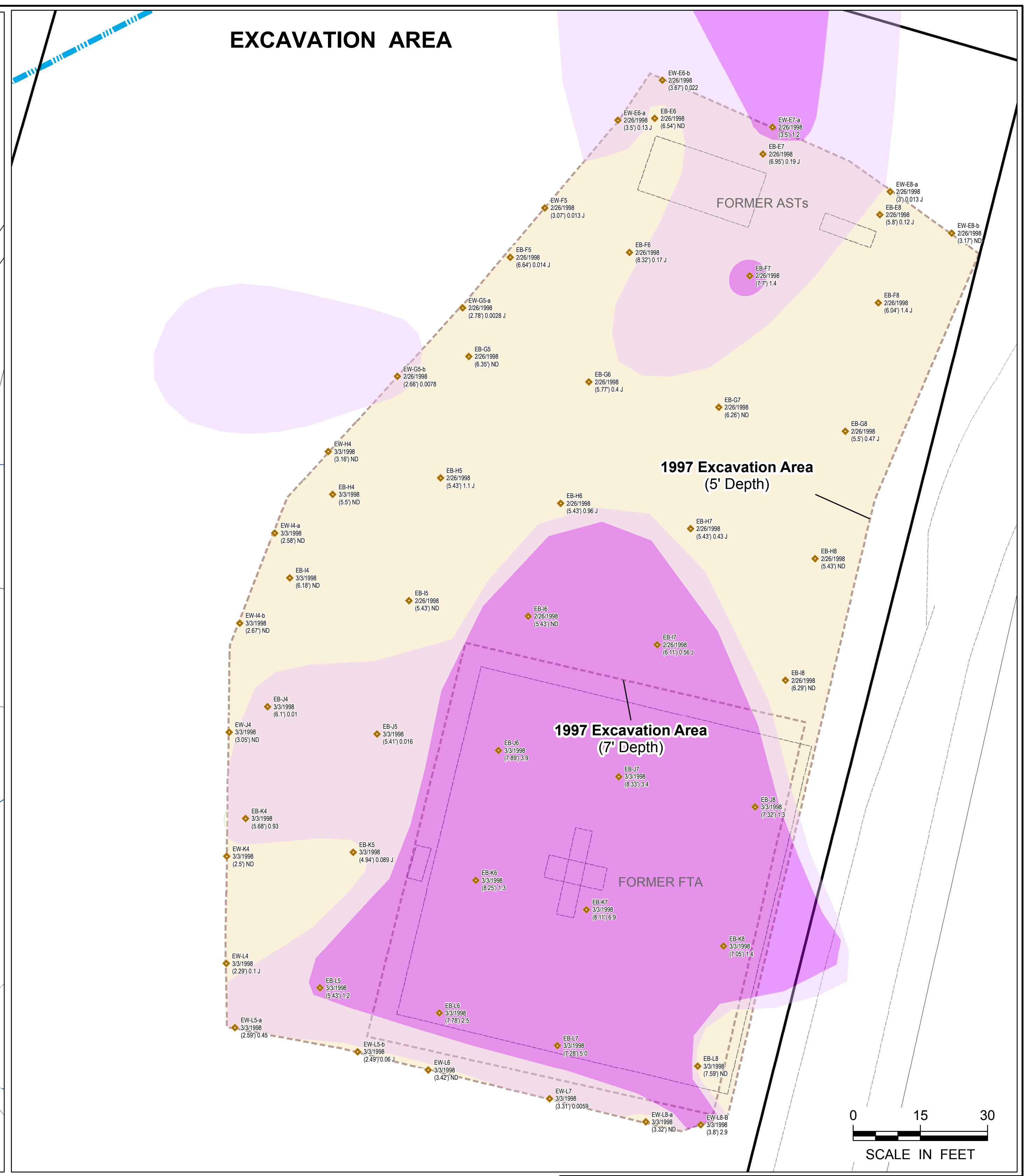
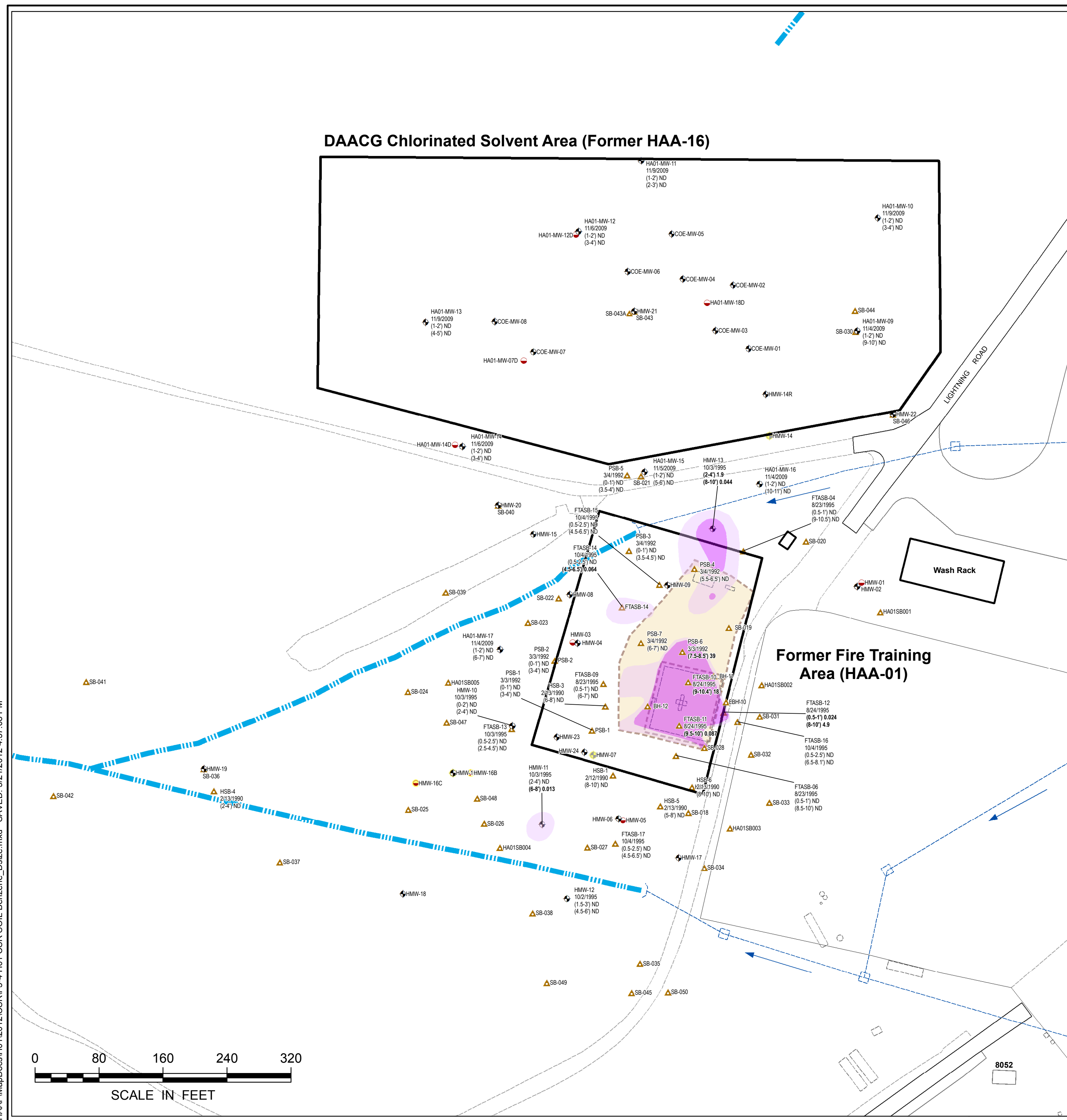
RRS - GAEPD Risk Reduction Standards (Type 1)  
 J values are estimated at concentrations below the practical quantitation limit (PQL).  
 ND - Not Detected  
 NA - Not Analyzed  
 µg/kg - micrograms per kilogram  
 mg/kg - milligrams per kilogram

HUNTER ARMY AIRFIELD, GEORGIA  
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 COMPLIANCE STATUS REPORT**

**Soil Investigation Summary  
 (November 2009)**



CITY(KNOXVILLE) DIV(GROUP-ENV/GIS) DB(BALTIMORE) PIC(T-TALELE) PM(CBERTZ) APM(S GIBBONS) TM(A.DAVIS)  
 PROJECT: GP08HAF5.H01C.DPCSR PATH: G:\GIS\HAA1\MapDocs\H0121\CSRF5-4 H01 CSR SOIL Benzene\_Dsize.mxd SAVED: 3/21/2012 4:37:08 PM



PROJECTION: NAD83 State Plane Georgia East.

**LEGEND**

	Storm Water Drainage System		Monitor Well (shallow)
	Drainage Flow Direction		Monitor Well (deep)
	Storm Water Drainage Canal		Destroyed/Abandoned Monitor Well (shallow)
	Approximate Excavation Area (1997)		Destroyed/Abandoned Monitor Well (deep)
	Benzene Isocontour (0.001 mg/kg)		Soil Boring (1987-2009)
	Benzene Isocontour (1.0 mg/kg)		Confirmation Soil Sample (November 1997)

**NOTES:**  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 5) Concentrations shown in the soil excavation area are post-soil removal activities.

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

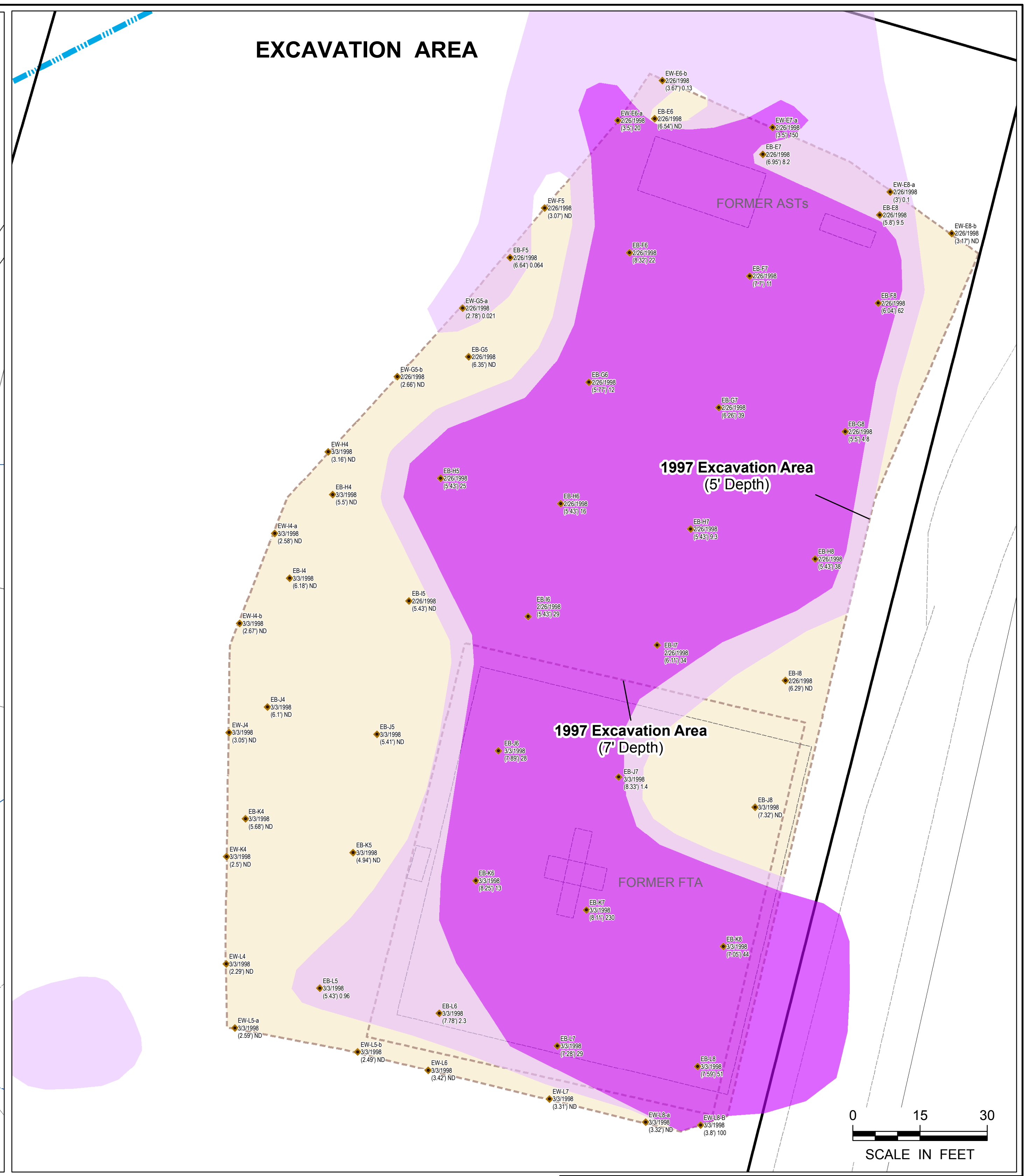
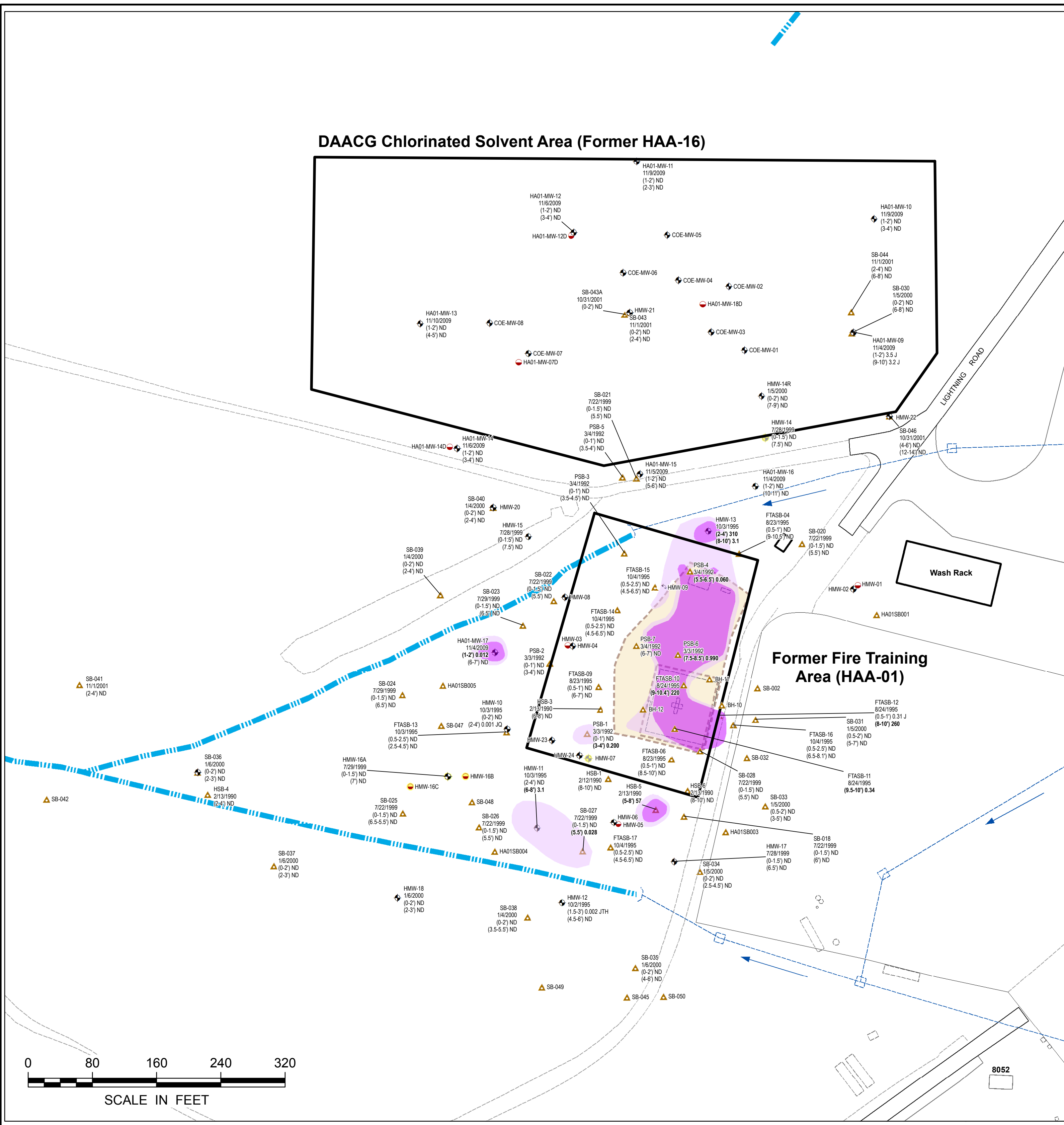
**Summary of Benzene Concentrations in Soil**



FIGURE  
**5-4**



CITY: (KNOXVILLE) DIV: (GROUP) (ENV) (GIS) DB: (B) (BALTIMORE) PIC: (T) (TALELE) PM: (C) (BERTIZ) APM: (S) (GIBBONS) TM: (A) (DAVIS) PROJECT: GPOBHAFA5.H01C.DPCSR PATH: G:\GIS\HAA1\MapDocs\H0121\CSRF5-5\_H01\_CSR\_SOIL\_xylenes\_Dsz.mxd SAVED: 3/21/2012 12:35:19 PM



PROJECTION: NAD83 State Plane Georgia East.

LEGEND	
	Storm Water Drainage System
	Drainage Flow Direction
	Storm Water Drainage Canal
	Approximate Excavation Area (1997)
	Total Xylenes Isocontour (0.001 mg/kg)
	Total Xylenes Isocontour (10 mg/kg)
	Monitor Well (shallow)
	Monitor Well (deep)
	Destroyed/Abandoned Monitor Well (shallow)
	Destroyed/Abandoned Monitor Well (deep)
	Soil Boring (1987-2009)
	Confirmation Soil Sample (November 1997)

NOTES:  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 5) Concentrations shown in the soil excavation area are post-soil removal activities.

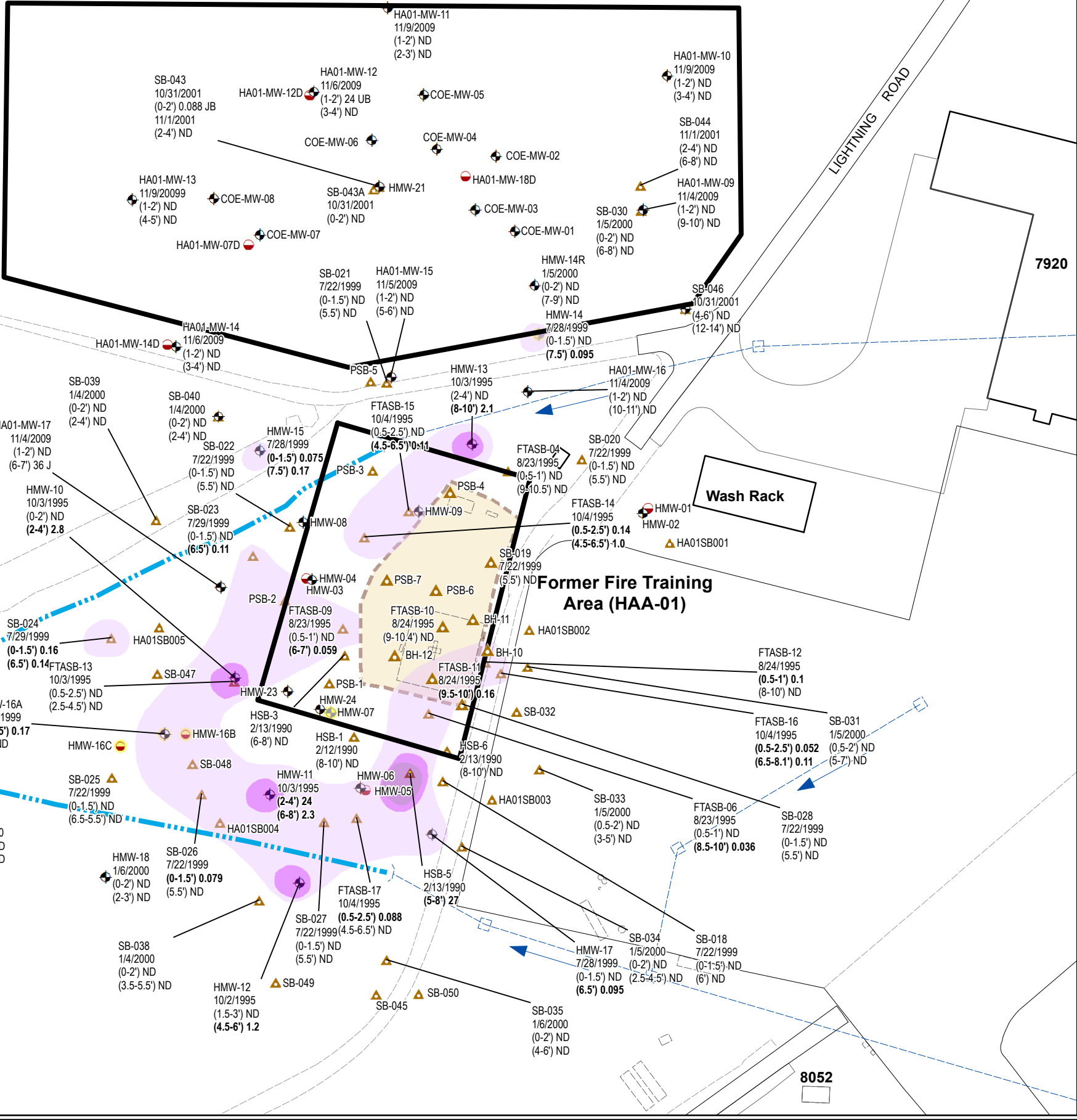
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Summary of Total Xylenes  
 Concentrations in Soil**

FIGURE  
**5-5**

CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (B. ALTON), PIC: (T. TALELE), PM: (C. BERTZ), APM: (S. GIBBONS), TM: (A. DAVIS)  
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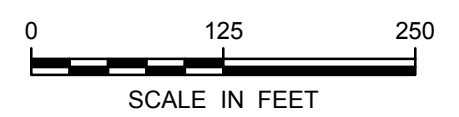
### DAACG Chlorinated Solvent Area (Former HAA-16)



### LEGEND

- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Acetone Isocontour (0.01 mg/kg)
- Acetone Isocontour (1.0 mg/kg)
- Acetone Isocontour (10 mg/kg)

- NOTES:
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.
  - 6) **BOLD** Constituent detected above the PQL.



PROJECTION: NAD83 State Plane Georgia East.  
 AERIAL SOURCE: SAGIS (2008).

### HUNTER ARMY AIRFIELD, GEORGIA HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT

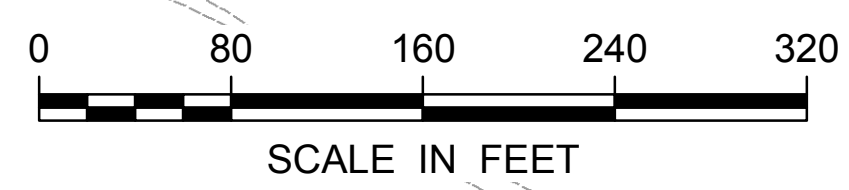
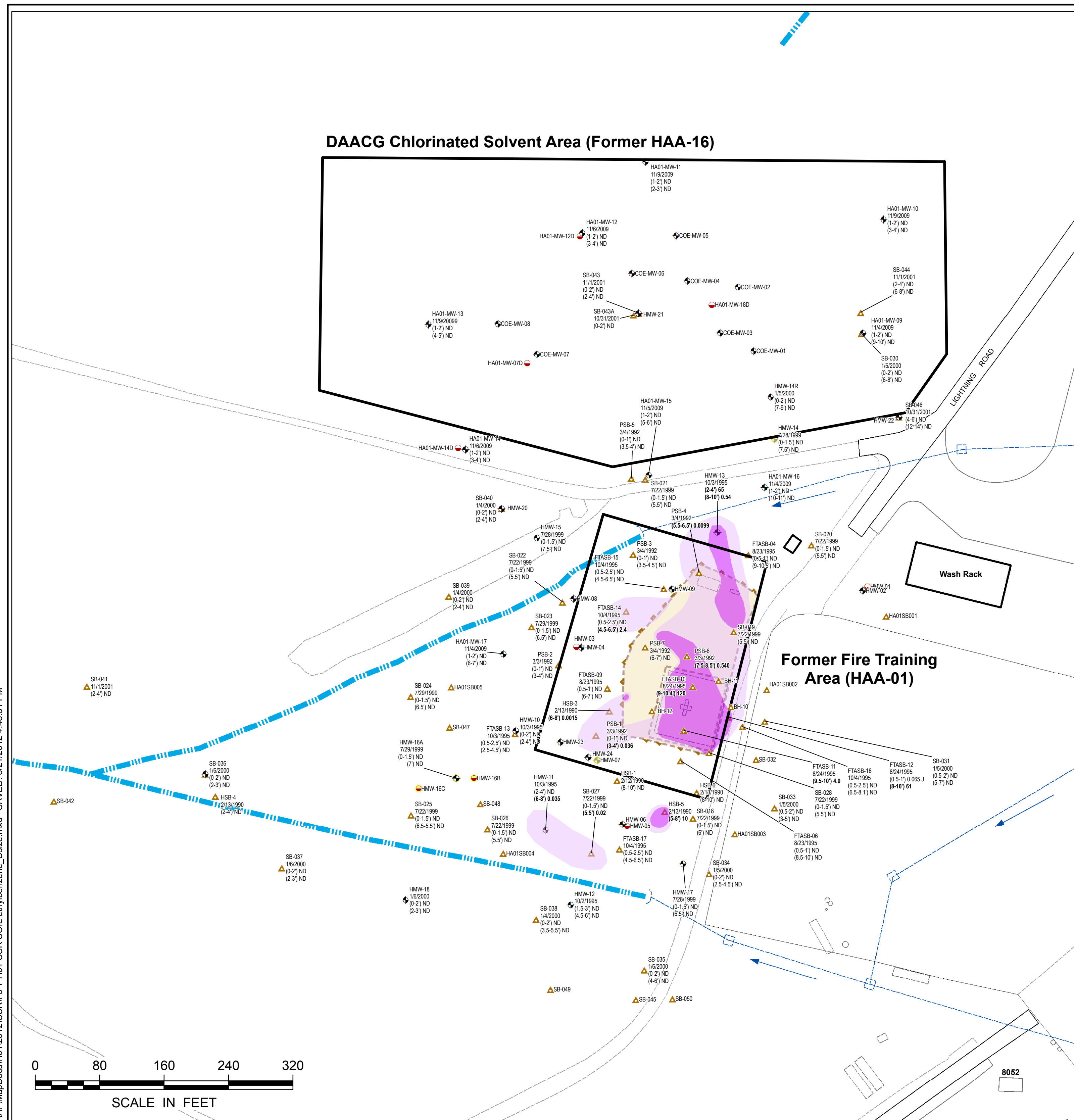
### Summary of Acetone Concentrations in Soil



FIGURE  
**5-6**



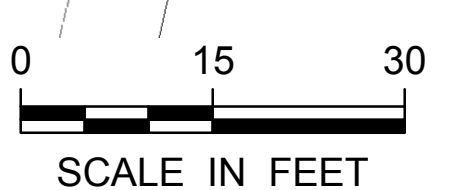
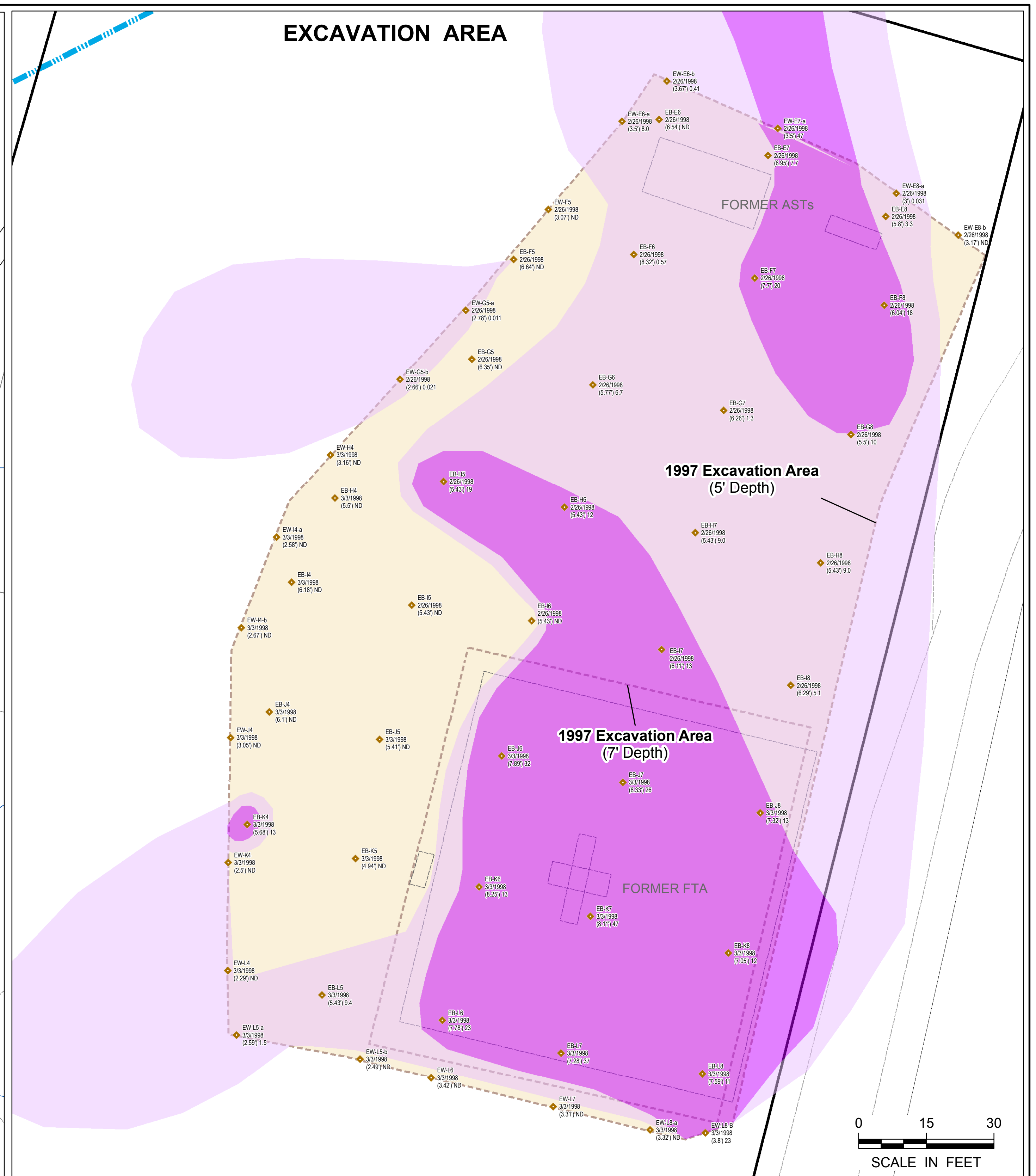
CITY(KNOXVILLE) DIV(GROUP-ENV/GIS) DB(BALTIMOR) PIC(CBERTZ) APM(SGIBBONS) TM(A.DAVIS) PROJECT:GPOBHA5.H01C.DPCSR PATH: G:\GIS\HAA1\MapDocs\H012\CSRF5-7 H01\_CSR\_SOIL\_ethylbenzene\_Daize.mxd SAVED: 3/21/2012 4:43:51 PM



PROJECTION: NAD83 State Plane Georgia East.

LEGEND	
	Storm Water Drainage System
	Drainage Flow Direction
	Storm Water Drainage Canal
	Approximate Excavation Area (1997)
	Ethylbenzene Isocontour (0.001 mg/kg)
	Ethylbenzene Isocontour (10 mg/kg)
	Monitor Well (shallow)
	Monitor Well (deep)
	Destroyed/Abandoned Monitor Well (shallow)
	Destroyed/Abandoned Monitor Well (deep)
	Soil Boring (1987-2009)
	Confirmation Soil Sample (November 1997)

NOTES:  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 5) Concentrations shown in the soil excavation area are post-soil removal activities.



HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Summary of Ethylbenzene Concentrations in Soil**

FIGURE **5-7**

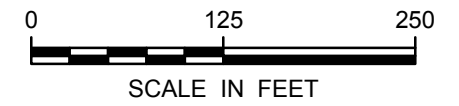
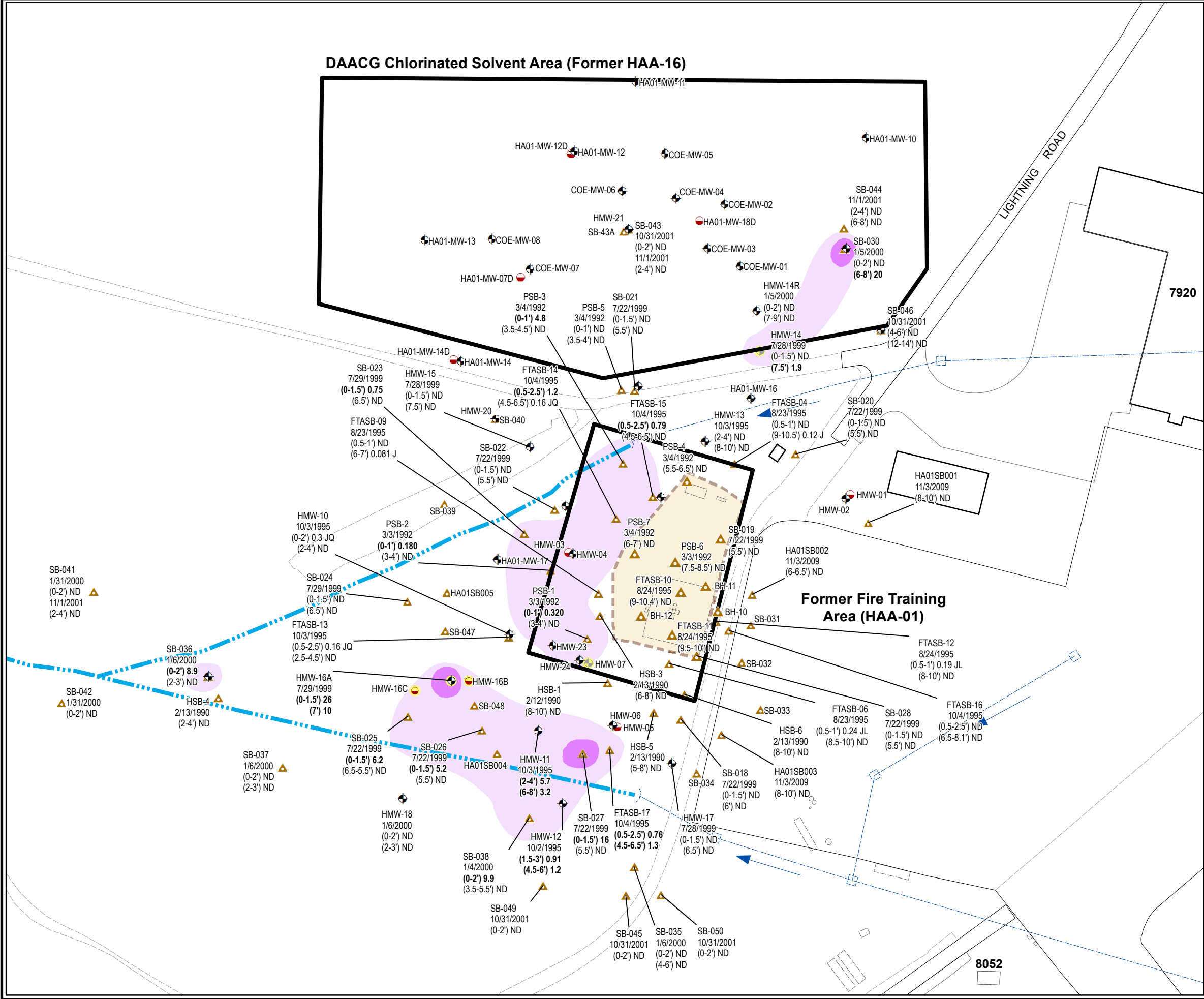
**DAACG Chlorinated Solvent Area (Former HAA-16)**

**LEGEND**

- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Benzo(a)pyrene Isocontour (0.1 mg/kg)
- Benzo(a)pyrene Isocontour (10 mg/kg)

- NOTES:**
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.

CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (BALATOM), PIC: (T. TALELE), PM: (C. BERTZ), APM: (S. GIBBONS), TM: (A. DAVIS), PROJECT: GP08HAFS.H01C.DPCSR, PATH: G:\GIS\HAFS\MapDocs\H012\CSRF5-8.H01\_CSR\_SOIL\_benzo(a)pyrene.mxd, SAVED: 3/21/2012, 4:18:58 PM



PROJECTION: NAD83 State Plane Georgia East.  
AERIAL SOURCE: SAGIS (2008).

**HUNTER ARMY AIRFIELD, GEORGIA  
HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
COMPLIANCE STATUS REPORT**

**Summary of Benzo(a)pyrene  
Concentrations in Soil**

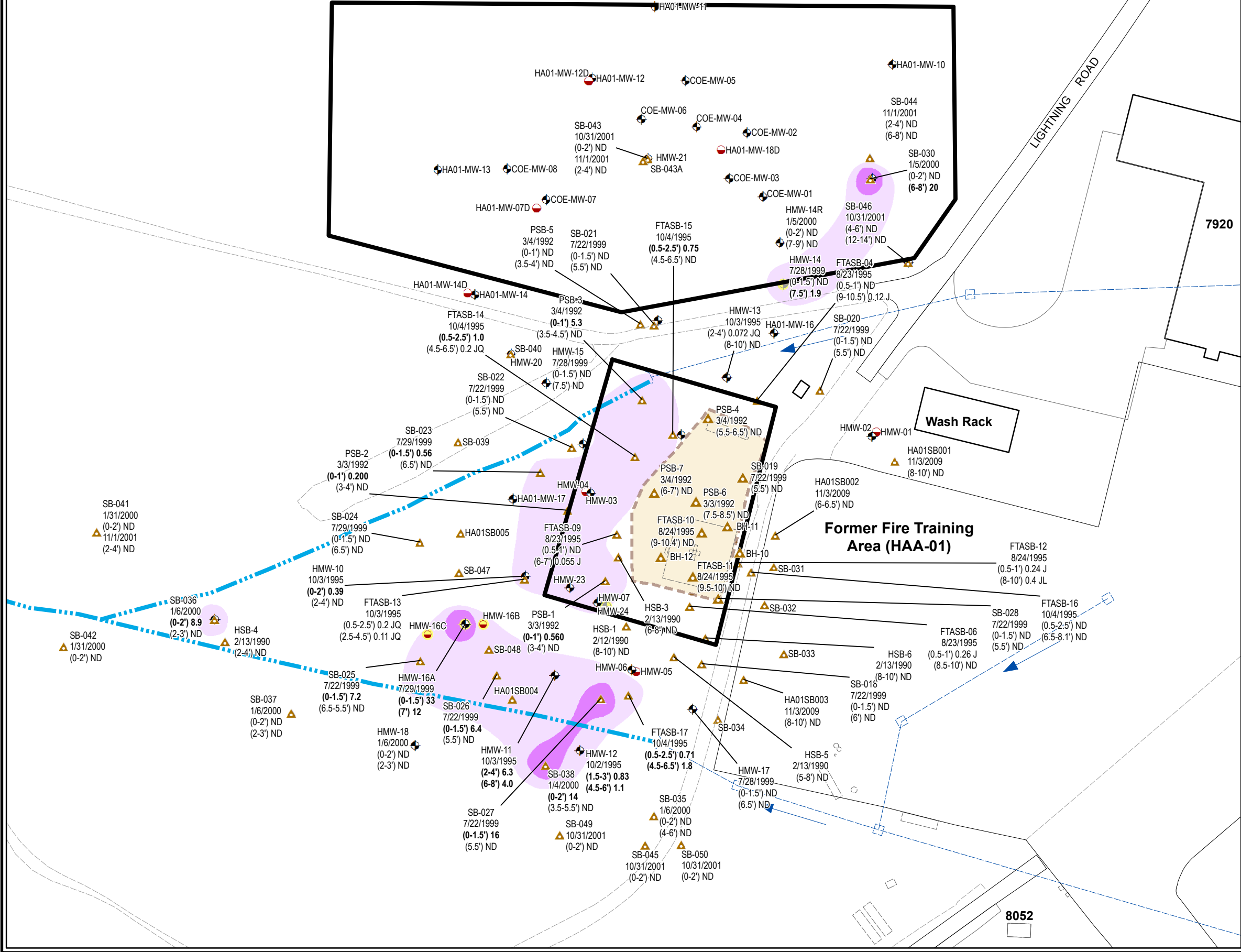
**ARCADIS**

FIGURE **5-8**



CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (BALTOM), PIC: (T. TALELE), PM: (C. BERTZ), APM: (S. GIBBONS), TM: (A. DAVIS)  
 PROJECT: GP08HAFS.H01C.DPCSR, PATH: G:\GIS\HAFS\MapDocs\H012\CSRF5-9.H01.CSR.SOIL.chrysene.mxd, SAVED: 3/21/2012 3:24:46 PM

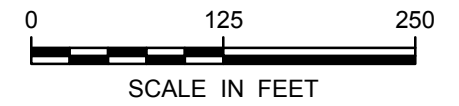
### DAACG Chlorinated Solvent Area (Former HAA-16)



#### LEGEND

- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Chrysene Isocontour (0.1 mg/kg)
- Chrysene Isocontour (10 mg/kg)

**NOTES:**  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 5) Concentrations shown in the soil excavation area are post-soil removal activities.



PROJECTION: NAD83 State Plane Georgia East.  
 AERIAL SOURCE: SAGIS (2008).

### HUNTER ARMY AIRFIELD, GEORGIA HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT

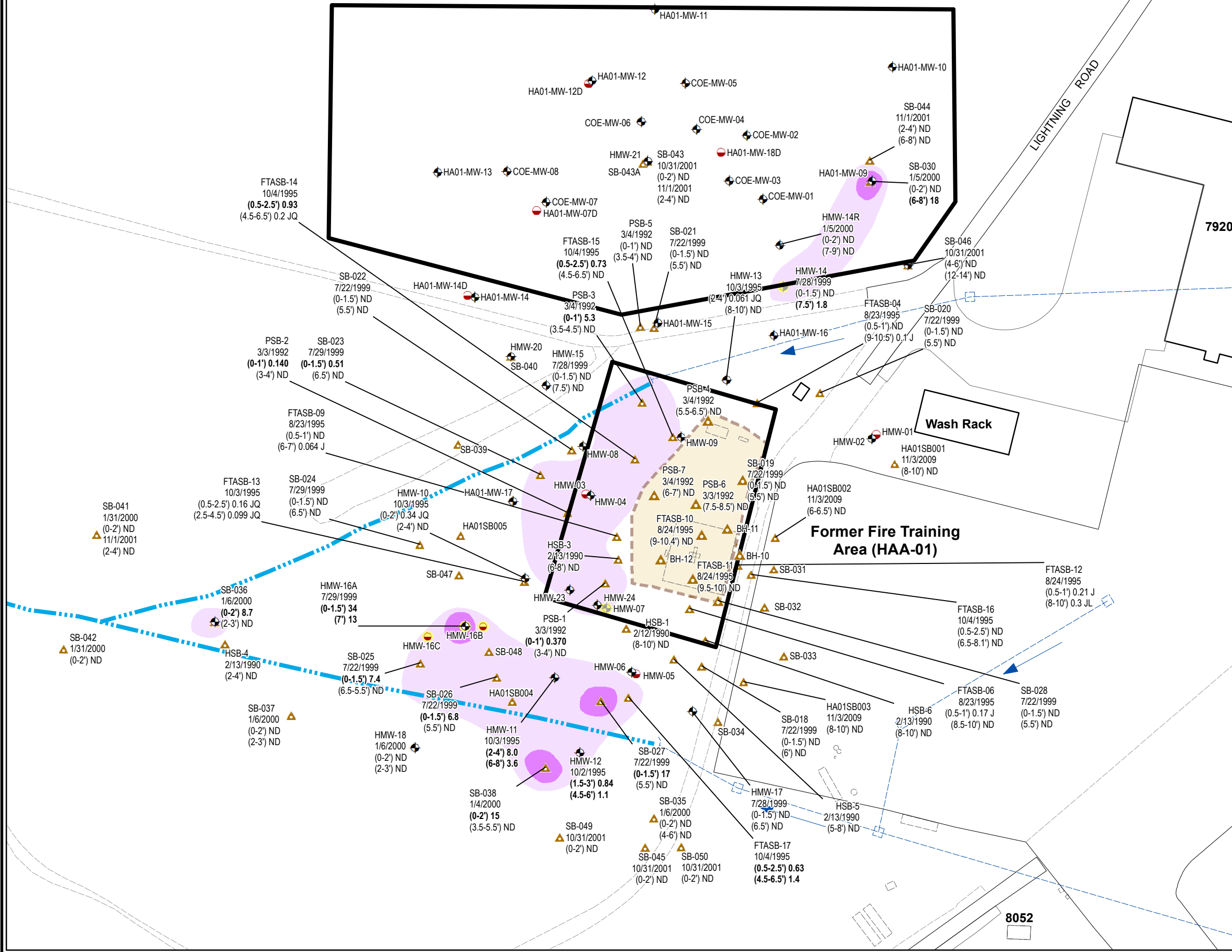
#### Summary of Chrysene Concentrations in Soil



FIGURE  
**5-9**

CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (B,AL,TOM), PIC: (T,TALELE), PM: (C,BERTZ), APM: (S,GIBBONS), TM: (A,DAVIS)  
 PROJECT: GP08HAF, H01C.DPCS, PATH: G:\GIS\HAF\MapDocs\H01C.DPCS\SRIF5-10\_H01\_CSR\_SOIL\_benzo(a)anthracene.mxd, SAVED: 3/21/2012 3:26:28 PM

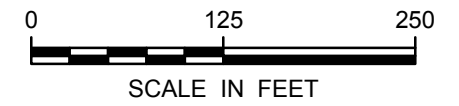
### DAACG Chlorinated Solvent Area (Former HAA-16)



### LEGEND

- ◈ Monitor Well (shallow)
- ◈ Monitor Well (deep)
- ◈ Destroyed/Abandoned Monitor Well (shallow)
- ◈ Destroyed/Abandoned Monitor Well (deep)
- ▲ Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Benzo(a)anthracene Isocontour (0.1 mg/kg)
- Benzo(a)anthracene Isocontour (10 mg/kg)

- NOTES:
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.



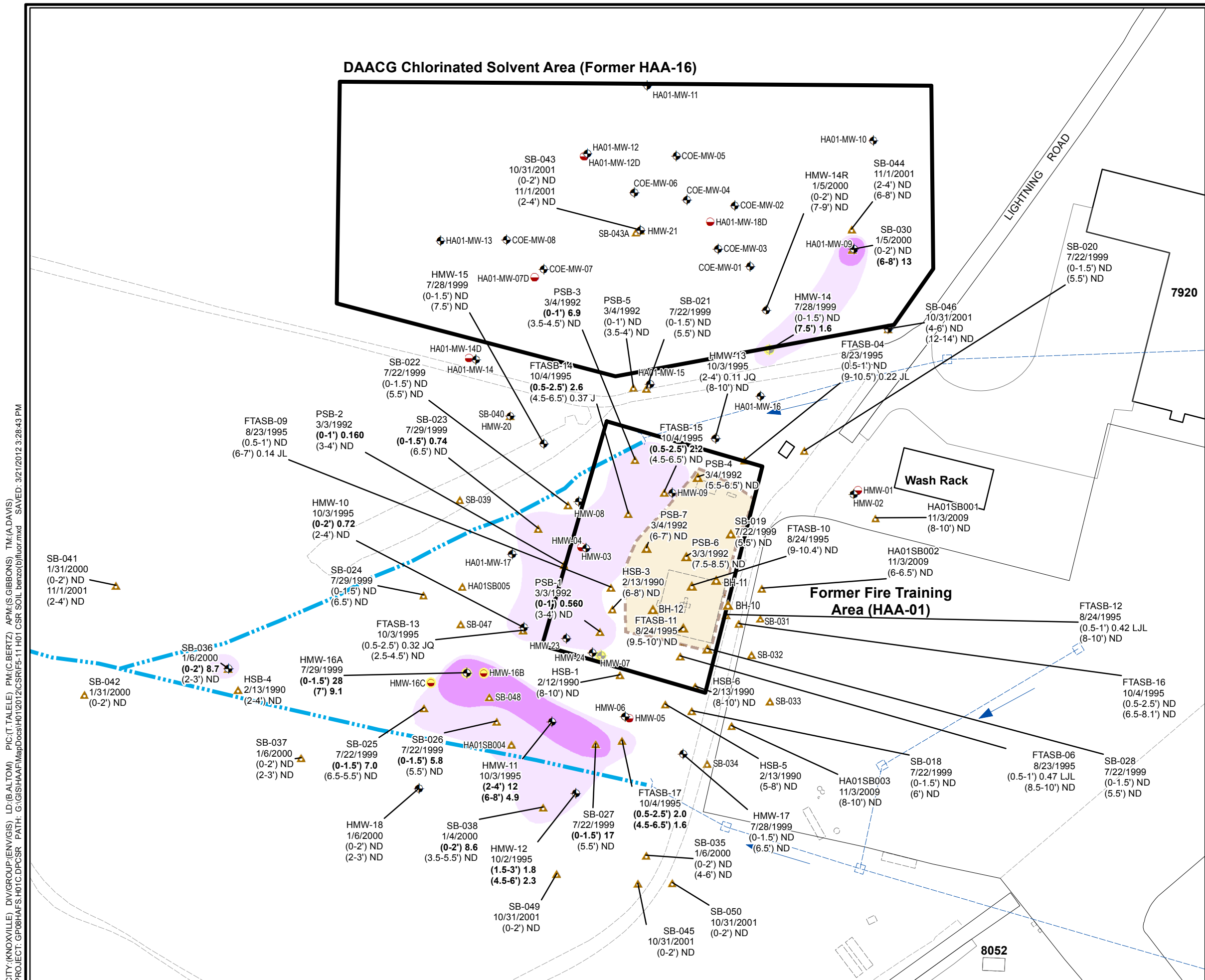
PROJECTION: NAD83 State Plane Georgia East.  
 AERIAL SOURCE: SAGIS (2008).

### HUNTER ARMY AIRFIELD, GEORGIA HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT

### Summary of Benzo(a)anthracene Concentrations in Soil

FIGURE  
**5-10**

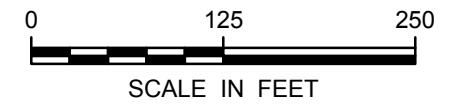
**DAACG Chlorinated Solvent Area (Former HAA-16)**



**LEGEND**

- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area
- Benzo(b)fluoranthene Isocontour (0.1 mg/kg)
- Benzo(b)fluoranthene Isocontour (10 mg/kg)

- NOTES:**
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.



PROJECTION: NAD83 State Plane Georgia East.  
AERIAL SOURCE: SAGIS (2008).

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
COMPLIANCE STATUS REPORT**

**Summary of Benzo(b)fluoranthene  
Concentrations in Soil**



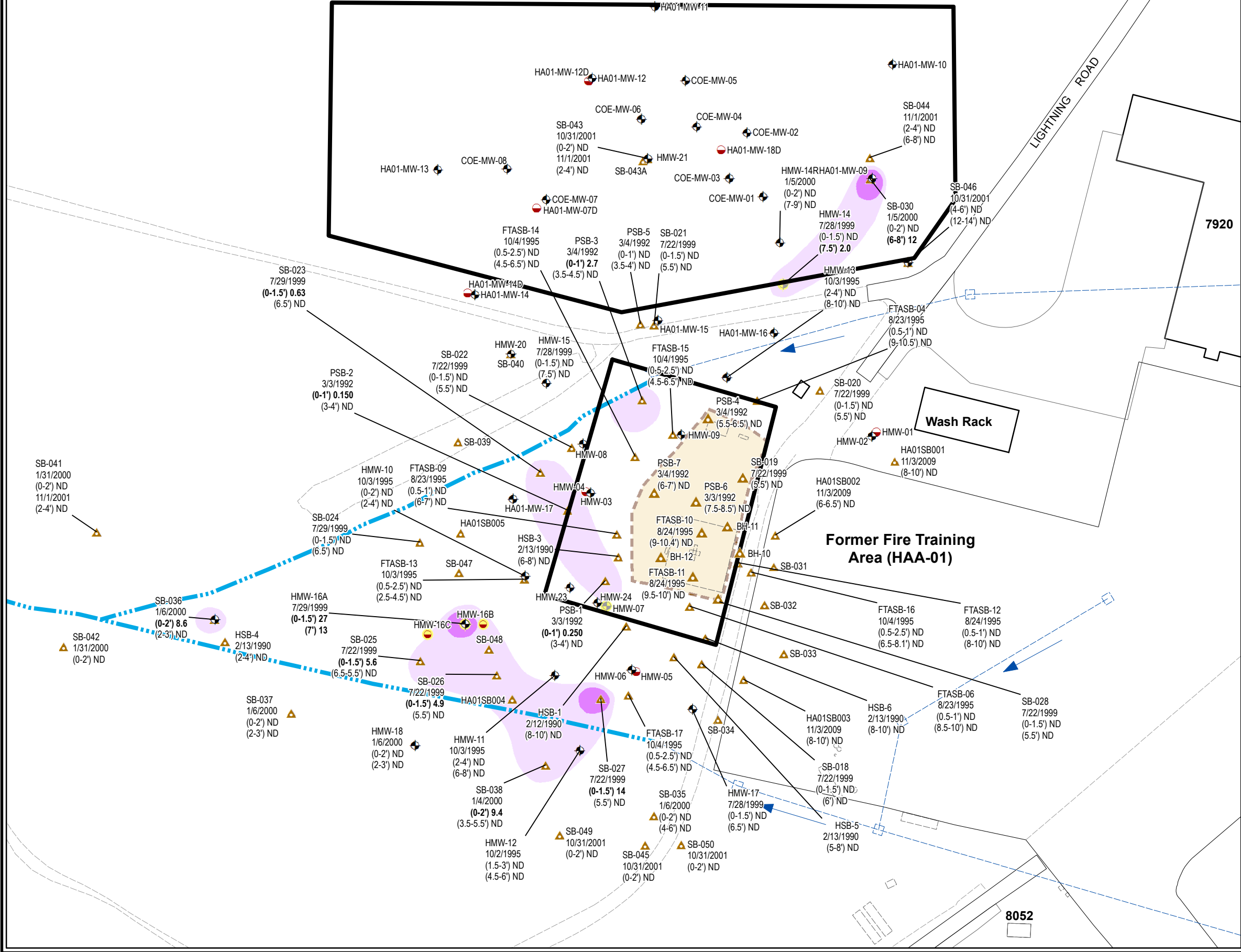
FIGURE  
**5-11**

CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (B. BALTIM), PIC: (T. TALELE), PM: (C. BERTZ), APM: (S. GIBBONS), TM: (A. DAVIS), PROJECT: GP08HAFS.H01C.DPCS, PATH: G:\GIS\HAA\MapDocs\H01C.DPCS\F5-11.H01 CSR SOIL benzofluor.mxd, SAVED: 3/21/2012 3:28:43 PM



CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (BALTOM), PIC: (T. TALELE), PM: (C. BERTZ), APM: (S. GIBBONS), TM: (A. DAVIS)  
 PROJECT: GP08HAFS.H01C.DPCS, PATH: G:\GIS\HAFS\MapDocs\H01C.DPCS\Fig-12.H01 CSR SOIL benzo(k)fluor.mxd, SAVER: 3/21/2012 3:30:37 PM

### DAACG Chlorinated Solvent Area (Former HAA-16)



### LEGEND

- ◊ Monitor Well (shallow)
- Monitor Well (deep)
- ◊ Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- ▲ Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Benzo(k)fluoranthene Isocontour (0.1 mg/kg)
- Benzo(k)fluoranthene Isocontour (10 mg/kg)

- NOTES:
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

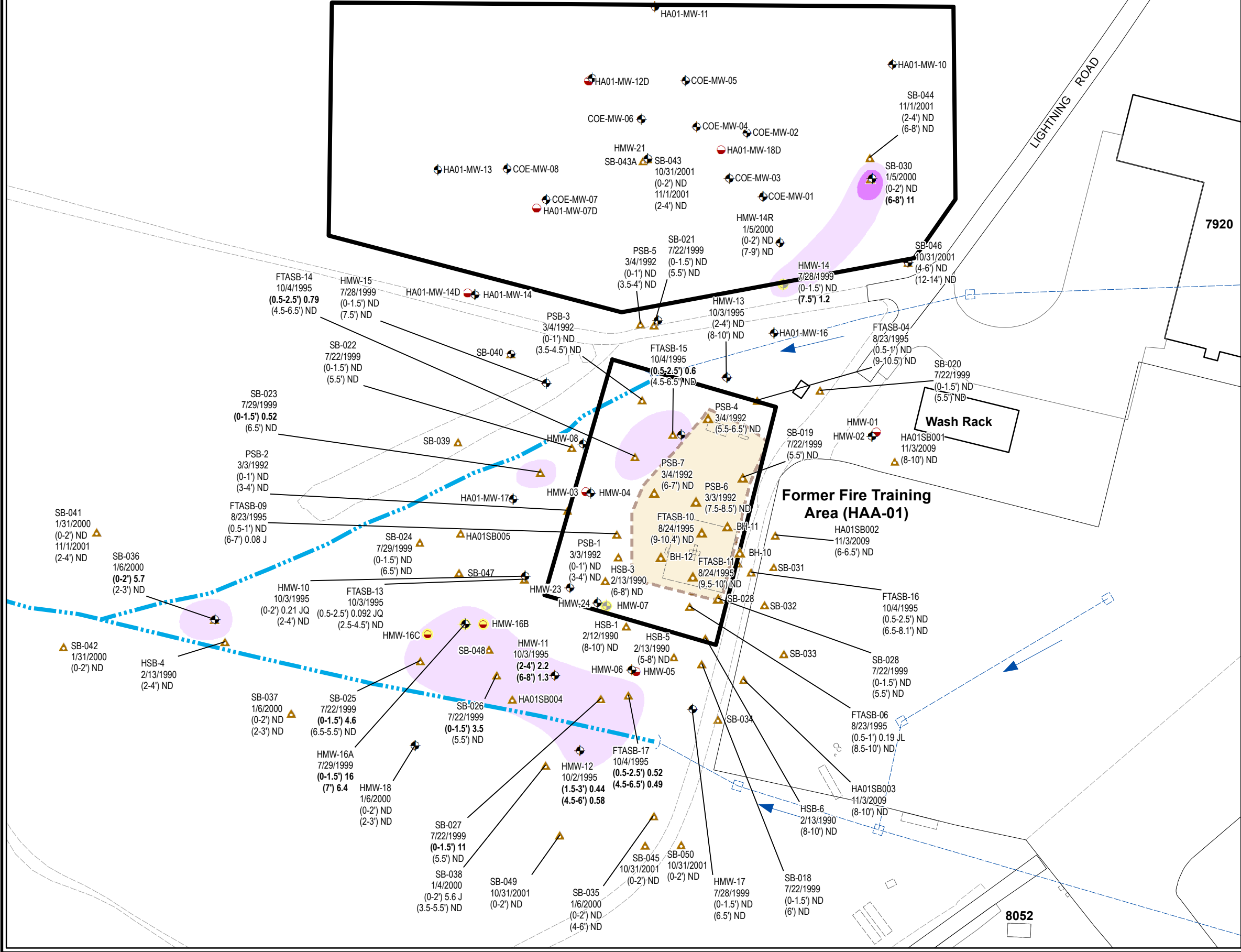
### Summary of Benzo(k)fluoranthene Concentrations in Soil

FIGURE  
**5-12**



CITY: KNOXVILLE, DIV: GROUP (ENV/GIS), LD: (B,AL,TOM), PIC: (T,TALELE), PM: (C,BERTZ), APM: (S,GIBBONS), TM: (A,DAVIS)  
 PROJECT: GP08HAFS.H01C.DPCSR, PATH: G:\GIS\HAFS\MapDocs\H012\CSRF05-13.H01.CSR.SOIL.Indeno(1,2,3-cd).mxd, SAVED: 3/22/2012 4:42:30 PM

### DAACG Chlorinated Solvent Area (Former HAA-16)



### LEGEND

- ◉ Monitor Well (shallow)
- ◉ Monitor Well (deep)
- ◉ Destroyed/Abandoned Monitor Well (shallow)
- ◉ Destroyed/Abandoned Monitor Well (deep)
- ▲ Soil Boring (1987-2009)
- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Indeno(1,2,3-cd)pyrene Isocontour (0.1 mg/kg)
- Indeno(1,2,3-cd)pyrene Isocontour (10 mg/kg)

- NOTES:
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Concentrations shown in the soil excavation area are post-soil removal activities.
  - 6) **BOLD** Constituent detected above the PQL.

PROJECTION: NAD83 State Plane Georgia East.  
 AERIAL SOURCE: SAGIS (2008).

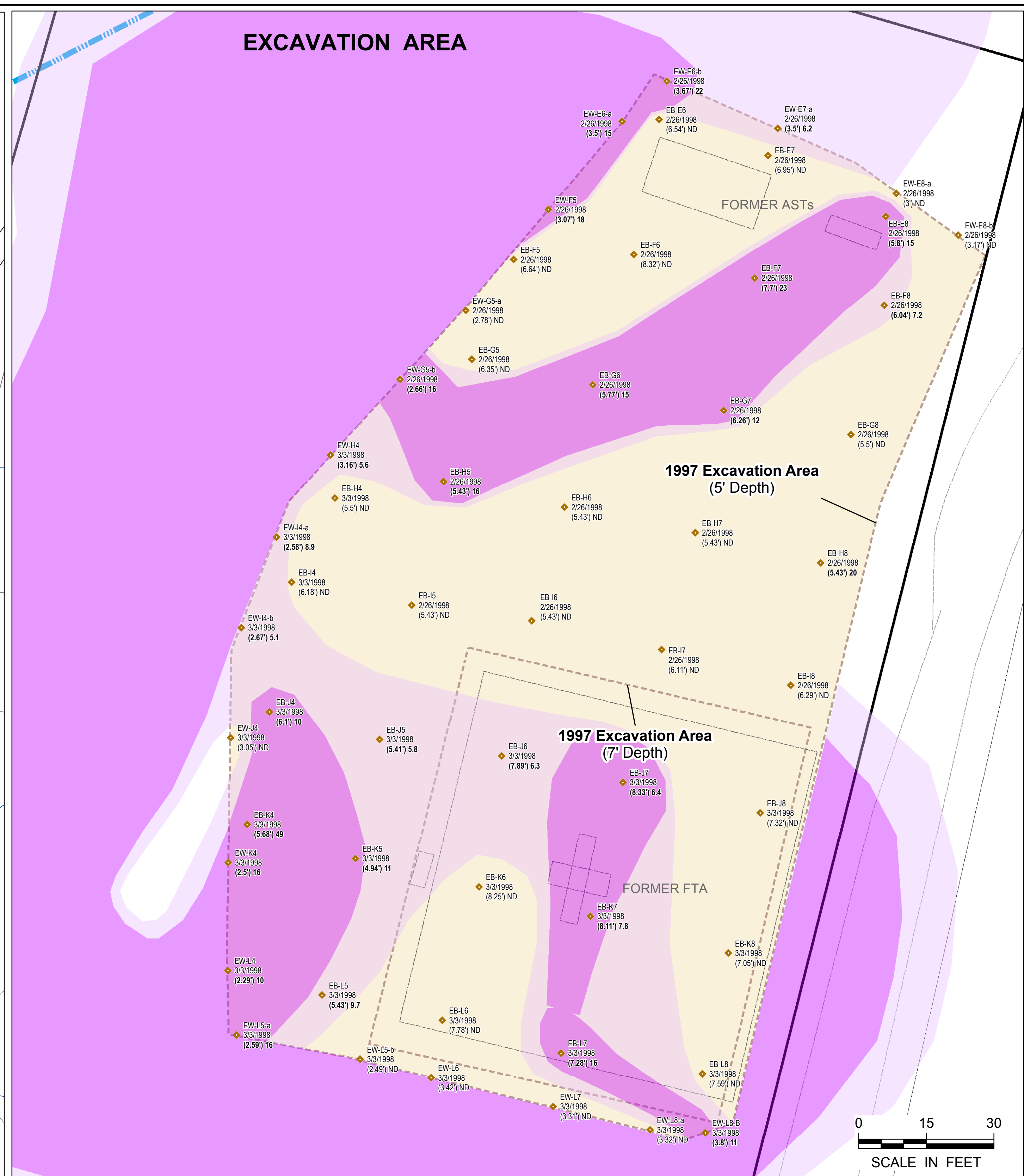
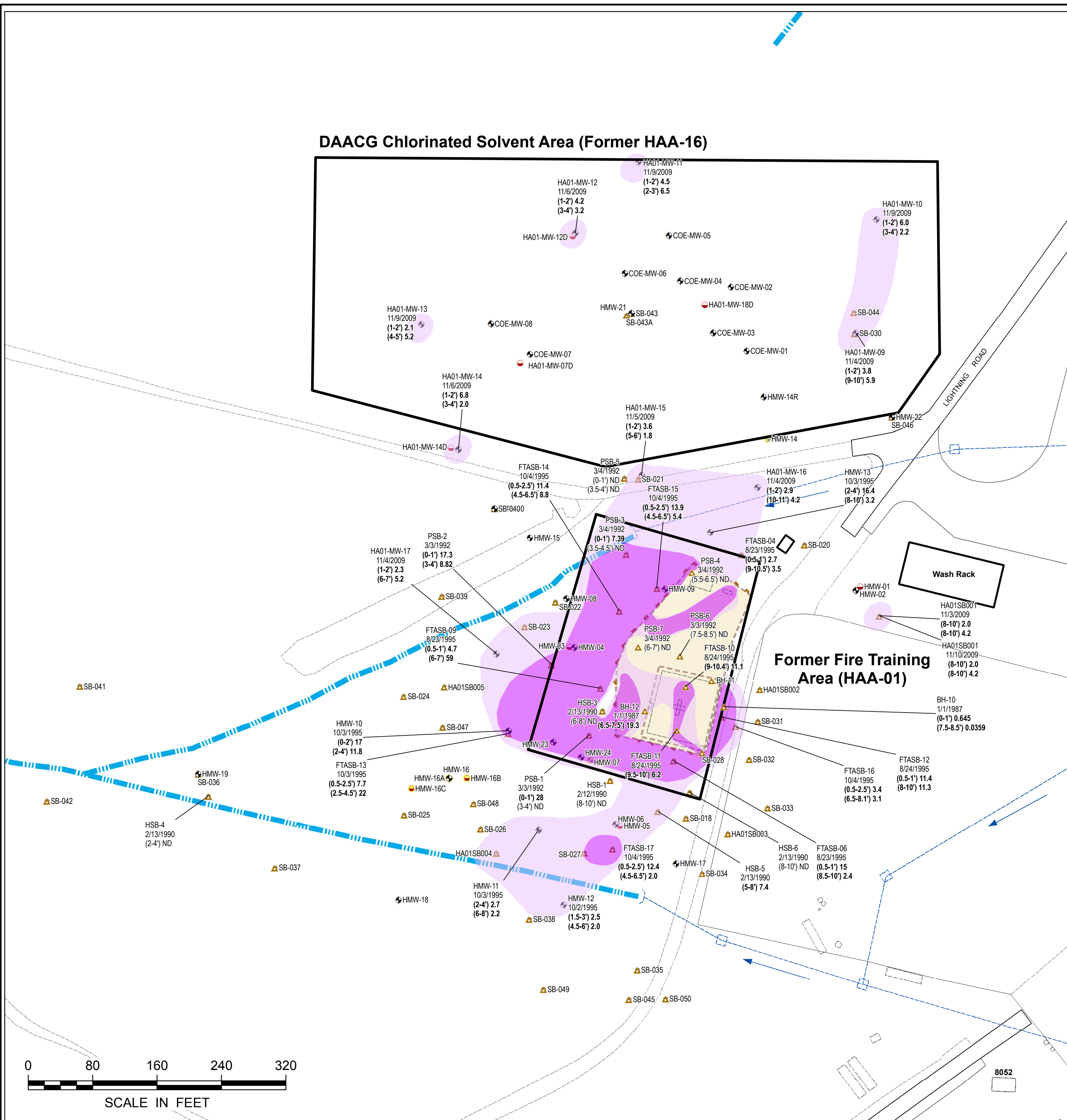
### HUNTER ARMY AIRFIELD, GEORGIA HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT

### Summary of Indeno(1,2,3-cd)pyrene Concentrations in Soil

FIGURE  
**5-13**



CITY(KNOXVILLE) DIV(GROUP-ENV/GIS) DB(BALTIM) PIC(T-TALELE) PM(CBERTZ) APM(SGIBBONS) TM(A.DAVIS)  
 PROJECT: GPOBHAFA5.H01.C.DPCSR PATH: G:\GIS\HAA1\MapDocs\H01\212\CSRF5-14 H01 CSR SOIL Lead\_Dsize.mxd SAVED: 3/21/2012 4:36:34 PM



PROJECTION: NAD83 State Plane Georgia East.

LEGEND	
	Storm Water Drainage System
	Drainage Flow Direction
	Storm Water Drainage Canal
	Approximate Excavation Area (1997)
	Lead Isocontour (1.0 mg/kg)
	Lead Isocontour (10 mg/kg)
	Monitor Well (shallow)
	Monitor Well (deep)
	Destroyed/Abandoned Monitor Well (shallow)
	Destroyed/Abandoned Monitor Well (deep)
	Soil Boring (1987-2009)
	Confirmation Soil Sample (November 1997)

NOTES:  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 5) Concentrations shown in the soil excavation area are post-soil removal activities.

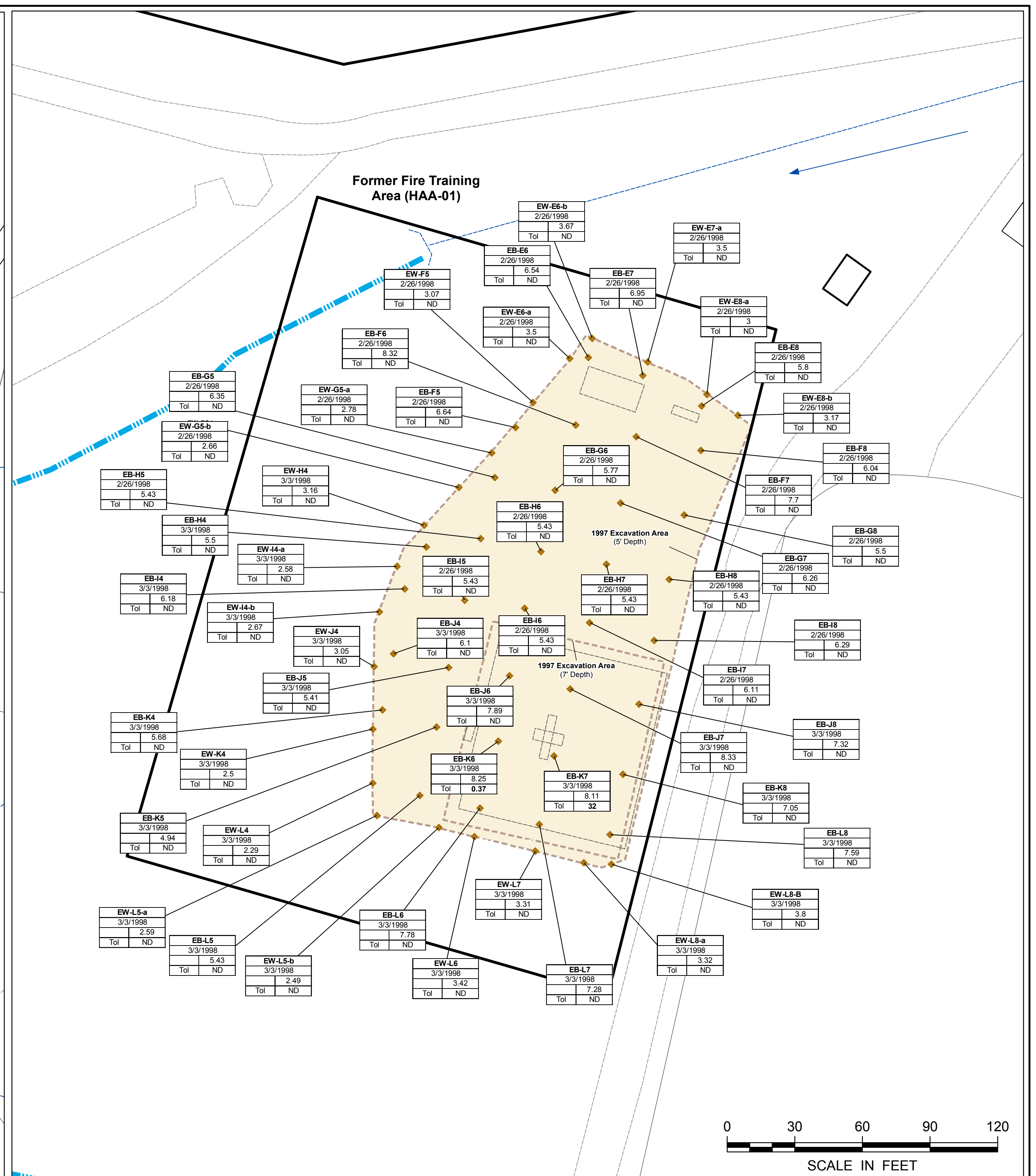
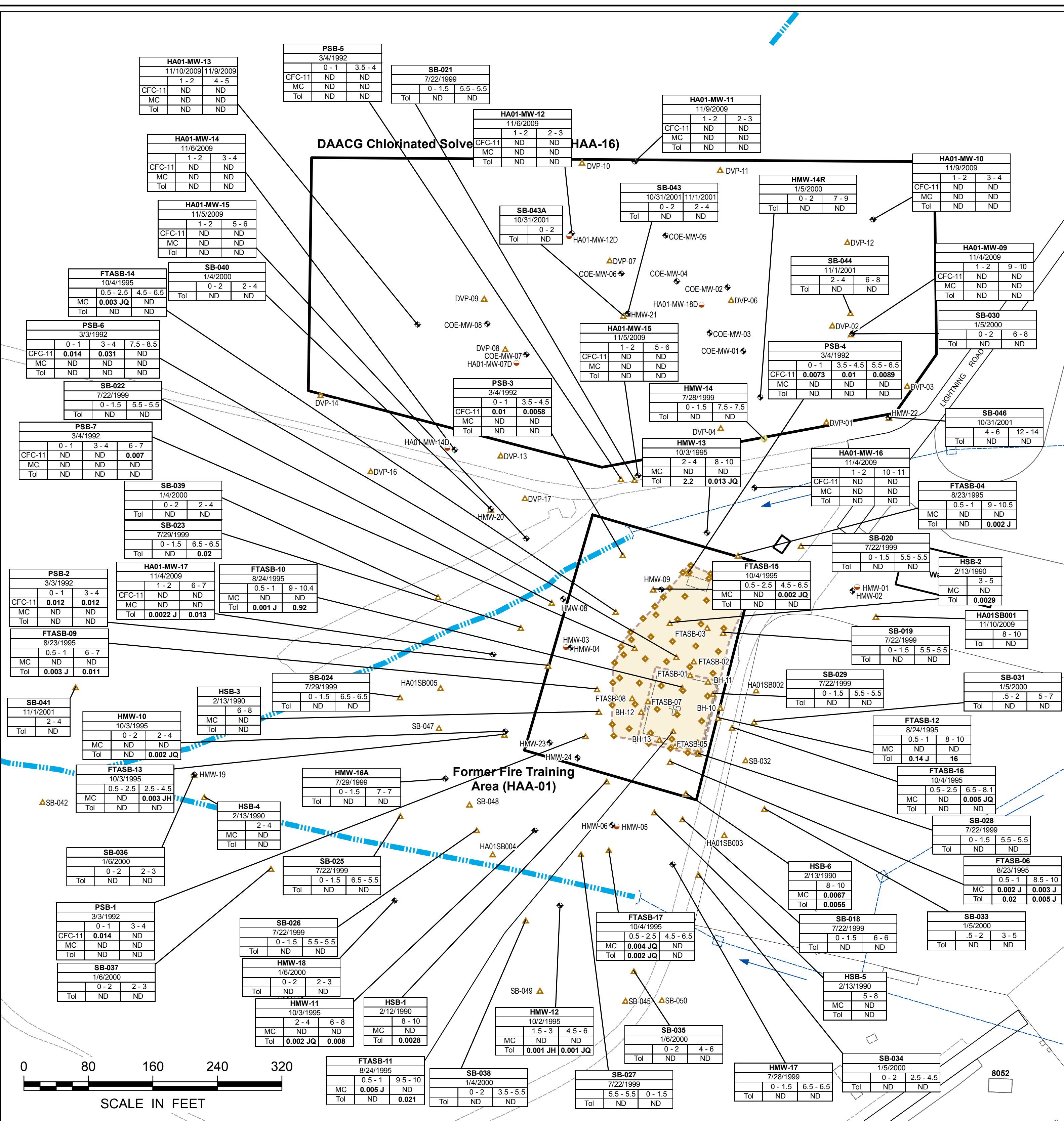
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Summary of Lead Concentrations in Soil**

FIGURE  
**5-14**



CITY(KNOXVILLE) DIV(GROUP-ENV(GIS)) DB(BALTIMORE) PIC(TALELLE) PM(CBERTZ) APM(S.GIBBONS) TM(A.DAVIS)  
 PROJECT: GP08HAF5.H01.CSR SOIL VOCS.mxd SAVER: 3/21/2012 1:55:04 PM



PROJECTION: NAD83 State Plane Georgia East.

- LEGEND**
- Storm Water Drainage System
  - Drainage Flow Direction
  - Storm Water Drainage Canal
  - Approximate Excavation Area (1997)
  - Monitor Well (shallow)
  - Monitor Well (deep)
  - Destroyed/Abandoned Monitor Well (shallow)
  - Destroyed/Abandoned Monitor Well (deep)
  - Soil Boring (1987-2009)
  - Confirmation Soil Sample (November 1997)

**NOTES:**

- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
- 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
- 3) ND - Not detected above the PQL.
- 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
- 5) Q values exceed quality control.
- 6) Concentrations shown in the soil excavation area are post-soil removal activities.
- 7) RRS- GAEPD HSR Risk Reduction Standards (Type 1)
- 8) **BOLD** - Constituent detected above laboratory detection limit.
- 9) All results are mg/kg - milligrams per kilogram.

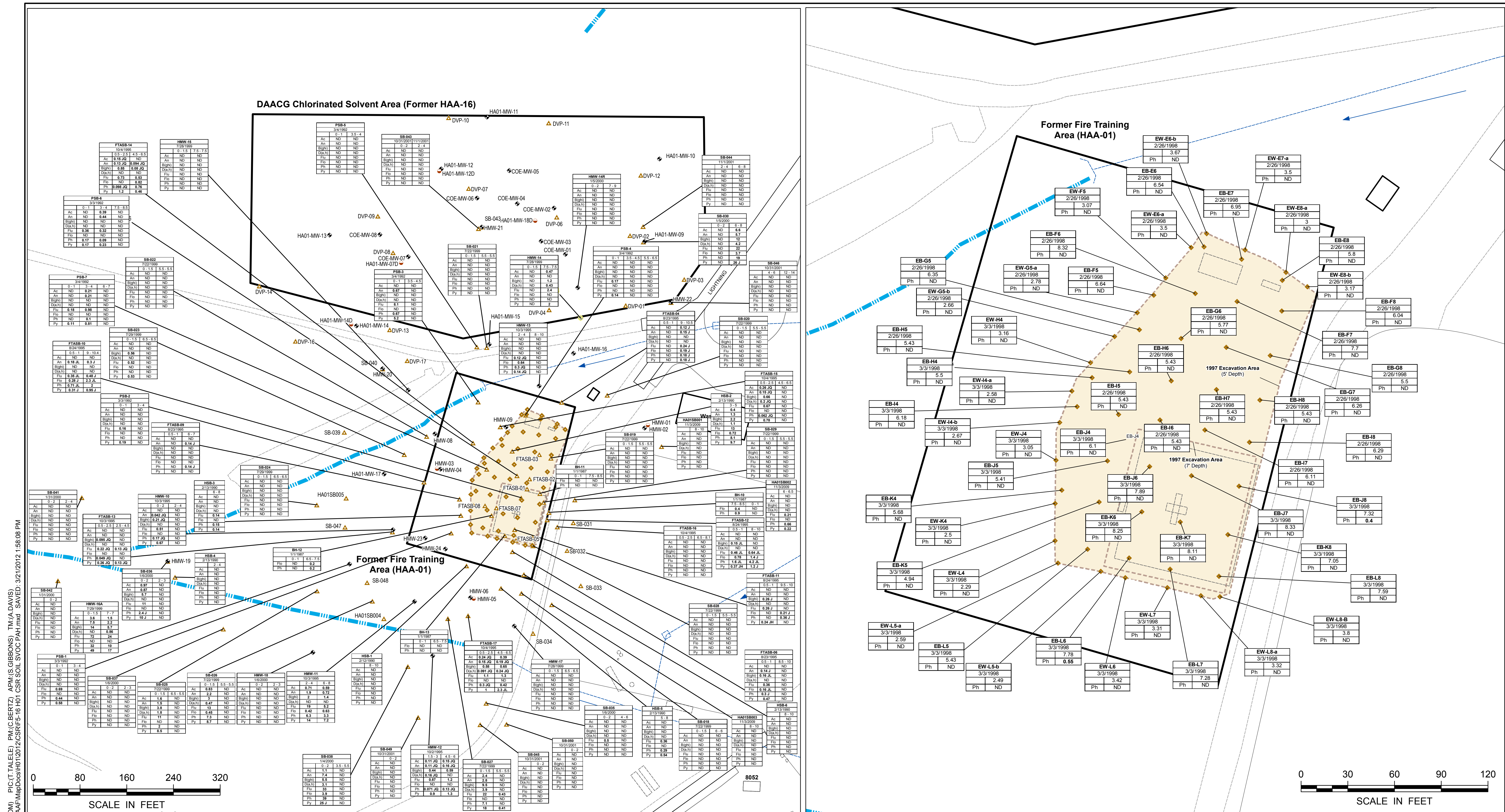
CFC-11 Methylene chloride Toluene	<b>PSB-2</b>		Sample Location Sample Date Sample Depth Result
	3/3/1992	3 - 4	
	0 - 1	0.012	
	MC	ND	
Tol	ND	ND	

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Extent of VOCs in Soil**







CITY(KNOXVILLE) DIV(GROUP-ENV/SGS) DB(BALTIMORE) PIC(TALEL) PM(CBERIZ) TM(A DAVIS) PROJECT: GP08HAF5.H012012SRIF5-16 H01 CSR SOIL SVOC PAH.mxd SAVED: 3/21/2012 1:58:08 PM

- PROJECTION: NAD83 State Plane Georgia East.
- LEGEND**
- Storm Water Drainage System
  - Drainage Flow Direction
  - Storm Water Drainage Canal
  - Approximate Excavation Area (1997)
  - Monitor Well (shallow)
  - Monitor Well (deep)
  - Destroyed/Abandoned Monitor Well (shallow)
  - Destroyed/Abandoned Monitor Well (deep)
  - Soil Boring (1987-2009)
  - Confirmation Soil Sample (November 1997)

- NOTES:**
- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
  - 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
  - 3) ND - Not detected above the PQL.
  - 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 5) Q values exceed quality control.
  - 6) Concentrations shown in the soil excavation area are post-soil removal activities.
  - 7) RRS- GAEPD HSRA Risk Reduction Standards (Type 1)
  - 8) **BOLD** - Constituent detected above laboratory detection limit.
  - 9) All results are mg/kg - milligrams per kilogram.

Sample Location	Sample Date	Sample Depth	Results
FTASB-17 10/4/1995	0.5 - 2.5	4.5 - 6.5	Acenaphthylene
			Anthracene
			Benzo(ghi)perylene
			Dibenz(a,h)anthracene
			Fluoranthene
			Fluorene
			Phenanthrene
Pyrene			
Ac	0.24	JQ	0.39
An	0.15	JQ	0.19
B(ghi)	0.58	JQ	0.65
D(a,h)	0.091	JQ	0.24
Flu	1.1	JQ	1.3
Flo	ND	ND	ND
Ph	0.3	JQ	0.42
Py	1	JL	2.3

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Extent of SVOCs (PAHs) in Soil**

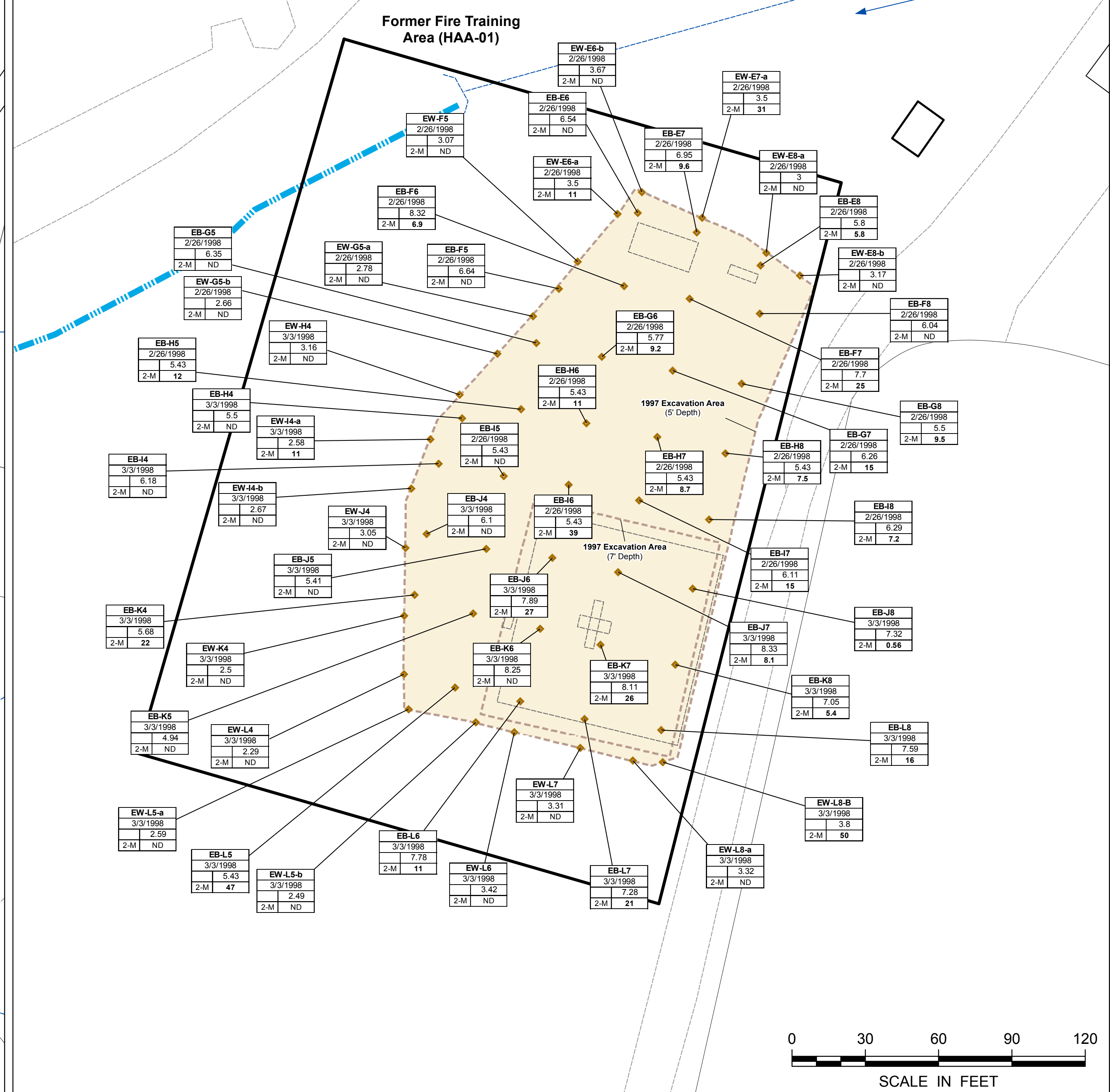
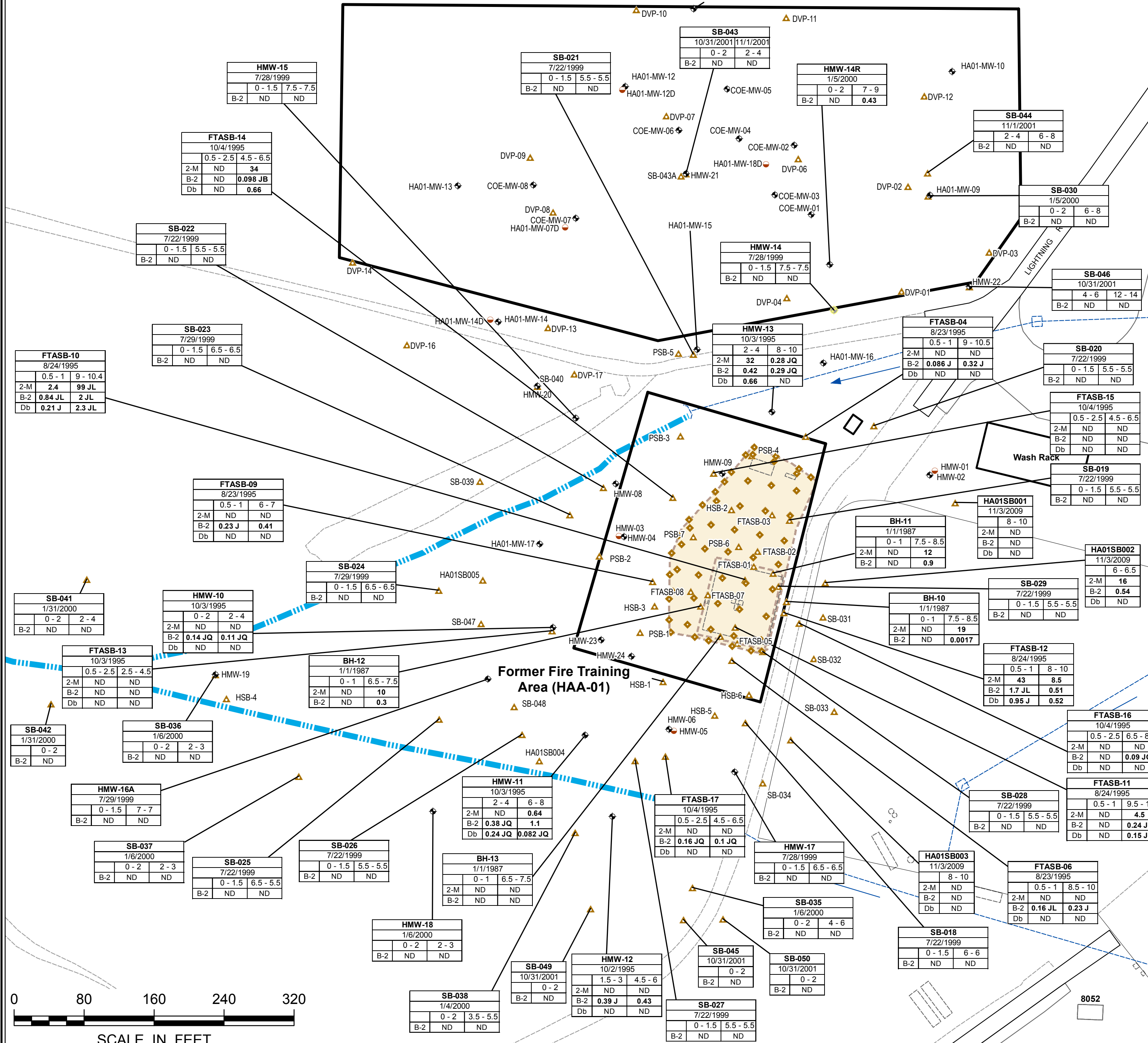
ARCADIS

FIGURE 5-16



DAACG Chlorinated Solvent Area (Former HAA-16)

Former Fire Training Area (HAA-01)



CITY(KNOXVILLE) DIV(GROUP-ENV/GIS) DBI(BALTIMORE) PIC(TALELLE) PM(CBERTZ) APM(S.GIBBONS) TM(A.DAVIS) PROJECT:GPOBHAFFMapDocsH012012CSRIF5-17 H01 CSR SOIL SVOC.mxd SAVER: 3/21/2012 1:57:14 PM

PROJECTION: NAD83 State Plane Georgia East.

**LEGEND**

- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Confirmation Soil Sample (November 1997)

**NOTES:**

- 1) All soil concentrations reported in milligrams per kilogram (mg/kg).
- 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.
- 3) ND - Not detected above the PQL.
- 4) J values are estimated at concentrations below the practical quantitation limit (PQL).
- 5) Q values exceed quality control.
- 6) Concentrations shown in the soil excavation area are post-soil removal activities.
- 7) RRS- GAEPD HSRA Risk Reduction Standards (Type 1)
- 8) **BOLD** - Constituent detected above laboratory detection limit.
- 9) All results are mg/kg - milligrams per kilogram.

Sample Location	Sample Date	Sample Depth	Result
FTASB-12	8/24/1995	0.5 - 1	8 - 10
		2-M	<b>43</b>
		B-2	1.7 JL
		Db	<b>0.95 J</b> 0.52

2-Methylnaphthalene  
Bis(2-ethylhexyl)phthalate  
Dibenzofuran

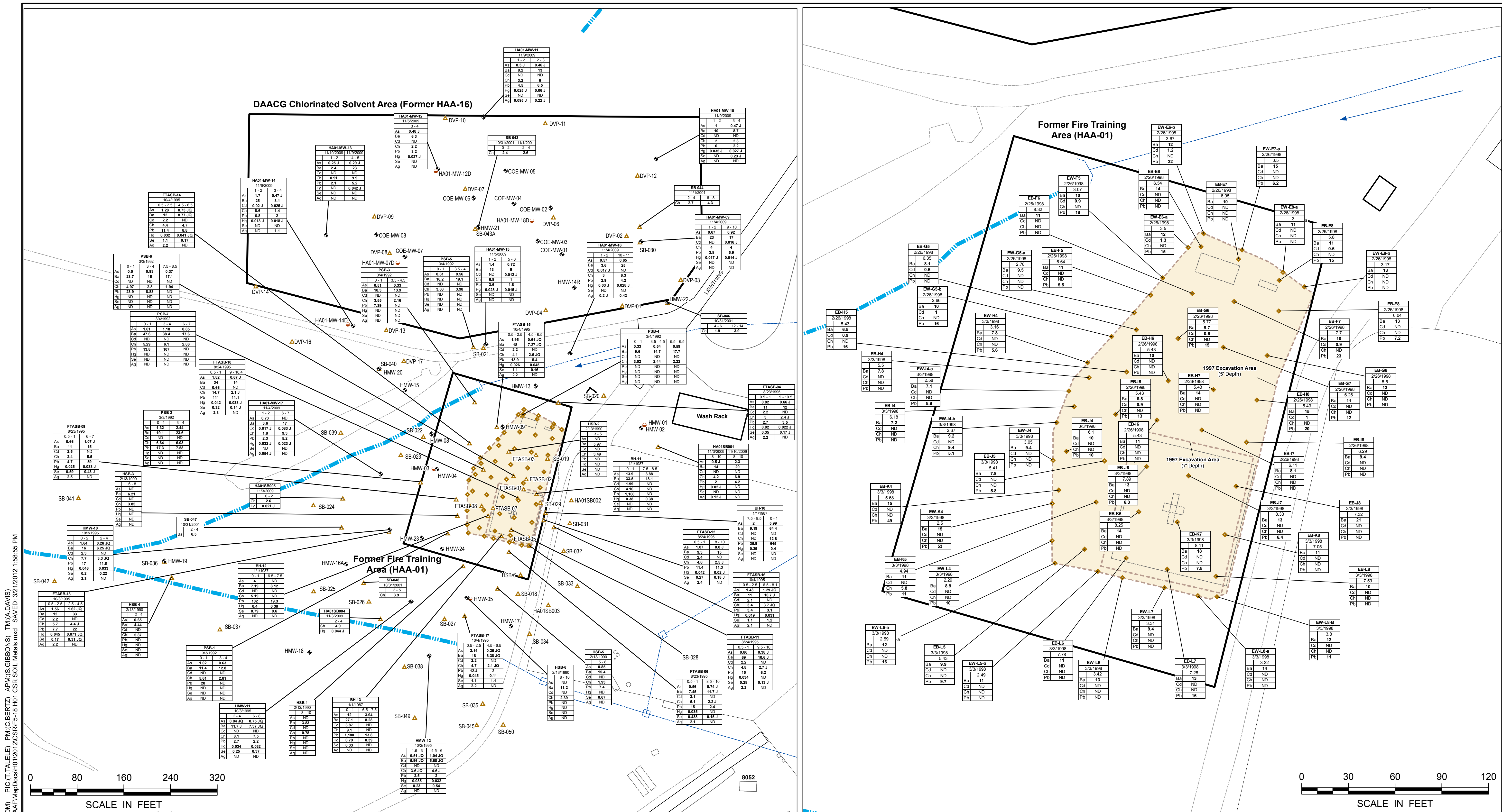
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Extent of SVOCs in Soil**

ARCADIS

FIGURE  
**5-17**





CITY(KNOXVILLE) DIV(GROUP)-(ENV)(GIS) DB:(B)AL(TOM) PIC:(T)ALE(L)E) PM:(C)BERT(Z) APM:(S)GIB(BONS) TM:(A)DA(V)S  
 PROJECT: GP08HAF5.H01C.DPCSR PATH: C:\GIS\HAA\MapDocs\H012012\CSRF5-18\_H01\_CSR\_Soil\_Metals.mxd SAVER: 3/21/2012 1:58:55 PM

PROJECTION: NAD83 State Plane Georgia East.

**LEGEND**

- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Monitor Well (shallow)
- Monitor Well (deep)
- Soil Boring (1987-2009)
- Confirmation Soil Sample (November 1997)

**NOTES:**

- All soil concentrations reported in milligrams per kilogram (mg/kg).
- If no laboratory analytical result is listed, the designated compound was not analyzed for.
- ND - Not detected above the PQL.
- J values are estimated at concentrations below the practical quantitation limit (PQL).
- Q values exceed quality control.
- Concentrations shown in the soil excavation area are post-soil removal activities.
- RRS- GAEPD HSR Risk Reduction Standards (Type 1)
- BOLD - Constituent detected above laboratory detection limit.
- All results are mg/kg - milligrams per kilogram.

FTASB-12		Sample Location	
8/24/1995		Sample Date	
0.5 - 1 8 - 10		Sample Depth	
As	1.07	0.8 J	Result
Ba	9.3	15	
Cd	2.4	ND	
Ch	4.6	2.5 J	
Pb	11.4	11.3	
Hg	0.042	0.02 J	
Se	0.27	0.18 J	
Ag	2.4	ND	

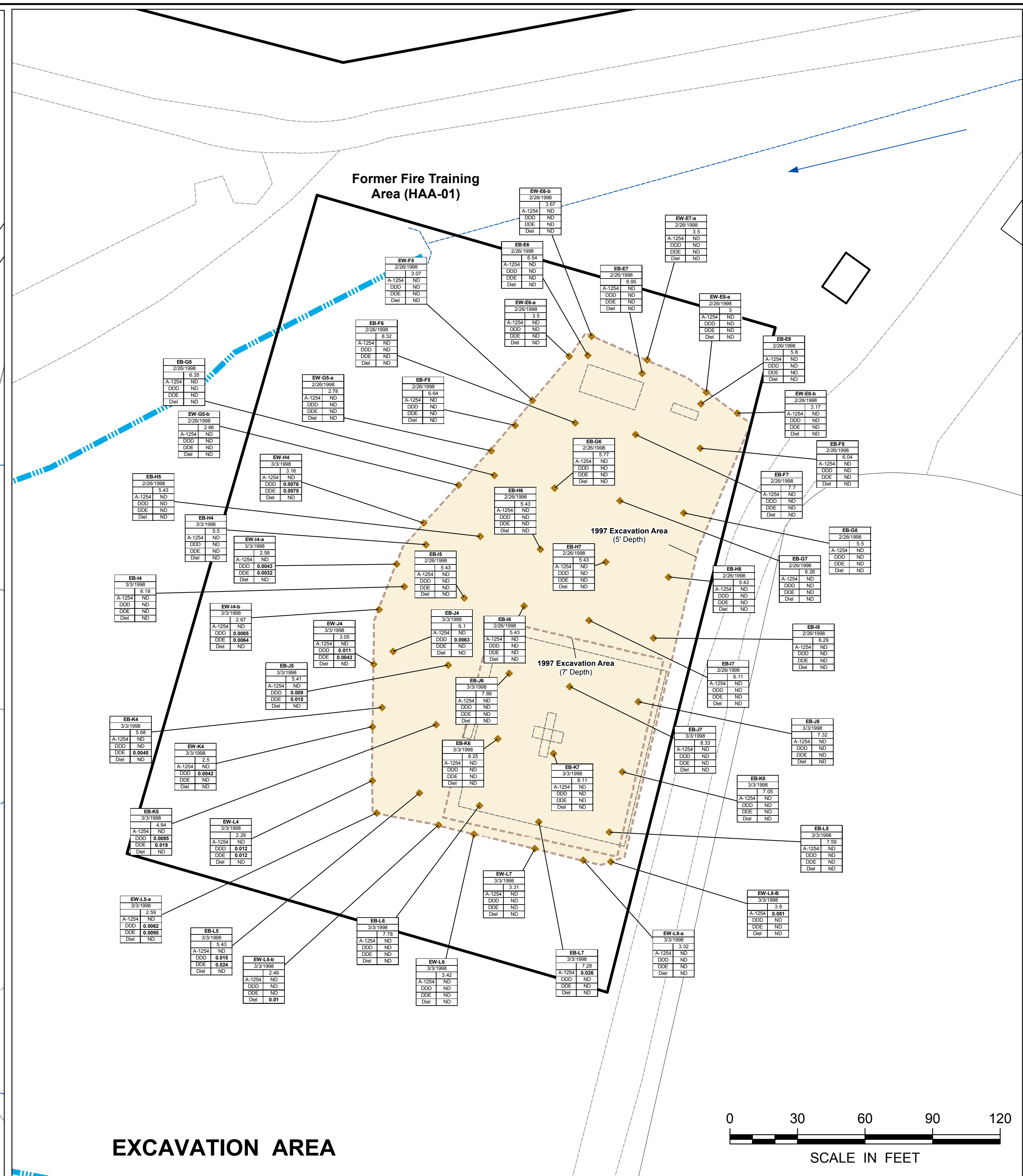
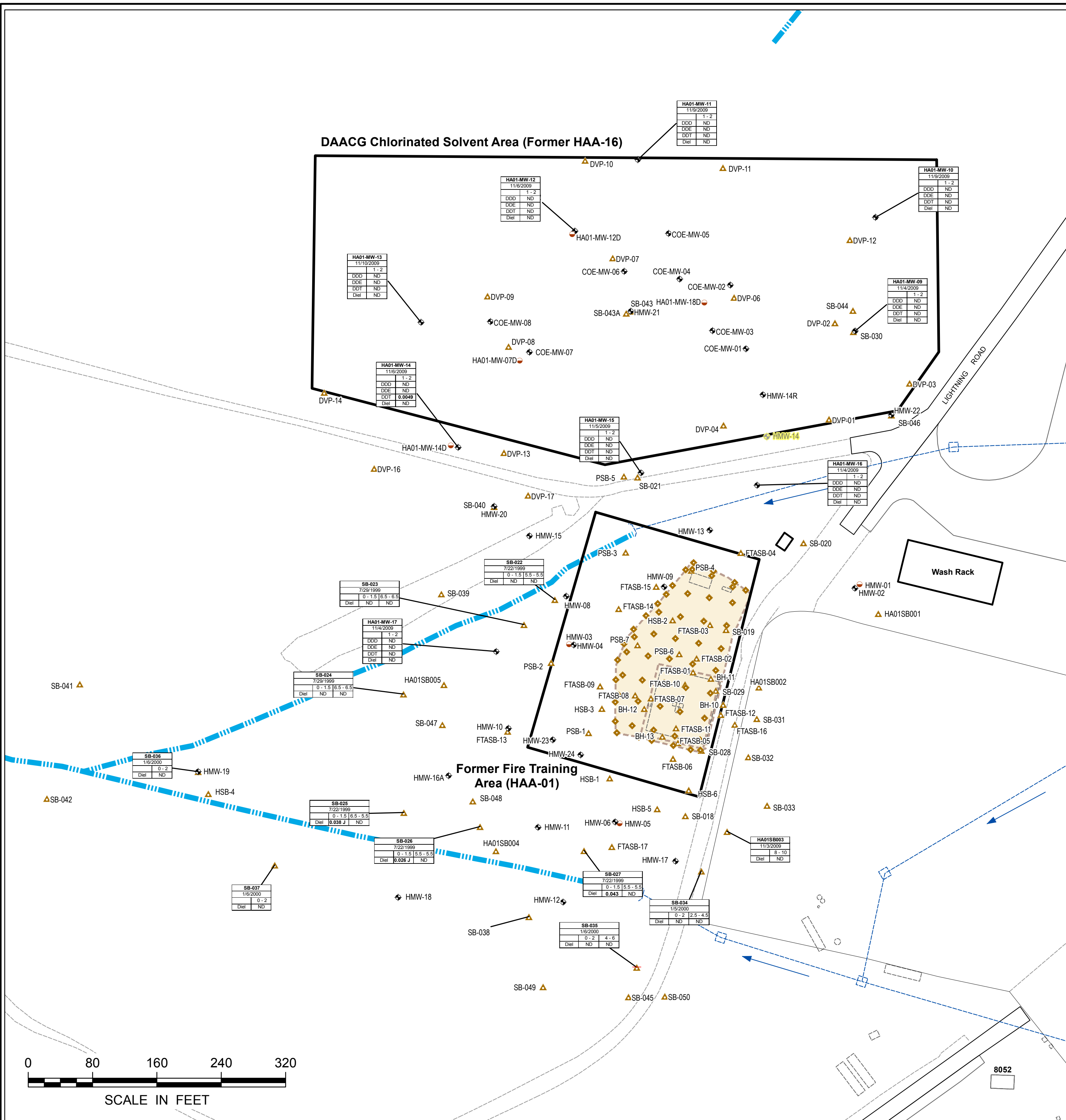
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Extent of Metals in Soil**

FIGURE  
**5-18**



CITY(KNOXVILLE) DIV(GROUP-ENV/GIS) DB(BALTIMORE) PIC(T-TALELE) PM(C.BERTIZ) APM(I.S.GIBBONS) TM(A.DAVIS) PROJECT: GP08HAF5.H01.C.DPCSR PATH: G:\GIS\HAF5\MapDocs\H012012\CSRF5-19.H01\_CSR\_SOIL\_Pesticides\_Dsize.mxd SAV:ED. 3/22/2012 4:40:54 PM



PROJECTION: NAD83 State Plane Georgia East.

**LEGEND**

- Storm Water Drainage System
- Drainage Flow Direction
- Storm Water Drainage Canal
- Approximate Excavation Area (1997)
- Monitor Well (shallow)
- Monitor Well (deep)
- Destroyed/Abandoned Monitor Well (shallow)
- Destroyed/Abandoned Monitor Well (deep)
- Soil Boring (1987-2009)
- Confirmation Soil Sample (November 1997)

**NOTES:**  
 1) All soil concentrations reported in milligrams per kilogram (mg/kg).  
 2) If no laboratory analytical result is listed, the designated compound was not analyzed for.  
 3) ND - Not detected above the PQL.  
 4) Concentrations shown in the soil excavation area are post-soil removal activities.  
 5) RRS- GAEPD HSRA Risk Reduction Standards (Type 1)  
 6) **BOLD** - Constituent detected above laboratory detection limit.  
 7) All results are mg/kg - milligrams per kilogram.

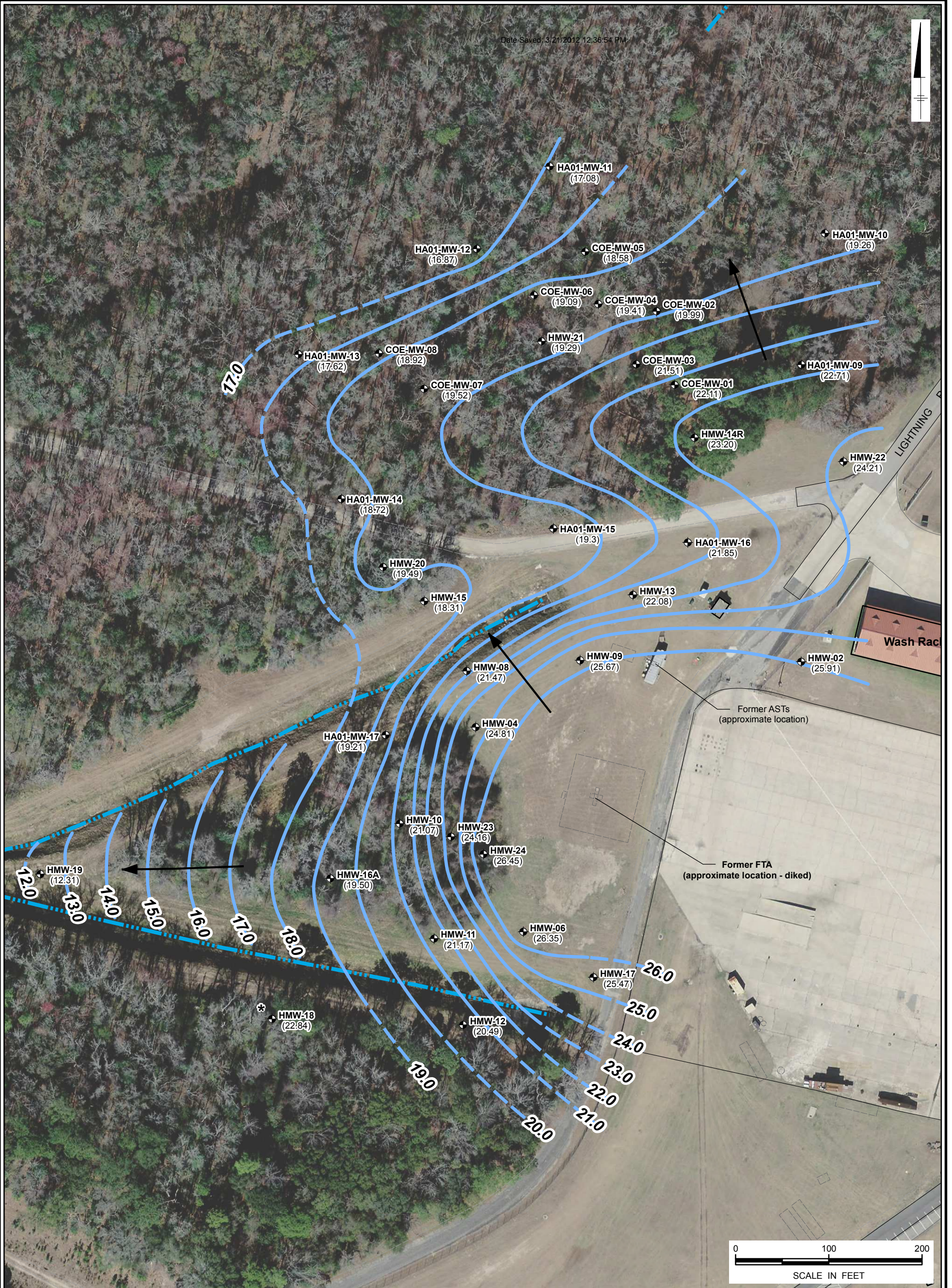
EB-L5		Sample Location	Sample Date	Sample Depth	Result
Compound	Concentration				
Aroclor 1254	5.43	EB-L5	3/3/1998	1.0 - 1.5	Result
DDD	<b>0.015</b>				
DDE, p,p'	<b>0.024</b>				
DDT	ND				
Dieldrin	ND				Not Sampled

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Extent of Pesticides in Soil**







PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- - - Storm Water Drainage Canal
- + Monitor Well (shallow)
- Groundwater Contour (ft amsl)
- - - (inferred where dashed)
- Direction of Groundwater Flow
- (20.49) Groundwater Elevation (ft amsl)  
Measured December 19, 2009
- \* Not Used to Construct Contours

HUNTER ARMY AIRFIELD, GEORGIA  
 HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT

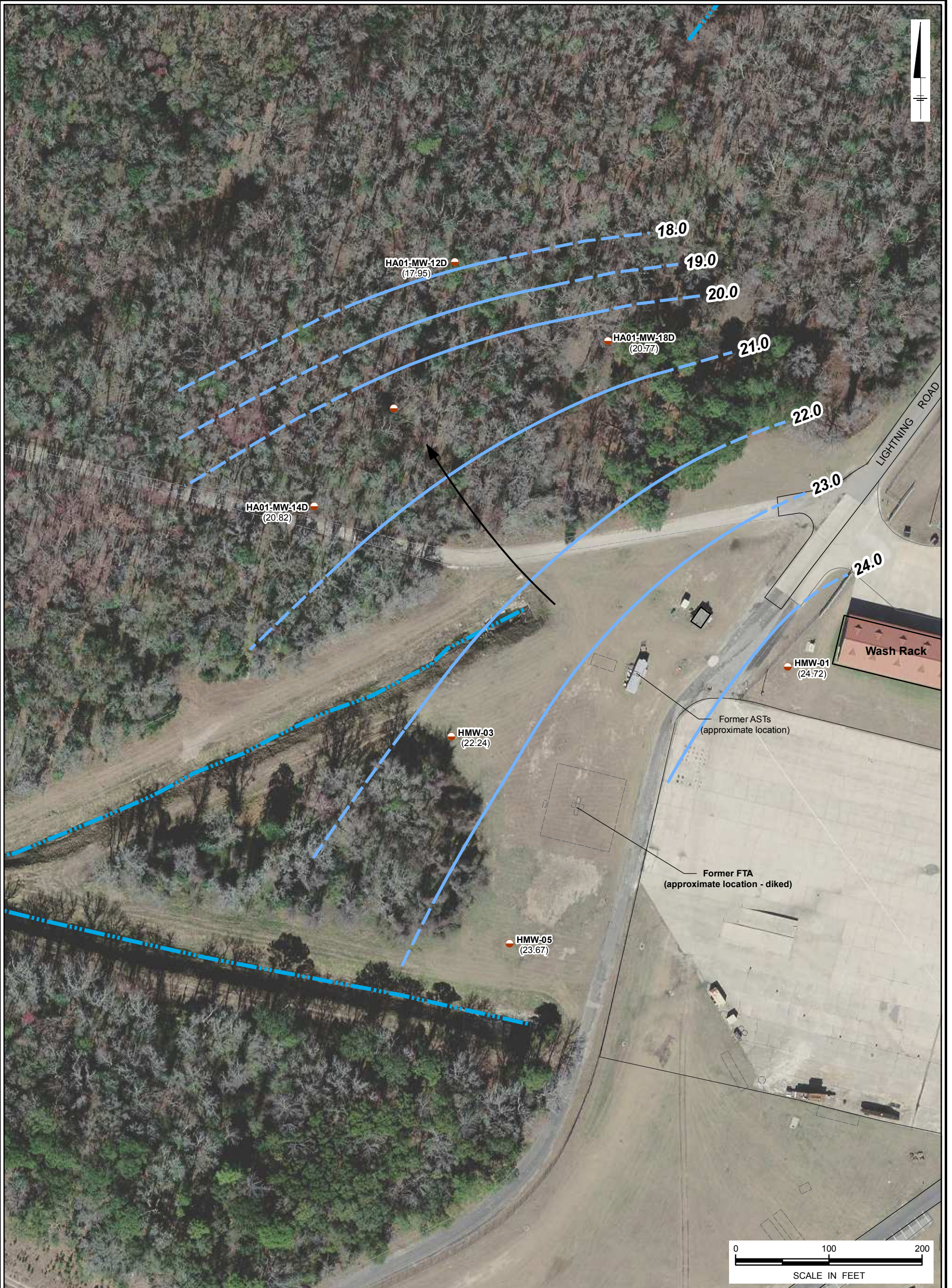
**Shallow Potentiometric Surface Map  
 (December 2009)**



FIGURE

**5-20**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- - - Storm Water Drainage Canal
- Monitor Well (deep)
- Groundwater Contour (ft amsl)
- - - (inferred where dashed)
- ➔ Direction of Groundwater Flow
- (23.67) Groundwater Elevation (ft amsl)  
Measured December 19, 2009

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Deep Potentiometric Surface Map  
 (December 2009)**

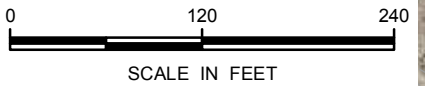
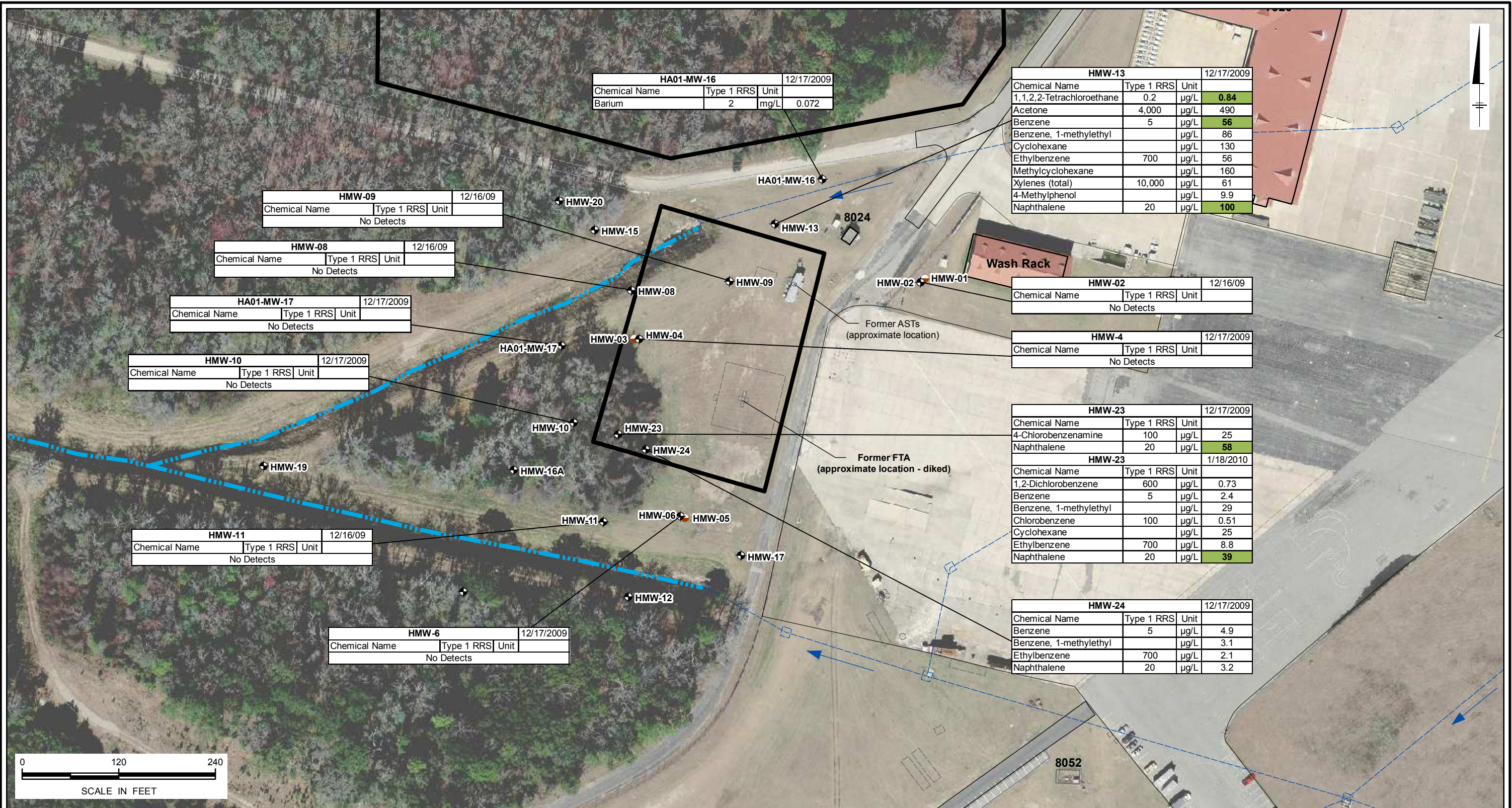


FIGURE

**5-21**



CITY:(KNOXVILLE) DIV:(GROUP:(ENV/GIS) ID:(B,AL,TOM) PIC:(T,TALELE) PM:(C,BERTZ) APM:(S,GIBBONS) TM:(A,DAVIS)  
 PROJECT: GP08HAFS.H01C.DPCSR PATH: G:\GIS\HAFS\MapDocs\H012012\CSRF5-22 H01 CSR GW 200912 FTA.mxd Date Saved: 3/22/2012 4:31:12 PM



PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

- LEGEND**
- - - - - Storm Water Drainage Canal
  - Storm Water Drainage System
  - ➔ Surface Water Flow Direction
  - ⊕ Monitor Well (shallow)
  - Monitor Well (deep)

**NOTES:**

- 1) RRS - GAEPD HSRA Risk Reduction Standards (Type 1)
- 2) Highlighted values represent those values that exceeds the Type 1 RRS.
- 3) J values are estimated at concentrations below the practical quantitation limit (PQL).

µg/L - micrograms per liter  
 mg/L - milligrams per liter

HA01-MW-16				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.072	

HMW-09				12/16/09
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-08				12/16/09
Chemical Name	Type 1 RRS	Unit		
No Detects				

HA01-MW-17				12/17/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-10				12/17/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-11				12/16/09
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-6				12/17/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-13				12/17/2009
Chemical Name	Type 1 RRS	Unit		
1,1,2,2-Tetrachloroethane	0.2	µg/L	0.84	
Acetone	4,000	µg/L	490	
Benzene	5	µg/L	56	
Benzene, 1-methylethyl		µg/L	86	
Cyclohexane		µg/L	130	
Ethylbenzene	700	µg/L	56	
Methylcyclohexane		µg/L	160	
Xylenes (total)	10,000	µg/L	61	
4-Methylphenol		µg/L	9.9	
Naphthalene	20	µg/L	100	

HMW-02				12/16/09
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-4				12/17/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

HMW-23				12/17/2009
Chemical Name	Type 1 RRS	Unit		
4-Chlorobenzamine	100	µg/L	25	
Naphthalene	20	µg/L	58	

HMW-23				1/18/2010
Chemical Name	Type 1 RRS	Unit		
1,2-Dichlorobenzene	600	µg/L	0.73	
Benzene	5	µg/L	2.4	
Benzene, 1-methylethyl		µg/L	29	
Chlorobenzene	100	µg/L	0.51	
Cyclohexane		µg/L	25	
Ethylbenzene	700	µg/L	8.8	
Naphthalene	20	µg/L	39	

HMW-24				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Benzene	5	µg/L	4.9	
Benzene, 1-methylethyl		µg/L	3.1	
Ethylbenzene	700	µg/L	2.1	
Naphthalene	20	µg/L	3.2	

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

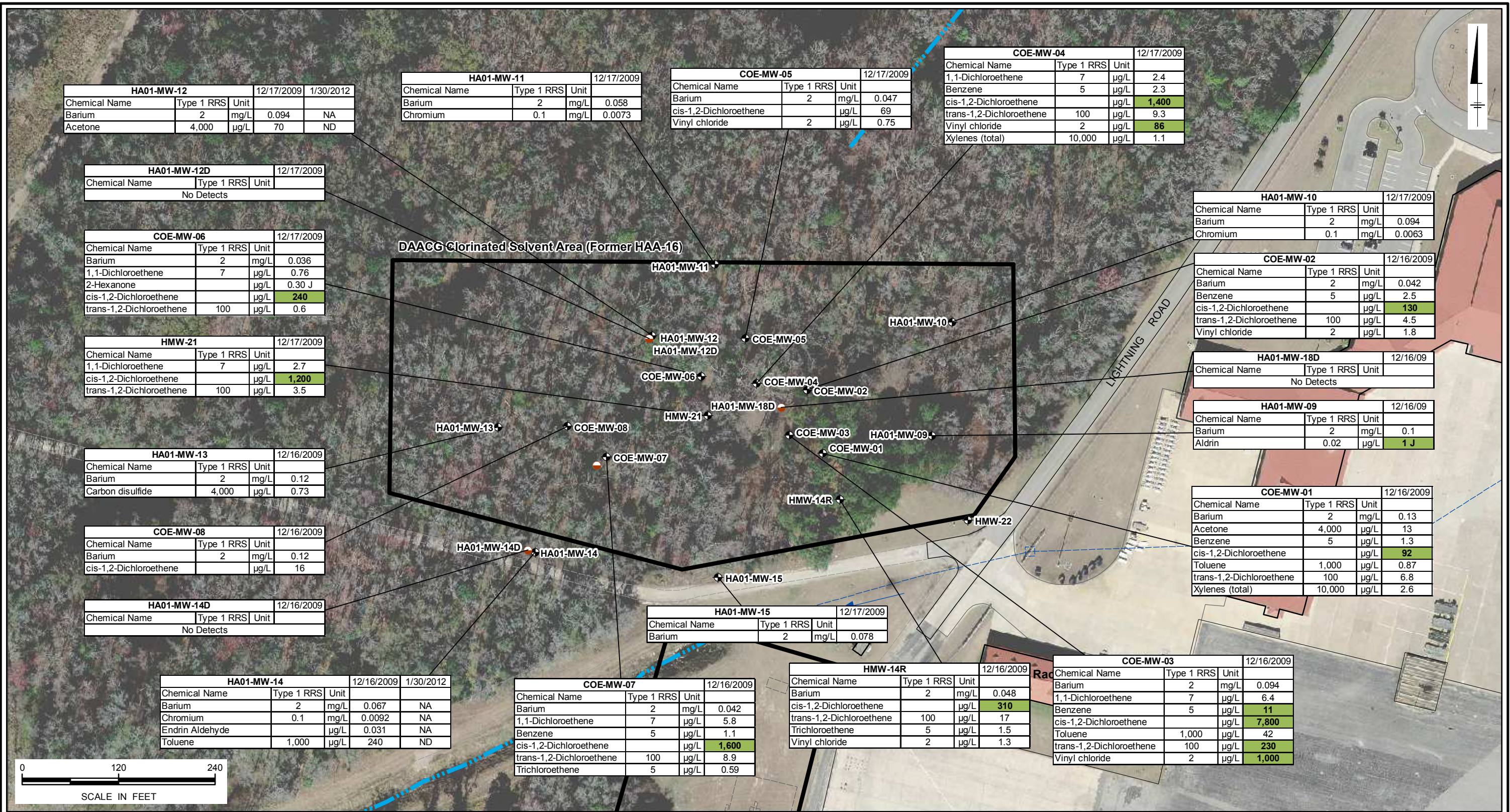
**Fire Training Area  
 Groundwater Summary (December 2009)**



FIGURE  
**5-22**



CITY:(KNOXVILLE) DIV:(GROUP:ENV/GIS) ID:(B.ALTON) PIC:(T.TALELE) PM:(C.BERTZ) APM:(S.GIBBONS) TM:(A.DAVIS)  
 PROJECT: GP08HAFS-H01C.DPCSR PATH: G:\GIS\HAAF\MapDocs\H01\2012\CSRF5-23\H01\_CSR\_GW\_200912\_DAAAG.mxd Date Saved: 3/22/2012 4:30:34 PM



HA01-MW-12					12/17/2009	1/30/2012
Chemical Name	Type 1 RRS	Unit				
Barium	2	mg/L	0.094	NA		
Acetone	4,000	µg/L	70	ND		

HA01-MW-11				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.058	
Chromium	0.1	mg/L	0.0073	

COE-MW-05				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.047	
cis-1,2-Dichloroethene		µg/L	69	
Vinyl chloride	2	µg/L	0.75	

COE-MW-04				12/17/2009
Chemical Name	Type 1 RRS	Unit		
1,1-Dichloroethene	7	µg/L	2.4	
Benzene	5	µg/L	2.3	
cis-1,2-Dichloroethene		µg/L	1,400	
trans-1,2-Dichloroethene	100	µg/L	9.3	
Vinyl chloride	2	µg/L	86	
Xylenes (total)	10,000	µg/L	1.1	

HA01-MW-12D				12/17/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

DAACG Chlorinated Solvent Area (Former HAA-16)

COE-MW-06					12/17/2009
Chemical Name	Type 1 RRS	Unit			
Barium	2	mg/L	0.036		
1,1-Dichloroethene	7	µg/L	0.76		
2-Hexanone		µg/L	0.30 J		
cis-1,2-Dichloroethene		µg/L	240		
trans-1,2-Dichloroethene	100	µg/L	0.6		

HA01-MW-10				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.094	
Chromium	0.1	mg/L	0.0063	

COE-MW-02				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.042	
Benzene	5	µg/L	2.5	
cis-1,2-Dichloroethene		µg/L	130	
trans-1,2-Dichloroethene	100	µg/L	4.5	
Vinyl chloride	2	µg/L	1.8	

HMW-21				12/17/2009
Chemical Name	Type 1 RRS	Unit		
1,1-Dichloroethene	7	µg/L	2.7	
cis-1,2-Dichloroethene		µg/L	1,200	
trans-1,2-Dichloroethene	100	µg/L	3.5	

HA01-MW-18D				12/16/09
Chemical Name	Type 1 RRS	Unit		
No Detects				

HA01-MW-13				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.12	
Carbon disulfide	4,000	µg/L	0.73	

HA01-MW-09				12/16/09
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.1	
Aldrin	0.02	µg/L	1 J	

COE-MW-08				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.12	
cis-1,2-Dichloroethene		µg/L	16	

COE-MW-01				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.13	
Acetone	4,000	µg/L	13	
Benzene	5	µg/L	1.3	
cis-1,2-Dichloroethene		µg/L	92	
Toluene	1,000	µg/L	0.87	
trans-1,2-Dichloroethene	100	µg/L	6.8	
Xylenes (total)	10,000	µg/L	2.6	

HA01-MW-14D				12/16/2009
Chemical Name	Type 1 RRS	Unit		
No Detects				

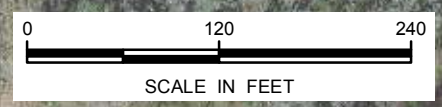
HA01-MW-15				12/17/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.078	

HA01-MW-14					12/16/2009	1/30/2012
Chemical Name	Type 1 RRS	Unit				
Barium	2	mg/L	0.067	NA		
Chromium	0.1	mg/L	0.0092	NA		
Endrin Aldehyde		µg/L	0.031	NA		
Toluene	1,000	µg/L	240	ND		

COE-MW-07				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.042	
1,1-Dichloroethene	7	µg/L	5.8	
Benzene	5	µg/L	1.1	
cis-1,2-Dichloroethene		µg/L	1,600	
trans-1,2-Dichloroethene	100	µg/L	8.9	
Trichloroethene	5	µg/L	0.59	

HMW-14R				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.048	
cis-1,2-Dichloroethene		µg/L	310	
trans-1,2-Dichloroethene	100	µg/L	17	
Trichloroethene	5	µg/L	1.5	
Vinyl chloride	2	µg/L	1.3	

COE-MW-03				12/16/2009
Chemical Name	Type 1 RRS	Unit		
Barium	2	mg/L	0.094	
1,1-Dichloroethene	7	µg/L	6.4	
Benzene	5	µg/L	11	
cis-1,2-Dichloroethene		µg/L	7,800	
Toluene	1,000	µg/L	42	
trans-1,2-Dichloroethene	100	µg/L	230	
Vinyl chloride	2	µg/L	1,000	



PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

- LEGEND**
- Storm Water Drainage Canal
  - Monitor Well (shallow)
  - Monitor Well (deep)

**NOTES:**

- 1) RRS - GAEPD Risk Reduction Standards (Type 1)
- 2) Highlighted values represent those values that exceeds the Type 1 RRS
- 3) J values are estimated at concentrations below the practical quantitation limit (PQL).

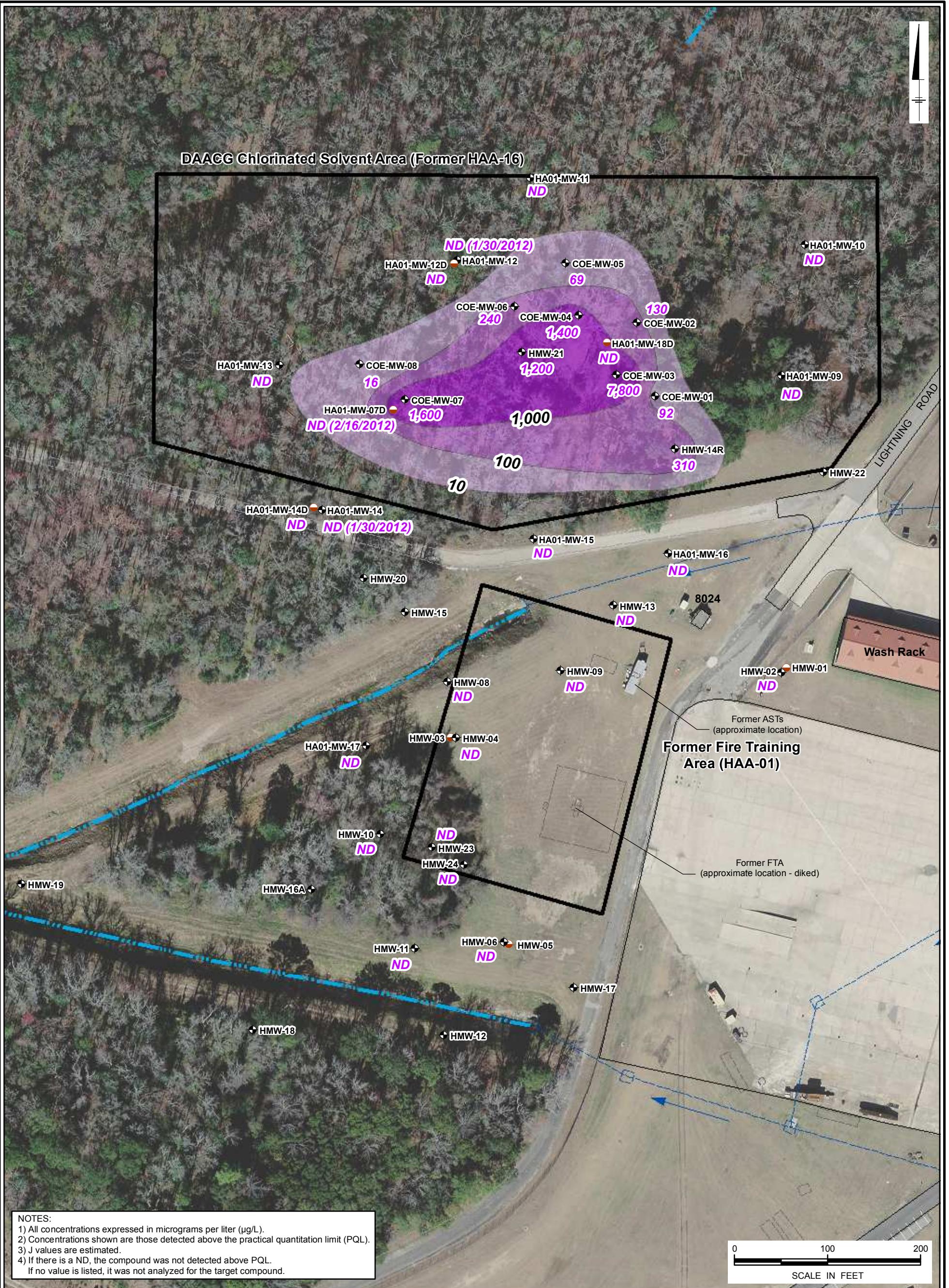
µg/L - micrograms per liter  
 mg/L - milligrams per liter

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**DAACG Chlorinated Solvent Area  
 Groundwater Summary  
 (December 2009 through February 2012)**

FIGURE  
**5-23**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- cis-1,2-Dichloroethene Isocontour 1.2 ( $\mu\text{g/L}$ )
- 100 ( $\mu\text{g/L}$ )
- 1,000 ( $\mu\text{g/L}$ )

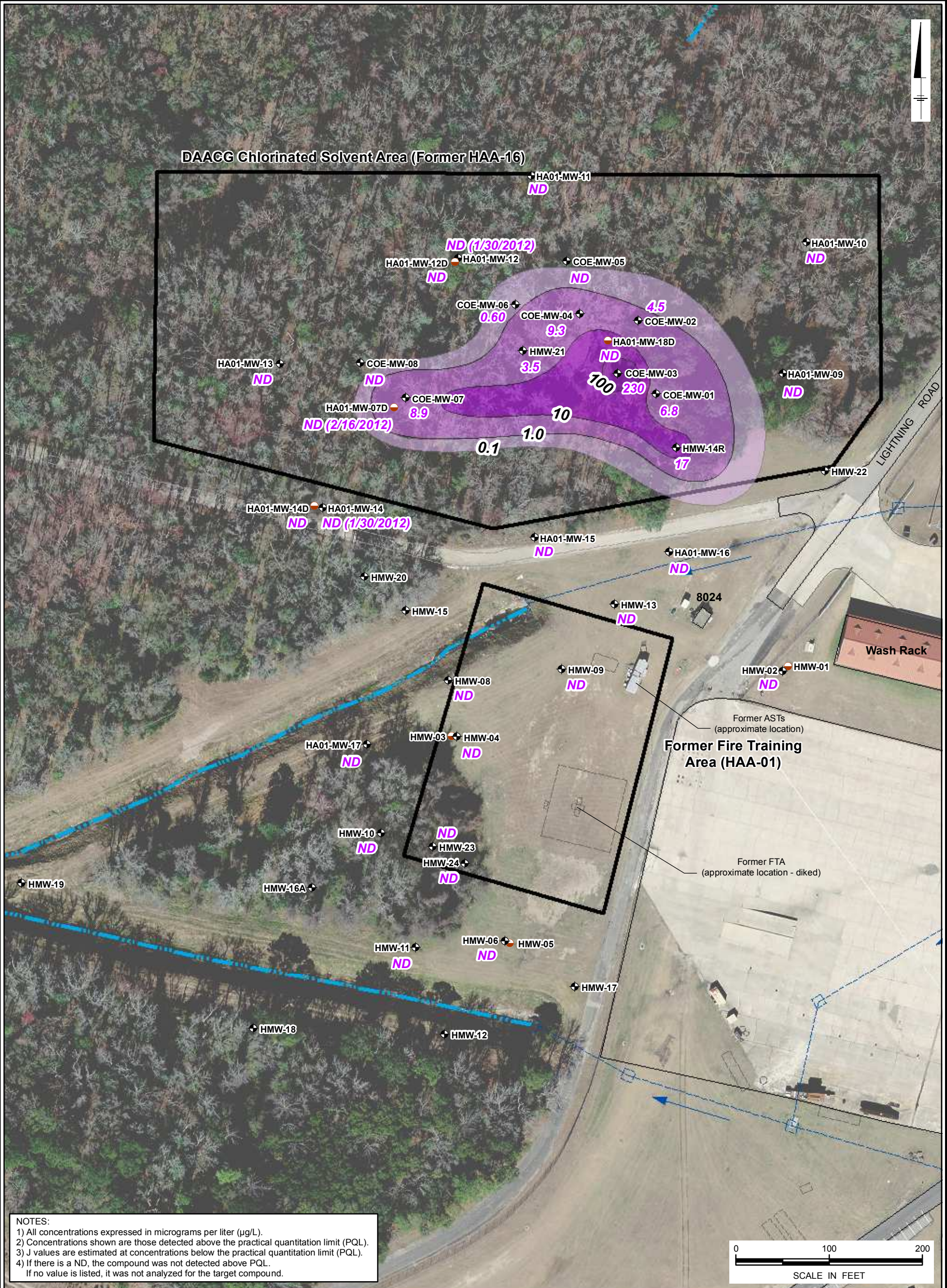
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Summary of cis-1,2-Dichloroethene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE  
**5-24**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- trans-1,2-Dichloroethene Isocontour
- 0.1 (µg/L)
- 1.0 (µg/L)
- 10 (µg/L)
- 100 (µg/L)

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

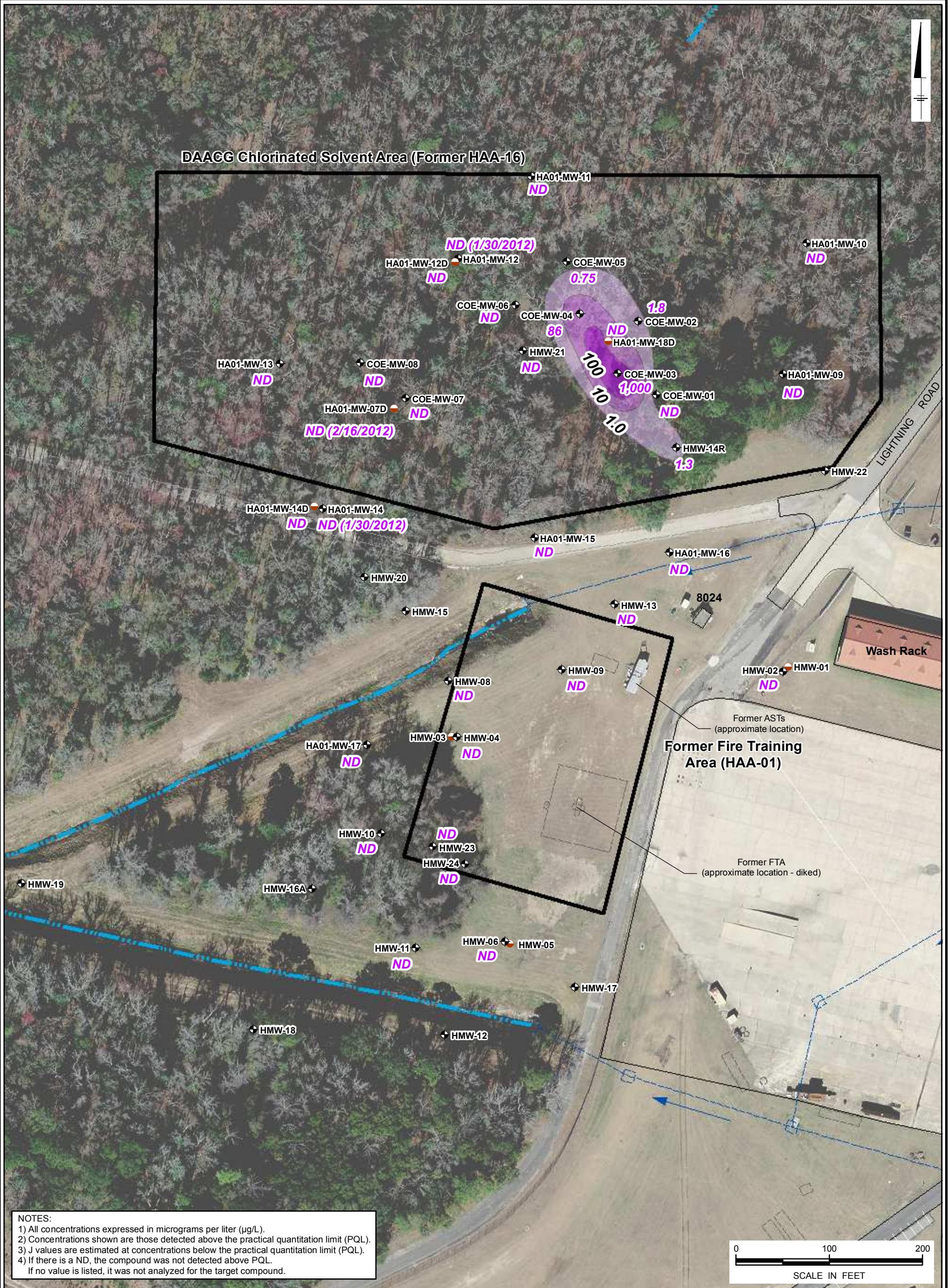
**Summary of trans-1,2-Dichloroethene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-25**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- Vinyl Chloride Isocontour
- 1.0 (µg/L)
- 10 (µg/L)
- 100 (µg/L)

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAAGG AREAS  
 COMPLIANCE STATUS REPORT**

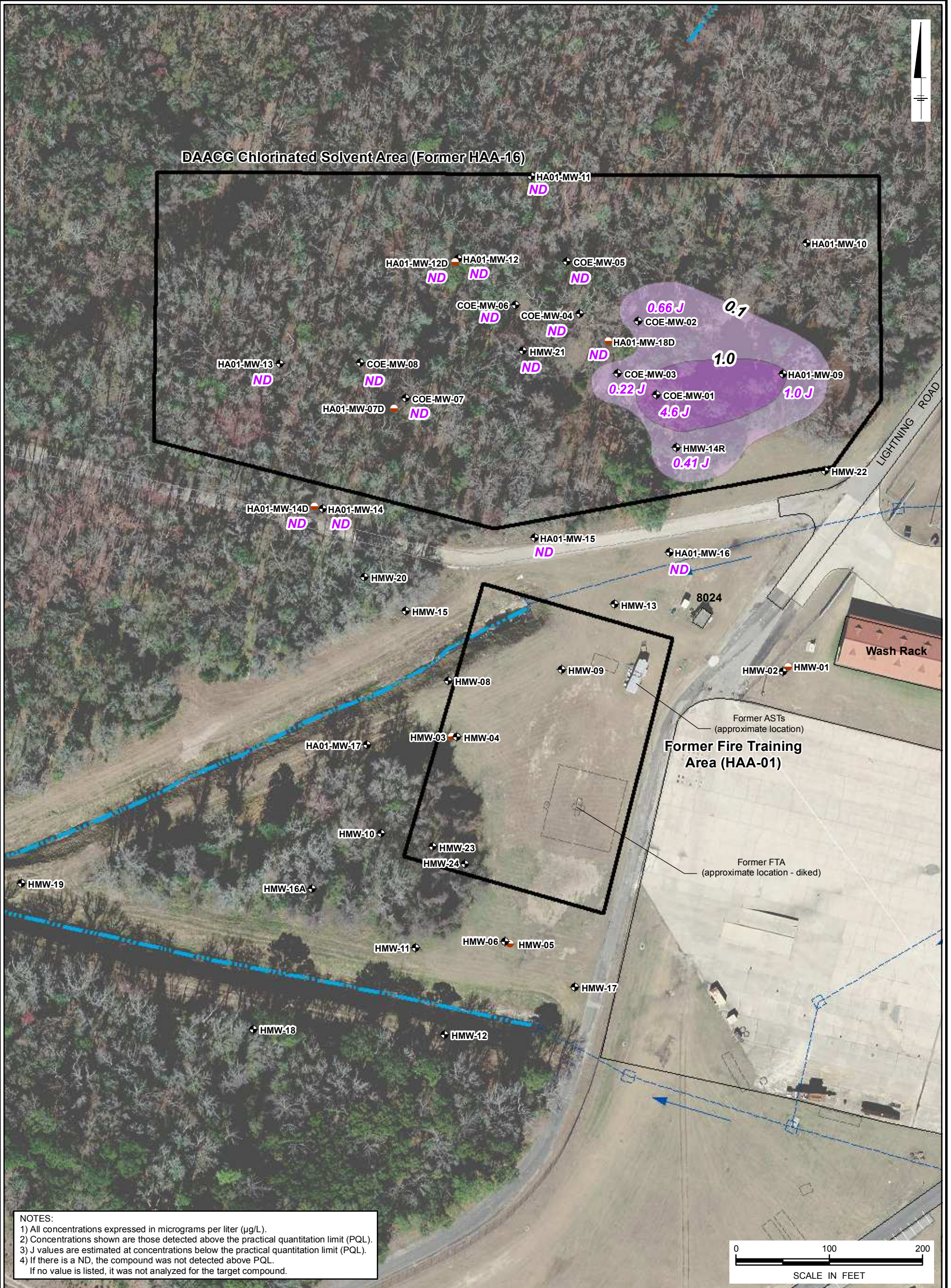
**Summary of Vinyl Chloride Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-26**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- Aldrin Isocontour**
- 0.1 (µg/L)
- 1.0 (µg/L)

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Summary of Aldrin Concentrations  
 in Groundwater (December 2009)**

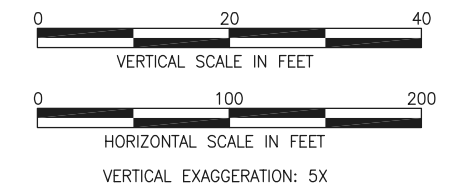
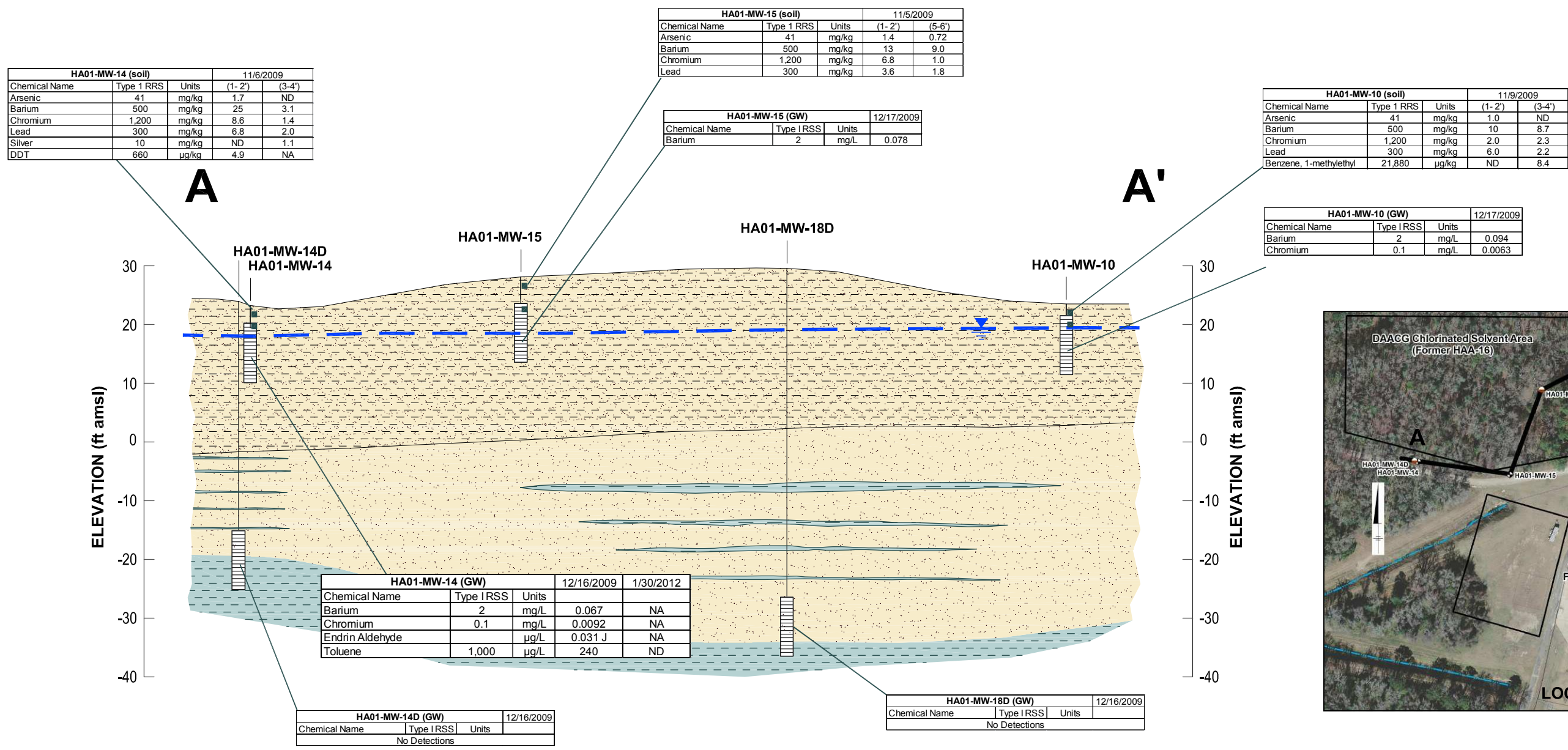


FIGURE

**5-27**



CITY: (KNOXVILLE) DIV: (GROUP) (ENV/IGS) LD: (B/ALTON) PIC: (T-TALELE) PM: (C-BERTZ) AP: (A-DAVIS) G: (GIS) HAA: (Map) P: (1012012) CSR: (F5-28) H01 CSR X: (SECS) .img LAYOUT: AA SAVED: 3/21/2012 2:05 PM ACAD: (VER: 18.05 (LMS TECH) PLOTTED: 3/21/2012 2:05 PM BY: ALTON, BRENDA



**LEGEND**

- SAND
- SILTY SAND / CLAYEY SAND
- SILTY CLAY / CLAY
- MONITOR WELL
- SCREENED INTERVAL
- APPROXIMATE WATER TABLE
- SOIL SAMPLE

**NOTES:**

- 1) NA - Not Analyzed
- 2) ND - Not detected above the PQL.
- 3) J values are estimated at concentrations below the practical quantitation limit (PQL)
- 4) DDT - dichlor-diphenyl-trichlorethylene
- 5) µg/L - micrograms per liter
- 6) mg/L - milligrams per liter
- 7) mg/kg - milligrams per kilogram
- 8) µg/kg - micrograms per kilogram
- 9) RRS - GAEPD HSRA Risk Reduction Standards (Type 1)
- 10) Not all compounds analyzed are shown. All detections of compounds are shown.

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

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**Geologic Cross-Section A-A'**

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FIGURE  
**5-28a**

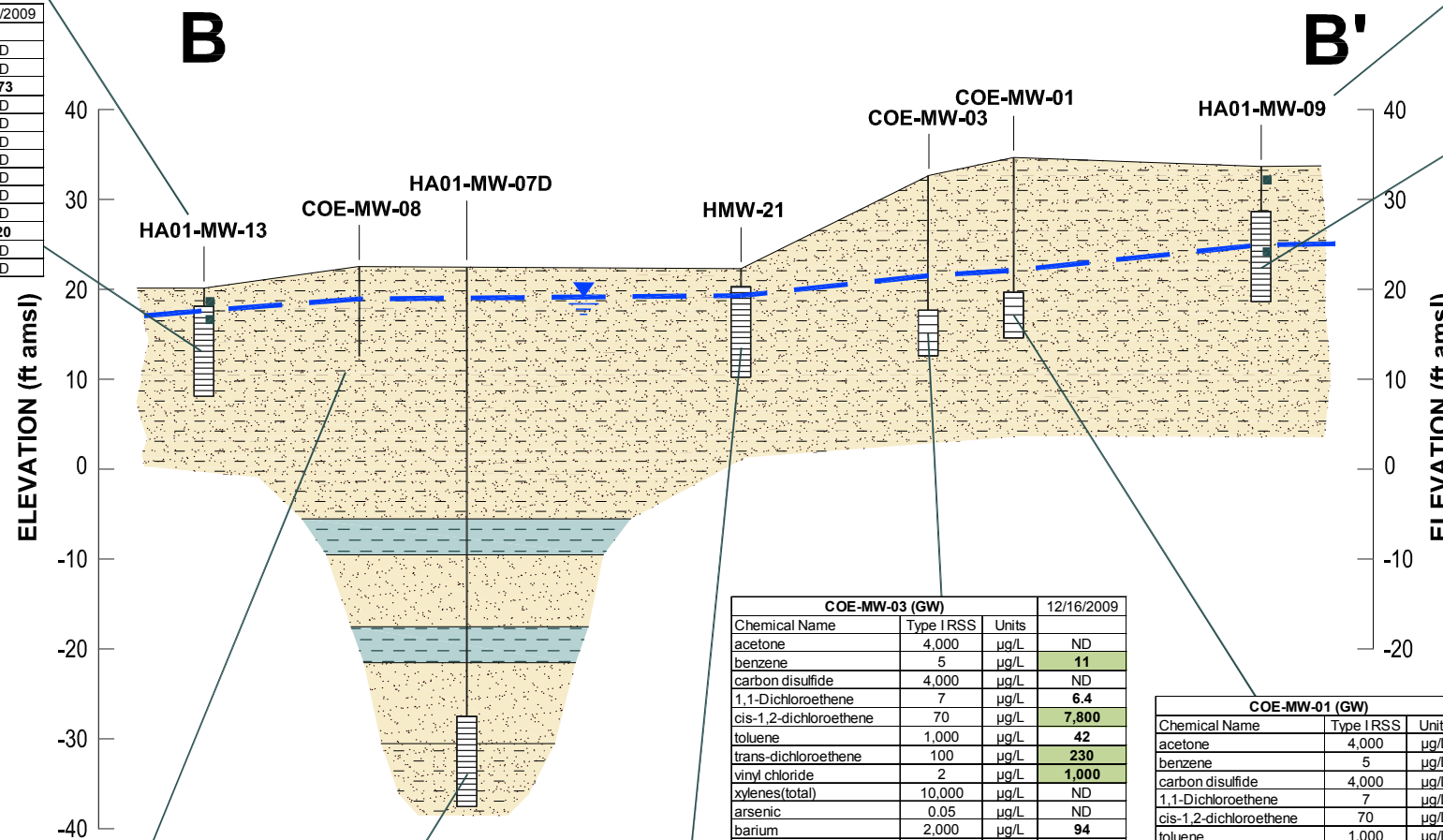
CITY: (KNOXVILLE) DIV(GROUP: (ENVIS) DB(1) LD(B:ALTON)) PIC(T:TALELE) PM(C:BERTZ) APN(HADAVIS) G:\GIS\HAA1\MapDocs\H01\2012\CSRF\F2-28\H01\_CSR\_XSECs.dwg LAYOUT: BB\_SAVED: 3/22/2012 4:07 PM ACADVER: 18.05 (LMS TECH) PLOTTED: 3/22/2012 4:07 PM BY: ALTON, BRENDA  
 PROJECT: GP08HAFS.H01C  
 XREFS: H01XSec00A.dwg H01XSec00B.dwg H01XSec00C.dwg H01XSec00D.dwg  
 IMAGES:

HA01-MW-13 (soil)			11/9/2009-11/10/2009	
Chemical Name	Type I RSS	Units	(1-2')	(4-5')
carbon tetrachloride	0.17	mg/kg	ND	0.0046 J
methyl acetate		mg/kg	ND	ND
arsenic	41	mg/kg	ND	ND
barium	500	mg/kg	2.4	23
chromium	1,200	mg/kg	0.91	9.9
lead	300	mg/kg	2.1	5.2

HA01-MW-09 (soil)			11/4/2009	
Chemical Name	Type I RSS	Units	(1-2')	(9-10')
carbon tetrachloride	0.17	mg/kg	ND	ND
methyl acetate		mg/kg	ND	0.0095
arsenic	41	mg/kg	0.67	0.92
barium	500	mg/kg	23	17
chromium	1,200	mg/kg	4	4
lead	300	mg/kg	3.8	5.9

HA01-MW-13 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	ND	
carbon disulfide	4,000	µg/L	0.73	
1,1-Dichloroethene	7	µg/L	ND	
cis-1,2-dichloroethene	70	µg/L	ND	
toluene	1,000	µg/L	ND	
trans-dichloroethene	100	µg/L	ND	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	ND	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	120	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	ND	

HA01-MW-09 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	ND	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	ND	
cis-1,2-dichloroethene	70	µg/L	ND	
toluene	1,000	µg/L	ND	
trans-dichloroethene	100	µg/L	ND	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	ND	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	0.10	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	1.0 J	



COE-MW-08 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	ND	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	ND	
cis-1,2-dichloroethene	70	µg/L	16	
toluene	1,000	µg/L	ND	
trans-dichloroethene	100	µg/L	ND	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	ND	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	120	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	ND	

HA01-MW-07D (GW)				2/16/2012
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	ND	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	ND	
cis-1,2-dichloroethene	70	µg/L	ND	
toluene	1,000	µg/L	0.65 J	
trans-dichloroethene	100	µg/L	ND	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	ND	
bis(2-ethylhexyl)phthalate	6	µg/L	2.3 J	
arsenic	0.05	µg/L	0.0065 J	
barium	2,000	µg/L	0.012 J	
cadmium	5	µg/L	ND	
lead	15	µg/L	ND	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	ND	
lindane	0.2	µg/L	ND	

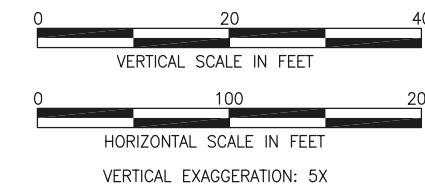
COE-MW-03 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	11	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	6.4	
cis-1,2-dichloroethene	70	µg/L	7,800	
toluene	1,000	µg/L	42	
trans-dichloroethene	100	µg/L	230	
vinyl chloride	2	µg/L	1,000	
xylenes(total)	10,000	µg/L	ND	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	94	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	0.22 J	

HMW-21 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	ND	
benzene	5	µg/L	0.98 J	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	2.7	
cis-1,2-dichloroethene	70	µg/L	1,200	
toluene	1,000	µg/L	ND	
trans-dichloroethene	100	µg/L	3.5	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	ND	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	24 J	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	ND	

COE-MW-01 (GW)				12/16/2009
Chemical Name	Type I RSS	Units		
acetone	4,000	µg/L	13	
benzene	5	µg/L	1.3	
carbon disulfide	4,000	µg/L	ND	
1,1-Dichloroethene	7	µg/L	ND	
cis-1,2-dichloroethene	70	µg/L	92	
toluene	1,000	µg/L	0.87	
trans-dichloroethene	100	µg/L	6.8	
vinyl chloride	2	µg/L	ND	
xylenes(total)	10,000	µg/L	2.6	
arsenic	0.05	µg/L	ND	
barium	2,000	µg/L	130	
mercury	2	µg/L	ND	
aldrin	0.02	µg/L	ND	

### LEGEND

- SAND
- SILTY SAND / CLAYEY SAND
- SILTY CLAY / CLAY
- MONITOR WELL SCREENED INTERVAL
- APPROXIMATE WATER TABLE
- SOIL SAMPLE



### NOTES:

- 1) ND - Not detected above the PQL.
- 2) J values are estimated at concentrations below the practical quantitation limit (PQL).
- 3) µg/L - micrograms per liter
- 4) mg/kg - milligrams per kilogram
- 5) RRS - GAEPD HSRA Risk Reduction Standards (Type 1)
- 6) **BOLD** - Constituent detected above laboratory detection limit.
- 7) **BOLD** - Constituent exceedances of Type 1 RRS.
- 8) Not all compounds analyzed are shown. All detections of compounds are shown.

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Geologic Cross-Section B-B'**

FIGURE  
**5-28b**



CITY: (KNOXVILLE) DIV: (GROUP: (ENV/IGS) DB: (LD/BA/AL/TOM) PIC: (T/TA/LE/LE) PM: (C/BERTZ) APN: (A/DAVIS) G:\GIS\HAA1\MapDocs\H01\2012\CSRF5-28\H01\_CSR\_XSECS.dwg LAYOUT: CC\_SAVED: 3/21/2012 1:13 PM ACADVER: 18.0S (LMS TECH) PLOTTED: 3/21/2012 1:14 PM BY: ALTOM, BRENDA

HA01-MW-17 (soil)			11/4/2009	
Chemical Name	Type I RSS	Units	(1-2')	(6-7')
2-butanone	0.79	mg/kg	ND	ND
Acetone	2.74	mg/kg	ND	0.036 J
Benzene	0.02	mg/kg	ND	ND
Ethylbenzene	20	mg/kg	ND	ND
Toluene	14.4	mg/kg	<b>0.013</b>	ND
Xylenes (total)	20	mg/kg	<b>0.012</b>	ND
2-Methylnaphthalene		mg/kg	ND	ND
Arsenic	20	mg/kg	<b>0.73</b>	ND
Barium	500	mg/kg	<b>3.6</b>	<b>17</b>
Chromium	1,200	mg/kg	<b>1.8</b>	<b>9.3</b>
Lead	300	mg/kg	<b>2.3</b>	<b>5.2</b>

HA01-MW-17 (GW)			12/17/2009	
Chemical Name	Type I RSS	Units		
Benzene	5	µg/L	ND	
Arsenic	50	µg/L	ND	
Barium	2,000	µg/L	ND	
Cadmium	5	µg/L	ND	
Chromium	100	µg/L	ND	
Lead	15	µg/L	ND	
Mercury	2	µg/L	ND	
Selenium	50	µg/L	ND	
Silver	100	µg/L	ND	

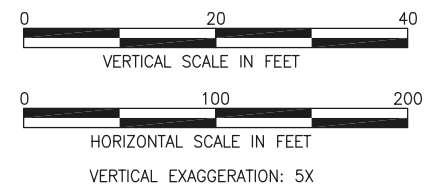
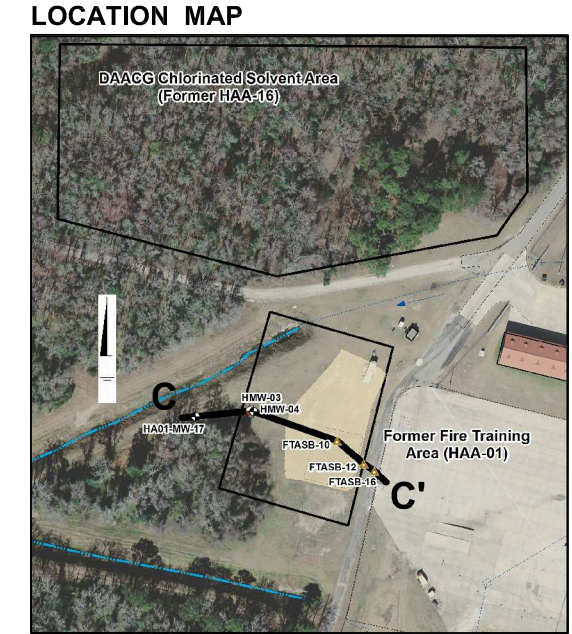
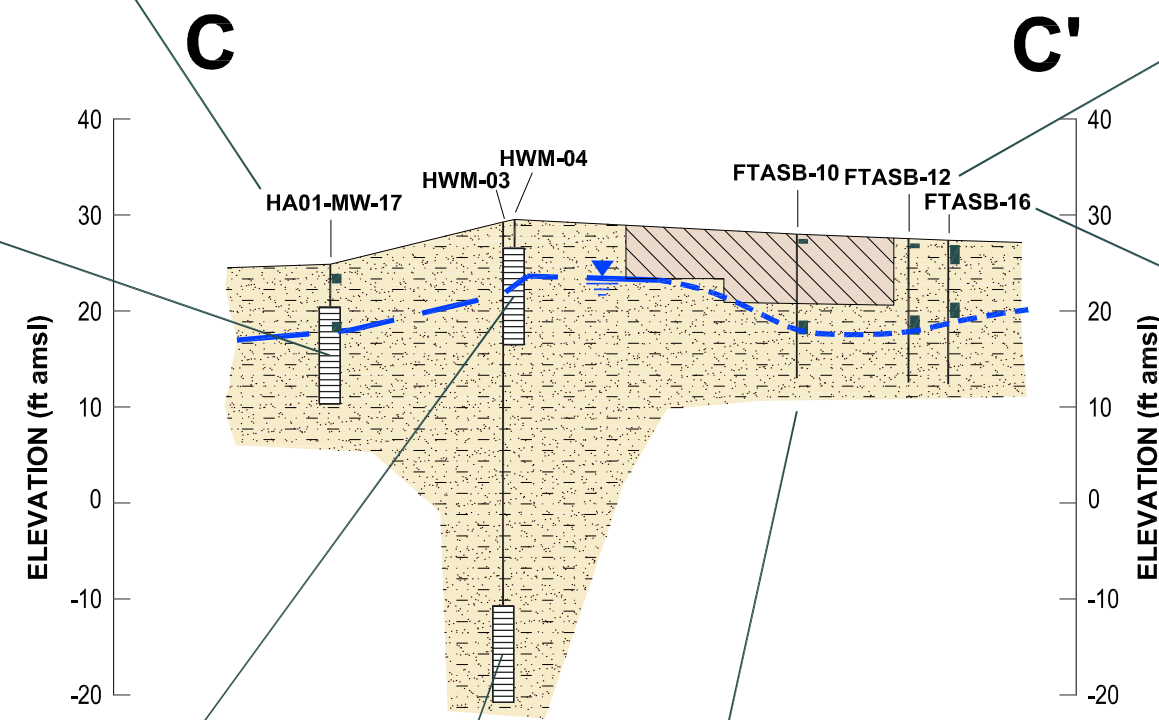
HWM-04 (GW)			12/17/2009	
Chemical Name	Type I RSS	Units		
Benzene	5	µg/L	ND	
Arsenic	50	µg/L	ND	
Barium	2,000	µg/L	ND	
Cadmium	5	µg/L	ND	
Chromium	100	µg/L	ND	
Lead	15	µg/L	ND	
Mercury	2	µg/L	ND	
Selenium	50	µg/L	ND	
Silver	100	µg/L	ND	

HWM-03 (GW)			10/6/1995	
Chemical Name	Type I RSS	Units		
Benzene	5	µg/L	1 J	
Arsenic	50	µg/L	<b>2.6</b>	
Barium	2,000	µg/L	<b>4.8</b>	
Cadmium	5	µg/L	<b>10</b>	
Chromium	100	µg/L	<b>20</b>	
Lead	15	µg/L	<b>3</b>	
Mercury	2	µg/L	<b>0.078</b>	
Selenium	50	µg/L	<b>5</b>	
Silver	100	µg/L	<b>20</b>	

FTASB-10 (soil)			10/3/1995	
Chemical Name	Type I RSS	Units	(0.5-1')	(9-10.4')
2-butanone	0.79	mg/kg	<b>0.014</b>	ND
Acetone	2.74	mg/kg	<b>0.11</b>	ND
Benzene	0.02	mg/kg	ND	<b>18</b>
Ethylbenzene	20	mg/kg	0.007	<b>120</b>
Toluene	14.4	mg/kg	ND	<b>0.92</b>
Xylenes (total)	20	mg/kg	0.009	<b>220</b>
2-Methylnaphthalene		mg/kg	2.4	99 JL
Bis(2-ethylhexyl)phthalate	50	mg/kg	0.84 JL	2 JL
Dibenzofuran		mg/kg	ND	2.3 JL
Fluorene	360	mg/kg	ND	2.3 JL
Naphthalene	100	mg/kg	<b>1.6</b>	79 JL
Phenanthrene	110	mg/kg	0.71 J	<b>2</b>
Pyrene	500	mg/kg	ND	0.95 J
Arsenic	41	mg/kg	<b>1.82</b>	ND
Barium	500	mg/kg	<b>34</b>	<b>24</b>
Cadmium	39	mg/kg	ND	ND
Chromium	1,200	mg/kg	<b>14.7</b>	ND
Lead	300	mg/kg	<b>111</b>	<b>11.1</b>
Mercury	17	mg/kg	<b>0.042</b>	ND
Selenium	36	mg/kg	<b>0.32</b>	ND
Silver	10	mg/kg	<b>2.3</b>	ND
Kerosene		mg/kg	<b>50</b>	<b>19,000</b>
TPH (as Diesel)		mg/kg	<b>820</b>	<b>900</b>
TPH (as Gasoline)		mg/kg	<b>50</b>	<b>900</b>

FTASB-12 (soil)			8/24/1995	
Chemical Name	Type I RSS	Units	(0.5-1')	(8-10')
2-butanone	0.79	mg/kg	ND	ND
Acetone	2.74	mg/kg	<b>0.1</b>	ND
Benzene	0.02	mg/kg	<b>0.024</b>	<b>4.9</b>
Ethylbenzene	20	mg/kg	0.065 J	<b>61</b>
Toluene	14.4	mg/kg	0.14 J	<b>16</b>
Xylenes (total)	20	mg/kg	0.31 J	<b>260</b>
2-Methylnaphthalene		mg/kg	<b>8.5</b>	<b>43</b>
Bis(2-ethylhexyl)phthalate	50	mg/kg	<b>0.51</b>	1.7 JL
Dibenzofuran		mg/kg	<b>0.52</b>	0.95 J
Fluorene	360	mg/kg	<b>0.78</b>	1.4 J
Naphthalene	100	mg/kg	<b>3.4</b>	<b>35</b>
Phenanthrene	110	mg/kg	1.6 JL	4.2 JL
Pyrene	500	mg/kg	ND	ND
Arsenic	41	mg/kg	0.38 J	<b>1.07</b>
Barium	500	mg/kg	10.6 J	<b>9.3</b>
Cadmium	39	mg/kg	ND	ND
Chromium	1,200	mg/kg	2.7 J	<b>4.6</b>
Lead	300	mg/kg	<b>6.2</b>	<b>11.4</b>
Mercury	17	mg/kg	ND	<b>0.042</b>
Selenium	36	mg/kg	0.13 J	<b>0.27</b>
Silver	10	mg/kg	ND	<b>2.4</b>
Kerosene		mg/kg	<b>750</b>	<b>15</b>
TPH (as Diesel)		mg/kg	<b>50</b>	<b>8</b>
TPH (as Gasoline)		mg/kg	<b>50</b>	<b>8</b>

FTASB-16 (soil)			10/4/1995	
Chemical Name	Type I RSS	Units	(0.5-2.5')	(6.5-8.1')
2-butanone	0.79	mg/kg	ND	ND
Acetone	2.74	mg/kg	<b>0.052</b>	<b>0.11</b>
Benzene	0.02	mg/kg	ND	ND
Ethylbenzene	20	mg/kg	ND	ND
Toluene	14.4	mg/kg	ND	ND
Xylenes (total)	20	mg/kg	ND	ND
2-Methylnaphthalene		mg/kg	ND	ND
Bis(2-ethylhexyl)phthalate	50	mg/kg	ND	ND
Dibenzofuran		mg/kg	ND	ND
Fluorene	360	mg/kg	ND	ND
Naphthalene	100	mg/kg	ND	ND
Phenanthrene	110	mg/kg	ND	ND
Pyrene	500	mg/kg	ND	ND
Arsenic	41	mg/kg	<b>1.43</b>	129 JQ
Barium	500	mg/kg	<b>11</b>	10.7 J
Cadmium	39	mg/kg	<b>2.1</b>	ND
Chromium	1,200	mg/kg	<b>3.4</b>	3.7 JQ
Lead	300	mg/kg	<b>3.4</b>	<b>3.1</b>
Mercury	17	mg/kg	<b>0.019</b>	<b>0.031</b>
Selenium	36	mg/kg	<b>1.1</b>	<b>1.2</b>
Silver	10	mg/kg	<b>2.1</b>	ND
Kerosene		mg/kg	<b>7</b>	<b>8</b>
TPH (as Diesel)		mg/kg	<b>7</b>	<b>8</b>
TPH (as Gasoline)		mg/kg	<b>7</b>	<b>8</b>



- LEGEND**
- 1997 EXCAVATION AREA
  - SILTY SAND / CLAYEY SAND
  - MONITOR WELL SCREENED INTERVAL
  - APPROXIMATE WATER TABLE
  - ESTIMATED WATER TABLE
  - SOIL SAMPLE

- NOTES:**
- 1) ND - Not detected above the PQL.
  - 2) J values are estimated at concentrations below the practical quantitation limit (PQL).
  - 3) Q values exceed quality control.
  - 4) µg/L - micrograms per liter
  - 5) mg/kg - milligrams per kilogram
  - 6) RRS - GAEPD HSRA Risk Reduction Standards (Type 1)
  - 7) **BOLD** - Constituent detected above laboratory detection limit.
  - 8) **BOLD** - Constituent exceedances of Type 1 RRS.
  - 9) Elevations of soil borings are unknown.
  - 10) Not all compounds analyzed are shown. All detections of compounds are shown.

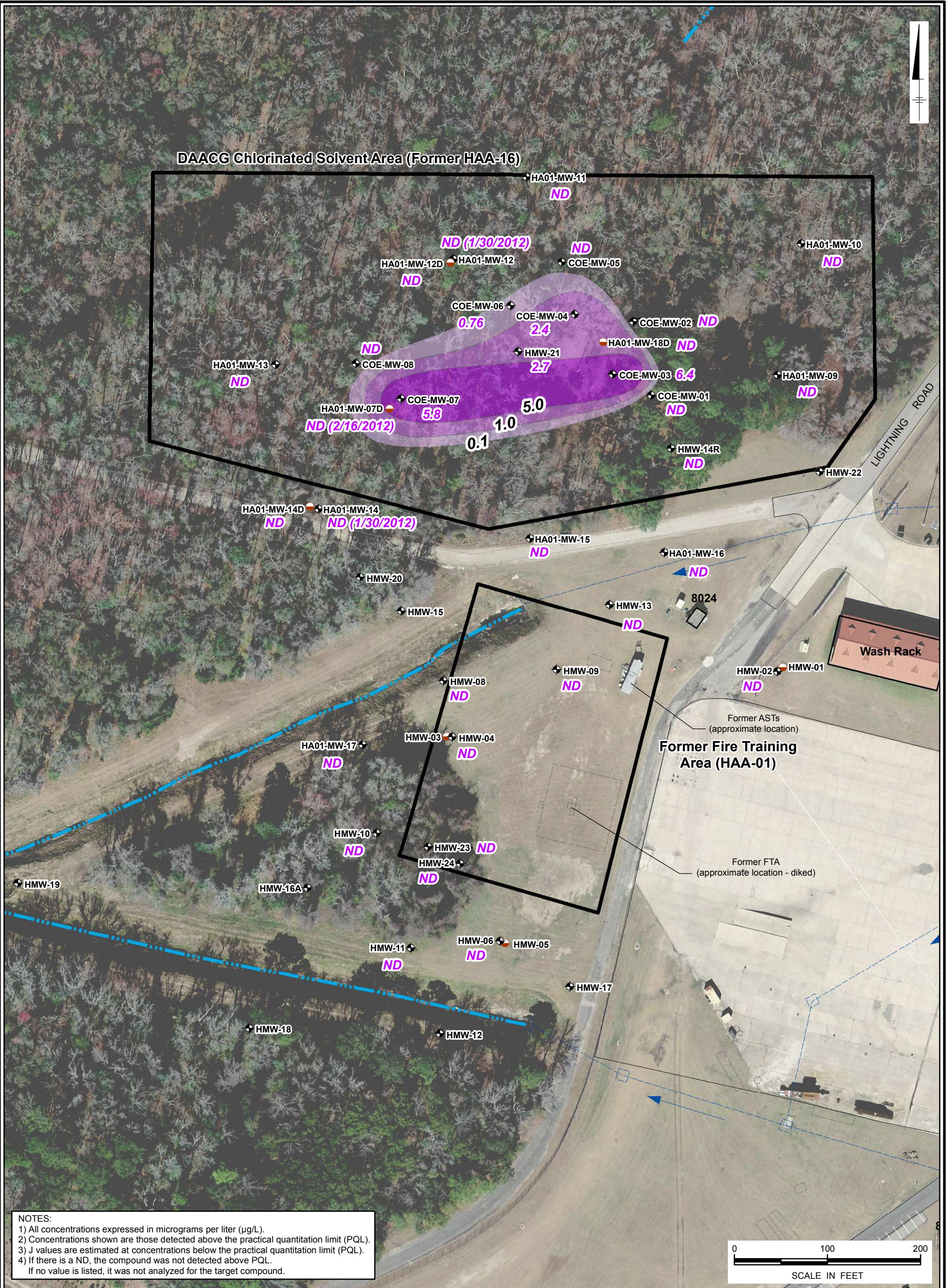
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS COMPLIANCE STATUS REPORT**

**Geologic Cross-Section C-C'**

FIGURE **5-28c**







PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

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**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

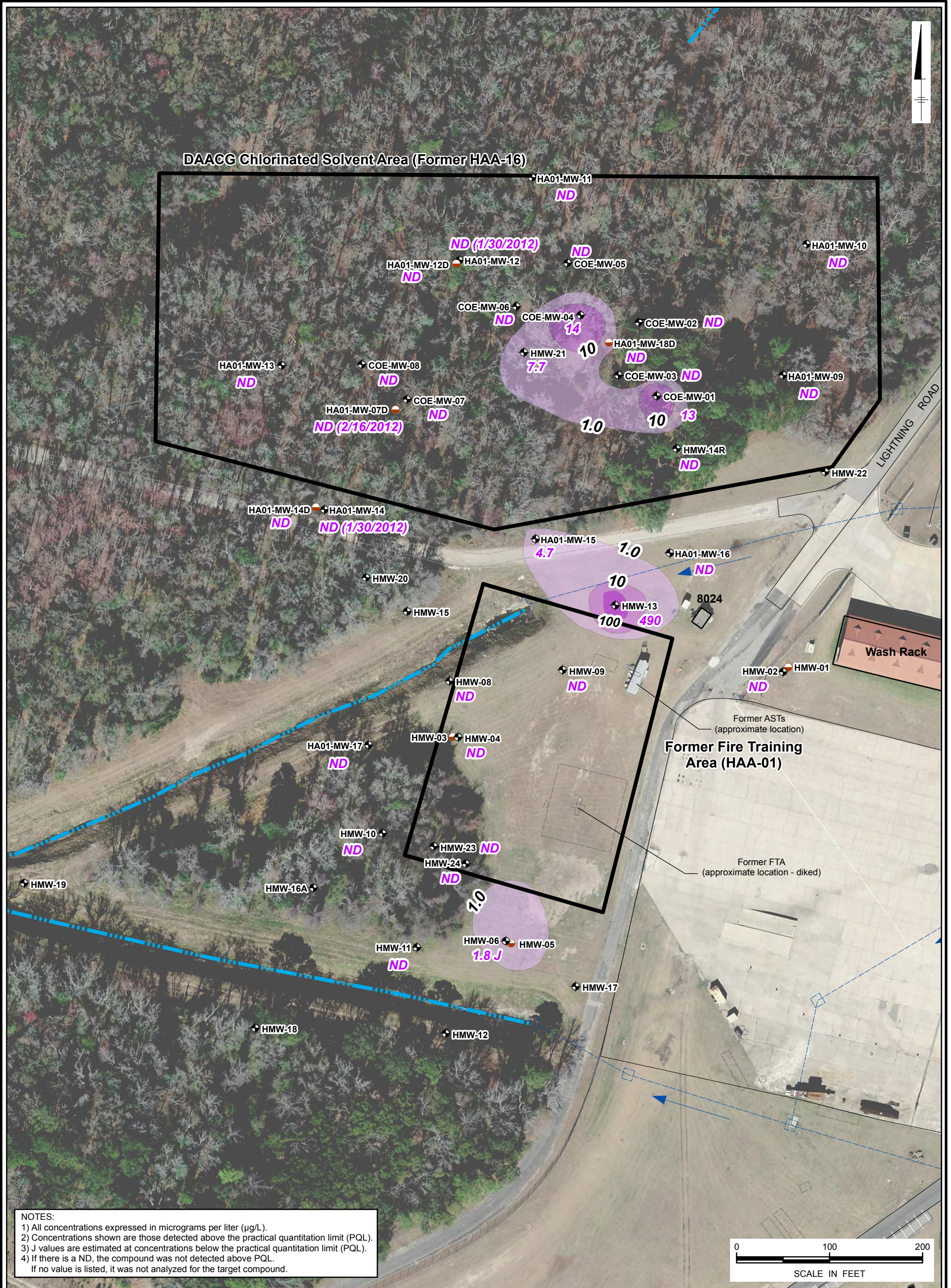
**Summary of 1,1-Dichloroethene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-29**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)

**Acetone Isocontour**

- 1.0 (µg/L)
- 10 (µg/L)
- 100 (µg/L)

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

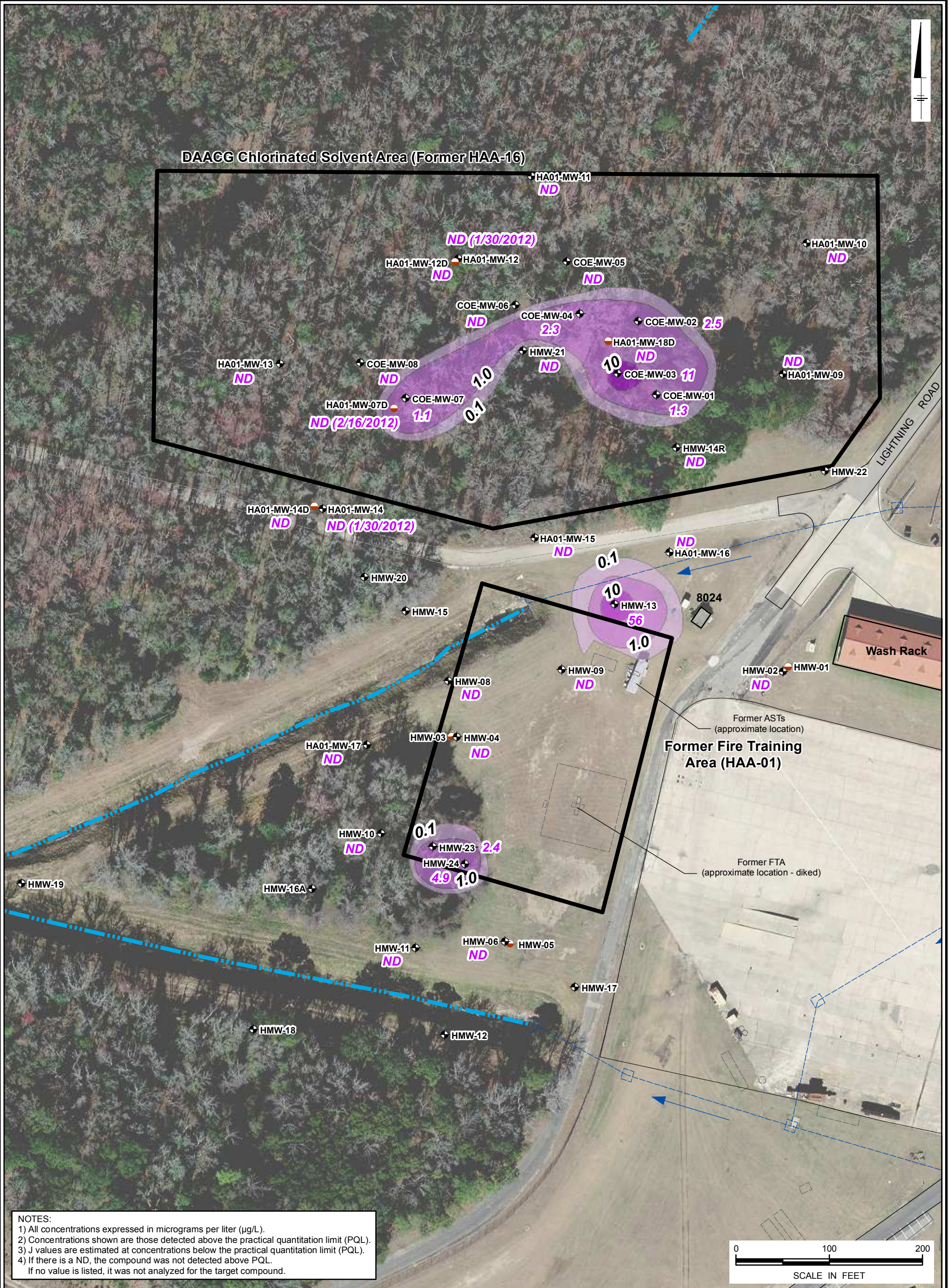
**Summary of Acetone Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-30**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- |                             |                           |
|-----------------------------|---------------------------|
| Storm Water Drainage Canal  | <b>Benzene Isocontour</b> |
| Storm Water Drainage System | 0.1 (µg/L)                |
| Drainage Flow Direction     | 1.0 (µg/L)                |
| Monitor Well (shallow)      | 10 (µg/L)                 |
| Monitor Well (deep)         |                           |

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

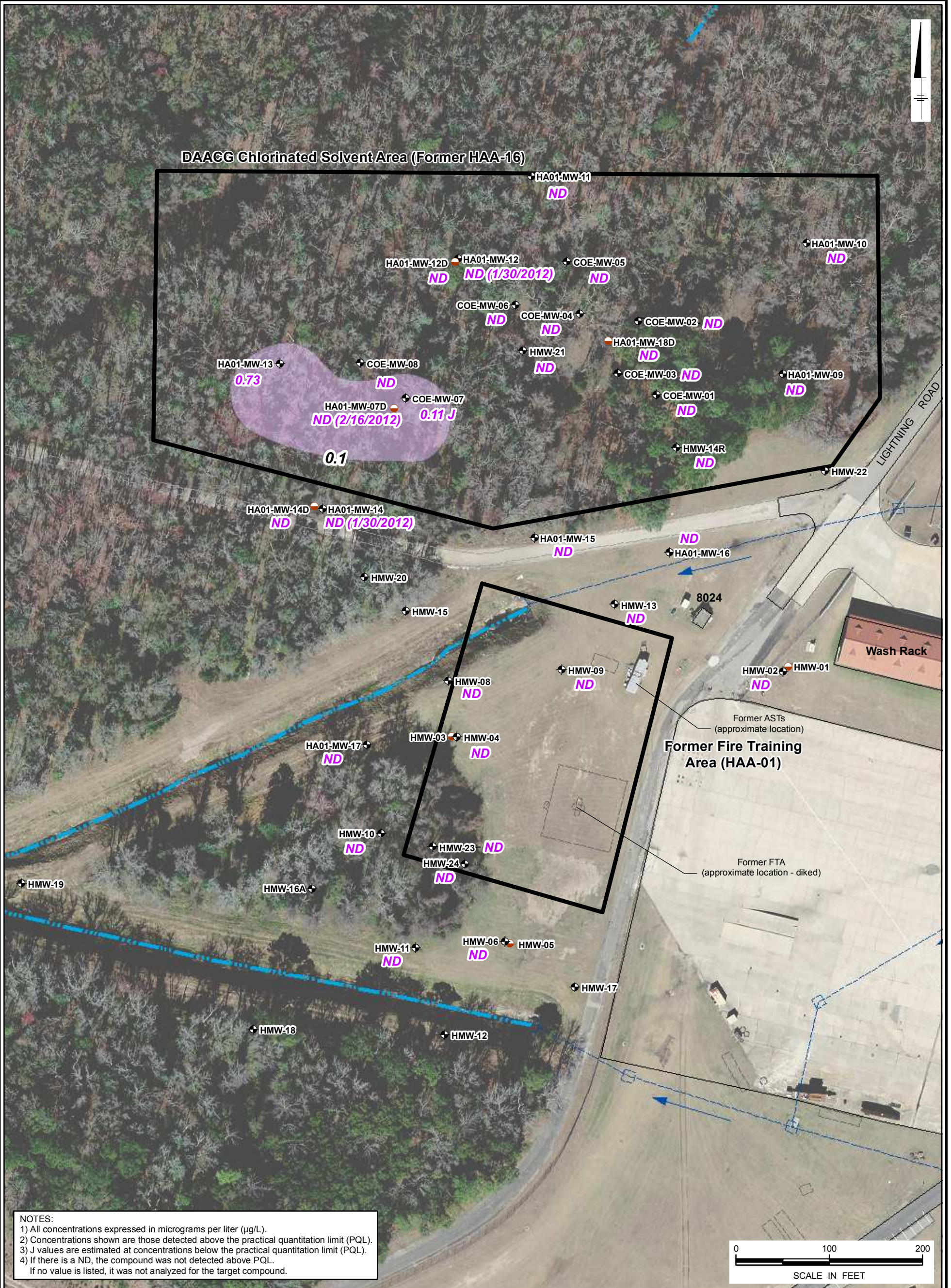
**Summary of Benzene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-31**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- ▬▬▬ Storm Water Drainage Canal
- - - - - Storm Water Drainage System
- ▶ Drainage Flow Direction
- ⊕ Monitor Well (shallow)
- ⊕ Monitor Well (deep)
- Carbon Disulfide Isocontour
- 0.1 ( $\mu\text{g/L}$ )

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

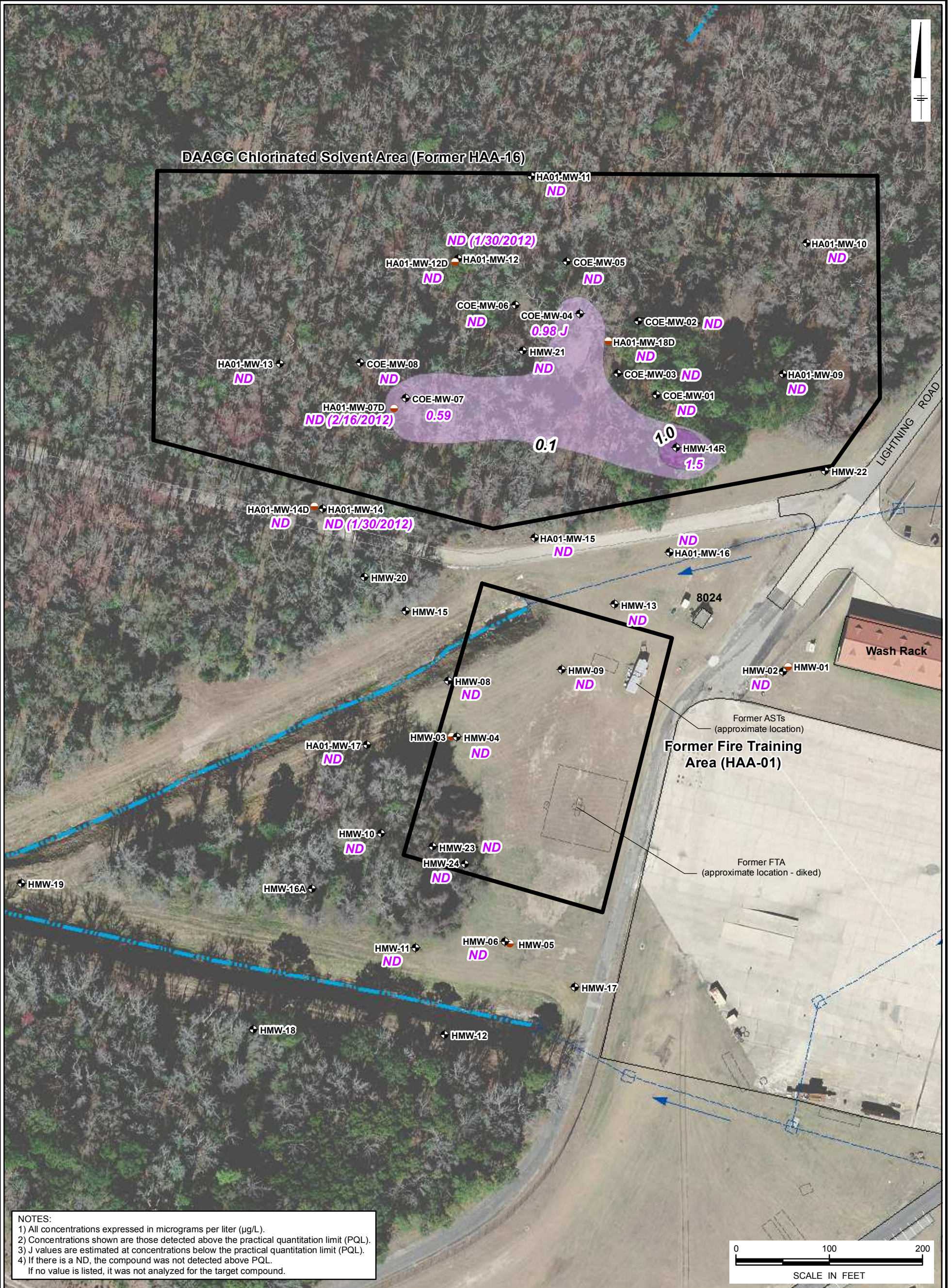
**Summary of Carbon Disulfide Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-32**





NOTES:  
 1) All concentrations expressed in micrograms per liter (µg/L).  
 2) Concentrations shown are those detected above the practical quantitation limit (PQL).  
 3) J values are estimated at concentrations below the practical quantitation limit (PQL).  
 4) If there is a ND, the compound was not detected above PQL.  
 If no value is listed, it was not analyzed for the target compound.

PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- Storm Water Drainage Canal
- Storm Water Drainage System
- Drainage Flow Direction
- Monitor Well (shallow)
- Monitor Well (deep)
- Trichloroethene Isocontour**
- 0.1 (µg/L)
- 1.0 (µg/L)

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

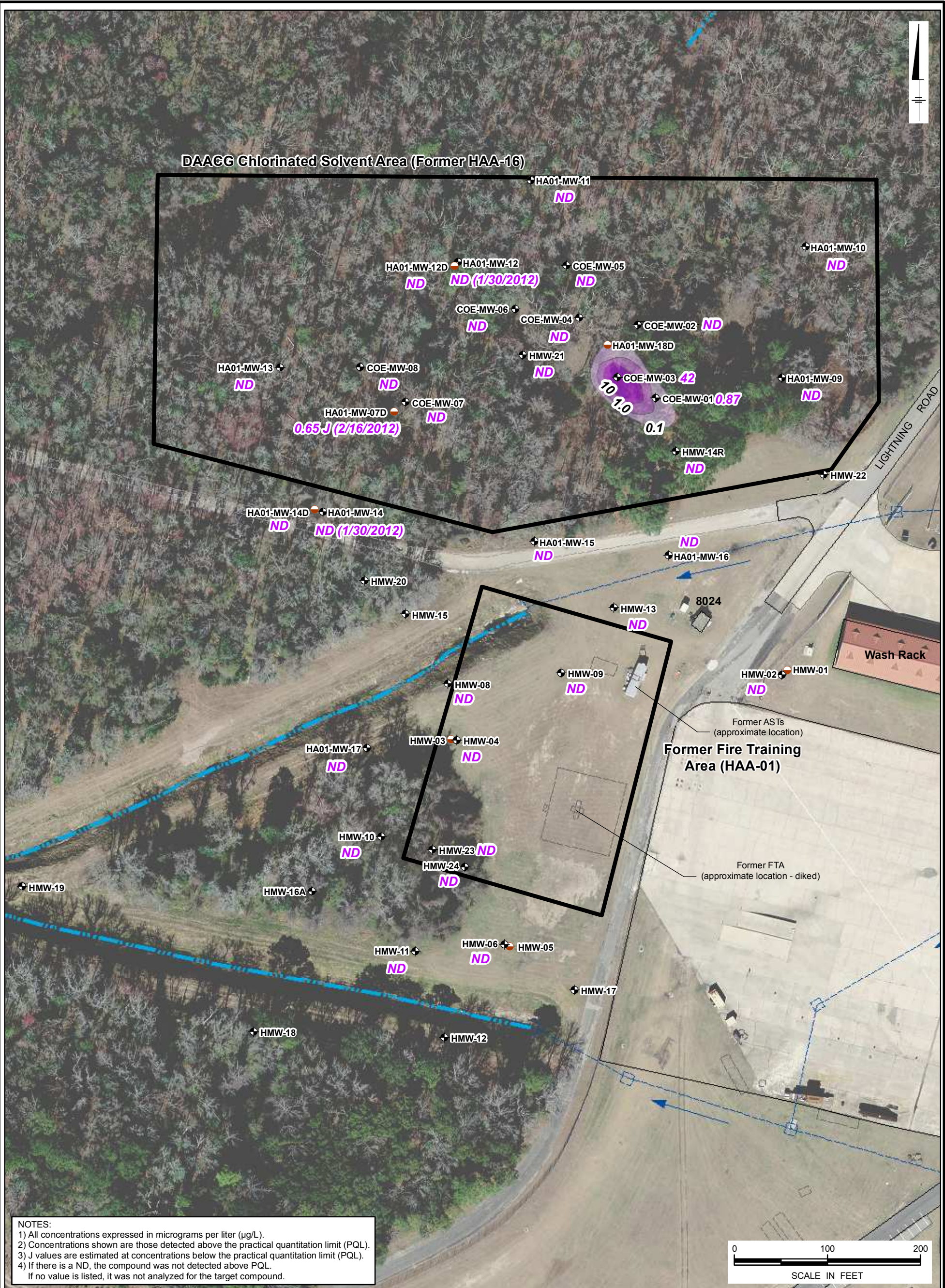
**Summary of Trichloroethene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-33**





PROJECTION: NAD83 StatePlane Georgia East Feet  
 AERIAL SOURCE: SAGIS (2008).

**LEGEND**

- |  |                             |  |                    |
|--|-----------------------------|--|--------------------|
|  | Storm Water Drainage Canal  |  | Toluene Isocontour |
|  | Storm Water Drainage System |  | 0.1 (µg/L)         |
|  | Drainage Flow Direction     |  | 1.0 (µg/L)         |
|  | Monitor Well (shallow)      |  | 10 (µg/L)          |
|  | Monitor Well (deep)         |  | 100 (µg/L)         |

HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

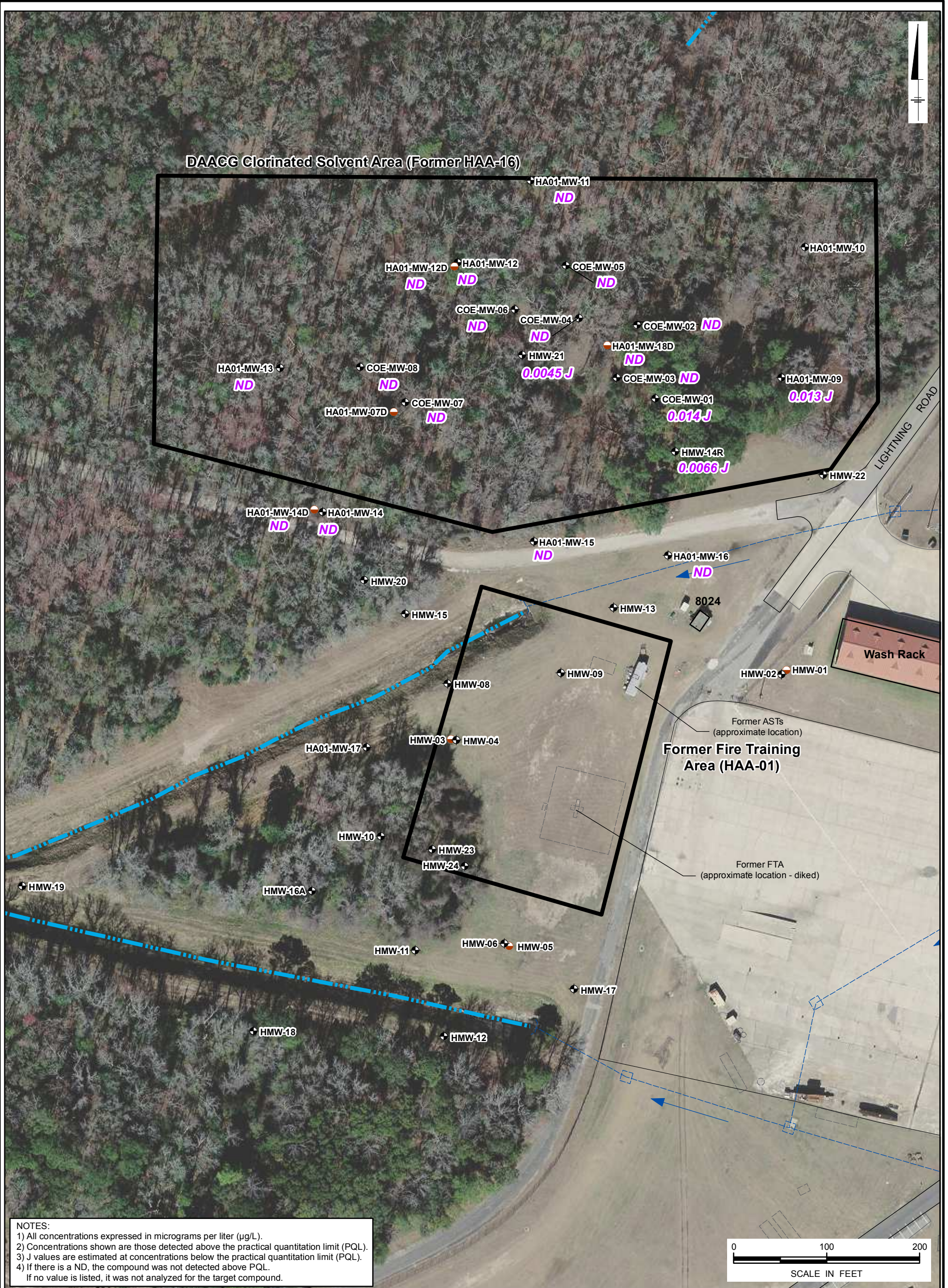
**Summary of Toluene Concentrations in  
 Groundwater (December 2009 through February 2012)**



FIGURE

**5-34**





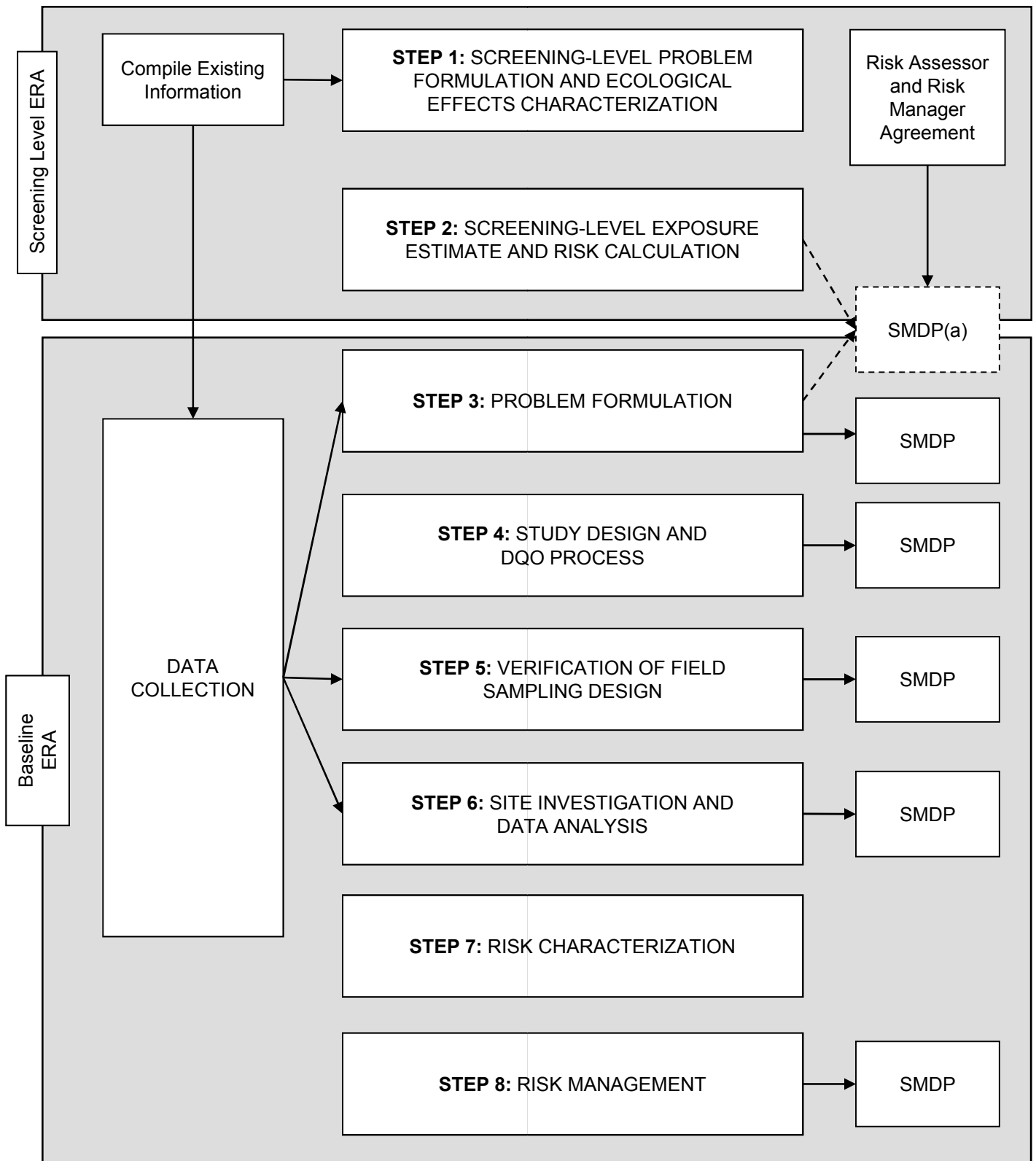
HUNTER ARMY AIRFIELD, GEORGIA  
**HAA-01 FORMER FIRE TRAINING/DAACG AREAS  
 COMPLIANCE STATUS REPORT**

**Summary of Endrin Aldehyde Concentrations in  
 Groundwater (December 2009)**





Figure 8-1  
Eight-Step Ecological Risk Assessment Process



Notes:

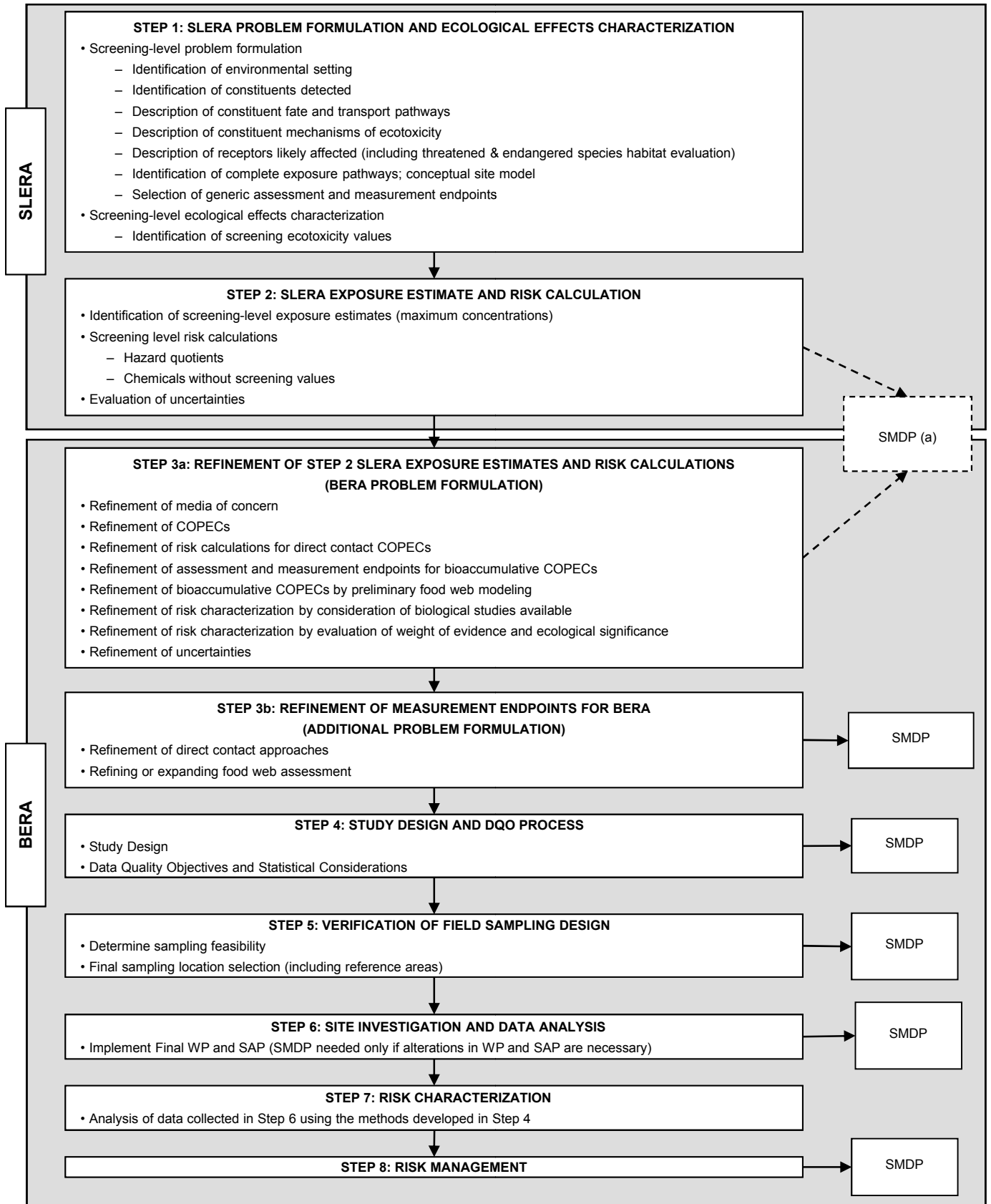
(a) SMDP occurs EITHER after Step 2 or after Step 3a

ERA Ecological Risk Assessment

SMDP Scientific Management Decision Point

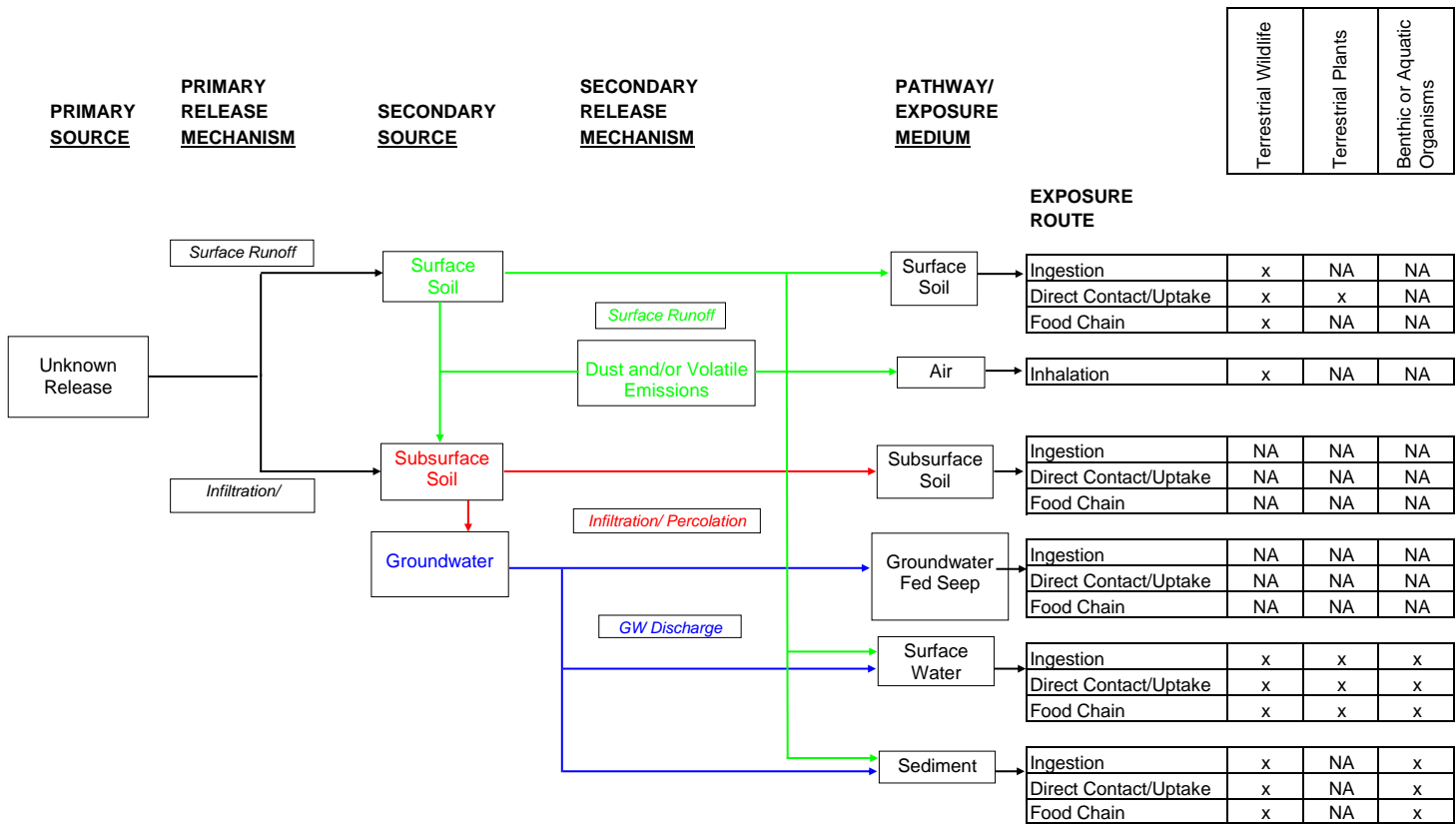
Source Adapted from USEPA 2000a

**Figure 8-2  
Expanded Eight-Step Ecological Risk Assessment Process**



Notes:

- |  |   |
|--|---|
| (a) SMDP occurs EITHER after Step 2 or after Step 3a | SMDP Scientific Management Decision Point |
| COPECs Constituents of Potential Ecological Concern  | WP Work Plan                              |
| DQO Data Quality Objectives                          | BERA Baseline ERA                         |
| GW Groundwater                                       | SLERA Screening-level ERA                 |
| SAP Sampling and Analysis Plan                       |   |
- Source: Adapted from USEPA 1997 and 2000a



NA Pathway not applicable.  
 x Potential pathway.



**Conceptual Site Model for Potential Ecological Receptors  
 HAA-01 (Former Fire Training Area and DAACG Chlorinated Solvent Area)  
 Hunter Army Airfield - Savannah, Georgia**

**Figure  
 8-3**



Historical Analytical Results  
Summary



Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

	Location ID	BH-10	BH-10	BH-11	BH-11	BH-12	BH-12	BH-13	BH-13	BH-13	EB-E6	EB-E7	EB-E7	EB-E8	EB-F5	EB-F5	EB-F6	EB-F7	EB-F8	EB-G5	EB-G6	EB-G7	EB-G8
	Sample Date	1/1/1987	1/1/1987	1/1/1987	1/1/1987	1/1/1987	1/1/1987	1/1/1987	1/1/1987	1/1/1987	2/26/1998	2/26/1998	3/31/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998
	Depth Interval	7.5-8.5	0-1	0-1	7.5-8.5	0-1	6.5-7.5	0-1	0-1	6.5-7.5	6.54	6.95	6.95	5.8	6.64	6.64	6.32	7.7	6.04	6.35	5.77	6.26	6.5
Chemical Name	Type 1 RRS																						
Hexachlorobutadiene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno[1,2,3-cd]pyrene	5																						
Isophorone	0.19																						
Naphthalene	100	10	< 0.001 U	< 0.001 U	7	< 0.001 U	5.8	< 0.002 U	< 0.001 U	< 0.001 U	ND	3.9		ND	ND	ND	2.5	14	ND	ND	4.8	7.4	ND
Nitrobenzene	0.7																						
N-Nitroso-di-n-propylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	0.9	< 0.001 U	< 0.001 U	< 0.001 U	< 0.001 U	0.2	< 0.003 U	< 0.001 U	< NRQ	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	50																						
Pyrene	500																						
<b>Metals (mg/kg)</b>																							
Arsenic	41	2	6.99	13.9	3.88	4	< 1.96 U	12	7.75	3.94													
Barium	500	9.19	64.4	33.5	18.1	7.19	8.12	27.1	19.8	8.28	14	10		11	11	11	11	10	13	8.1	9.7	11	13
Cadmium	39	< 1.96 U	< 1.96 U	1.99	< 1.96 U	< 1.96 U	< 1.96 U	0.02	3.87	< 1.96 U	ND	ND	0.6	ND	ND	ND	ND	0.9	ND	0.6	0.6	ND	ND
Chromium	1200	< 3.99 U	12.8	4.16	< 3.99 U	5.19	< 3.99 U	3.84	9.1	< 3.99 U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	300	35.9	645	1160	< NRQ	102	19.3	1180	1180	13.8	ND	ND	15	ND	5.5	ND	23	7.2	ND	15	12	ND	
Mercury	17	0.39	0.4	0.38	0.38	0.4	0.38	0.79	0.38	0.39													
Selenium	36	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.79	0.8	0.22	0.33	< 0.2 U													
Silver	10	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U	< 3.99 U													
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254																							
DDO																							
DDE, p,p'																							
DDT																							
Delta BHC																							
Dieldrin	0.66																						
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Endrin																							
Endrin Aldehyde																							
Endrin ketone																							
gamma-Chlordane																							
Heptachlor																							
Heptachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
Methoxychlor	10																						
Toxaphene																							
<b>Field Parameters (%)</b>																							
Moisture																							
Percent Solid																							





Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

Location ID	EB-G8	EB-H4	EB-H5	EB-H6	EB-H7	EB-H8	EB-H4	EB-I5	EB-I5	EB-I6	EB-I7	EB-I8	EB-J4	EB-J5	EB-J6	EB-J6	EB-J7	EB-J8	EB-K4	EB-K5	EB-K6	EB-K7	
Sample Date	2/26/1998	3/3/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	3/3/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	
Depth Interval	5.5	5.5	5.43	5.43	5.43	5.43	6.15	5.43	5.43	5.43	6.11	6.29	6.1	5.41	7.89	7.89	6.33	7.52	5.68	4.94	8.25	6.11	
Chemical Name	Type 1 RRS																						
Hexachlorobutadiene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno[1,2,3-cd]pyrene	5																						
Isophorone	0.19																						
Naphthalene	100	ND	ND	8.4	4.5	5.5	4.5	ND	ND	14	10	4.4	ND	ND	11		ND	ND	11	11	ND	8.2	
Nitrobenzene	0.7																						
N-Nitrosodipropylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	0.4	ND	ND	ND	ND	
Phenol	50																						
Pyrene	500																						
<b>Metals (mg/kg)</b>																							
Arsenic	41																						
Barium	500	13	7.8	6.5	10	14	15	7.2	6.8	6.8	11	8.1	9.4	10	7.9	13		13	21	15	11	14	18
Cadmium	39	ND	ND	0.9	ND	ND	1	ND	ND	6.9	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
Chromium	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
Lead	300	ND	ND	16	ND	ND	20	ND	ND	13	ND	ND	ND	10	5.8	6.3		6.4	ND	49	11	ND	7.8
Mercury	17																						
Selenium	36																						
Silver	10																						
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
DDD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0063	0.009	ND		ND	ND	ND	0.0085	ND	ND
DDE, p,p'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.015	ND		ND	ND	0.0045	0.019	ND	ND
DDT																							
beta-BHC																							
Dieldrin	0.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Endrin																							
Endrin Aldehyde																							
Endrin ketone																							
gamma-Chlordane																							
Hepachlor																							
Hepachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
Methoxychlor	10																						
Toxaphene																							
<b>Field Parameters (%)</b>																							
Moisture																							
Percent Solid																							



Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

	Location ID	EB-K8	EB-L5	EB-L6	EB-L7	EB-L8	EW-E6-a	EW-E6-b	EW-E7-a	EW-E8-a	EW-E8-b	EW-F5	EW-G5-a	EW-G5-b	EW-H4	EW-I4-a	EW-I4-b	EW-J4	EW-K4	EW-K4	EW-L4	EW-L5-a	EW-L5-b
	Sample Date	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	2/26/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998
	Depth Interval	7.05	5.43	7.78	7.23	7.59	3.5	3.87	3.5	3	3.17	3.07	2.78	2.66	3.16	2.98	2.97	3.05	2.5	2.5	2.29	2.59	2.48
Chemical Name	Type 1 RRS																						
Hexachlorobutadiene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno[1,2,3-cd]pyrene	5																						
Isophthalic	0.19																						
Naphthalene	100	ND	36	7.3	14	9.5	4.9	ND	17	ND	ND	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	0.7																						
N-Nitroso-di-n-propylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	50																						
Pyrene	500																						
<b>Metals (mg/kg)</b>																							
Arsenic	41																						
Barium	500	11	9.9	11	13	10	12	12	15	11	13	10	9.5	10	7.8	7.1	9.2	9.4	8.1	15	8.9	12	11
Cadmium	39	ND	ND	ND	ND	ND	1.3	1.2	ND	ND	ND	0.9	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND
Lead	300	ND	9.7	ND	16	ND	15	22	6.2	ND	ND	18	ND	16	5.6	8.9	5.1	ND	16	53	10	16	ND
Mercury	17																						
Selenium	36																						
Silver	10																						
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254		ND	ND	ND	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DDD		ND	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0076	0.0043	0.0085	0.011	0.0035	0.0042	0.012	0.0062	ND
DDE, p,p'		ND	0.024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0075	0.0032	0.0064	0.0043	ND	ND	0.012	0.0095	ND
DOT																							
delta-BHC																							
Dieldrin	0.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Endrin																							
Endrin Aldehyde																							
Endrin ketone																							
gamma-Chlordane																							
Heptachlor																							
Heptachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
Methoxychlor	10																						
Toxaphene																							
<b>Field Parameters (%)</b>																							
Moisture																							
Percent Solid																							





Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

Location ID	EW-L6	EW-L6	EW-L7	EW-L8-a	EW-L8-B	FTASB-04	FTASB-04	FTASB-06	FTASB-06	FTASB-09	FTASB-09	FTASB-10	FTASB-10	FTASB-11	FTASB-11	FTASB-12	FTASB-12	FTASB-13	FTASB-13	FTASB-14	FTASB-14	FTASB-15		
Sample Date	3/3/1998	3/3/1998	3/3/1998	3/3/1998	3/3/1998	8/23/1995	8/23/1995	8/23/1995	8/23/1995	8/23/1995	8/23/1995	8/24/1995	8/24/1995	8/24/1995	8/24/1995	8/24/1995	8/24/1995	10/3/1995	10/3/1995	10/4/1995	10/4/1995	10/4/1995		
Depth Interval	3-42	3-42	3-31	3-32	3-8	8-1	9-10.5	8-1	8.5-16	8-1	6-7	8-1	8-10.4	8-1	9.5-10	8-10	8-10	5-1	5-2.5	5-4.5	5-2.5	4.5-6.5	5-2.5	
Chemical Name	Type	RRS																						
Hexachlorobutadiene	17.5																							
Hexachlorocyclopentadiene	15.2																							
Hexachloroethane	9.99																							
Indeno(1,2,3-cd)pyrene	5																							
Naphthalene	0.19																							
Naphthalene	100	ND	ND	ND	ND																			
Nitrobenzene	0.7																							
N-Nitrosodipropylamine	1.71																							
N-Nitrosodiphenylamine	6.46																							
Pentachlorophenol	3.3																							
Phenanthrene	110	ND	ND	ND	ND																			
Phenol	50																							
Pyrene	500																							
<b>Metals (mg/kg)</b>																								
Arsenic	41																							
Barium	500	10	13	9.4	14	12	11	12	7.46	11.7 J	0.66	1.07 J	1.82	0.67 J	0.86	0.38 J	0.9 J	1.07	1.56	1.62 JQ	1.28	0.73 JQ	1.95	
Calcium	39	ND	ND	ND	ND	ND	2.2	<2.4 U	2.1	<2.8 U	2.8	<2.3 U	0.86	<2.4 U	2.2	<2.4 U	<2.5 U	2.4	2.2	<2.6 U	2.2	<2.3 U	2.2	
Chromium	1200	ND	ND	ND	ND	ND	9	2.4 J	5.1	2.3 J	2.4	6.5	14.7	2.1 J	4.8	2.7 J	2.5 J	4.6	5.7	4.4 J	4.4	4.7	4.1	
Lead	300	ND	ND	ND	ND	11	2.7	3.5	15	2.4	4.7	59	111	11.1	15	6.2	11.3	2.7	22	11.4	7.7	8.8	13.9	
Mercury	17																							
Selenium	36																							
Silver	10																							
<b>Other (mg/kg)</b>																								
Kerosene								8	100	9	100	8	50	10000	10	750	11000	15	8	10	10	8100	30	
TPH (as Diesel)								8	8	100	9	100	8	520	900	10	50	900	8	8	70	10	800	30
TPH (as Gasoline)								8	8	100	9	100	8	50	900	10	50	900	8	8	10	10	800	30
<b>Pesticides (mg/kg)</b>																								
Aldrin																								
alpha-Chlordane																								
Aroclor 1254		ND	ND	ND	ND	ND	0.081																	
DDO		ND	ND	ND	ND	ND	ND																	
DDE, p,p'		ND	ND	ND	ND	ND	ND																	
DDT																								
Beta BHC																								
Dieldrin	0.66	ND	ND	ND	ND	ND																		
Endosulfan I																								
Endosulfan II																								
Endosulfan Sulfate																								
Endrin																								
Endrin Aldehide																								
Endrin ketone																								
gamma-Chlordane																								
Hepachlor																								
Hepachlor epoxide																								
Hexachlorocyclohexane, Alpha-																								
Hexachlorocyclohexane, Beta-																								
Lindane																								
Methoxychlor	10																							
Toxaphene																								
<b>Field Parameters (%)</b>																								
Moisture								10.1	16.8	3.9	22.5	21.4	11.6	11.8	17.8	7.8	18.2	18.5	15.6	9.5	23.2	10.1	15.9	7.4
Percent Solid																								









Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

	Location ID	HA01-MW-17	HA01-MW-17	HA01SB001	HA01SB001	HA01SB002	HA01SB003	HA01SB004	HA01SB005	HMW-10	HMW-10	HMW-11	HMW-11	HMW-12	HMW-12	HMW-13	HMW-13	HMW-14	HMW-14	HMW-14R	HMW-14R	HMW-15	HMW-15	
	Sample Date	11/4/2009	11/4/2009	11/3/2009	11/18/2009	11/3/2009	11/3/2009	11/3/2009	10/31/1995	10/31/1995	10/31/1995	10/31/1995	10/2/1995	10/2/1995	10/3/1995	10/3/1995	7/28/1999	7/28/1999	1/6/2000	1/6/2000	7/28/1999	7/28/1999	7/28/1999	
	Depth Interval	6-7	11-2	8-10	8-10	6-6.5	8-10	2-4	0-2	0-2	2-4	2-4	6-8	1.5-3	4.5-6	2-4	7.5-7.5	0-1.5	0-2	7-9	0-1.5	0-1.5	7.5-7.5	
Chemical Name	Type	RRS																						
Hexachlorobutadiene	17.5		< 0.078 U		< 0.071 U	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
Hexachlorocyclopentadiene	15.2		< 0.39 U		< 0.35 U	< 0.41 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
Hexachloroethane	9.99		< 0.078 U		< 0.071 U	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
Indenol (1,2,3-d)pyrene	5		< 0.078 U		< 0.071 U	< 0.083 U				0.21 JQ	< 0.41 U	2.2	1.3	0.44	0.88	< 0.4 U	< 0.38 U			1.2	< 0.36 U	< 0.34 U	< 0.36 U	< 0.36 U
Naphthalene	100		< 0.078 U		5.3	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	1	< 0.4 U	< 0.4 U	2.2	0.22 JQ	< 0.36 U		< 0.36 U	< 0.34 U	< 0.36 U	< 0.36 U	< 0.36 U
Nitrobenzene	0.7		< 0.078 U		< 0.071 U	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
N-Nitroso-di-n-propylamine	1.71		< 0.078 U		< 0.071 U	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
N-Nitrosodiphenylamine	6.46		< 0.078 U		0.96	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U							
Pentachlorophenol	3.3		< 0.39 U		< 0.35 U	< 0.41 U				< 0.94 U	< 1 U	< 1 U	< 1.1 U	< 1 U	< 1 U	< 1 U	< 0.97 U							
Phenanthrene	110		< 0.078 U		0.66	< 0.083 U				0.17 JQ	< 0.41 U	6.3	3.3	0.071 JQ	0.13 JQ	0.3 JQ	< 0.38 U			< 0.36 U	< 0.36 U	< 0.34 U	< 0.36 U	< 0.36 U
Phenol	50		< 0.078 U		< 0.071 U	< 0.083 U				< 0.37 U	< 0.41 U	< 0.4 U	< 0.43 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.38 U			< 0.36 U	< 0.36 U	< 0.34 U	< 0.36 U	< 0.36 U
Pyrene	500		< 0.078 U		0.22	< 0.083 U				0.67	< 0.41 U	14	7.2	0.9	1.3	0.14 JQ	< 0.38 U			2	< 0.36 U	< 0.34 U	< 0.36 U	< 0.36 U
<b>Metals (mg/kg)</b>																								
Arsenic	41	< 2.9 U	0.73	0.5 J	2.3					1.64	0.26 JQ	0.84 JQ	0.75 JQ	0.51 JQ	1.04 JQ	0.72 JQ	0.6 JQ							
Barium	500	17	3.6	14	20					16	6.25 JQ	11.7 J	7.97 JQ	5.96 JQ	5.68 JQ	7.85 JQ	27							
Calcium	39	0.063 J	0.017 J	< 0.12 U	< 0.12 U					2.3	< 2.4 U	< 2.4 U	< 2.6 U	< 2.4 U	< 2.4 U	< 2.4 U	< 2.3 U							
Chromium	1200	9.3	1.8	4.2	5.9		4.9	2.6		7.7	3.3 JQ	9.1	7.5	3.6 JQ	4.6 J	3 JQ	31.7							
Lead	300	5.2	2.3	2	4.2					17	11.8	2.7	2.2	2.5	2	16.4	3.2							
Mercury	17	0.023 J	0.032 J	0.02 J	< 0.095 U		0.044 J	0.021 J		0.046	0.033	0.034	0.032	0.035	0.032	0.033	0.03							
Selenium	36	< 2.3 U	< 0.57 U	< 0.58 U	< 0.58 U					0.2	0.22	0.22	0.37	0.23	0.34	0.44	0.23							
Silver	10	< 1.4 U	0.054 J	0.12 J	< 0.29 U					2.3	< 2.4 U	< 2.4 U	< 2.6 U	< 2.4 U	< 2.4 U	< 2.4 U	< 2.3 U							
<b>Other (mg/kg)</b>																								
Kerosene										8	9	100	500	9	10	13000	10							
TPH (as Diesel)										50	50	100	500	9	10	800	10							
TPH (as Gasoline)										8	9	100	500	9	10	800	30							
<b>Pesticides (mg/kg)</b>																								
Aldrin			< 0.0019 U																					
alpha-Chlordane			< 0.0019 U																					
Aroclor 1254																								
DDO			< 0.0019 U																					
DDE, p,p'			< 0.0019 U																					
DDT			< 0.0019 U																					
delta BHC			< 0.0019 U																					
Dieldrin	0.66		< 0.0019 U																					
Endosulfan I			< 0.0019 U																					
Endosulfan II			< 0.0019 U																					
Endosulfan Sulfate			< 0.0019 U																					
Endrin			< 0.0019 U																					
Endrin Aldehyde			< 0.0019 U																					
Endrin ketone			< 0.0019 U																					
gamma-Chlordane			< 0.0019 U																					
Hepachlor			< 0.0019 U																					
Hepachlor epoxide			< 0.0019 U																					
Hexachlorocyclohexane, Alpha-			< 0.0019 U																					
Hexachlorocyclohexane, Beta-			< 0.0019 U																					
Lindane			< 0.0019 U																					
Methoxychlor	10		< 0.0074 U																					
Toxaphene			< 0.092 U																					
<b>Fluid Parameters (%)</b>																								
Moisture										11.5	19	16.9	22.7	18.1	16.8	16.6	14.1							
Percent Solid		85.9	86.6	85.1	84.9	81.9	79.9	81.9	88.4															



Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

Location ID	HMW-16A	HMW-16A	HMW-17	HMW-17	HMW-18	HMW-18	HSB-1	HSB-2	HSB-3	HSB-4	HSB-5	HSB-6	PSB-1	PSB-1	PSB-2	PSB-2	PSB-2	PSB-2	PSB-2	PSB-3	PSB-3	PSB-4	
Sample Date	7/29/1999	7/29/1999	7/29/1999	7/29/1999	1/6/2000	1/6/2000	2/12/1999	2/13/1999	2/13/1999	2/13/1999	2/13/1999	2/13/1999	3/3/1992	3/3/1992	3/3/1992	3/3/1992	3/3/1992	3/3/1992	3/3/1992	3/4/1992	3/4/1992	3/4/1992	
Depth Interval	0 - 1.5	7 - 17	7/29/1999 0 - 1.5	7/29/1999 0 - 1.5	1/6/2000 0 - 2	1/6/2000 2 - 3	2/12/1999 0 - 10	2/13/1999 3 - 5	2/13/1999 6 - 8	2/13/1999 2 - 4	2/13/1999 5 - 8	2/13/1999 8 - 10	3/3/1992 0 - 1	3/3/1992 3 - 4	3/3/1992 0 - 1	3/3/1992 3 - 4	3/3/1992 0 - 1	3/3/1992 3 - 4	3/3/1992 3 - 4	3/4/1992 3.5 - 4.5	3/4/1992 0 - 1	3/4/1992 5.5 - 6.5	
Chemical Name	Type 1 RRS																						
Hexachlorobutadiene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno[1,2,3-cd]pyrene	5	16	6.4	< 0.36 U	< 0.37 U	< 0.42 U	< 0.38 U	< 0.095 U	2.9	< 0.11 U	< 0.11 U	< 0.12 U	< 0.11 U	< 0.18 U	< 1.9 U	< 0.18 U	< 0.19 U	< 0.18 U		< 0.19 U	< 0.18 U	< 0.87 U	< 0.19 U
Isoquinoline	0.19																						
Naphthalene	100	< 3.5 U	< 0.79 U	< 0.36 U	< 0.37 U	< 0.42 U	< 0.38 U	< 0.21 U	< 0.23 U	5.7	< 0.23 U	11	< 0.24 U	< 0.078 U	3.5	< 0.081 U	< 0.084 U	< 0.081 U		< 0.083 U	< 0.08 U	< 0.38 U	< 0.081 U
Nitrobenzene	0.7																						
N-Nitrosodipropylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	32	10	< 0.36 U	< 0.37 U	< 0.42 U	< 0.38 U	< 0.067 U	8.1	0.15	< 0.074 U	0.29	< 0.076 U	0.44	< 0.85 U	< 0.081 U	< 0.084 U	< 0.081 U		< 0.083 U	< 0.08 U	0.67	< 0.081 U
Phenol	50																						
Pyrene	500	49	17	< 0.36 U	< 0.37 U	< 0.42 U	< 0.38 U	< 0.072 U	9.7	0.14	< 0.079 U	0.54	< 0.081 U	0.58	< 0.85 U	0.19	< 0.084 U	0.13		< 0.083 U	< 0.08 U	5.2	< 0.081 U
<b>Metals (mg/kg)</b>																							
Arsenic	41						< 0.48 U	< 0.52 U	< 0.54 U	0.65	0.85	< 0.55 U	1.02	0.63	1.28	2.44	1.32			1.31	0.33	0.51	0.59
Barium	500						3.83	5.97	6.21	4.44	15.4	11.2	11.4	12.8	14.9	23.4	19.1			23.6	13.9	18.3	17.7
Cadmium	39						< 0.37 U	< 0.4 U	< 0.42 U	< 0.41 U	< 0.45 U	< 0.42 U	< 0.52 U	< 0.57 U	< 0.54 U	< 0.55 U	< 0.54 U			< 0.56 U	< 0.54 U	< 0.51 U	< 0.54 U
Chromium	1200						0.78	3.49	3.85	5.87	1.93	2.39	5.61	2.81	5.88	5.91	6.94			6.93	2.16	3.55	2.22
Lead	300						< 5.26 U	< 5.71 U	< 5.97 U	< 6.81 U	7.4	< 5.97 U	28	< 7.62 U	17.3	8.82	16.8			7.88	< 7.28 U	7.39	< 7.27 U
Mercury	17						< 0.11 U	< 0.11 U	< 0.11 U	< 0.12 U	< 0.12 U	< 0.09 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U			< 0.1 U	< 0.1 U	< 0.09 U	< 0.1 U
Selenium	36						< 0.42 U	< 0.45 U	< 0.47 U	< 0.46 U	0.97	< 0.47 U	< 0.27 U	< 0.29 U	< 0.28 U	< 0.23 U	< 0.28 U			< 0.29 U	< 0.28 U	< 0.25 U	< 0.28 U
Silver	10						< 0.6 U	< 0.65 U	< 0.68 U	< 0.66 U	< 0.73 U	< 0.68 U	< 0.78 U	< 0.86 U	< 0.81 U	< 0.83 U	< 0.81 U			< 0.84 U	< 0.82 U	< 0.77 U	< 0.82 U
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254																							
DDO																							
DDE, p,p'																							
DDT																							
delta BHC																							
Dieldrin	0.66						< 0.0042 U																
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Endrin																							
Endrin Aldehyde																							
Endrin ketone																							
gamma-Chlordane																							
Hepachlor																							
Hepachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
Methoxychlor	10						< 0.022 U																
Toxaphene																							
<b>Field Parameters (%)</b>																							
Moisture							5	12.4	16.2	14	21.6	16.3	10.4	17.3	13.5	16.3	13.5			16.1	12.9	7.7	13.8
Percent Solid																							





Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

	Location ID	PSB-4	PSB-4	PSB-5	PSB-5	PSB-6	PSB-6	PSB-6	PSB-7	PSB-7	PSB-7	SB-018	SB-018	SB-019	SB-019	SB-020	SB-020	SB-021	SB-021	SB-022	SB-022	SB-023	SB-023
	Sample Date	3/4/1992	3/4/1992	3/4/1992	3/4/1992	3/3/1992	3/3/1992	3/3/1992	3/4/1992	3/4/1992	3/4/1992	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999
	Depth Interval	0-1	3.5-4.5	0-1	3.5-4	0-1	3-4	7.5-8.5	0-1	3-4	6-7	0-1.5	6-8	0-1.5	8.5-9.5	0-1.5	8.5-9.5	0-1.5	8.5-9.5	0-1.5	8.5-9.5	0-1.5	8.5-9.5
Chemical Name	Type	RRS																					
Hexachlorobenzene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno(1,2,3-cd)pyrene	5	< 0.16 U	< 0.18 U	< 0.17 U	< 0.19 U	< 0.19 U	<b>0.57</b>	< 9 U	< 0.17 U	< 0.18 U	< 0.18 U	< 0.34 U	< 0.36 U	< 0.37 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.34 U	< 0.39 U	< 0.4 U	< 0.4 U	<b>0.52</b>	< 0.41 U
Isoquinoline	0.19																						
Naphthalene	100	< 0.078 U	< 0.08 U	< 0.074 U	< 0.082 U	< 0.082 U	<b>1.4</b>	<b>41</b>	< 0.076 U	< 0.077 U	< 0.08 U	< 0.34 U	< 0.36 U	< 0.37 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.34 U	< 0.39 U	< 0.4 U	< 0.4 U	< 0.36 U	< 0.41 U
Nitrobenzene	0.7																						
N-Nitroso-di-n-propylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	< 0.078 U	< 0.08 U	< 0.074 U	< 0.082 U	<b>0.17</b>	<b>0.09</b>	< 3.9 U	< 0.076 U	<b>0.1</b>	< 0.08 U	< 0.34 U	< 0.36 U	< 0.37 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.34 U	< 0.39 U	< 0.4 U	< 0.4 U	< 0.36 U	< 0.41 U
Phenol	50																						
Pyrene	500	<b>0.14</b>	< 0.08 U	< 0.074 U	< 0.082 U	<b>0.17</b>	<b>0.23</b>	< 3.9 U	<b>0.11</b>	<b>0.81</b>	< 0.08 U	< 0.34 U	< 0.36 U	< 0.37 U	< 0.37 U	< 0.36 U	< 0.35 U	< 0.34 U	< 0.39 U	< 0.4 U	< 0.4 U	<b>0.53</b>	< 0.41 U
<b>Metals (mg/kg)</b>																							
Arsenic	41	<b>0.33</b>	<b>0.54</b>	<b>0.61</b>	<b>0.56</b>	<b>0.5</b>	<b>0.93</b>	<b>0.37</b>	<b>1.61</b>	<b>1.16</b>	<b>0.85</b>												
Barium	500	<b>9.6</b>	<b>14.7</b>	<b>16.2</b>	<b>19.1</b>	<b>23.7</b>	<b>15</b>	<b>17.1</b>	<b>47.6</b>	<b>38.4</b>	<b>17.6</b>												
Cadmium	39	< 0.51 U	< 0.54 U	< 0.5 U	< 0.55 U	< 0.54 U	< 0.54 U	< 0.53 U	< 0.51 U	< 0.52 U	< 0.54 U												
Chromium	1200	<b>3.02</b>	<b>2.44</b>	<b>3.68</b>	<b>3.86</b>	<b>3.86</b>	<b>2.8</b>	<b>3.94</b>	<b>5.29</b>	<b>6.1</b>	<b>2.86</b>												
Lead	300	< 6.9 U	< 7.29 U	< 6.7 U	< 7.31 U	<b>23.9</b>	<b>8.83</b>	< 7.16 U	<b>13.8</b>	<b>107</b>	< 7.19 U												
Mercury	17	< 0.09 U	< 0.09 U	< 0.09 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U												
Selenium	36	< 0.27 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.27 U	< 0.27 U	< 0.28 U	< 0.28 U												
Silver	10	< 0.77 U	< 0.82 U	< 0.75 U	< 0.82 U	< 0.81 U	< 0.8 U	< 0.8 U	< 0.76 U	< 0.76 U	< 0.81 U												
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254																							
DDO																							
DDE, p,p'																							
DDT																							
delta BHC																							
Dieldrin																							
0.66																							
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Erdrin																							
Erdrin Aldehyde																							
Erdrin ketone																							
gamma-Chlordane																							
Heptachlor																							
Heptachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
10																							
Methoxychlor																							
Toxaphene																							
<b>Fluid Parameters (%)</b>																							
Moisture																							
10																							
12.5																							
6																							
14.4																							
14.5																							
13.2																							
11																							
8.3																							
8.8																							
12.1																							
Percent Solid																							



Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

Location ID	SB-024	SB-024	SB-025	SB-025	SB-026	SB-026	SB-027	SB-027	SB-028	SB-028	SB-029	SB-029	SB-030	SB-030	SB-031	SB-031	SB-033	SB-033	SB-034	SB-034	SB-035	SB-035		
Sample Date	7/29/1999	7/29/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	7/22/1999	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/6/2000		
Depth Interval	0 - 1.5	6.5 - 8.5	0 - 1.5	8.5 - 15.5	0 - 1.5	8.5 - 15.5	8.5 - 15.5	8.5 - 15.5	0 - 1.5	5.5 - 15.5	0 - 1.5	5.5 - 15.5	0 - 2	6 - 8	6 - 2	5 - 7	5 - 2	3 - 5	0 - 2	2.5 - 4.5	0 - 2	4 - 8		
Chemical Name	Type	RRS																						
Hexachlorobutadiene	17.5																							
Hexachlorocyclopentadiene	15.2																							
Hexachloroethane	9.99																							
Indeno(1,2,3-cd)pyrene	5	< 0.48 U	< 0.41 U	4.6	< 0.39 U		< 0.41 U	< 0.4 U	11	< 0.37 U	< 0.38 U	< 0.36 U	< 0.37 U	< 0.35 U	11						< 0.36 U	< 0.35 U		
Naphthalene	100	< 0.48 U	< 0.41 U	< 0.37 U	< 0.39 U	< 0.41 U	< 0.4 U	< 0.4 U	< 1.4 U	< 0.37 U	< 0.38 U	< 0.36 U	< 0.37 U	< 0.35 U	< 1.9 U						< 0.36 U	< 0.35 U		
Nitrobenzene	0.7																							
N-Nitrosodipropylamine	1.71																							
N-Nitrosodiphenylamine	6.46																							
Pentachlorophenol	3.3																							
Phenanthrene	110	< 0.48 U	< 0.41 U	2	< 0.39 U	7.3	< 0.41 U	< 0.4 U	7.1	< 0.37 U	< 0.38 U	< 0.36 U	< 0.37 U	< 0.35 U	19						< 0.36 U	< 0.35 U		
Phenol	50																							
Pyrene	500	< 0.48 U	< 0.41 U	8.5	< 0.39 U	8.7	< 0.41 U	0.41	18	< 0.37 U	< 0.38 U	< 0.36 U	< 0.37 U	< 0.35 U	26 J						< 0.36 U	< 0.35 U		
<b>Metals (mg/kg)</b>																								
Arsenic	41																							
Barium	500																							
Cadmium	39																							
Chromium	1200																							
Lead	300																							
Mercury	17																							
Selenium	36																							
Silver	10																							
<b>Other (mg/kg)</b>																								
Kerosene																								
TPH (as Diesel)																								
TPH (as Gasoline)																								
<b>Pesticides (mg/kg)</b>																								
Aldrin																								
alpha-Chlordane																								
Aroclor 1254																								
DDO																								
DDE, p,p'																								
DDT																								
delta BHC																								
Dieldrin	0.66	< 0.0048 U	< 0.0041 U	0.038 J	< 0.004 U	0.026 J	< 0.0041 U	< 0.004 U	0.043												< 0.0036 U	< 0.0037 U	< 0.0035 U	< 0.0035 U
Endosulfan I																								
Endosulfan II																								
Endosulfan Sulfate																								
Endrin																								
Endrin Aldehyde																								
Endrin ketone																								
gamma-Chlordane																								
Hepachlor																								
Hepachlor epoxide																								
Hexachlorocyclohexane, Alpha-																								
Hexachlorocyclohexane, Beta-																								
Lindane																								
Methoxychlor	10	< 0.025 U	< 0.021 U	< 0.19 U	< 0.02 U	0.14 J	< 0.021 U	< 0.02 U	< 0.18 U												< 0.018 U	< 0.019 U	< 0.018 U	< 0.018 U
Toxaphene																								
<b>Field Parameters (%)</b>																								
Moisture																								
Percent Solid																								





Appendix A - Table 1  
 Historical Soil Sample Analytical Summary  
 HAA-01 former FTA and DAACG Area

Location ID	SB-036	SB-036	SB-037	SB-037	SB-038	SB-038	SB-039	SB-039	SB-040	SB-040	SB-041	SB-041	SB-042	SB-043	SB-043	SB-043A	SB-044	SB-044	SB-045	SB-046	SB-046	SB-047	
Sample Date	1/6/2000	1/6/2000	1/6/2000	1/6/2000	1/4/2000	1/4/2000	1/4/2000	1/4/2000	1/4/2000	1/4/2000	10/1/2000	11/1/2001	1/31/2000	10/31/2001	11/1/2001	10/31/2001	11/1/2001	11/1/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001	
Depth Interval	0-2	2-3	0-2	2-3	0-2	2-3	0-2	2-4	0-2	2-4	0-2	2-4	0-2	0-2	2-4	0-2	2-4	0-2	0-2	0-2	0-2	2-4	
Chemical Name	Type 1 RRS																						
Hexachlorobutadiene	17.5																						
Hexachlorocyclopentadiene	15.2																						
Hexachloroethane	9.99																						
Indeno[1,2,3-cd]pyrene	5	8.7	< 0.39 U	< 0.37 U	< 0.4 U	5.6 J	< 0.43 U				< 0.43 U	< 0.35 U	< 0.44 U	< 0.35 U	< 0.35 U		< 0.35 U	< 0.38 U	< 0.34 U/L	< 0.38 U	< 0.34 U		
Isophorone	0.19																						
Naphthalene	100	< 0.36 U	< 0.39 U	< 0.37 U	< 0.4 U	0.53	< 0.43 U				< 0.43 U	< 0.35 U	< 0.44 U	< 0.35 U	< 0.35 U		< 0.35 U	< 0.38 U	< 0.34 U/L	< 0.38 U	< 0.34 U		
Nitrobenzene	0.7																						
N-Nitroso-di-n-propylamine	1.71																						
N-Nitrosodiphenylamine	6.46																						
Pentachlorophenol	3.3																						
Phenanthrene	110	2.4 J	< 0.39 U	< 0.37 U	< 0.4 U	39	< 0.43 U				< 0.43 U	< 0.35 U	< 0.44 U	< 0.35 U	< 0.35 U		< 0.35 U	< 0.38 U	< 0.34 U/L	< 0.38 U	< 0.34 U		
Phenol	50																						
Pyrene	500	10 J	< 0.39 U	< 0.37 U	< 0.4 U	25 J	< 0.43 U				< 0.43 U	< 0.35 UJ	< 0.44 U	< 0.35 UJ	< 0.35 UJ		< 0.35 UJ	< 0.38 UJ	< 0.34 U/L	< 0.38 UJ	< 0.34 UJ		
<b>Metals (mg/kg)</b>																							
Arsenic	41																						
Barium	500																						
Cadmium	39																						6.5
Chromium	1200																						
Lead	300														2.4	2.6		2.7	4.3			3.9	1.9
Mercury	17																						
Selenium	36																						
Silver	10																						
<b>Other (mg/kg)</b>																							
Kerosene																							
TPH (as Diesel)																							
TPH (as Gasoline)																							
<b>Pesticides (mg/kg)</b>																							
Aldrin																							
alpha-Chlordane																							
Aroclor 1254																							
DDO																							
DDE, p,p'																							
DDT																							
delta BHC																							
Dieldrin	0.66	< 0.0036 U		< 0.0037 U																			
Endosulfan I																							
Endosulfan II																							
Endosulfan Sulfate																							
Endrin																							
Endrin Aldehyde																							
Endrin ketone																							
gamma-Chlordane																							
Heptachlor																							
Heptachlor epoxide																							
Hexachlorocyclohexane, Alpha-																							
Hexachlorocyclohexane, Beta-																							
Lindane																							
Methoxychlor	10	< 0.019 U		< 0.019 U																			
Toxaphene																							
<b>Field Parameters (%)</b>																							
Moisture																							
Percent Solid																							

Notes:  
 - Duplicate sample  
 - Indicate the analyte was detected above the Georgia HSRA Type 1 Risk Reduction Standards  
**BOLD** - Indicate the analyte was detected above the detection limit.  
 B - Analyte was detected in an associated blank as well as in the sample.  
 D - Sample was diluted for analysis.  
 U - The analyte was not detected above the reporting limit.  
 UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.  
 UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.  
 J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample in lbs - feet below land surface  
 µg/kg - Micrograms per Kilogram  
 mg/kg - Milligrams per Kilogram  
 NA - Not analyzed  
 RRS - GAEPD Rule 391-3-19-07 Risk Reduction Standard (July 23, 2003).  
 SVOCs - Semi-volatile Organic Compounds  
 VOCs - Volatile Organic Compounds

**Appendix A - Table 2**  
**Historical Sediment Sample Analytical Summary**  
**HAA-01 Former FTA and DAACG Area**  
**Hunter Army Airfield, Georgia**

Location ID	SD-1	SD-2	SD-3	SD-3	PSS-1	PSS-2	PSS-2	PSS-3	PSS-4
Sample ID	SD-1	SD-2	SD-3DUP	SD-3	HSD-1	HSD-DUP	HSD-2	HSD-3	HSD-4
Sample Date	2/12/1990	2/12/1990	2/12/1990	2/12/1990	3/3/1992	3/3/1992	3/3/1992	3/4/1992	3/4/1992
Compound									
<b>Volatiles Organic Compounds (VOCs) µg/kg (EPA Method 8260B)</b>									
1,1,1-Trichloroethane	< 1.5 U	< 1.8 U	< 1.6 U	< 1.6 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,1,2,2-Tetrachloroethane	< 1.7 U	< 2.1 U	< 1.9 U	< 1.9 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,1,2-Trichloroethane	< 1.8 U	< 2.2 U	< 2 U	< 2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,1-Dichloroethane	< 0.98 U	< 1.2 U	< 1 U	< 1 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,1-Dichloroethene	< 1.4 U	< 1.6 U	< 1.5 U	< 1.5 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,2-Dichloroethane	< 1 U	< 1.2 U	< 1.1 U	< 1.1 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,2-Dichloroethene	< 1.49 U	< 1.76 U	< 1.6 U	< 1.6 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
1,2-Dichloropropane	< 1.1 U	< 1.3 U	< 1.2 U	< 1.2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
2-Butanone	< 10.9 U	< 12.8 U	< 11.7 U	< 11.6 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
2-Hexanone	< 3.6 U	< 4.2 U	< 3.9 U	< 3.9 U	NA	NA	NA	NA	NA
2-Chloroethyl vinyl ether	NA	NA	NA	NA	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
4-Methyl-2-pentanone	< 3.08 U	< 3.63 U	< 3.31 U	< 3.3 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
Acetone	<b>40</b>	<b>110</b>	< 21 U	<b>120</b>	NA	NA	NA	NA	NA
Benzene	< 1.3 U	< 1.5 U	<b>31</b>	<b>15</b>	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Bromodichloromethane	< 1.1 U	< 1.3 U	< 1.2 U	< 1.2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Bromoform	< 2.8 U	< 3.3 U	< 3 U	< 3 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Bromomethane	< 1.3 U	< 1.6 U	< 1.4 U	< 1.4 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
Carbon disulfide	< 3.6 U	<b>23</b>	< 3.8 U	< 3.8 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Carbon tetrachloride	< 1.1 U	< 1.3 U	< 1.2 U	< 1.2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
CFC-11	NA	NA	NA	NA	<b>6.9</b>	< 6.9 U	<b>7.4</b>	< 6.7 U	< 6.8 U
Chlorobenzene	< 0.75 U	< 0.88 U	< 0.8 U	< 0.8 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Chloroethane	< 2 U	< 2.4 U	< 2.2 U	< 2.2 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
Chloroform	< 1.4 U	< 1.6 U	< 1.5 U	< 1.5 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Chloromethane	< 28 U	< 33 U	< 30 U	< 30 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
cis-1,3-Dichloropropene	< 1.8 U	< 2.1 U	< 1.9 U	< 1.9 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Dibromochloromethane	< 1.5 U	< 1.8 U	< 1.6 U	< 1.6 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Diethyl ether	NA	NA	NA	NA	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	< 1.1 U	< 1.4 U	< 1.2 U	< 1.2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Methylene chloride	<b>7</b>	<b>12</b>	< 2 U	< 2 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Styrene	< 1.8 U	< 2.2 U	< 2 U	< 2 U	NA	NA	NA	NA	NA
Tetrachloroethene	< 0.59 U	< 0.69 U	< 0.63 U	< 0.63 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Toluene	< 0.81 U	<b>3.2</b>	< 0.86 U	< 0.86 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
trans-1,3-Dichloropropene	< 0.99 U	< 1.2 U	< 1.1 U	< 1.1 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Trichloroethene	< 1 U	< 1.2 U	< 1.1 U	< 1.1 U	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
Vinyl acetate	< 3 U	< 3.5 U	< 3.2 U	< 3.2 U	NA	NA	NA	NA	NA
Vinyl chloride	< 1.8 U	< 2.1 U	< 1.9 U	< 1.9 U	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
Xylenes (total)	< 1.2 U	< 1.4 U	< 1.3 U	<b>2.4</b>	< 6.8 U	< 6.9 U	< 6.5 U	< 6.7 U	< 6.8 U
<b>Semi-Volatile Organic Compounds (SVOCs) µg/kg (EPA Method 8270C)</b>									
1,2-Dichlorobenzene	NA	NA	NA	NA	< 190 U	< 960 U	< 910 U	< 94 U	< 96 U
1,3-Dichlorobenzene	NA	NA	NA	NA	< 190 U	< 960 U	< 910 U	< 94 U	< 96 U
1,4-Dichlorobenzene	NA	NA	NA	NA	< 190 U	< 960 U	< 910 U	< 94 U	< 96 U
2,4,6-Tribromophenol	<b>7200</b>	<b>7820</b>	<b>1530</b>	<b>7370</b>	NA	NA	NA	NA	NA
2-Fluorobiphenyl	<b>4030</b>	<b>3990</b>	<b>4530</b>	<b>4460</b>	NA	NA	NA	NA	NA
2-Fluorophenol	<b>8610</b>	<b>10000</b>	<b>9500</b>	<b>9870</b>	NA	NA	NA	NA	NA
4-Bromofluorobenzene	<b>54</b>	<b>61</b>	<b>65</b>	<b>67</b>	NA	NA	NA	NA	NA
Acenaphthene	<b>1100</b>	< 170 U	<b>4900</b>	< 1600 U	< 190 U	< 960 U	< 910 U	< 94 U	<b>110</b>
Acenaphthylene	< 530 U	< 120 U	<b>2000</b>	<b>3100</b>	< 190 U	< 940 U	< 910 U	< 94 U	< 96 U
Anthracene	<b>3000</b>	< 97 U	<b>9300</b>	<b>8200</b>	<b>210</b>	<b>1500</b>	<b>2400</b>	< 94 U	<b>130</b>
Benz(a)anthracene	<b>13000</b>	< 79 U	<b>33000</b>	<b>26000</b>	<b>760</b>	<b>6400</b>	<b>13000</b>	<b>160</b>	<b>510</b>
Benzo(a)pyrene	<b>9200</b>	< 230 U	<b>27000</b>	<b>18000</b>	<b>850</b>	<b>7100</b>	<b>12000</b>	< 190 U	<b>400</b>
Benzo(b)fluoranthene	<b>16000</b>	< 170 U	<b>27000</b>	<b>21000</b>	<b>760</b>	<b>7200</b>	<b>13000</b>	< 130 U	<b>450</b>
Benzo(ghi)perylene	<b>6200</b>	< 95 U	<b>17000</b>	<b>13000</b>	< 440 U	< 2200 U	<b>5100</b>	< 210 U	< 220 U
Benzo(k)fluoranthene	<b>7200</b>	< 210 U	<b>29000</b>	<b>17000</b>	<b>890</b>	<b>7200</b>	<b>12000</b>	<b>280</b>	<b>390</b>
Chrysene	<b>22000</b>	< 120 U	<b>52000</b>	<b>40000</b>	<b>930</b>	<b>7600</b>	<b>15000</b>	<b>180</b>	<b>670</b>
Dibenz(a,h)anthracene	<b>4200</b>	< 81 U	<b>11000</b>	<b>8100</b>	< 440 U	< 2200 U	< 2100 U	< 210 U	< 220 U
Dichlorobenzene	NA	NA	NA	NA	< 14 U	< 14 U	< 13 U	< 13 U	< 14 U
Fluoranthene	<b>36000</b>	< 150 U	<b>62000</b>	<b>54000</b>	<b>2200</b>	<b>15000</b>	<b>34000</b>	<b>190</b>	<b>1200</b>
Fluorene	<b>1500</b>	< 140 U	<b>8300</b>	<b>2500</b>	< 190 U	< 960 U	<b>1200</b>	< 94 U	<b>130</b>
Indeno(1,2,3-cd)pyrene	<b>7900</b>	< 120 U	<b>23000</b>	<b>15000</b>	<b>440</b>	<b>3300</b>	<b>7600</b>	< 210 U	< 220 U
Naphthalene	< 230 U	< 270 U	<b>390</b>	< 250 U	< 190 U	< 960 U	< 910 U	< 94 U	< 96 U
Phenanthrene	<b>20000</b>	< 87 U	<b>62000</b>	<b>33000</b>	<b>810</b>	<b>7400</b>	<b>19000</b>	< 94 U	<b>1400</b>
Pyrene	<b>27000</b>	< 92 U	<b>58000</b>	<b>43000</b>	<b>1400</b>	<b>9100</b>	<b>21000</b>	<b>220</b>	<b>990</b>

**Appendix A - Table 2**  
**Historical Sediment Sample Analytical Summary**  
**HAA-01 Former FTA and DAACG Area**  
**Hunter Army Airfield, Georgia**

Location ID	SD-1	SD-2	SD-3	SD-3	PSS-1	PSS-2	PSS-2	PSS-3	PSS-4
Sample ID	SD-1	SD-2	SD-3DUP	SD-3	HSD-1	HSD-DUP	HSD-2	HSD-3	HSD-4
Sample Date	2/12/1990	2/12/1990	2/12/1990	2/12/1990	3/3/1992	3/3/1992	3/3/1992	3/4/1992	3/4/1992
Compound									
<b>Metals mg/kg (EPA Method 6010)</b>									
Arsenic	< 0.53 U	<b>0.76</b>	< 0.57 U	< 0.57 U	<b>0.49</b>	<b>0.37</b>	< 0.3 U	< 0.31 U	<b>1.05</b>
Barium	<b>19.8</b>	<b>8.46</b>	<b>229</b>	<b>13.4</b>	<b>15.6</b>	<b>9.95</b>	<b>8.7</b>	<b>7.97</b>	<b>12</b>
Cadmium	< 0.41 U	< 0.47 U	< 0.44 U	< 0.44 U	< 0.62 U	< 0.62 U	< 0.59 U	< 0.62 U	< 0.63 U
Chromium	<b>3.38</b>	<b>2.2</b>	<b>32</b>	<b>69.7</b>	<b>5.66</b>	<b>2.86</b>	<b>2.55</b>	<b>1.09</b>	<b>3.54</b>
Lead	<b>7.65</b>	<b>7.71</b>	<b>362</b>	<b>275</b>	<b>29.4</b>	<b>22.9</b>	<b>16</b>	< 8.36 U	< 8.46 U
Mercury	< 0.11 U	< 0.13 U	< 0.12 U	< 0.12 U	< 0.11 U	< 0.12 U	< 0.11 U	< 0.11 U	< 0.11 U
Selenium	< 0.46 U	< 0.54 U	< 0.49 U	< 0.49 U	< 0.33 U	< 0.33 U	< 0.31 U	< 0.32 U	< 0.34 U
Silver	< 0.66 U	< 0.77 U	< 0.71 U	< 0.71 U	< 0.93 U	< 0.94 U	< 0.89 U	< 0.94 U	< 0.95 U
<b>Other</b>									
Moisture	13.9	26.2	19.8	19.7	26.6	27.1	23.2	25.4	27

Notes:

**BOLD** - indicate the analyte was detected.

B - Analyte was detected in an associated blank as well as in the sample.

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

NA - Not analyzed

U - The analyte was not detected above the reporting limit.

µg/kg - Micrograms per Kilogram

mg/kg - Milligrams per Kilogram

VOCs - Volatile Organic Compounds

SVOCs - Semi-volatile Organic Compounds

Appendix A - Table 3  
 Historical Surface Water Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Compound	Analytical Method	Unit	Location ID	HSW1	HSW2	HSW3	HSW4	HSW5	HSW6	
			Sample ID	Sample Date	Sample ID	Sample Date	Sample ID	Sample Date	Sample ID	Sample Date
<b>Volatile Organic Compounds (VOCs) µg/L (EPA Method 8260B)</b>										
1,1,1,2-Tetrachloroethane	SW8260B	ug/l	HSW1-20011031	10/31/2001	HSW2-20011031	10/31/2001	HSW3-20011031	10/31/2001	HSW6-20011031	10/31/2001
1,1,1-Trichloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2,2-Tetrachloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,2-Trichloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloroethene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1-Dichloropropene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichlorobenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trichlorobenzene	SW8260B	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	SW8260B	ug/l	4.5 J	3.7 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromo-3-chloropropane (DBCP)	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	SW8260B	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichloropropane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3,5-Trimethylbenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	SW8260B	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichloropropane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2,2-Dichloropropane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Butanone	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Chloroethyl vinyl ether	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Chlorotoluene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Hexanone	SW8260B	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	1.1 J	< 10 U	< 10 U	< 10 U
4-Chlorotoluene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	SW8260B	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone	SW8260B	ug/l	< 100 U	< 100 U	3.3 J	2.7 J	< 100 U	< 100 U	< 100 U	< 100 U
Acrolein	SW8260B	ug/l	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Acrylonitrile	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Benzene	SW8260B	ug/l	13	12	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Benzene, 1-methylethyl	SW8260B	ug/l	1.9 J	1.8 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromobenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromochloromethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromodichloromethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromoform	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Bromomethane	SW8260B	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Carbon disulfide	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
CFC-11	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
CFC-12	SW8260B	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Chlorobenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloromethane	SW8260B	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
cis-1,2-Dichloroethene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,3-Dichloropropene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromomethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichloro-2-butene, cis-1,4-	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichloro-2-butene, trans-1,4-	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Ethylbenzene	SW8260B	ug/l	8.5	8.3	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Hexachlorobutadiene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 11 U	< 5 U	< 5 U
Iodomethane	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methyl Methacrylate	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	SW8260B	ug/l	9.9	9	< 5 U	< 5 U	< 5 U	< 11 U	< 5 U	< 5 U
n-Butylbenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
n-Propylbenzene	SW8260B	ug/l	2.1 J	1.8 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
p-Isopropyltoluene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U

footnotes on last page

Appendix A - Table 3  
Historical Surface Water Sample Analytical Summary  
HAA-01 Former FTA and DAACG Area  
Hunter Army Airfield, Georgia

Location ID	HSW1	HSW1	HSW2	HSW3	HSW4	HSW5	HSW6
Sample ID	HSW1-20011031	HSW6_DUP1-20011031	HSW2-20011031	HSW3-20011031	HSW4-20011031	HSW5-20011031	HSW6-20011031
Sample Date	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001
<b>Volatile Organic Compounds (VOCs) µg/L (EPA Method 8260B) - continued</b>							
sec-Butylbenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Styrene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
tert-Butyl methyl ether	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
tert-Butylbenzene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Tetrachloroethene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Toluene	SW8260B	ug/l	14	13	< 5 U	< 5 U	1.1 J
trans-1,2-Dichloroethene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
trans-1,3-Dichloropropene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Trichloroethene	SW8260B	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl acetate	SW8260B	ug/l	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Vinyl chloride	SW8260B	ug/l	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Xylenes (total)	SW8260B	ug/l	67	64	< 5 U	< 5 U	< 5 U
<b>Semi-Volatile Organic Compounds (SVOCs) µg/L (EPA Method 8270C)</b>							
1,2,4-Trichlorobenzene	SW8270C	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dichlorobenzene	SW8270C	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U
1,3-Dichlorobenzene	SW8270C	ug/l	< 10 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	SW8270C	ug/l	< 10 U	< 11 U	< 5 U	< 10 U	< 11 U
1-Methylnaphthalene	SW8270C	ug/l	2.2 J	1.7 J	< 10 U	< 10 U	< 10 U
2,4,5-Trichlorophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2,4,6-Trichlorophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2,4-Dichlorophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2,4-Dimethylphenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2,4-Dinitrophenol	SW8270C	ug/l	< 50 U	< 55 U	< 50 U	< 50 U	< 55 U
2,4-Dinitrotoluene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2,6-Dinitrotoluene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2-Chloronaphthalene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2-Chlorophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2-Methyl-4,6-dinitrophenol	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 22 U
2-Methylnaphthalene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2-Methylphenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
2-Nitrobenzamine	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 22 U
2-Nitrophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
3,3'-Dichlorobenzidine	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
3,4-Methylphenol	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 22 U
3-Nitrobenzamine	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 22 U
4-Bromophenyl phenyl ether	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
4-Chloro-3-methylphenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
4-Chlorobenzamine	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
4-Chlorophenyl phenyl ether	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
4-Nitrobenzamine	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 22 U
4-Nitrophenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Acenaphthene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Acenaphthylene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Anthracene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benz(a)anthracene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzenemethanol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzidine	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzo(a)pyrene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzo(b)fluoranthene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzo(ghi)perylene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzo(k)fluoranthene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Benzoic acid	SW8270C	ug/l	< 50 U	< 55 U	< 50 U	< 50 U	< 55 U
Bis(2-chloroethoxy)methane	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Bis(2-chloroethyl) ether	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Bis(2-chloroisopropyl) ether	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Bis(2-ethylhexyl)phthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Butyl benzyl phthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Carbazole	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Chrysene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Dibenz(a,h)anthracene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U
Dibenzofuran	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 11 U

footnotes on last page



Appendix A - Table 3  
 Historical Surface Water Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HSW1	HSW1	HSW2	HSW3	HSW4	HSW5	HSW6		
Sample ID	HSW1-20011031	HSW6_DUP1-20011031	HSW2-20011031	HSW3-20011031	HSW4-20011031	HSW5-20011031	HSW6-20011031		
Sample Date	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001	10/31/2001		
<b>Semi-Volatile Organic Compounds (SVOCs) µg/L (EPA Method 8270C) - continuec</b>									
Diethyl phthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Dimethyl phthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Di-n-butyl phthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Di-n-octylphthalate	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Fluoranthene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Fluorene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Hexachlorobenzene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Hexachlorobutadiene	SW8270C	ug/l	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 11 U	< 5 U
Hexachlorocyclopentadiene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Hexachloroethane	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Indeno(1,2,3-cd)pyrene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Isophorone	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Naphthalene	SW8270C	ug/l	4.4 J	3.6 J	< 5 U	< 5 U	< 5 U	< 11 U	< 5 U
Nitrobenzene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Nitrosodimethylamine, N-	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
N-Nitroso-di-n-propylamine	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
N-Nitrosodiphenylamine	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Pentachlorophenol	SW8270C	ug/l	< 20 U	< 22 U	< 20 U	< 20 U	< 20 U	< 22 U	< 20 U
Phenanthrene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Phenol	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
Pyrene	SW8270C	ug/l	< 10 U	< 11 U	< 10 U	< 10 U	< 10 U	< 11 U	< 10 U
<b>Metals mg/L(EPA Method 6010)</b>									
Arsenic	SW6010B	mg/l	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Barium	SW6010B	mg/l	<b>0.03 J</b>	<b>0.032 J</b>	<b>0.025 J</b>	<b>0.029 J</b>	<b>0.024 J</b>	<b>0.024 J</b>	<b>0.025 J</b>
Cadmium	SW6010B	mg/l	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	<b>0.0003 J</b>	< 0.005 U
Chromium	SW6010B	mg/l	< 0.05 U	<b>0.0012 J</b>	<b>0.0009 J</b>	<b>0.0001 J</b>	<b>0.0008 J</b>	<b>0.013 J</b>	<b>0.0013 J</b>
Lead	SW6010B	mg/l	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
Selenium	SW6010B	mg/l	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Silver	SW6010B	mg/l	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Mercury	SW7470A	mg/l	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	<b>0.00087 J</b>

Notes:

- BOLD** - indicate the analyte was detected.
- B - Analyte was detected in an associated blank as well as in the sample.
- J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- NA - Not analyzed
- U - The analyte was not detected above the reporting limit.
- UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value
- UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- µg/L - Micrograms per Liter
- mg/L - Milligrams per Liter
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds

Appendix A - Table 4  
Historical Groundwater Sample Analytical Summary  
HAA-01 Former FTA and DAACG Area  
Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	
				Sample ID	AS0112(072004)	AS0122(011605)	AS0132(071705)	AS0142(011506)	AS0152(072406)	AS0162(012007)	AS0164(012007)-DUP	AS0172(071407)	AS0174(071407)-DUP	AS0182(012508)	AS0184(012508)-DUF	COE-MW-01 (020309)	COE-MW-1 (121609)	
Sample Date	7/20/2004	1/16/2005	7/17/2005	1/15/2006	7/24/2006	1/20/2007	1/20/2007	1/20/2007	7/14/2007	7/14/2007	1/25/2008	1/25/2008	2/3/2009	12/16/2009				
<b>Volatile Organic Compounds (µg/L) (EPA Method 8260)</b>																		
1,1,1-Trichloroethane	71-55-6	200	200	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,1,2,2-Tetrachloroethane	79-34-5	0.2	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1000000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
1,1,2-Trichloroethane	79-00-5	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,1-Dichloroethane	75-34-3	4000	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,1-Dichloroethene	75-35-4	7	7	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,2,4-Trichlorobenzene	120-82-1	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
1,2-Dibromoethane	106-93-4	0.05	0.05	NA	NA	NA	NA	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,2-Dichlorobenzene	95-50-1	600	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
1,2-Dichloroethane	107-06-2	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,2-Dichloroethene	540-59-0	NA	NA	<b>88.9</b>	<b>151</b>	<b>70.6</b>	<b>46.4</b>	<b>108</b>	<b>42.8</b>	<b>43.6</b>	<b>52</b>	<b>46.7</b>	<b>123 J</b>	<b>130 J</b>	NA	NA	<0.5 U	<0.5 U
1,2-Dichloropropane	78-87-5	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
1,3-Dichlorobenzene	541-73-1	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
1,4-Dichlorobenzene	106-46-7	75	75	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
2-Butanone	78-93-3	2000	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U
2-Hexanone	591-78-6	NA	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<b>5.9 J</b>	<10 U
4-Methyl-2-pentanone	108-10-1	2000	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<10 U
Acetone	67-64-1	4000	NA	3.8 U	<b>2.4 J</b>	<b>3.1 J</b>	<5 U	<b>2.87 J</b>	<5 U	<5 U	<b>2.44 J</b>	<b>1.58 J</b>	<5 U	<5 U	<5 U	<5 U	<10 U	<b>13</b>
Benzene	71-43-2	5	5	<b>1.7</b>	<1 U	<b>1.8</b>	<b>1</b>	<b>1.43</b>	<b>1.18</b>	<b>1.16</b>	<b>1.2</b>	<b>1.1</b>	<b>1.52</b>	<b>1.54</b>	<b>2</b>	<b>1.3</b>	<0.5 U	<0.5 U
Benzene, 1-methylethyl	98-82-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
Bromochloromethane	74-97-5	NA	NA	NA	NA	NA	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	NA	NA	NA
Bromodichloromethane	75-27-4	100	80	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Bromoform	75-25-2	100	80	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Bromomethane	74-83-9	10	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Carbon disulfide	75-15-0	4000	NA	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<0.5 U	<0.5 U
Carbon tetrachloride	56-23-5	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
CFC-11	75-69-4	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
CFC-12	75-71-8	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
Chlorobenzene	108-90-7	100	100	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Chloroethane	75-00-3	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Chloroform	67-66-3	100	80	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Chloromethane	74-87-3	3	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
cis-1,2-Dichloroethene	156-59-2	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
cis-1,3-Dichloropropene	10061-01-5	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Cyclohexane	110-82-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
Dibromochloromethane	124-48-1	100	80	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Ethylbenzene	100-41-4	700	700	<b>0.27 J</b>	<b>0.23 J</b>	<1 U	<b>2.2</b>	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.18 J	<0.5 U
Methyl acetate	79-20-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1 U	<1 U
Methylcyclohexane	108-87-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5 U	<5 U
Methylene chloride	75-09-2	5	5	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<0.5 U	<0.5 U
Styrene	100-42-5	100	100	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
tert-Butyl methyl ether	1634-04-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5 U	<0.5 U
Tetrachloroethene	127-18-4	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Toluene	108-88-3	1000	1000	1 U	<b>0.51 J</b>	1 U	<b>1.9</b>	<b>0.867 J</b>	<b>0.806 J</b>	<b>0.734 J</b>	1.01 U	1 U	<b>1.07</b>	<b>1.03</b>	<b>1.1</b>	<b>0.87</b>	<0.5 U	<0.5 U
trans-1,2-Dichloroethene	156-60-5	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>12</b>	<b>6.8</b>
trans-1,3-Dichloropropene	10061-02-6	NA	NA	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Trichloroethene	79-01-6	5	5	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<0.5 U
Vinyl chloride	75-01-4	2	2	<b>1.6</b>	<b>2.2</b>	<b>1.4</b>	<b>0.74 J</b>	<b>1.85</b>	<b>0.691 J</b>	<b>0.72 J</b>	<b>0.899 J</b>	<b>0.913 J</b>	<b>1.16</b>	<b>1.31</b>	<b>2.8</b>	<b>&lt;0.5 U</b>	<0.5 U	<0.5 U
Xylenes (total)	1330-20-7	10000	10000	<b>4.2</b>	<b>3.6</b>	<b>3.7</b>	<b>3.3</b>	<b>3.03</b>	<b>4.72</b>	<b>4.6</b>	<b>5.27</b>	<b>4.64</b>	<b>3.62</b>	<b>3.63</b>	<b>3</b>	<b>2.6</b>	<0.5 U	<0.5 U



Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1	RRS	MCL	Location ID Sample ID	Sample Date	COE-MW-01 AS0112(072004)	COE-MW-01 AS0122(011605)	COE-MW-01 AS0132(071705)	COE-MW-01 AS0142(011506)	COE-MW-01 AS0152(072406)	COE-MW-01 AS0162(012007)	COE-MW-01 AS0164(012007)-DUP	COE-MW-01 AS0172(071407)	COE-MW-01 AS0174(071407)-DUP	COE-MW-01 AS0182(012508)	COE-MW-01 AS0184(012508)-DUF	COE-MW-01 COE-MW-01 (020309)	COE-MW-01 COE-MW-1 (121609)	
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120	130
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	< 2 U
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	< 5 U
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	0.057 J
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.5 UB	< 10 U
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	< 5 U
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0044 J	4.6 J
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	0.014 J
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Heptachlor epoxide	1024-67-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.019 J	< 0.028 U
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.11 U
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.25 U	< 0.28 U
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1	RRS	Location ID	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01	COE-MW-01
				Sample ID	AS0112(072004)	AS0122(011605)	AS0132(071705)	AS0142(011506)	AS0152(072406)	AS0162(012007)	AS0164(012007)-DUP	AS0172(071407)	AS0174(071407)-DUP	AS0182(012508)	AS0184(012508)-DUP	COE-MW-01 (020309)	COE-MW-1 (121609)
				Sample Date	7/20/2004	1/16/2005	7/17/2005	1/15/2006	7/24/2006	1/20/2007	1/20/2007	7/14/2007	7/14/2007	1/25/2008	1/25/2008	2/3/2009	12/16/2009
				MCL													
<b>Other</b>																	
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																	
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-02	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03
Sample ID	AS0212(072004)	AS0222(011605)	AS0232(071705)	AS0242(011506)	AS0244(011506)-DUF	AS0252(072406)	AS0262(012007)	AS0272(071407)	AS0282(012508)	COE-MW-02 (020309)	COE-MW-2 (121609)	AS0312(072004)	AS0322(011605)	AS0332(071705)	AS0342(011506)	AS0352(072406)				
Sample Date	7/20/2004	1/16/2005	7/17/2005	1/15/2006	1/15/2006	7/24/2006	1/20/2007	7/14/2007	1/25/2008	2/3/2009	12/16/2009	7/20/2004	1/16/2005	7/17/2005	1/15/2006	7/24/2006				
Chemical Name	CAS No	Type_1_RRS	MCL																	
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	53	42	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	0.95 J	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	< 5 U	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	3 J	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	0.66 J	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.11 U	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.25 U	< 0.28 U	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	COE-MW-02 AS0212(072004) 7/20/2004	COE-MW-02 AS0222(011605) 1/16/2005	COE-MW-02 AS0232(071705) 7/17/2005	COE-MW-02 AS0242(011506) 1/15/2006	COE-MW-02 AS0244(011506)-DUF 1/15/2006	COE-MW-02 AS0252(072406) 7/24/2006	COE-MW-02 AS0262(012007) 1/20/2007	COE-MW-02 AS0272(071407) 7/14/2007	COE-MW-02 AS0282(012508) 1/25/2008	COE-MW-02 (020309) COE-MW-2 (121609) 2/3/2009	COE-MW-02 COE-MW-2 (121609) 12/16/2009	COE-MW-03 AS0312(072004) 7/20/2004	COE-MW-03 AS0322(011605) 1/16/2005	COE-MW-03 AS0332(071705) 7/17/2005	COE-MW-03 AS0342(011506) 1/15/2006	COE-MW-03 AS0352(072406) 7/24/2006
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-03	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-04	
Sample ID	AS0354(072406)-DUF	AS0362(012007)	AS0372(071407)	AS0382(012508)	COE-MW-03 (020309)	COE-MW-3 (121609)	COE-MW-3(012511)	AS0412(072004)	AS0422(011605)	AS0424(011605)-DUF	AS0432(071705)	AS0434(071705)-DUF	AS0442(011606)	AS0452(072506)	AS0462(012007)	AS0472(071407)				
Sample Date	7/24/2006	1/20/2007	7/14/2007	1/25/2008	2/3/2009	12/16/2009	1/25/2011	7/20/2004	1/16/2005	1/16/2005	7/17/2005	7/17/2005	1/16/2006	7/25/2006	1/20/2007	7/14/2007				
Chemical Name	CAS No	Type_1_RRS	MCL																	
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	< 10 U	< 10 U	0 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	88	94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	< 2 U	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	2.6 J	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	17000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	3 UB	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	< 5 U	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	0 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	15000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	< 0.025 U	0.22 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	0.46 J	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	< 0.025 U	< 0.028 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	< 0.1 U	< 0.11 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	< 0.25 U	< 0.28 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID	COE-MW-03 AS0354(072406)-DUF	COE-MW-03 AS0362(012007)	COE-MW-03 AS0372(071407)	COE-MW-03 AS0382(012508)	COE-MW-03 COE-MW-03 (020309)	COE-MW-03 COE-MW-3 (121609)	COE-MW-03 COE-MW-3(012511)	COE-MW-04 AS0412(072004)	COE-MW-04 AS0422(011605)	COE-MW-04 AS0424(011605)-DUF	COE-MW-04 AS0432(071705)	COE-MW-04 AS0434(071705)-DUF	COE-MW-04 AS0442(011606)	COE-MW-04 AS0452(072506)	COE-MW-04 AS0462(012007)	COE-MW-04 AS0472(071407)	
Sample Date	MCL			Sample Date	7/24/2006	1/20/2007	7/14/2007	1/25/2008	2/3/2009	12/16/2009	1/25/2011	7/20/2004	1/16/2005	1/16/2005	7/17/2005	7/17/2005	1/16/2006	7/25/2006	1/20/2007	7/14/2007	
<b>Other</b>																					
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	48000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	44000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	< 20 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	31 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	1200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	21000	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Field</b>																					
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	300000	NA	NA	NA	NA	NA	NA	NA	NA	NA	







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	COE-MW-04	COE-MW-04	COE-MW-04	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-05	COE-MW-06	COE-MW-06	
Sample ID	AS0482(012508)	COE-MW-04 (020409)	COE-MW-4 (121709)	AS0512(072004)	AS0522(011605)	AS0532(071705)	AS0542(011606)	AS0552(072506)	AS0562(012007)	AS0572(071407)	AS0582(012508)	COE-MW-05 (020409)	COE-MW-05 (121709)	COE-MW-5(012611)	AS0612(072004)	AS0614(072004)-DUF			
Sample Date	1/25/2008	2/4/2009	12/17/2009	7/20/2004	1/16/2005	7/17/2005	1/16/2006	7/25/2006	1/20/2007	7/14/2007	1/25/2008	2/4/2009	12/17/2009	1/26/2011	7/20/2004	7/20/2004			
Chemical Name	CAS No	Type_1_RRS	MCL																
<b>Metals, Total</b>																			
Arsenic	7440-38-2	50	10	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	0 UB	NA	NA
Barium	7440-39-3	2000	2000	NA	26	20 J	NA	NA	NA	NA	NA	NA	NA	NA	35	47	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	< 2 U	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	< 2 U	NA	NA	NA
Chromium	7440-47-3	100	100	NA	8.7	3.2 UB	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	3.3 UB	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3400	NA	NA
Lead	7439-92-1	15	15	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	91	NA	NA
Mercury	7439-97-6	2	2	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA
Selenium	7782-49-2	50	50	NA	< 10 U	2.6 UB	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA
Silver	7440-22-4	100	NA	NA	< 5 U	2.6 J	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	2 J	NA	NA	NA
<b>Metals, Dissolved</b>																			
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2500	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87	NA	NA
<b>Pesticides</b>																			
2,4,5-TP (Silvex)	93-72-1	50	50	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	< 0.025 UJ	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	< 0.025 UJ	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Endrin	72-20-8	2	2	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	0.82 J	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	0.36 J	< 0.025 U	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	< 0.025 U	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	< 0.1 U	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	< 0.25 U	< 0.28 U	NA	NA	NA	NA	NA	NA	NA	NA	< 0.25 U	< 0.25 U	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID	COE-MW-04 AS0482(012508)	COE-MW-04 COE-MW-04 (020409)	COE-MW-04 COE-MW-4 (121709)	COE-MW-05 AS0512(072004)	COE-MW-05 AS0522(011605)	COE-MW-05 AS0532(071705)	COE-MW-05 AS0542(011606)	COE-MW-05 AS0552(072506)	COE-MW-05 AS0562(012007)	COE-MW-05 AS0572(071407)	COE-MW-05 AS0582(012508)	COE-MW-05 COE-MW-05 (020409)	COE-MW-05 COE-MW-5 (121709)	COE-MW-05 COE-MW-5(012611)	COE-MW-06 AS0612(072004)	COE-MW-06 AS0614(072004)-DUF	Sample Date	MCL		
<b>Other</b>																							
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51000	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14000	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 20 U	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17000	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1200	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5100	NA	NA
<b>Field</b>																							
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	170000	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	COE-MW-06 AS0622(011605) 1/16/2005	COE-MW-06 AS0632(071705) 7/17/2005	COE-MW-06 AS0642(011606) 1/16/2006	COE-MW-06 AS0652(072506) 7/25/2006	COE-MW-06 AS0662(012007) 1/20/2007	COE-MW-06 AS0672(071407) 7/14/2007	COE-MW-06 AS0682(012508) 1/25/2008	COE-MW-06 COE-MW-06 (020409) 2/4/2009	COE-MW-06 COE-MW-06 (121709) 12/17/2009	COE-MW-07 AS0712(072004) 7/20/2004	COE-MW-07 AS0722(011605) 1/16/2005	COE-MW-07 AS0732(071705) 7/17/2005	COE-MW-07 AS0742(011606) 1/16/2006	COE-MW-07 AS0752(072506) 7/25/2006	COE-MW-07 AS0754(072506)-DUF 7/25/2006	COE-MW-07 AS0762(012007) 1/20/2007
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	NA	38	36	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	< 2 U	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	3.3 UB	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	1.4 J	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 UJ	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	< 0.25 U	< 0.25 U	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA



Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	COE-MW-06 AS0622(011605) 1/16/2005	COE-MW-06 AS0632(071705) 7/17/2005	COE-MW-06 AS0642(011606) 1/16/2006	COE-MW-06 AS0652(072506) 7/25/2006	COE-MW-06 AS0662(012007) 1/20/2007	COE-MW-06 AS0672(071407) 7/14/2007	COE-MW-06 AS0682(012508) 1/25/2008	COE-MW-06 (020409) COE-MW-06 (121709) 2/4/2009	COE-MW-06 (121709) AS0712(072004) 12/17/2009	COE-MW-07 AS0712(072004) 7/20/2004	COE-MW-07 AS0722(011605) 1/16/2005	COE-MW-07 AS0732(071705) 7/17/2005	COE-MW-07 AS0742(011606) 1/16/2006	COE-MW-07 AS0752(072506) 7/25/2006	COE-MW-07 AS0754(072506)-DUF 7/25/2006	COE-MW-07 AS0762(012007) 1/20/2007
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	HA01-MW-07D	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	
Sample ID	AS0764(012007)-DUF	AS0772(071407)	AS0774(071407)-DUF	AS0782(012508)	AS0784(012508)-DUF	COE-MW-07 (020409)	COE-MW-07 (121609)	COE-MW-7(012611)	A01-MW-07D(011611)	AS0812(072004)	AS0822(011605)	AS0832(071705)	AS0842(011606)	AS0852(072506)	AS0862(012007)	AS0872(071407)				
Sample Date	1/20/2007	7/14/2007	7/14/2007	1/25/2008	1/25/2008	2/4/2009	12/16/2009	1/26/2011	40924	7/20/2004	1/16/2005	7/17/2005	1/16/2006	7/25/2006	1/20/2007	7/14/2007				
Chemical Name	CAS No	Type_1_RRS	MCL																	
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	5.7 J	< 10 U	0 UB	< 0.010 U	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	42	42	NA	0.012 J	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	< 2 U	< 2 U	NA	< 0.002 U	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	< 5 U	< 5 U	NA	< 0.005 U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	4200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	3.7 UB	< 10 U	NA	< 0.010 U	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	84	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	< 0.1 UJ	< 0.1 U	NA	< 0.0001 U	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	< 10 U	< 10 U	NA	< 0.010 U	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	0.67 UB	0.9 J	NA	< 0.005 U	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	0 UB	< 0.010 U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	2100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	77	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	< 0.56 U	NA	NA	< 0.54 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	< 2.2 U	NA	NA	< 2.2 U	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	< 0.026 UJ	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	< 0.026 UJ	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 UJ	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	< 0.026 U	< 0.025 U	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	< 0.11 U	< 0.1 U	NA	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	< 0.26 U	< 0.25 U	NA	< 0.26 U	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	< 0.56 U	NA	NA	< 0.54 U	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	COE-MW-07	HA01-MW-07D	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	
Sample ID	Sample Date			AS0764(012007)-DUF	AS0772(071407)	AS0774(071407)-DUF	AS0782(012508)	AS0784(012508)-DUF	COE-MW-07 (020409)	COE-MW-07 (121609)	COE-MW-7(012611)	A01-MW-07D(011611)	AS0812(072004)	AS0822(011605)	AS0832(071705)	AS0842(011606)	AS0852(072506)	AS0862(012007)	AS0872(071407)				
Sample Date	Sample Date			1/20/2007	7/14/2007	7/14/2007	1/25/2008	1/25/2008	2/4/2009	12/16/2009	1/26/2011	40924	7/20/2004	1/16/2005	7/17/2005	1/16/2006	7/25/2006	1/20/2007	7/14/2007				
<b>Other</b>																							
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	20000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	< 20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																							
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	150000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	COE-MW-08	COE-MW-08	COE-MW-08	COE-MW-08	HAA01-MW-10	HAA01-MW-10	HAA01-MW-11	HAA01-MW-12	HAA01-MW-12D	HA01-MW-12	HAA01-MW-13	HAA01-MW-14	HAA01-MW-14D	HAA01-MW-14	HAA01-MW-15	HAA01-MW-15			
Sample ID	AS0882(012508)	COE-MW-08 (020409)	COE-MW-08 (121609)	COE-MW-08 (012611)	AA01-MW-10 (12170AA-01)	AA01-MW-10 (01251AA01-MW-11)	AA01-MW-11 (12170AA01-MW-12)	AA01-MW-12 (12170AA01-MW-12D)	AA01-MW-12D (12170AA01-MW-12)	AA01-MW-12 (013012AA01-MW-13)	AA01-MW-13 (12160AA01-MW-14)	AA01-MW-14 (12160AA01-MW-14D)	AA01-MW-14D (12160AA01-MW-14)	AA01-MW-14 (013012AA01-MW-15)	AA01-MW-15 (12170AA-01)	AA01-MW-15 (01251AA01-MW-15)			
Sample Date	1/25/2008	2/4/2009	12/16/2009	1/26/2011	12/17/2009	1/25/2011	12/17/2009	12/17/2009	12/17/2009	1/30/2012	12/16/2009	12/16/2009	12/16/2009	12/16/2009	40938	12/17/2009	1/25/2011		
Chemical Name	CAS No	Type_1_RRS	MCL																
<b>Metals, Total</b>																			
Arsenic	7440-38-2	50	10	NA	< 10 U	< 10 U	< 10 U	4.8 J	0 UB	< 10 U	< 10 U	< 10 U	NA	< 10 U	< 10 U	NA	< 10 U	0 UB	
Barium	7440-39-3	2000	2000	NA	140	120	NA	94	NA	58	94	9.4 J	NA	120	67	10 J	NA	78	NA
Cadmium	7440-43-9	5	5	NA	< 2 U	< 2 U	NA	< 2 U	NA	< 2 U	< 2 U	< 2 U	NA	< 2 U	< 2 U	NA	< 2 U	NA	NA
Chromium	7440-47-3	100	100	NA	< 5 U	< 5 U	NA	6.3 UB	NA	7.3 UB	2.9 UB	2.4 UB	NA	4.5 J	9.2	< 5 U	NA	4.2 UB	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	18000	NA	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	7500
Lead	7439-92-1	15	15	NA	4.2 UB	< 10 U	NA	< 10 U	NA	< 10 U	< 10 U	2.8 J	NA	< 10 U	< 10 U	< 10 U	NA	< 10 U	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	470	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	200
Mercury	7439-97-6	2	2	NA	< 0.1 U	< 0.1 U	NA	< 0.1 U	NA	0.059 J	< 0.1 U	< 0.1 U	NA	< 0.1 U	0.082 J	< 0.1 U	NA	< 0.1 U	NA
Selenium	7782-49-2	50	50	NA	< 10 U	< 10 U	NA	< 10 U	NA	< 10 U	< 10 U	< 10 U	NA	< 10 U	< 10 U	< 10 U	NA	< 10 U	NA
Silver	7440-22-4	100	NA	NA	3.2 UB	< 5 U	NA	1.7 J	NA	1.8 J	< 5 U	1.3 J	NA	< 5 U	< 5 U	1.1 J	NA	< 5 U	NA
<b>Metals, Dissolved</b>																			
Arsenic	7440-38-2	50	10	NA	NA	NA	< 10 U	NA	0 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 UB
Iron	7439-89-6	NA	NA	NA	NA	NA	16000	NA	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	5500
Manganese	7439-96-5	NA	NA	NA	NA	NA	440	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	180
<b>Pesticides</b>																			
2,4,5-TP (Silvex)	93-72-1	50	50	NA	< 0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	< 2.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.25 UJ	< 0.025 U	NA	< 0.027 UJ	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
DDE, p,p'	72-55-9	0.1	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
DDT	50-29-3	0.1	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
delta BHC	319-86-8	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Dieldrin	60-57-1	0.02	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Endosulfan I	959-98-8	NA	NA	NA	< 0.027 UJ	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Endosulfan II	33213-65-9	NA	NA	NA	< 0.027 UJ	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Endrin	72-20-8	2	2	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	0.031 J	< 0.025 U	NA	< 0.027 UJ	NA
Endrin ketone	53494-70-5	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Heptachlor	76-44-8	0.4	0.4	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Lindane	58-89-9	0.2	0.2	NA	< 0.027 U	< 0.025 UJ	NA	NA	NA	< 0.025 U	< 0.027 UJ	< 0.025 UJ	NA	< 0.025 UJ	< 0.025 UJ	< 0.025 U	NA	< 0.027 UJ	NA
Methoxychlor	72-43-5	40	40	NA	< 0.11 U	< 0.1 UJ	NA	NA	NA	< 0.1 U	< 0.11 UJ	< 0.1 UJ	NA	< 0.1 UJ	< 0.1 UJ	< 0.1 U	NA	< 0.11 UJ	NA
Toxaphene	8001-35-2	3	3	NA	< 0.27 U	< 0.25 UJ	NA	NA	NA	< 0.25 U	< 0.27 UJ	< 0.25 UJ	NA	< 0.25 UJ	< 0.25 UJ	< 0.25 U	NA	< 0.27 UJ	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	< 0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	COE-MW-08 Sample ID AS0882(012508) Sample Date 1/25/2008	COE-MW-08 COE-MW-08 (020409) 2/4/2009	COE-MW-08 COE-MW-08 (121609) 12/16/2009	COE-MW-08 COE-MW-8(012611) 1/26/2011	HAA01-MW-10 AA01-MW-10 (12170AA-01) 12/17/2009	HAA01-MW-10 AA01-MW-10(01251AA01-MW-11) 1/25/2011	HAA01-MW-11 AA01-MW-11 (12170AA01-MW-12) 12/17/2009	HAA01-MW-12 AA01-MW-12 (12170AA01-MW-12D) 12/17/2009	HAA01-MW-12D AA01-MW-12 (12170AA01-MW-12D) 12/17/2009	HA01-MW-12 AA01-MW-12 (013012AA01-MW-13) 1/30/2012	HAA01-MW-13 AA01-MW-13 (12160AA01-MW-14) 12/16/2009	HAA01-MW-14 AA01-MW-14 (12160AA01-MW-14D) 12/16/2009	HAA01-MW-14D AA01-MW-14 (12160AA01-MW-14D) 12/16/2009	HAA01-MW-14 AA01-MW-14 (0130AA01-MW-15) 40938	HAA01-MW-15 AA01-MW-15 (12170AA-01-MW-15) 12/17/2009	HAA01-MW-15 AA01-MW-15(01251AA01-MW-15) 1/25/2011
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	25000	NA	< 10000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	41000
Chloride	16887-00-6	2	NA	NA	NA	NA	98000	NA	31000	NA	NA	NA	NA	NA	NA	NA	NA	NA	8600
Nitrate	14797-55-8	NA	10000	NA	NA	NA	110	NA	250 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.5 J
Nitrite	14797-65-0	NA	1000	NA	NA	NA	< 20 U	NA	46 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	14 J
Sulfate	14808-79-8	NA	NA	NA	NA	NA	240000 J	NA	98000	NA	NA	NA	NA	NA	NA	NA	NA	NA	10000
Sulfide	18496-25-8	NA	NA	NA	NA	NA	< 1000 U	NA	< 1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	820 J
TOC	TOC	NA	NA	NA	NA	NA	15000	NA	6100	NA	NA	NA	NA	NA	NA	NA	NA	NA	16000
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	570000	NA	250000	NA	NA	NA	NA	NA	NA	NA	NA	NA	170000







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID	Sample Date	HAA01-MW-16 AA01-MW-16 (12170)	HAA01-MW-17 AA01-MW-17 (12170)	HAA01-MW-18 AA01-MW-18 (12160)	HAA01-MW-9 AA01-MW-9 (12160)	HMW-01 HMW-01 (030790)	HMW-01 HMW-01 (031290)	HMW-01 HMW-01 (100790)	HMW-02 HMW-02 (030790)	HMW-02 HMW-02 (031290)	HMW-02 HMW-02 (100795)	HMW-02 HMW-02 (110598)	HMW-02 HMW-02 (050699)	HMW-02 AC0212(071299)	HMW-02 AC0222(062400)	HMW-02 AC0232(071904)	HMW-02 AC0242(011505)
<b>Metals, Total</b>																					
Arsenic	7440-38-2	50	10			< 10 U	NA	< 10 U	4.8 J	3.1	9.4	10	51.6	< 2.30	3	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000			72	NA	11 J	100	59.2	76.6	42	1000	46.5	95	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5			< 2 U	NA	< 2 U	< 2 U	< 3.50	< 4.40	10	< 3.50	< 4.40	10	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100			< 5 U	NA	< 5 U	< 5 U	11.2	17.6	20	217	< 7.40	14.7	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15			< 10 U	NA	< 10 U	< 10 U	< 25.00	< 63.80	3	261	< 63.80	17.3	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2			< 0.1 U	NA	< 0.1 U	< 0.1 U	< 0.20	< 0.18	0.06	< 0.20	< 0.18	0.24	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50			< 10 U	NA	< 10 U	< 10 U	< 2.00	< 2.00	5	2.8	< 2.00	5	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA			< 5 U	NA	< 5 U	< 5 U	< 5.70	< 6.10	20	< 5.70	< 6.10	20	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																					
Arsenic	7440-38-2	50	10			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																					
2,4,5-TP (Silvex)	93-72-1	50	50			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA			< 0.028 U	NA	< 0.028 U	1 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA			< 0.028 U	NA	< 0.028 U	0.012 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA			< 0.028 U	NA	< 0.028 U	0.013 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2			< 0.028 U	NA	< 0.028 U	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40			< 0.11 U	NA	< 0.11 U	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3			< 0.28 U	NA	< 0.28 U	< 0.26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HAA01-MW-16 AA01-MW-16 (12170)	HAA01-MW-17 AA01-MW-17 (12170)	HAA01-MW-18 AA01-MW-18 (12160)	HAA01-MW-9 AA01-MW-9 (12160)	HMW-01 HMW-01 (030790)	HMW-01 HMW-01 (031290)	HMW-01 HMW-01 (100790)	HMW-02 HMW-02 (030790)	HMW-02 HMW-02 (031290)	HMW-02 HMW-02 (100795)	HMW-02 HMW-02 (110598)	HMW-02 HMW-02 (050699)	HMW-02 AC0212(071299)	HMW-02 AC0222(062400)	HMW-02 AC0232(071904)	HMW-02 AC0242(011505)
<b>Other</b>																				
Alkalinity	ALK	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																				
Ignitability	Ignitability	deg F	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-02 AC0252(071905) 7/19/2005	HMW-02 AC0262(011506) 1/15/2006	HMW-02 AC0272(072606) 7/26/2006	HMW-02 AC0282(012107) 1/21/2007	HMW-02 AC0292(071307) 7/13/2007	HMW-02 AC0202(012608) 1/26/2008	HMW-02 HMW-02 (020209) 2/2/2009	HMW-02 HMW-2 (121609) 12/16/2009	HMW-03 HMW-3 (030890) 3/8/1990	HMW-03 HMW-3 (031292) 3/12/1992	HMW-03 HMW-3 (100695) 10/6/1995	HMW-04 HMW-4 (030890) 3/8/1990	HMW-04 HMW-4 (031292) 3/12/1992	HMW-04 HMW-4 (100695) 10/6/1995	HMW-04 HMW-4 (110598) 11/5/1998	HMW-04 HMW-4 (050699) 5/6/1999
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA	2.4	< 2.30	2.6	8.5	2.3	10	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	55	NA	36.8	88.1	4.8	166	54.4	112	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA	< 3.50	< 4.40	10	< 3.50	< 4.40	10	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	7.6	NA	12	< 7.40	20	46.7	< 7.40	11.8	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	66.9	2.6 J	< 2 U	NA	< 5 U	< 0.5 U	11 UB	NA	NA	< 25	< 63.80	3	28.6	< 63.80	11.8	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	0.1	NA	< 0.20	< 0.18	0.078	< 0.20	< 0.18	0.06	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA	< 2.00	< 2.00	5	5.2	< 2.00	5	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	NA	< 5.70	< 6.10	20	< 5.70	< 6.10	20	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	< 0.55 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	< 2.2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	< 0.28 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	< 0.55 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-02 AC0252(071905) 7/19/2005	HMW-02 AC0262(011506) 1/15/2006	HMW-02 AC0272(072606) 7/26/2006	HMW-02 AC0282(012107) 1/21/2007	HMW-02 AC0292(071307) 7/13/2007	HMW-02 AC0202(012608) 1/26/2008	HMW-02 HMW-02 (020209) 2/2/2009	HMW-02 HMW-2 (121609) 12/16/2009	HMW-03 HMW-3 (030890) 3/8/1990	HMW-03 HMW-3 (031292) 3/12/1992	HMW-03 HMW-3 (100695) 10/6/1995	HMW-04 HMW-4 (030890) 3/8/1990	HMW-04 HMW-4 (031292) 3/12/1992	HMW-04 HMW-4 (100695) 10/6/1995	HMW-04 HMW-4 (110598) 11/5/1998	HMW-04 HMW-4 (050699) 5/6/1999
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-04 AC0412(071299) 7/12/1999	HMW-04 AC0414(071299)-DUF 7/12/1999	HMW-04 AC0422(062400) 6/24/2000	HMW-04 AC0432(071904) 7/19/2004	HMW-04 AC0442(011505) 1/15/2005	HMW-04 AC0452(071705) 7/17/2005	HMW-04 AC0462(011406) 1/14/2006	HMW-04 AC0472(072406) 7/24/2006	HMW-04 AC0482(012107) 1/21/2007	HMW-04 AC0492(071207) 7/12/2007	HMW-04 AC0402(012408) 1/24/2008	HMW-04 (020309) 2/3/2009	HMW-4 (121709) 12/17/2009	HMW-5 (030890) 3/8/1990	HMW-5 (031292) 3/12/1992	HMW-05D HMW-5D (031292) 3/12/1992
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	NA	< 4 U	< 2 U	< 2 U	< 3 U	< 5 U	< 0.5 U	< 10 U	NA	< 25.00	< 63.80	< 63.80
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA



Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID	HMW-04 AC0412(071299)	HMW-04 AC0414(071299)-DUF	HMW-04 AC0422(062400)	HMW-04 AC0432(071904)	HMW-04 AC0442(011505)	HMW-04 AC0452(071705)	HMW-04 AC0462(011406)	HMW-04 AC0472(072406)	HMW-04 AC0482(012107)	HMW-04 AC0492(071207)	HMW-04 AC0402(012408)	HMW-04 HMW-04 (020309)	HMW-04 HMW-4 (121709)	HMW-05 HMW-5 (030890)	HMW-05 HMW-5 (031292)	HMW-05D HMW-5D (031292)
			Sample Date	7/12/1999	7/12/1999	6/24/2000	7/19/2004	1/15/2005	7/17/2005	1/14/2006	7/24/2006	1/21/2007	7/12/2007	1/24/2008	2/3/2009	12/17/2009	3/8/1990	3/12/1992	3/12/1992
			MCL																
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HMW-05	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06	HMW-06
Sample ID	HMW-5 (100695)	HMW-6 (030890)	HMW-6 (031292)	HMW-6 (100695)	HMW-6 (110598)	HMW-6 (050699)	AC0612(071299)	AC0622(062400)	AC0624(062400)-DUF	AC0632(071904)	AC0642(011505)	AC0652(071705)	AC0662(011406)	AC0672(072506)	AC0682(012007)	AC0682(012007)	AC0692(071107)		
Sample Date	10/6/1995	3/8/1990	3/12/1992	10/6/1995	11/5/1998	5/6/1999	7/12/1999	6/24/2000	6/24/2000	7/19/2004	1/15/2005	7/17/2005	1/14/2006	7/25/2006	1/20/2007	1/20/2007	7/11/2007		
Chemical Name	CAS No	Type_1_RRS	MCL																
<b>Metals, Total</b>																			
Arsenic	7440-38-2	50	10	10	77.3	14.7	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	30	864	57.2	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	10	3.96	< 4.40	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	20	239	< 7.40	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	3	337	< 63.80	2.6	NA	NA	NA	NA	NA	NA	< 4 U	< 2 U	< 2 U	< 3 U	< 3 U	< 5 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	0.057	< 0.20	< 0.18	0.058	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	5	14.4	2.1	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	20	< 5.70	< 6.10	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																			
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																			
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-05 HMW-5 (100695) 10/6/1995	HMW-06 HMW-6 (030890) 3/8/1990	HMW-06 HMW-6 (031292) 3/12/1992	HMW-06 HMW-6 (100695) 10/6/1995	HMW-06 HMW-6 (110598) 11/5/1998	HMW-06 HMW-6 (050699) 5/6/1999	HMW-06 AC0612(071299) 7/12/1999	HMW-06 AC0622(062400) 6/24/2000	HMW-06 AC0624(062400)-DUF 6/24/2000	HMW-06 AC0632(071904) 7/19/2004	HMW-06 AC0642(011505) 1/15/2005	HMW-06 AC0652(071705) 7/17/2005	HMW-06 AC0662(011406) 1/14/2006	HMW-06 AC0672(072506) 7/25/2006	HMW-06 AC0682(012007) 1/20/2007	HMW-06 AC0692(071107) 7/11/2007
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HMW-06	HMW-06	HMW-06	HMW-07	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08	HMW-08
Sample ID	AC0602(012408)	HMW-06 (020309)	HMW-6 (121709)	HMW-7 (031292)	HMW-8 (031292)	HMW-8 (100895)	HMW-8 (110598)	HMW-8 (050699)	AC0812(071299)	AC0822(062400)	AC0832(071904)	AC0842(011505)	AC0852(071705)	AC0862(011406)	AC0872(072406)	AC0882(012107)		
Sample Date	1/24/2008	2/3/2009	12/17/2009	3/12/1992	3/12/1992	10/8/1995	11/5/1998	5/6/1999	7/12/1999	6/24/2000	7/19/2004	1/15/2005	7/17/2005	1/14/2006	7/24/2006	1/21/2007		
Chemical Name	CAS No	Type_1_RRS	MCL															
<b>Metals, Total</b>																		
Arsenic	7440-38-2	50	10	NA	< 10 U	NA	11.3	< 2.30	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	22 J	NA	147	65	93	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	< 2 U	NA	< 4.40	< 4.40	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	< 5 U	NA	18.6	< 7.40	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	0.55 J	3.8 UB	NA	< 63.80	< 63.80	3	NA	NA	NA	NA	NA	< 4 U	< 2 U	< 2 U	< 3 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	< 0.1 U	NA	< 0.18	< 0.18	0.055	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	< 10 U	NA	6.5	< 2.00	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	< 5 U	NA	< 6.10	< 6.10	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																		
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																		
2,4,5-TP (Silvex)	93-72-1	50	50	NA	< 0.5 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	< 2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	0.026 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	< 0.27 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-06 AC0602(012408) 1/24/2008	HMW-06 HMW-06 (020309) 2/3/2009	HMW-06 HMW-6 (121709) 12/17/2009	HMW-07 HMW-7 (031292) 3/12/1992	HMW-08 HMW-8 (031292) 3/12/1992	HMW-08 HMW-8 (100895) 10/8/1995	HMW-08 HMW-8 (110598) 11/5/1998	HMW-08 HMW-8 (050699) 5/6/1999	HMW-08 AC0812(071299) 7/12/1999	HMW-08 AC0822(062400) 6/24/2000	HMW-08 AC0832(071904) 7/19/2004	HMW-08 AC0842(011505) 1/15/2005	HMW-08 AC0852(071705) 7/17/2005	HMW-08 AC0862(011406) 1/14/2006	HMW-08 AC0872(072406) 7/24/2006	HMW-08 AC0882(012107) 1/21/2007
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-08 AC0892(071207) 7/12/2007	HMW-08 AC0802(012408) 1/24/2008	HMW-08 HMW-08 (020309) 2/3/2009	HMW-08 HMW-8 (121609) 12/16/2009	HMW-09 HMW-9 (031292) 3/12/1992	HMW-09 HMW-9 (100895) 10/8/1995	HMW-09 HMW-8 (110598) 11/5/1998	HMW-09 HMW-9 (050699) 5/6/1999	HMW-09 AC0912(071299) 7/12/1999	HMW-09 AC0922(062400) 6/24/2000	HMW-09 AC0932(071904) 7/19/2004	HMW-09 AC0942(011505) 1/15/2005	HMW-09 AC0952(071705) 7/17/2005	HMW-09 AC0962(011406) 1/14/2006	HMW-09 AC0972(072406) 7/24/2006	HMW-09 AC0982(012107) 1/21/2007
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	< 10 U	NA	5.2	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	33	NA	113	68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	< 2 U	NA	< 4.40	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	< 5 U	NA	9.1	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	< 5 U	< 0.5 U	2.7 UB	NA	< 63.80	3	NA	NA	NA	NA	NA	NA	NA	< 4 U	4.1 J	< 2 U	3 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	< 0.1 U	NA	< 0.18	0.056	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	< 10 U	NA	< 2.00	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	0.56 UB	NA	< 6.10	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	< 0.54 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	< 2.2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	< 0.026 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	< 0.26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	< 0.54 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-08 AC0892(071207) 7/12/2007	HMW-08 AC0802(012408) 1/24/2008	HMW-08 HMW-08 (020309) 2/3/2009	HMW-08 HMW-8 (121609) 12/16/2009	HMW-09 HMW-9 (031292) 3/12/1992	HMW-09 HMW-9 (100895) 10/8/1995	HMW-09 HMW-9 (110598) 11/5/1998	HMW-09 HMW-9 (050699) 5/6/1999	HMW-09 AC0912(071299) 7/12/1999	HMW-09 AC0922(062400) 6/24/2000	HMW-09 AC0932(071904) 7/19/2004	HMW-09 AC0942(011505) 1/15/2005	HMW-09 AC0952(071705) 7/17/2005	HMW-09 AC0962(011406) 1/14/2006	HMW-09 AC0972(072406) 7/24/2006	HMW-09 AC0982(012107) 1/21/2007
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID	Sample Date	HMW-09 AC0992(071207)	HMW-09 AC0902(012408)	HMW-09 HMW-09 (020309)	HMW-09 HMW-9 (121609)	HMW-09 HMW-9(012511)	HMW-10 HMW-10 (100995)	HMW-10 HMW-10 (110598)	HMW-10 HMW-9(012511)	HMW-10 AC1012(071299)	HMW-10 AC1022(062400)	HMW-10 AC1032(071904)	HMW-10 AC1042(011505)	HMW-10 AC1052(071605)	HMW-10 AC1062(011406)	HMW-10 AC1064(011406)-DUF	HMW-10 AC1072(072306)
<b>Metals, Total</b>																					
Arsenic	7440-38-2	50	10	NA	NA	NA	6.2 J	NA	< 10 U	8.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	< 2 U	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	< 5 U	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	16000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	< 5 U	< 0.5 U	4.6 UB	NA	NA	NA	5.3	NA	NA	NA	NA	NA	NA	NA	NA	< 4 U	< 2 U	< 2 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	< 0.1 U	NA	NA	0.061	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	3.1 UB	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	1.2 UB	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																					
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	0 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	12000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																					
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	14 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	< 2.2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	0.027 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	2.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	< 0.029 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	0.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	0.17 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	< 0.12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	< 0.29 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	2.6 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID	HMW-09 AC0992(071207)	HMW-09 AC0902(012408)	HMW-09 HMW-09 (020309)	HMW-09 HMW-9 (121609)	HMW-09 HMW-9(012511)	HMW-10 HMW-10 (100995)	HMW-10 HMW-10 (110598)	HMW-10 HMW-9(012511)	HMW-10 AC1012(071299)	HMW-10 AC1022(062400)	HMW-10 AC1032(071904)	HMW-10 AC1042(011505)	HMW-10 AC1052(071605)	HMW-10 AC1062(011406)	HMW-10 AC1064(011406)-DUF	HMW-10 AC1072(072306)
			Sample Date	7/12/2007	1/24/2008	2/3/2009	12/16/2009	1/25/2011	10/9/1995	11/5/1998	5/6/1999	7/12/1999	6/24/2000	7/19/2004	1/15/2005	7/16/2005	1/14/2006	1/14/2006	7/23/2006
			MCL																
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	150000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	3100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	< 20 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	23 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	1400 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	26000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	230000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HMW-10	HMW-10	HMW-10	HMW-10	HMW-10	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11	HMW-11
Sample ID	AC1082(012107)	AC1092(071107)	AC1002(012308)	HMW-10 (020309)	HMW-10 (121709)	HMW-11 (100895)	HMW-11 (110598)	HMW-11 (050699)	AC1112(071299)	AC1122(062400)	AC1132(071904)	AC1142(011505)	AC1144(011505)-DUF	AC1152(071705)	AC1162(011406)	AC1172(072306)		
Sample Date	1/21/2007	7/11/2007	1/23/2008	2/3/2009	12/17/2009	10/8/1995	11/5/1998	5/6/1999	7/12/1999	6/24/2000	7/19/2004	1/15/2005	1/15/2005	7/17/2005	1/14/2006	7/23/2006		
Chemical Name	CAS No	Type_1_RRS	MCL															
<b>Metals, Total</b>																		
Arsenic	7440-38-2	50	10	NA	NA	NA	< 10 U	NA	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	54	NA	47	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	< 2 U	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	< 5 U	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	< 3 U	< 5 U	0.63 J	< 10 U	NA	3.8	NA	NA	NA	NA	NA	NA	< 4 U	< 2 U	< 2 U
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	< 0.1 U	NA	0.053	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	< 10 U	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	< 5 U	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																		
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																		
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	< 0.53 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	< 2.1 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	0.014 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	< 0.28 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	< 0.53 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA



Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-10 AC1082(012107) 1/21/2007	HMW-10 AC1092(071107) 7/11/2007	HMW-10 AC1002(012308) 1/23/2008	HMW-10 HMW-10 (020309) 2/3/2009	HMW-10 HMW-10 (121709) 12/17/2009	HMW-11 HMW-11 (100895) 10/8/1995	HMW-11 HMW-11 (110598) 11/5/1998	HMW-11 HMW-11 (050699) 5/6/1999	HMW-11 AC1112(071299) 7/12/1999	HMW-11 AC1122(062400) 6/24/2000	HMW-11 AC1132(071904) 7/19/2004	HMW-11 AC1142(011505) 1/15/2005	HMW-11 AC1144(011505)-DUF 1/15/2005	HMW-11 AC1152(071705) 7/17/2005	HMW-11 AC1162(011406) 1/14/2006	HMW-11 AC1172(072306) 7/23/2006
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-11 AC1182(012007) 1/20/2007	HMW-11 AC1184(012007)-DUF 1/20/2007	HMW-11 AC1192(071207) 7/12/2007	HMW-11 AC1102(012408) 1/24/2008	HMW-11 AC1104(012408)-DUF 1/24/2008	HMW-11 HMW-11 (020309) 2/3/2009	HMW-11 HMW-11 (121609) 12/16/2009	HMW-12 HMW-12 (100895) 10/8/1995	HMW-12 HMW-12-W_1/19/2001 1/19/2000	HMW-13 HMW-13 (100995) 10/9/1995	HMW-13 HMW-13 (110598) 11/5/1998	HMW-13 HMW-13 (050699) 5/6/1999	HMW-13 AC1312(071299) 7/12/1999	HMW-13 AC1314(071299)-DUF 7/12/1999	HMW-13 AC1322(062400) 6/24/2000	HMW-13 AC1324(062400)-DUF 6/24/2000
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	< 10 U	NA	13	< 10 U	30	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	48	NA	58	26 J	131	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	< 2 U	NA	10	NA	10	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	< 5 U	NA	14.5	NA	46	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	< 3 U	< 3 U	< 5 U	0.53 J	0.54 J	2.8 UB	NA	NA	4.8	< 3 U	18.8	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	0.1	NA	0.099	NA	0.176	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	< 10 U	NA	3.6	NA	4	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	< 5 U	NA	20	NA	20	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	< 0.55 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	1.7 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	0.067 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	0.043 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	0.024 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	< 0.25 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	< 0.55 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID	HMW-11 AC1182(012007)	HMW-11 AC1184(012007)-DUF	HMW-11 AC1192(071207)	HMW-11 AC1102(012408)	HMW-11 AC1104(012408)-DUF	HMW-11 HMW-11 (020309)	HMW-11 HMW-11 (121609)	HMW-12 HMW-12 (100895)	HMW-12 HMW-12-W_1/19/200	HMW-13 HMW-13 (100995)	HMW-13 HMW-13 (110598)	HMW-13 HMW-13 (050699)	HMW-13 AC1312(071299)	HMW-13 AC1314(071299)-DUF	HMW-13 AC1322(062400)	HMW-13 AC1324(062400)-DUF	Sample Date	
<b>Other</b>																						
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																						
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-13 AC1332(071904) 7/19/2004	HMW-13 AC1334(071904)-DUF 7/19/2004	HMW-13 AC1342(011505) 1/15/2005	HMW-13 AC1352(071605) 7/16/2005	HMW-13 AC1362(011406) 1/14/2006	HMW-13 AC1372(072406) 7/24/2006	HMW-13 AC1374(072406)-DUF 7/24/2006	HMW-13 AC1382(012107) 1/21/2007	HMW-13 AC1392(071207) 7/12/2007	HMW-13 AC1302(012508) 1/25/2008	HMW-13 (020209) 2/2/2009	HMW-13 (121709) 12/17/2009	HMW-13(012511) 1/25/2011	HMW-14R AS1412(072004) 7/20/2004	HMW-14R AS1422(011605) 1/16/2005	HMW-14R AS1432(071605) 7/16/2005
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7 J	NA	0 UB	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18 J	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.4 J	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	36000	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	< 4 U	< 2 U	< 2 U	< 2 U	3 U	< 5 U	< 0.5 U	3.6 UB	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1800	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.8 UB	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17 UB	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34000	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1800	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53 UJ	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.1 UJ	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.04 J	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.75 J	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.024 J	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.034 J	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.11 U	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.28 U	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53 U	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID	HMW-13 AC1332(071904)	HMW-13 AC1334(071904)-DUF	HMW-13 AC1342(011505)	HMW-13 AC1352(071605)	HMW-13 AC1362(011406)	HMW-13 AC1372(072406)	HMW-13 AC1374(072406)-DUF	HMW-13 AC1382(012107)	HMW-13 AC1392(071207)	HMW-13 AC1302(012508)	HMW-13 HMW-13 (020209)	HMW-13 HMW-13 (121709)	HMW-13 HMW-13(012511)	HMW-14R AS1412(072004)	HMW-14R AS1422(011605)	HMW-14R AS1432(071605)	
			Sample Date	7/19/2004	7/19/2004	1/15/2005	7/16/2005	1/14/2006	7/24/2006	7/24/2006	1/21/2007	7/12/2007	1/25/2008	2/2/2009	12/17/2009	1/25/2011	7/20/2004	1/16/2005	7/16/2005	
			MCL																	
<b>Other</b>																				
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	67000	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2600	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	390 J	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30 J	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33000	NA	NA	NA
<b>Field</b>																				
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	140000	NA	NA	NA







Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HMW-14R	HMW-14R	HMW-14R	HMW-14R	HMW-14R	HMW-14R	HMW-14R	HMW-14R	HMW-17	HMW-17	HMW-18	HMW-19	HMW-20	HMW-21	HMW-21	HMW-21	HMW-21	
Sample ID	AS1442(011606)	AS1452(072506)	AS1462(012007)	AS1472(071307)	AS1482(012508)	HMW-14R (020309)	HMW-14R (121609)	DUP_W_1/19/2000	HMW-17_1/19/2000	HMW-17_1/19/2000	HMW-18-W_1/20/2000	HMW-19-W_1/20/2000	HMW-20_1/20/2000	AS2112(072004)	AS2122(011605)	AS2132(071705)	AS2142(011506)	
Sample Date	1/16/2006	7/25/2006	1/20/2007	7/13/2007	1/25/2008	2/3/2009	12/16/2009	1/19/2000	1/19/2000	1/19/2000	1/20/2000	1/20/2000	1/20/2000	7/20/2004	1/16/2005	7/17/2005	1/15/2006	
Chemical Name	CAS No	Type_1_RRS	MCL															
<b>Metals, Total</b>																		
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	4.7 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	NA	29	48	26 J	< 20 U	37 J	56 J	< 20 U	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	NA	< 2 U	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	NA	< 5 U	2.2 UB	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	NA	3.7 UB	< 10 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	NA	3.6 UB	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	NA	1.7 UB	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																		
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																		
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	NA	< 0.025 U	0.41 J	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	0.0066 J	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	NA	3.9 J	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	NA	0.52 J	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	NA	< 0.025 U	< 0.027 U	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	NA	< 0.1 U	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	NA	< 0.25 U	< 0.27 U	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-14R AS1442(011606) 1/16/2006	HMW-14R AS1452(072506) 7/25/2006	HMW-14R AS1462(012007) 1/20/2007	HMW-14R AS1472(071307) 7/13/2007	HMW-14R AS1482(012508) 1/25/2008	HMW-14R (020309) 2/3/2009	HMW-14R (121609) 12/16/2009	HMW-17 DUP_W_1/19/2000 1/19/2000	HMW-17 HMW-17_1/19/2000 1/19/2000	HMW-18 HMW-18-W_1/20/2000 1/20/2000	HMW-19 HMW-19-W_1/20/2000 1/20/2000	HMW-20 HMW-20_1/20/2000 1/20/2000	HMW-21 AS2112(072004) 7/20/2004	HMW-21 AS2122(011605) 1/16/2005	HMW-21 AS2132(071705) 7/17/2005	HMW-21 AS2142(011506) 1/15/2006
<b>Other</b>																			
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																			
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

	Location ID Sample ID	Sample Date	HMW-21 AS2152(072506)	HMW-21 AS2162(012007)	HMW-21 AS2172(071407)	HMW-21 AS2182(012508)	HMW-21 HMW-21 (020409)	HMW-21 HMW21 (121709)	HMW-21 HMW-21(012611)	HMW-23 AC2332(071904)	HMW-23 AC2342(011505)	HMW-23 AC2352(071705)	HMW-23 AC2362(011406)	HMW-23 AC2372(072506)	HMW-23 AC2382(012107)	HMW-23 AC2392(071207)
Chemical Name	CAS No	Type_1_RRS	MCL													
<b>Volatiles Organic Compounds (µg/L) (EPA Method 8260)</b>																
1,1,1-Trichloroethane	71-55-6	200	200	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 UJ	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	79-34-5	0.2	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1000000	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	5	5	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	75-34-3	4000	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	75-35-4	7	7	3.3	3.46	3.71	< 1 U	< 0.5 U	2.7	8.7 J	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	120-82-1	70	70	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	< 10.5 U	< 9.9 U	< 10 U	< 9.62 U
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	0.2	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 UJ	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	106-93-4	0.05	0.05	NA	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	< 1 U
1,2-Dichlorobenzene	95-50-1	600	600	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	< 10.5 U	< 9.9 U	< 10 U	< 9.62 U
1,2-Dichloroethane	107-06-2	5	5	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethene	540-59-0	NA	NA	1100	1170	1630	9.6	NA	NA	NA	NA	NA	< 1 U	< 1 U	0.318 J	< 1 U
1,2-Dichloropropane	78-87-5	5	5	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	541-73-1	600	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	< 10.5 U	< 9.9 U	< 10 U	< 9.62 U
1,4-Dichlorobenzene	106-46-7	75	75	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	< 10.5 U	< 9.9 U	< 10 U	< 9.62 U
2-Butanone	78-93-3	2000	NA	< 5 U	19.8	< 5 U	< 5 U	< 10 U	< 40 U	< 100 U	NA	NA	< 5 U	< 5 U	< 5 U	< 5 U
2-Hexanone	591-78-6	NA	NA	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	< 40 U	< 100 U	NA	NA	< 5 U	< 5 U	< 5 U	< 5 U
4-Methyl-2-pentanone	108-10-1	2000	NA	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	< 40 U	< 100 U	NA	NA	< 5 U	< 5 U	< 5 U	< 5 U
Acetone	67-64-1	4000	NA	< 5 U	2.47 J	< 5 U	< 5 UJ	< 10 U	7.7 UB	< 100 U	NA	NA	4.4 J	4.3 J	< 5 U	4.22 J
Benzene	71-43-2	5	5	1.1	1.22	1.5	< 1 U	< 0.5 U	0.98 J	< 5 U	336	166	139	134	137	45.2
Benzene, 1-methylethyl	98-82-8	NA	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	NA
Bromochloromethane	74-97-5	NA	NA	NA	< 1 U	< 1 U	< 1 U	NA	NA	NA	NA	NA	NA	NA	NA	< 1 U
Bromodichloromethane	75-27-4	100	80	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Bromofrom	75-25-2	100	80	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane	74-83-9	10	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Carbon disulfide	75-15-0	4000	NA	< 5 U	< 5 U	< 5 U	< 5 U	< 0.5 U	< 2 U	< 5 UJ	NA	NA	< 5 U	1.4 J	< 5 U	< 5 U
Carbon tetrachloride	56-23-5	5	5	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 UJ	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
CFC-11	75-69-4	2000	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	NA
CFC-12	75-71-8	1000	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 UJ	NA	NA	NA	NA	NA	NA
Chlorobenzene	108-90-7	100	100	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	75-00-3	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Chloroform	67-66-3	100	80	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Chloromethane	74-87-3	3	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 UJ	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	156-59-2	70	70	NA	NA	NA	NA	15	1200	3200	NA	NA	NA	< 1 U	NA	NA
cis-1,3-Dichloropropene	10061-01-5	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Cyclohexane	110-82-7	NA	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	124-48-1	100	80	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	100-41-4	700	700	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	12.5	13.7	9.4	16.1	9.97	10.9
Methyl acetate	79-20-9	NA	NA	NA	NA	NA	NA	< 1 U	< 4 U	< 10 U	NA	NA	NA	NA	NA	NA
Methylcyclohexane	108-87-2	NA	NA	NA	NA	NA	NA	< 5 U	< 20 U	< 50 UJ	NA	NA	NA	NA	NA	NA
Methylene chloride	75-09-2	5	5	< 5 U	< 5 U	< 5 U	5 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 5 U	< 5 U	< 5 U	< 5 U
Styrene	100-42-5	100	100	< 1 U	0.294 J	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butyl methyl ether	1634-04-4	NA	NA	NA	NA	NA	NA	< 0.5 U	< 2 U	< 5 U	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127-18-4	5	5	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 UJ	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Toluene	108-88-3	1000	1000	0.362 J	0.371 J	0.432 J	< 1 U	< 0.5 U	< 2 U	< 5 U	< 5 U	0.4 J	< 1 U	1.4	6.57	< 1 U
trans-1,2-Dichloroethene	156-60-5	100	100	NA	NA	NA	NA	0.7	3.5	9.5	NA	NA	NA	< 1 U	NA	NA
trans-1,3-Dichloropropene	10061-02-6	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 2 U	< 1 U	< 1 U	< 1 U
Trichloroethene	79-01-6	5	5	0.367 J	0.419 J	0.52 J	< 1 U	< 0.5 U	< 2 U	< 5 U	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl chloride	75-01-4	2	2	11.1	10.8	20.7	< 1 U	0.13 J	< 2 U	36 J	NA	NA	< 1 U	< 1 U	< 1 U	< 1 U
Xylenes (total)	1330-20-7	10000	10000	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5 U	< 2 U	< 5 U	< 5 U	< 1 U	< 1 U	3.7	< 1 U	17.6





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID	HMW-21 AS2152(072506) Sample Date 7/25/2006	HMW-21 AS2162(012007) 1/20/2007	HMW-21 AS2172(071407) 7/14/2007	HMW-21 AS2182(012508) 1/25/2008	HMW-21 HMW-21 (020409) 2/4/2009	HMW-21 HMW21 (121709) 12/17/2009	HMW-21 HMW-21(012611) 1/26/2011	HMW-23 AC2332(071904) 7/19/2004	HMW-23 AC2342(011505) 1/15/2005	HMW-23 AC2352(071705) 7/17/2005	HMW-23 AC2362(011406) 1/14/2006	HMW-23 AC2372(072506) 7/25/2006	HMW-23 AC2382(012107) 1/21/2007	HMW-23 AC2392(071207) 7/12/2007
<b>Metals, Total</b>																	
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	< 10 U	< 10 U	0 UB	NA	NA	NA	NA	NA	NA	NA
Barium	7440-39-3	2000	2000	NA	NA	NA	NA	100	24 J	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	5	5	NA	NA	NA	NA	< 2 U	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	100	100	NA	NA	NA	NA	< 5 U	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	3100	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	NA	NA	NA	NA	1.9 UB	< 10 U	NA	NA	< 4 U	2.2 J	< 2 U	< 3 U	< 5 U	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	55	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	50	50	NA	NA	NA	NA	4.8 UB	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	100	NA	NA	NA	NA	NA	< 5 U	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA
<b>Metals, Dissolved</b>																	
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	< 10 U	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	1300	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	53	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																	
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	94-75-7	70	70	NA	NA	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	309-00-2	0.02	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
DDT	50-29-3	0.1	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
delta BHC	319-86-8	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	NA	NA	< 0.025 UJ	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	72-20-8	2	2	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	NA	NA	< 0.025 U	0.0045 J	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Lindane	58-89-9	0.2	0.2	NA	NA	NA	NA	< 0.025 U	< 0.025 U	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	40	40	NA	NA	NA	NA	< 0.1 U	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001-35-2	3	3	NA	NA	NA	NA	< 0.25 U	< 0.25 U	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	NA	NA	< 0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	Location ID Sample ID Sample Date MCL	HMW-21	HMW-21	HMW-21	HMW-21	HMW-21	HMW-21	HMW-21	HMW-23	HMW-23	HMW-23	HMW-23	HMW-23	HMW-23	HMW-23
				AS2152(072506) 7/25/2006	AS2162(012007) 1/20/2007	AS2172(071407) 7/14/2007	AS2182(012508) 1/25/2008	HMW-21 (020409) 2/4/2009	HMW21 (121709) 12/17/2009	HMW-21(012611) 1/26/2011	AC2332(071904) 7/19/2004	AC2342(011505) 1/15/2005	AC2352(071705) 7/17/2005	AC2362(011406) 1/14/2006	AC2372(072506) 7/25/2006	AC2382(012107) 1/21/2007	AC2392(071207) 7/12/2007
<b>Other</b>																	
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	26000	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	18000	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	51	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	8800	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 1000 U	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	2800	NA	NA	NA	NA	NA	NA
<b>Field</b>																	
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	140000	NA	NA	NA	NA	NA	NA





Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Location ID	HMW-23	HMW-23	HMW-23	HMW-23	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	HMW-24	
Sample ID	AC2302(012308)	AA01-MW-23 (01181)	HMW-23 (020309)	HMW-23 (121709)	AC2432(071904)	AC2442(011505)	AC2452(071705)	AC2454(071705)-DUF	AC2462(011506)	AC2472(072506)	AC2482(012107)	AC2492(071207)	AC2494(071207)-DUF	AC2402(012408)	HMW-24 (020309)	HMW-24 (121709)				
Sample Date	1/23/2008	1/18/2010	2/3/2009	12/17/2009	7/19/2004	1/15/2005	7/17/2005	7/17/2005	1/15/2006	7/25/2006	1/21/2007	7/12/2007	7/12/2007	1/24/2008	2/3/2009	12/17/2009				
Chemical Name	CAS No	Type_1_RRS	MCL																	
<b>Metals, Total</b>																				
Arsenic	7440-38-2	50	10	NA	NA	< 10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA
Barium	7440-39-3	2000	2000	NA	NA	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	NA
Cadmium	7440-43-9	5	5	NA	NA	< 2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2 U	NA
Chromium	7440-47-3	100	100	NA	NA	< 5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 5 U	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	15	15	< 0.5 U	NA	2.7 UB	NA	NA	NA	< 4 U	< 4 U	3.1 J	< 2 U	3 U	< 5 U	< 5 U	1.1 J	< 10 U	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	2	2	NA	NA	< 0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.1 U	NA
Selenium	7782-49-2	50	50	NA	NA	4.2 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 10 U	NA
Silver	7440-22-4	100	NA	NA	NA	2.5 UB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 UB	NA
<b>Metals, Dissolved</b>																				
Arsenic	7440-38-2	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Pesticides</b>																				
2,4,5-TP (Silvex)	93-72-1	50	50	NA	NA	< 0.51 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.53 UJ	NA
2,4-D	94-75-7	70	70	NA	NA	< 2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 2.1 UJ	NA
Aldrin	309-00-2	0.02	NA	NA	NA	0.11 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.082 J	NA
alpha-Chlordane	5103-71-9	NA	NA	NA	NA	0.046 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.077 J	NA
Chlordane	57-74-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD	72-54-8	0.1	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.056 J	NA
DDE, p,p'	72-55-9	0.1	NA	NA	NA	0.01 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.044 J	NA
DDT	50-29-3	0.1	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
delta BHC	319-86-8	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.057 J	NA
Dieldrin	60-57-1	0.02	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.028 J	NA
Endosulfan I	959-98-8	NA	NA	NA	NA	0.034 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.057 J	NA
Endosulfan II	33213-65-9	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
Endosulfan Sulfate	1031-07-8	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
Endrin	72-20-8	2	2	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.015 J	NA
Endrin Aldehyde	7421-93-4	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
Endrin ketone	53494-70-5	NA	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
gamma-Chlordane	5103-74-2	NA	NA	NA	NA	2.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 J	NA
Heptachlor	76-44-8	0.4	0.4	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.027 U	NA
Heptachlor epoxide	1024-57-3	0.2	0.2	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.17 J	NA
Hexachlorocyclohexane, Alpha-	319-84-6	0.006	NA	NA	NA	< 0.028 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.052 J	NA
Hexachlorocyclohexane, Beta-	319-85-7	0.02	NA	NA	NA	0.077	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.076 J	NA
Lindane	58-89-9	0.2	0.2	NA	NA	0.025 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.026 J	NA
Methoxychlor	72-43-5	40	40	NA	NA	< 0.11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.11 U	NA
Toxaphene	8001-35-2	3	3	NA	NA	< 0.28 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.27 U	NA
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	70	NA	NA	NA	0.25 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.43 J	NA



Appendix A - Table 4  
 Historical Groundwater Sample Analytical Summary  
 HAA-01 Former FTA and DAACG Area  
 Hunter Army Airfield, Georgia

Chemical Name	CAS No	Type_1_RRS	MCL	Location ID Sample ID Sample Date	HMW-23 AC2302(012308) 1/23/2008	HMW-23 AA01-MW-23 (01181) 1/18/2010	HMW-23 HMW-23 (020309) 2/3/2009	HMW-23 HMW-23 (121709) 12/17/2009	HMW-24 AC2432(071904) 7/19/2004	HMW-24 AC2442(011505) 1/15/2005	HMW-24 AC2452(071705) 7/17/2005	HMW-24 AC2454(071705)-DUF 7/17/2005	HMW-24 AC2462(011506) 1/15/2006	HMW-24 AC2472(072506) 7/25/2006	HMW-24 AC2482(012107) 1/21/2007	HMW-24 AC2492(071207) 7/12/2007	HMW-24 AC2494(071207)-DUF 7/12/2007	HMW-24 AC2402(012408) 1/24/2008	HMW-24 HMW-24 (020309) 2/3/2009	HMW-24 HMW-24 (121709) 12/17/2009
<b>Other</b>																				
Alkalinity	ALK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	18496-25-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	TOC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Field</b>																				
Ignitability	Ignitability	deg F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	PHWATER	su	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	TDS	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

\* - Duplicate sample

  - Indicate the analyte was detected above the Type 1 RRS or MCL where no RRS has been established

**BOLD** - indicate the analyte was detected

B - Analyte was detected in an associated blank as well as in the sample.

D - Sample was diluted for analysis.

H - Sample was prepped or analyzed beyond the specified holding time

J - The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

MCL - USEPA Maximum Contaminant Level - National Primary Drinking Water Regulations (5/2009)

µg/L - Micrograms per Liter

mg/L - Milligrams per Liter

NA - Not analyzed

RRS - GAEPD Rule 391-3-19-07 Risk Reduction Standard (July 23, 2003)

RSL - USEPA Regional Screening Level for Tap Water (12/10/2009)

SVOCs - Semi-volatile Organic Compounds

T - Tentatively Identified Compound

U - The analyte was not detected above the reporting limit

UB - Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value

UJ - The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

JL - The analyte is possibly biased low or a false negative based on QC data

VOCs - Volatile Organic Compounds

## Appendix B

Historic Field Procedures, Field  
Forms, and Historic Well Construction  
Logs

**CSR Field Procedures**

Extracted from 2002 CSR prepared by Law Engineering and  
Environmental Services, Inc.

## **APPENDIX C**

### **C1.0 SOIL BORING AND WELL CONSTRUCTION PROCEDURES**

The procedures used to advance the soil borings, install the temporary piezometers, and install and develop the monitoring wells at the former FTA at HAAF are described below.

#### **C1.1 SOIL BORINGS**

Soil borings were advanced using Geoprobe<sup>®</sup>, hand auger, and standard soil penetration testing procedures. These procedures are described below.

##### **C1.1.1 Geoprobe<sup>®</sup> Procedures**

Twenty-nine soil borings were advanced and samples were collected using a Geoprobe<sup>®</sup> sampling device. Soil samples were collected in four-foot intervals beginning at the ground surface, as shown on Tables 3.1 and 3.2. Sampling continued until ground water was encountered. The soil samples were logged in the field in accordance with the Unified Soil Classification System (USCS). Soil borings were filled with bentonite/cement grout or bentonite chips upon completion of soil sampling.

Soil samples obtained with the Geoprobe<sup>®</sup> were collected with a 1.4 inch inside diameter (I.D.), 2-inch outside diameter (O.D.) acetate-lined tube sampler. Sampling techniques are described in Section C2.2.

The soil samples collected from soil borings SB-30 through SB-40, HMW-14R, and HMW-18 were screened in the field using a Photovac Microtip photoionization detector (PID). Soil samples collected from soil borings SB-18 through SB-29, HMW-14, HMW-15, HMW-16, and HMW-17 were not screened. The PID was calibrated on a daily basis with 100 ppm isobutylene in air calibration gas according to manufacturer's instructions. Appendix D provides the soil boring logs and Appendix C-1 provides Field Sampling Reports (FSRs) of these soil borings.

The Geoprobe<sup>®</sup> equipment was steam-cleaned or washed with tap water and phosphate-free (Alconox<sup>™</sup>) soap and rinsed with pesticide-grade methanol and organic-free water prior to use and between each boring to reduce the potential for cross contamination.

### **C1.1.2 Hand Auger Procedures**

Eight soil borings were advanced using a stainless steel hand auger. Surface grass/debris were removed and the hand auger bucket was inserted into the ground and advanced to the desired depth. Once the bucket was extracted, the soil was placed into a decontaminated stainless steel bowl and homogenized. Sampling procedures are described in Section C2.2.

The hand auger was washed with tap water and phosphate-free (Alconox™) soap and rinsed with pesticide-grade methanol and organic-free water prior to use and between each boring to reduce the potential for cross contamination.

### **C1.1.3 Split-Spoon Soil Sampling Procedures**

Three soil borings were advanced using a truck-mounted drill rig equipped with hollow-stem augers and split-spoon soil samplers. Soil samples collected with a split-spoon sampling device were collected in accordance with ASTM Method D1686-84. Soil samples were collected on continuous basis from ground surface to boring termination using the following procedures. At each sample interval, the split-spoon sampler measuring 1.4-inch I.D., 2-inch O.D. was inserted into the boring. The sampler was seated 6 inches to penetrate any loose cuttings and then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blow required to drive the sampler the final foot was recorded and designated the “standard penetration resistance”. The penetration resistance when properly evaluated is an index to engineering properties of the soil. After each interval was sampled the boring was advanced to the next sample interval with the hollow stem augers. Soil samples collected using a split-spoon sampler were collected for lithologic description, field screening for qualitative VOCs using a PID, and laboratory analysis. A small portion of each soil sample was removed from the split-spoon and placed in a “zip-lock” bag, sealed and set aside to allow for volatilization. These soil screening samples (“zip-lock” bag sample) were screened in the field for qualitative volatile organic compounds (VOCs) using a PID, and inspected for staining and odor. The lithology of each soil sample was classified in accordance with the Unified Soil Classification System (USCS). The PID was calibrated on a daily basis with isobutylene in air calibration gas according to the manufacturer’s instructions. Soil samples were selected for laboratory analysis based on the field screening results where the PID indicated the presence of VOCs in the soils. Sampling procedures are described in Section C2.2.



27

## C1.2 Temporary Piezometer Installation and Sampling

Eight temporary piezometers were installed to determine placement of the permanent monitoring wells. The piezometers were constructed of a 1.0 inch diameter PVC screen and casing and were installed into the soil boring that was advanced using the Geoprobe®. The screen was ten feet in length with a slot size of 0.010-inch. Select piezometer locations were converted to monitoring wells. For those locations the temporary piezometer was removed, the soil boring was overdrilled, and a monitoring well was installed. Locations that were not designated to be converted to a monitoring well were abandoned using a bentonite/cement grout or bentonite chips to ground surface after the casing and screen were removed.

## C1.3 TYPE II MONITORING WELL INSTALLATION

Ten Type II (single cased) groundwater monitoring wells (HMW-14, HMW-14R, HMW-15, HMW-16, HMW-17, HMW-18, HMW-19, HMW-20, HMW-21, and HMW-22) were installed at the site. The borings were drilled by a truck-mounted drill rig using continuous flight hollow stem augers. Monitoring wells were installed in accordance with guidance set forth in U.S. Army Corps of Engineers document EM1110-1-4000, Monitor Well Design, Installation, and Documentation at Hazardous and/or Toxic Waste Sites. Wells were designed to screen the uppermost water-bearing zone in the soil at the site. Appendix D provides well construction information for the Type II monitoring wells.

Monitoring wells HMW-14 through HMW-17 were constructed of two-inch I.D. flush joint, threaded schedule 40 PVC pipe with ten feet of 0.010-inch machine slotted screen. Well borings were advanced using a 4.25-inch hollow-stem auger. Clean No. 1 sand of 20/40 gradation was placed into the annulus between the well screen and the borehole using a tremie pipe. Monitoring wells HMW-14R, HMW-18, HMW-19, HMW-20, HMW-21, and HMW-22 are constructed of two-inch I.D. flush joint, threaded schedule 40 PVC pipe with ten feet of 0.006-inch machine slotted screen. Well borings were advanced using a 6.25-inch hollow-stem auger. Clean silica sand of 30/60 gradation was placed into the annulus between the well screen and the borehole using a tremie pipe.

The sand filter pack was installed to approximately two to three feet above the screen and was capped with a bentonite seal approximately 0.5 to 1.5 feet thick. Clean potable water was used to set the sand pack. The volume of water used was recorded on the monitoring well installation diagram (presented in Appendix D). Proper placement of the filter sand was confirmed by taped measurements. Cement-bentonite grout was

installed in the annular space from the top of the bentonite seal to within approximately six inches to a foot of the ground surface using a tremie pipe. A waterproof cap was installed on the riser pipe and an above-grade lockable protective cover and concrete well pad was placed around each well.

#### **C1.4 WELL DEVELOPMENT**

Upon completion of monitoring well installation activities, each newly installed well was developed. The purpose of well development is to remove excess sediment, recover any water lost during drilling, clear formational pathways which may have been blocked during drilling, and draw representative groundwater into the screen. Monitoring wells were developed in accordance with guidance set forth in U.S. Army Corps of Engineers document EM1110-1-4000, Monitor Well Design, Installation, and Documentation at Hazardous and/or Toxic Waste Sites. The monitoring wells were developed using the pump and surge technique by using a QED purge pump equipped with surge rings or a surge block and submersible pump. The development process was accomplished by causing the groundwater within the well to move vigorously through the screen while removing the water and sediment from the well. The purge pump was raised and lowered through the well screen section producing an agitation action.

Well development was completed at least 48 hours before sampling of each new monitoring well. The monitoring wells were developed using an air driven displacement pump. Development continued until a minimum of five well volumes had been removed, less than 0.1 foot. of sediment remained at the bottom of the monitoring well, and pH, specific conductance, and temperature measurements were stabilized. During well development, pH, temperature, and specific conductivity (SC) were measured to evaluate the effectiveness of the development activities. Measurements were performed with a QED Purge Saver FC-4000 in-line meter or a Horiba™ multi-meter. The meter was calibrated on a daily basis according to manufacturer's instructions. The well was considered developed after five well volumes were removed and the water quality indicator parameters had stabilized. Stabilization of parameters is defined as 10% between two consecutive readings.

In addition, the wells were to be developed to below 5 nephelometric turbidity units (NTUs). The turbidity of the water was measured with a DRT-15C turbidimeter calibrated daily per manufacturer's instructions. Development parameters are summarized in Table C.1.

A photograph of the ground water taken from the developed monitoring well was made of at least a one liter clear glass sample container of the water, using 35 mm color print film, a suitable back-light and background, and close enough to show the clarity of the water. Photographs are presented in Appendix C-2.

**C1.5 MONITORING WELL ABANDONMENT**

Monitoring well HMW-14 was abandoned because the well was determined to not be representative of groundwater conditions at the site due to turbidity and incorrect well screen placement. HMW-14 was abandoned by removing the bottom well plug and filling the annular space with grout (injected through a tremie pipe) while removing the polyvinyl chloride (PVC) well screen and risers. Once the annular space was filled with grout, the location was completed to ground surface with concrete. Well abandonment procedures were conducted in accordance with guidance set forth in U.S. Army Corps of Engineers document EM1110-1-4000, Monitor Well Design, Installation, and Documentation at Hazardous and/or Toxic Waste Sites and Georgia Water Well Standards.

**C1.6 SITE SURVEY**

The monitoring wells and soil sampling locations were surveyed for horizontal location and elevation. The horizontal locations of monitoring wells and sampling locations were surveyed to a horizontal accuracy of 1.0 foot. The top-of-casing elevations were surveyed to the nearest 0.01 foot. Coordinate values used were Georgia State Plane, East Zone, North American Datum of 1983 (NAD). Ground surface elevations for monitoring wells and soil sampling locations were surveyed to the nearest 0.1 foot. The National Geodetic Vertical Datum (NGVD) of 1929 was used as the reference datum for elevations. Existing monitoring wells that were sampled were surveyed for horizontal location and top-of-casing elevation. The survey was conducted by Donaldson, Garrett & Associates, Inc., a licensed State of Georgia land surveyor.

## **C2.0 SAMPLING PROCEDURES**

The sampling procedures conducted at the former FTA located at HAAF are described below.

### **C2.1 SAMPLE CONTAINERS AND SAMPLE IDENTIFICATION**

Sample containers and preservatives were supplied by the laboratory in accordance with Table C.2. Field personnel identified the location of the sample collected; the date upon which it was obtained; the type of sample; whether or not a preservative was used, and if so, what type; and the respective project number. This information was documented in the Field Sampling Report (FSR). This same information was then placed on the sample identification label, which in turn was affixed to the sample container. Sample labels were filled out with indelible ink.

### **C2.2 SOIL SAMPLING**

Soil samples were collected from a Geoprobe<sup>®</sup> sampler and/or hand augers and/or split-spoon sampler. Soil samples obtained with the Geoprobe<sup>®</sup> were collected with a 1.4 inch inside diameter (I.D.), 2-inch outside diameter (O.D.) acetate-lined tube sampler. The acetate liner was split and the soil sample was immediately collected for volatile organic compounds (VOCs) using three Encore<sup>®</sup> samplers. The remaining soil from the selected interval was placed into a decontaminated stainless steel bowl and homogenized. The homogenized soil was placed into two, 4-ounce (oz) glass jars for semi-volatile organics (SVOCs), and/or pesticides/PCBs, and moisture content.

Soil sample collection procedures from a stainless steel hand auger were performed in the following manner: Surface grass/debris were removed and the hand auger bucket was inserted into the ground and advanced to the desired depth. Once the bucket was extracted, the soil was placed into a decontaminated stainless steel bowl and homogenized. The homogenized soil was placed into one, 4-oz glass jar for SVOCs and moisture content. The samples were individually placed in water-tight zip-lock bags and packed in a cooler with bags of ice in order to maintain sample integrity. Soil samples and QA splits were submitted to the following laboratories for the analyses shown on Table 3.2:

Soil samples were collected with a 1.4-inch I.D., 2-inch O.D. 2-foot in length split-spoon sampler. At each sample interval, the split-spoon sampler was inserted into the boring and seated 6 inches to

penetrate any loose cuttings and then driven an additional foot with blows of a 140-pound hammer falling 30 inches. Soil samples from split-tube samplers were gently removed from the split-tube and placed on clean aluminum foil and securely wrapped and sealed with the aluminum foil and placed on ice pending the results of the headspace gas analysis and completion of visual inspection. A small portion of each soil sample will be placed in a self-sealing plastic bag and placed to the side to allow for volatilization. A photoionization detector (PID) was used to analyze the headspace gas in the bag. The PID gives a relative response to the presence of VOCs, but do not identify individual VOC constituents. The soil samples were also inspected for visual evidence of contamination, e.g., free-phase product and/or staining. The results of the field screening were used to select samples for laboratory analysis. Soil samples for VOC analysis were collected from the soil core from the split-spoon prior to homogenizing. The soil was placed into a decontaminated stainless steel bowl and homogenized. Soil samples for SVOCs and metals analysis were then collected from the homogenized soil.

Soil samples collected from soil borings SB-18 through SB-29, and SB-43 to SB-50, and HMW-14 through HMW-17 were sent to:

Severn Trent Laboratories (STL) – Savannah  
5102 LaRouche Avenue  
Savannah, GA 31404

Because STL-Savannah could not provide data on a 48 hour turn-around time at the scheduled sampling event, the soil samples collected from soil borings SB-30 through SB-42 and HMW-14R, and HMW-18 were sent to:

Analytical Services Inc. (ASI)  
110 Technology Parkway  
Norcross, GA 30092

QA Split Samples:

Accura Analytical Laboratory, Inc.

6017 Financial Drive  
Norcross, GA 30071



## **C2.3 GROUNDWATER SAMPLING**

Groundwater samples were collected from monitoring wells and temporary piezometers. The procedures used to collect the samples are described below.

### **C2.3.1 Preliminary Observations**

Prior to sampling, each monitoring well was inspected for damage and usability. The well cover was carefully opened to limit the potential for foreign material to enter the well. Upon opening the well, both a tri-gas monitor and a PID measurement were collected and entered into the logbook. Prior to purging and sampling, the depth to groundwater and total depth of the well were measured in each well with an electrical water level indicator.

### **C2.3.2 Groundwater Level Measurement**

Each well was marked with an easily identifiable permanent reference survey point that was located on the highest point of the well casing. The depth to groundwater and total depth of the well was measured using an electrical water-level indicator. The instruments used were a electronic water-level meter and product probe. The water-level/product probe indicator was washed with an Alconox™ and water mixture and rinsed with potable water prior to each use. The depth to groundwater was measured and recorded in the field notebook.

### **C2.3.3 Well Purging**

Monitoring wells were purged prior to sampling to provide fresh formation water for sampling. Purging was conducted in accordance with procedures set forth in U.S. Army Corps of Engineers guidance document EM200-1-3, *Requirements for the Preparation of Sampling and Analysis Plans*. Monitoring wells were purged with a QED stainless steel and Teflon bladder pump or a peristaltic pump and dedicated Teflon tubing until a minimum of 3 well volumes had been removed, and pH, specific conductance, and temperature had stabilized. In addition, the wells were to be purged to 5 NTUs. A pair of new gloves were used during the purging and sampling of each well.

The water quality parameters of temperature, pH, and specific conductance were measured with a Purge Saver FC-4000 in-line meter or a Horiba™ multi-meter. The meter was calibrated on a daily basis according to manufacturer’s instructions. The physical appearance of the groundwater removed during purging was also recorded. Purging was considered complete when the water quality parameters stabilized. Stabilization of parameters is defined as: variation of pH less than 0.2 pH units between two consecutive readings, variation of temperature less than 0.5 degrees Celsius between two consecutive readings, and less than 10% variation of specific conductance between two consecutive readings. The turbidity of the water was measured with a DRT-15C turbidimeter and calibrated daily per manufacturer’s instructions. Table C.3 presents the final well stabilization parameters.

The formula used to calculate the volume of standing water in the well casing and filter pack based on the initial water level is presented below:

$$V = \pi ((r_1^2 - r_2^2) \phi + r_2^2) \times H \times 7.48$$

- Where: V = volume, in gallons
- H = height of water in well screen and filter pack in feet
- r<sub>1</sub> = radius of borehole in feet
- r<sub>2</sub> = radius of well in feet
- φ = porosity of filter pack, assumes 30 percent
- π = 3.14
- 7.48 = conversion factor for cubic feet to gallons

The value of V was then multiplied by 3 (or 5 for development) to obtain the minimum well bore volume required to remove from the well.

### C2.3.4 Groundwater Sample Collection

#### Monitoring Wells

Plastic sheeting was placed on the ground surface in the vicinity of the well to be sampled. Groundwater samples were obtained from each well as soon as the well recovered after purging. The groundwater samples were obtained with a QED stainless steel and Teflon bladder pump or a peristaltic pump with Teflon tubing utilizing low-flow sampling techniques. The flow rate on the pump was lowered to 100 milliliters (mls) +/- 20 mls per minute (as recommended by the EPA) for the collection of VOCs. Groundwater samples for VOC analysis were collected by pulling water into the Teflon tubing and

stopping the peristaltic pump, manually pinching the tubing closed and then removing the tubing pulled from the well with the water retained in the tubing. The pinch was removed from the tubing allowing the column of water to drain from the tubing into the sample container without passing through the pump's roller mechanism. Three 40-ml VOA vials were filled allowing no headspace for VOCs. After the VOCs were collected, the SVOCs and metals containers were filled. The SVOC samples were collected using a Teflon bailer and clean nylon rope. The SVOCs were collected in two, 1-liter amber glass bottles and the metals were collected in a 500 ml polyethylene bottle pre-preserved with nitric acid. The samples were individually placed in water-tight zip-lock bags and packed in a cooler with bags of ice in order to maintain sample integrity. Groundwater samples and QA splits were submitted to the following laboratories for the analyses shown on Table 3.2:

Groundwater Samples:

Analytical Services Inc. (ASI)  
110 Technology Parkway  
Norcross, GA 30092

Severn Trent Laboratories (STL) – Savannah  
5102 LaRouche Avenue  
Savannah, GA 31404

QA Split Samples:

Accura Analytical Laboratory, Inc.  
6017 Financial Drive  
Norcross, GA 30071

Temporary Piezometers

The temporary piezometers were sampled within hours after installation with a peristaltic pump. The VOCs were collected by pulling up the tubing and reversing the pump to allow the VOA vials to be filled from the bottom end of the tubing with water that had not been through the pump head. Three, 40-ml VOA vials were filled allowing no headspace for VOCs. After the VOCs were collected, the SVOCs containers were filled (for piezometer samples SB-38 and SB-40). The SVOCs were collected in two, 1-liter amber glass bottles. The samples were individually placed in water-tight zip-lock bags and packed in a cooler with bags of ice in order to maintain sample integrity. The piezometer groundwater samples were submitted to the following laboratories for the analyses shown on Table 3.2:

Piezometer samples collected from locations HMW-14, HMW-15, HMW-16A, HMW-16B, HMW-16C and HMW-17 were sent to:

Severn Trent Laboratories (STL) – Savannah  
5102 LaRoche Avenue  
Savannah, Georgia 31404

Because STL-Savannah could not provide data on a 48 hour turn-around time, samples collected from piezometer locations SB-38 and SB-40 were sent to:

Analytical Services Inc. (ASI)  
110 Technology Parkway  
Norcross, GA 30092

### **C3.0 FIELD SAMPLE RECORD KEEPING AND CUSTODY PROCEDURES**

Field documentation and custody procedures used at HAAF are described below.

#### **C3.1 FIELD DOCUMENTATION**

Field activities were documented in the field notebook and summarized by the Site Manager on a Daily Quality Control Report (DQCR). To provide for proper identification in the field and proper tracking in the laboratory, samples were labeled in a clear and consistent fashion. Field personnel maintained a permanently bound field notebook. This notebook was water resistant with sequentially numbered pages. Field activities were recorded with a waterproof permanent marker.

#### **C3.2 CHAIN OF CUSTODY**

Sample custody was initiated at the time of sample collection by placing the labeled sample into an iced cooler in the possession of the sampling personnel. A line item on the chain-of-custody record was filled out by the sampling personnel. The chain-of-custody record was used to track custody of samples during transport and shipping. Prior to sample shipping, the field representative signed, dated, and listed the time and confirmed the completeness of descriptive information contained on the form. The chain-of-custody form accompanied the samples. Each individual who subsequently assumed responsibility for the samples signed the chain-of-custody record. The field chain-of-custody record terminated upon laboratory receipt of samples. All entries were recorded in ink. Each sample had a corresponding entry on a chain-of-custody record. The chain-of-custody form included:

- Site name
- The unique sample I.D. name or number
- Sample type
- Date and time of the collection
- Number of containers
- Signature of sampler(s)
- Signature of persons involved in the chain of custody and inclusive dates and times of possession



## **C4.0 GENERAL DECONTAMINATION PROCEDURE**

Decontamination was performed in accordance with the following standard operating procedures.

### **C4.1 GENERAL DECONTAMINATION PROCEDURE**

Equipment that came in contact with potentially contaminated materials, soil, or water was cleaned prior to each use on this project. Decontamination consisted of a combination of steam cleaning and/or Alconox™ soap wash and potable water rinse.

### **C4.2 DRILLING EQUIPMENT**

Drilling rigs and downhole equipment were cleaned and decontaminated at a designated decontamination station before each boring or well was installed. Equipment was inspected before use to determine if fluids (oils, lubricants, hydraulic fluids, etc.) were leaking. Drilling equipment was decontaminated as follows:

- The entire rig was steam cleaned upon arrival on-site.
- The back of the rig, including the jacks, mast, kelly bar, platform, hoists, spindles, cathead, etc., was steam cleaned between borings, as necessary.

Downhole drilling and sampling tools were decontaminated before each boring or well installation as described below:

- Steam clean
- Clean with tap water and laboratory grade, phosphate free detergent, with a brush.
- Rinse with tap water.
- Rinse with pesticide-grade methanol.
- Flush with organic-free water and allow to air dry as long as possible.

### **C4.3 SAMPLING EQUIPMENT**

The following cleaning procedures were used for preparing sampling equipment prior to field use:

- Clean with tap water and Alconox™ soap using a brush if necessary to remove particulate matter and surface films.
- Rinse thoroughly with tap water.

- Rinse thoroughly with organic-free water.
- Rinse with pesticide-grade methanol.
- Rinse thoroughly with organic-free water and allow to air dry as long as possible.
- The equipment was wrapped with aluminum foil, if appropriate, to prevent contamination if the equipment was stored or transported.

**TABLE C.1**  
**Summary of Monitoring Well Development Parameters**

Well Name	Development Date	pH	Specific Conductance	Temperature (°C)	Turbidity (NTU)
HMW-14	8/25/1999	6.46	0.028 (mS/cm)	26.3	1062
HMW-14R	1/11/2000	5.49	158 (umhos/cm)	20.7	15.8
HMW-15	8/26/1999	5.87	0.063 (mS/cm)	22.4	452
HMW-16	9/2/1999	5.77	0.106 (mS/cm)	25.0	19.1
HMW-17	9/1/1999	5.94	0.08 (mS/cm)	25.9	23.1
HMW-18	1/14-15/2000	4.58	0.6 (mS/cm)	17.19	3.57
HMW-19	1/13-14/2000	5.52	200 (umhos/cm)	17.9	4.4
HMW-20	1/12-13/2000	5.71	1.17 (umhos/cm)	20.3	45.5
HMW-21	11/2-5/2001	6.14	130 (umhos/cm)	21.5	100.2
HMW-22	11/2/2001	5.20	145.4 (umhos/cm)	24.6	0.34

PREPARED/DATE: J Vickers 2/29/00  
CHECKED/DATE: J Hartness 3/1/00  
UPDATED/DATE: R Quinn 11/12/01

**TABLE C.2**  
**Sample Containers, Preservation Methods, and Holding Time for Laboratory Analysis**

Parameter	Container	Preservation	Holding Time
<b><u>WATER SAMPLES</u></b>			
<b>Inorganic Analytes</b>			
Metals	1-liter polypropylene	HNO <sub>3</sub> to pH<2	180 days (mercury 26 days) *
<b>Organic Compounds</b>			
VOCs	3, 40 ml VOA vial	HCl to pH<2	14 days until analysis
SVOCs	1-liter amber glass	cool, 4° C	7 days until extraction and analysis within 40 days *
<b><u>SOIL SAMPLES</u></b>			
<b>Organic Compounds</b>			
VOCs	3 Encore samplers	cool, 4° C	48 hours until analysis
SVOCs	1, 4-oz glass jar	cool, 4° C	14 days until extraction and analysis within 40 days *
Pesticides/PCBs	1,4-oz glass jar	cool, 4° C	14 days until extraction and analysis within 40 days *
Metals	1, 16 oz plastic jar	none	6 months until analysis

PREPARED/DATE: J Hartness 3/16/00  
CHECKED/DATE: C Northern 3/21/00

Sources:

*United States Environmental Protection Agency Test Methods for Evaluating Solid Waste, Physical/Chemical Method, Third Edition; SW-846, July 1992.*

Note:

\* Holding time from Validated Time of Sample Collection.

**TABLE C.3**  
**Summary of Groundwater Sampling Parameters**

Well Name	Sample Date	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)
HMW-2	1/16/2000	4.68	44	22.0	1.4
HMW-3	11/6/2001	5.78	144	14.3	1.17
HMW-12	1/19/2000	5.19	0.43	17.3	7.49
HMW-14R	1/17/2000	5.46	1.49	20.4	3.2
HMW-14R	11/6/2001	5.39	264	21	4.07
HMW-17	1/19/2000	5.48	0.61	17.5	9.56
HMW-18	1/20/2000	4.69	0.50	17.1	0.22
HMW-19	1/20/2000	5.20	1.78	17.5	0.40
HMW-20	1/18/2000	5.82	0.71	20.0	9.3
HMW-21	11/6/2001	5.71	141	21.5	116
HMW-22	11/6/2001	5.18	202	24.6	1.1

PREPARED/DATE: J Vickers 2/29/00  
CHECKED/DATE: J Hartness 3/1/00  
UPDATED/DATE: R Quinn 11/12/01



**FIELD SAMPLING REPORTS**

# SCREENING SUMMARY

4

Boring #	Time	DATE	Depth feet	Jar Head Space			Observations	Bore
				(B.1)	(B.2)	(B.3)		
FTASB-01	1350	8-21-95	.5-1.0'	Ø	Ø	Ø	No ODOR silty sand	FTA
FTASB-01	1355	"	2.5-3.0	70	9	Ø	SAND - FUEL OIL ODOR	FTAS
FTASB-01	1400	"	4.5-5.0	100	13	Ø	"	FTAS
FTASB-01	1412	"	6.5-7.0	50	12	Ø	"	FTAS
FTASB-01	1417	"	8.5-9.0	60	10	Ø	"	FTAS
FTASB-02	1452	"	.5-1.0	Ø	12	Ø	Slight Fuel odor with sand	FTAS
FTASB-02	1458	"	2.5-3.0	60	30	Ø	Sand - Fuel Odor	FTAS
TASB-03	1510	"	.5-1.0	Ø	25	Ø	SAND - Fuel odor	FTASB
TASB-03	1513	"	2.5-3.0	60	25	Ø	"	FTASB
TASB-04	0745	8/22	.5-1.0	Ø	Ø	Ø	SILTY SAND - NO ODOR	FTASB
TASB-04	0753	"	2.5-3.0	Ø	Ø	Ø	"	FTASB
TASB-04	0805	"	4.5-5.0	Ø	Ø	Ø	"	FTASB
TASB-04	0813	"	6.5-7.0	Ø	Ø	Ø	"	FTASB
TASB-04	0826	"	8.5-9.0	Ø	Ø	Ø	"	FTASB
TASB-04	0850	"	10.0-10.5	Ø	Ø	Ø	"	FTASB
TASB-05	0925	"	.5-1.0	Ø	Ø	Ø	"	FTASB
TASB-05	0933	"	2.5-3.0	20	Ø	Ø	SILTY SAND FUEL OIL ODOR	FTASB-1
TASB-05	0945	"	4.5-5.0	20	100	Ø	"	FTASB-1
TASB-05	0955	"	6.5-7.0	70	-	Ø	"	FTASB-1
TASB-05	1005	"	8.5-9.0	60	-	Ø	"	FTASB-1
TASB-06	1016	"	.5-1.0	Ø	Ø	Ø	SILTY SAND NO ODOR	FTASB-1
TASB-06	1020	"	2.5-3.0	Ø	Ø	Ø	"	FTASB-1
TASB-06	1023	"	4.5-5.0	Ø	Ø	Ø	"	FTASB-1
TASB-06	<del>1025</del> 1038	"	6.5-7.0	Ø	Ø	Ø	"	FTASB-1
TASB-06	1038	"	8.5-9.0	Ø	Ø	Ø	"	FTASB-1
TASB-07	1331	"	.5-1.0	Ø	Ø	Ø	"	
TASB-07	1337	"	2.5-3.0	16	10	Ø	Silty Sand Fuel Odor	
TASB-07	1341	"	4.5-5.0	50	-	Ø	"	
TASB-07	1345	"	6.5-7.0	80	20	Ø	"	
TASB-07	1349	"	8.5-9.0	70	-	Ø	"	

# SCREENING SUMMARY

	BORING#	TIME	DATE	Depth feet	JAR Headspace	B.H.	B.Z.	OBSERVATIONS
sand	FTASB-08	1405	8-22	.5-1	0	0	0	Silty sand
odor	FTASB-08	1413	8-22	2.5-3'	5	0	0	Silty sand Feil
	FTASB-08	1420	8-22	4.5-5.0	60	30	0	"
	FTASB-09	1432	8-22	.5-1.0	0	0	0	Silty sand No
	FTASB-09	1437	"	2.5-3	0	0	0	"
with sand	FTASB-09	1443	"	4.5-5	0	0	0	"
or	FTASB-09	1450	"	6.5-7	0	0	0	"
	FTASB-10	1518	"	.5-1.0	60	5	0	Same location
	FTASB-10	1520	"	2.5-3.0	50	15	0	as FTAC-2 Feil odor/silty
odor	FTASB-10	1522	"	4.5-5.0	35	25	0	"
	FTASB-10	1525	"	6.5-7.0	60	24	0	"
	FTASB-10	1528	"	8.5-9.0	40	25	0	"
	FTASB-10	1535	"	9.5-10.0 <del>to 500</del>	70	25	0	"
	FTASB-11	0732	8/23	.5-1.0	0	0	0	Silty sand
	FTASB-11	0738	"	2.5-3.0	0	0	0	Strong odor
	FTASB-11	0742	"	4.5-5.0	5	0	0	"
odor	FTASB-11	0748	"	6.5-7.0	2	0	0	"
	FTASB-11	0752	"	8.5-9.0	10	0	0	"
	FTASB-11	0755	"	9.5-10.0	20	10	0	"
	FTASB-12	0820	"	.5-1.0	15	2	0	Same location FTAC-4 silty
odor	FTASB-12	0823	"	2.5-3.0	10	4	0	sand - strong odor
	FTASB-12	0825	"	4.5-5.0	10	7	0	"
	FTASB-12	0830	"	6.5-7.0	12	7	0	"
	FTASB-12	0835	"	8.5-9.0	11	8	0	"

100%

# ANALYTICAL SAMPLE SUMMARY

6

SAMPLE ID	DATE Coll.	TIME	Depth	Matrix	PID RESULT
FTASB-04A	8-22-95	0745	.5-1.0'	Soil	0
FTASB-04F	"	0850	10.0-10.5'	"	0
FTASB-06A	"	1016	.5-1.0'	"	0
FTASB-06E	"	1038	8.5-9.0'	"	21
ETASB-09A	"	1432	.5-1.0'	"	0
FTASB-090	"	1450	6.5-7.0'	"	0
FTACO-1	"	1300	3" <del>4"</del>	Concrete	NA
FTACO-2	"	1305	4"	"	NA
FTACO-3	"	1310	3"	"	NA
FTACO-4	"	1315	3"	"	NA
FTACO-4 QA	"	1315	3"	"	NA
FTACO-DUP	"	0730	3"	"	NA
FTASB-10A	"	1518	0.5-1.0'	Soil	60
FTASB-10F	"	1635	9.5-10.0	"	70
FTASB-11A	8-23-95	0732	0.5-1.0'	"	0
FTASB-11F	"	0755	9.5-10.0	"	20
FTASB-12A	"	0820	0.5-1.0'	"	15
FTASB-12E	"	0835	8.5-9.0'	"	11
FTASB-DUP	"	0820	Dup of FTASB-12A		10
FTASB-12QA	"	0120	QA Split of FTASB-12A		

11  
12  
12  
13  
13

# FIELD SAMPLING REPORT



**LAW**

ENGINEERING AND ENVIRONMENTAL SERVICES

JOB NO. 2001-9-3411

JOB NAME HAAF FTA

DATE 7/21/99 TIME 15:40

SAMPLING POINT HMW-14

LOCATION

## SAMPLE INFORMATION

SAMPLE I.D. NO. HMW-14

MATERIAL:  WATER  SOIL  SLUDGE  OTHER (LIST) \_\_\_\_\_

TYPE:  GRAB  COMPOSITE  OTHER (LIST) \_\_\_\_\_

HAZARDOUS?:  YES  NO

### CONTAINER

TYPE	VOLUME	NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
<u>GLASS</u>	<u>40 ml</u>	<u>2</u>	<u>Hcl</u>	<u>VOA Vial</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE, ODOR; COLOR; ETC.)

Turbid/stained - no odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

## FIELD MEASUREMENTS

SAMPLES COLLECTED BY: PK/KB

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

## GENERAL INFORMATION

WEATHER Sunny


AIR TEMP. 95°F

SAMPLES SHIPPED TO: Savannah Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck  BUS  PLANE  COURIER



<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. 12001-9-3411
		JOB NAME HAAP FTA
		DATE 7/22/95 TIME 9:30/9:40
		SAMPLING POINT HMW-14
		LOCATION FTA

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. HMW-14-1	HMW-14-2
MATERIAL: _____ WATER <input checked="" type="checkbox"/> SOIL _____ SLUDGE _____ OTHER (LIST) _____		
TYPE: <input checked="" type="checkbox"/> GRAB _____ COMPOSITE _____ OTHER (LIST) _____		
HAZARDOUS?: _____ YES <input checked="" type="checkbox"/> NO		

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
Exone	~ 5g	3	None	HMW-14-1 1.5'
Glass	2 oz Glass	1	None	↓ ↓
Glass	4 oz Glass	1	None	↓ ↓
Exone	~ 5g	3	None	HMW-14-2 7.5'
Glass	2 oz	1	↓	↓ ↓
Glass	4 oz	1	↓	↓ ↓


COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
 Dk Brown Sand No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: PK / BG		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER Sunny	AIR TEMP. 97°F
SAMPLES SHIPPED TO:	Shannon H. Lohs	
SPECIAL HANDLING:		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck _____ BUS _____ PLANE _____ COURIER		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>HAAF FTA</u>
		DATE <u>7/2/99</u> TIME <u>15:50</u>
		SAMPLING POINT <u>HMW-15</u>
		LOCATION _____

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>HMW-15</u>
MATERIAL: <u>+</u> WATER _____ SOIL _____ SLUDGE _____ OTHER (LIST) _____	
TYPE: <u>+</u> GRAB _____ COMPOSITE _____ OTHER (LIST) _____	
HAZARDOUS?: _____ YES <u>X</u> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Glass</u>	<u>40 ml</u>	<u>3</u>	<u>HCl</u>	<u>Vot Vials</u>
<u>Glass</u>	<u>40 ml</u>	<u>3</u>	<u>HCl</u>	<u>Vot Vials (duplicate)</u>


COMMENTS. (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Turbid - no odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK/KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>15 °F</u>
SAMPLES SHIPPED TO: <u>Savannah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <u>X</u> Car/Truck _____ BUS _____ PLANE _____ COURIER		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-341</u>
		JOB NAME <u>HAAP FTA</u>
		DATE <u>7/28/99</u> TIME <u>11:15/11:30</u>
		SAMPLING POINT <u>HMW-15</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>HMW-15-1</u> <u>HMW-15-2</u>
MATERIAL: <input type="checkbox"/> WATER <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER (LIST) _____	
TYPE: <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> COMPOSITE <input type="checkbox"/> OTHER (LIST) _____	
HAZARDOUS?: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Envelope</u>	<u>~5 g</u>	<u>3</u>	<u>None</u>	<u>HMW-15-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Envelope</u>	<u>~5 g</u>	<u>3</u>	<u>None</u>	<u>HMW-15-2 7.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Ok Brown (Black Sand) No Odor

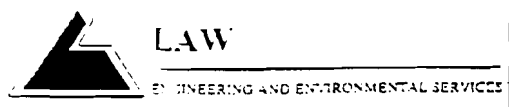
LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / BG</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>97° F</u>
SAMPLES SHIPPED TO: <u>Spann's Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck <input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER		

**FIELD SAMPLING REPORT**



JOB NO. 12001-9-3411  
 JOB NAME HAAP-FTA  
 DATE 7/2/99 TIME 15:15  
 SAMPLING POINT HMW-16A  
 LOCATION \_\_\_\_\_

**SAMPLE INFORMATION** SAMPLE ID. NO. HMW-16A  
 MATERIAL:  WATER \_\_\_\_\_ SOIL \_\_\_\_\_ SLUDGE \_\_\_\_\_ OTHER (LIST) \_\_\_\_\_  
 TYPE:  GRAB \_\_\_\_\_ COMPOSITE \_\_\_\_\_ OTHER (LIST) \_\_\_\_\_  
 HAZARDOUS?: \_\_\_\_\_ YES  NO

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Glass</u>	<u>40 ml</u>	<u>2</u>	<u>HCl</u>	<u>VOA vial</u>

COMMENTS: (WELL PURGING VOLUME, SAMPLE APPEARANCE, ODOR, COLOR, ETC.)  
Turbid - no odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_  
 COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

**FIELD MEASUREMENTS** SAMPLES COLLECTED BY: PK/KB

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

**GENERAL INFORMATION** WEATHER Sunny AIR TEMP. 95°F  
 SAMPLES SHIPPED TO: Savannah Labs  
 SPECIAL HANDLING: \_\_\_\_\_  
 MODE OF SHIPMENT:  Car/Truck \_\_\_\_\_ BUS \_\_\_\_\_ PLANE \_\_\_\_\_ COURIER \_\_\_\_\_

# FIELD SAMPLING REPORT



LAW  
ENGINEERING AND ENVIRONMENTAL SERVICES

JOB NO. 12001-9-3411  
JOB NAME HAAF FTA  
DATE 7/21/99 TIME 15:00  
SAMPLING POINT HMW-16B  
LOCATION

SAMPLE INFORMATION SAMPLE I.D. NO. HMW-16B

MATERIAL:  WATER  SOIL  SLUDGE  OTHER (LIST) \_\_\_\_\_

TYPE:  GRAB  COMPOSITE  OTHER (LIST) \_\_\_\_\_

HAZARDOUS?:  YES  NO

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
Glass	10 ml	3	HCl	VOA vial

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
turbid - no odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

FIELD MEASUREMENTS		SAMPLES COLLECTED BY: <u>PK/KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS	


GENERAL INFORMATION WEATHER Sunny AIR TEMP. 95°F

SAMPLES SHIPPED TO: Savannah Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck  BUS  PLANE  COURIER



<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. 12001-9-3411
		JOB NAME LAAF FTA
		DATE 7/21/99 TIME 14:45
		SAMPLING POINT HMW-16C
		LOCATION

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. HMW-16C
MATERIAL: <input checked="" type="checkbox"/> WATER _____ SOIL _____ SLUDGE _____ OTHER (LIST) _____	
TYPE: <input checked="" type="checkbox"/> GRAB _____ COMPOSITE _____ OTHER (LIST) _____	
HAZARDOUS?: _____ YES <input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
Glass	40 ml	3	HCl	VOA vial

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
 Turbid - no odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: PL / KB		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER 95° Sunny	AIR TEMP. 95°F
SAMPLES SHIPPED TO: Savannah Labs		
SPECIAL HANDLING:		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck _____ BUS _____ PLANE _____ COURIER		

# FIELD SAMPLING REPORT



LAW  
ENGINEERING AND ENVIRONMENTAL SERVICES

JOB NO. 12001-9-3411  
JOB NAME HAAF FTA  
DATE 7/29/99 TIME 9:30/9:45  
SAMPLING POINT HMW-16  
LOCATION FTA

## SAMPLE INFORMATION

SAMPLE I.D. NO. HMW-16-1 HMW-16-2

MATERIAL: WATER  SOIL  SLUDGE  OTHER (LIST) \_\_\_\_\_  
TYPE:  GRAB  COMPOSITE  OTHER (LIST) \_\_\_\_\_  
HAZARDOUS?:  YES  NO

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>HMW-16-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>HMW-16-2 7.0'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Dk Brown / Black Sand No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_  
COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

## FIELD MEASUREMENTS

SAMPLES COLLECTED BY: PK / BG

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS


## GENERAL INFORMATION

WEATHER Sunny AIR TEMP. 97°F

SAMPLES SHIPPED TO: Savannah Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck  BUS  PLANE  COURIER

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-3411</u> JOB NAME <u>HAAF-FTA</u> DATE <u>7/21/99</u> TIME <u>15:30</u> SAMPLING POINT <u>HAW-17</u> LOCATION _____
------------------------------	---	--

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>HAW-17</u>		
MATERIAL: <input checked="" type="checkbox"/> WATER	<input type="checkbox"/> SOIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER (LIST) _____
TYPE: <input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> COMPOSITE	<input type="checkbox"/> OTHER (LIST) _____	
HAZARDOUS?:	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Glass</u>	<u>40 ml</u>	<u>3</u>	<u>HCl</u>	<u>Not Vials</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Turbid - no odor


LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK/KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>95°F</u>
SAMPLES SHIPPED TO:	<u>Savannah Labs</u>	
SPECIAL HANDLING:		
MODE OF SHIPMENT:	<input checked="" type="checkbox"/> Car/Truck	<input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER

15

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>WAPF FTA</u>
		DATE <u>7/28/99</u> TIME <u>1300/15:45</u>
		SAMPLING POINT <u>HMW-17</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>HMW-17-1</u> <u>HMW-17-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <u>GRAB</u> <input checked="" type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <u>YES</u> <input type="checkbox"/> <u>NO</u> <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>25g</u>	<u>3</u>	<u>None</u>	<u>HMW-17-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>25g</u>	<u>3</u>	<u>None</u>	<u>HMW-17-2 6.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>


COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Brown / Dk Brown Silty Sand No Odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK/BG</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>97°F</u>
SAMPLES SHIPPED TO: <u>Siannah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <u>Car/Truck</u> <input checked="" type="checkbox"/> <u>BUS</u> <input type="checkbox"/> <u>PLANE</u> <input type="checkbox"/> <u>COURIER</u> <input type="checkbox"/>		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>HAAF FTA</u>
		DATE <u>1/22/99</u> TIME <u>8:00/9:00</u>
		SAMPLING POINT <u>SB-18'</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-18-1</u> <u>SB-18-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <u>GRAB</u> <input checked="" type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <u>YES</u> <input type="checkbox"/> <u>NO</u> <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Envelope</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-18-1 1.5'</u>
<u>Glass</u>	<u>202.</u>	<u>1</u>	<u>NONE</u>	↓
<u>Glass</u>	<u>4 oz.</u>	<u>1</u>	<u>NONE</u>	↓
<u>Envelope</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-18-2 6'</u>
<u>Glass</u>	<u>2 oz.</u>	<u>1</u>	<u>NONE</u>	↓
<u>Glass</u>	<u>4 oz.</u>	<u>1</u>	<u>NONE</u>	↓

COMMENTS: (WELL PURGING VOLUME: SAMPLE APPEARANCE: ODOR: COLOR: ETC.)  
DK Brown Sand No Odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)


<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

**GENERAL INFORMATION** WEATHER Sunny AIR TEMP. 95°F

SAMPLES SHIPPED TO: Savannah Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck  BUS  PLANE  COURIER

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. 12001-9-3411
		JOB NAME HARRIS FTA
		DATE 7/22/99 TIME 9:20/9:40
		SAMPLING POINT SB-19 LOCATION FTA

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. SB-19-1	SB-19-2
MATERIAL: <input checked="" type="checkbox"/> WATER <input type="checkbox"/> SOIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER (LIST) _____		
TYPE: <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> COMPOSITE <input type="checkbox"/> OTHER (LIST) _____		
HAZARDOUS?: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
Encore	~ 5 g	3	None	SB-19-1 1.5'
Glass	2 oz	1	↓	↓
Glass	4 oz	1	↓	↓
Encore	~ 5 g	3	None	SB-19-2 5.5'
Glass	2 oz	1	↓	↓
Glass	4 oz	1	↓	↓

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
 DK Brown / Brown Sand No Odor

Sample SB-19-1 split w/ALOE LAB (Accura) Samples shipped by Fed Ex 7/22/99


LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: PK / KIB		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER Sunny	AIR TEMP. 95°F
SAMPLES SHIPPED TO: Savannah Labs		
SPECIAL HANDLING:		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck <input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER		



<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. <u>2001-9-3411</u> JOB NAME <u>HAAF FTA</u> DATE <u>7/22/99</u> TIME <u>9:50/9:55</u> SAMPLING POINT <u>SB-20</u> LOCATION <u>FTA</u>
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<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-20-1</u> <u>SB-20-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <u>GRAB</u> <input checked="" type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <u>YES</u> <input type="checkbox"/> <u>NO</u> <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS	
TYPE	VOLUME				
<u>Encore</u>	<u>~ 5 g</u>	<u>3</u>	<u>None</u>	<u>SB-20-1</u>	<u>1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>~ 5 g</u>	<u>3</u>	<u>None</u>	<u>SB-20-2</u>	<u>5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Black / Dark Brown Sand . No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>DK/KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u> Sunny </u>	AIR TEMP. <u> 95°F </u>
SAMPLES SHIPPED TO: <u> Savannah Labs </u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck <input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER		

# FIELD SAMPLING REPORT



JOB NO. 12001-9-341  
 JOB NAME HAAP FTA  
 DATE 7/22/99 TIME 10:00/hrs  
 SAMPLING POINT SB-21  
 LOCATION FTA

SAMPLE INFORMATION

SAMPLE I.D. NO. SB-21-1 SB-21-2

MATERIAL: + WATER + SOIL \_\_\_\_\_ SLUDGE \_\_\_\_\_ OTHER (LIST) \_\_\_\_\_  
 TYPE: + GRAB \_\_\_\_\_ COMPOSITE \_\_\_\_\_ OTHER (LIST) \_\_\_\_\_  
 HAZARDOUS?: \_\_\_\_\_ YES + NO

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encone</u>	<u>5 g</u>	<u>3</u>	<u>None</u>	<u>SB-21-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encone</u>	<u>5 g</u>	<u>3</u>	<u>None</u>	<u>SB-21-2 5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Lt Brown / Med Brown Sand No odor

Duplicate B collected at SB-21-1 (3 encones, 1 2oz Glass, 1 4oz Glass)

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

FIELD MEASUREMENTS

SAMPLES COLLECTED BY: PK/KB

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS


GENERAL INFORMATION

WEATHER Sunny AIR TEMP. 95°F

SAMPLES SHIPPED TO: Savannah Lab

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT: X Car/Truck \_\_\_\_\_ BUS \_\_\_\_\_ PLANE \_\_\_\_\_ COURIER

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>2001-9-3411</u>
		JOB NAME <u>HARF FTA</u>
		DATE <u>7/22/99</u> TIME <u>11:30/11:15</u>
		SAMPLING POINT <u>SB-22</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-22-1</u> <u>SB-22-2</u>
MATERIAL: <u>      </u> WATER <input checked="" type="checkbox"/> SOIL <u>      </u> SLUDGE <u>      </u> OTHER (LIST) <u>      </u>	
TYPE: <input checked="" type="checkbox"/> GRAB <u>      </u> COMPOSITE <u>      </u> OTHER (LIST) <u>      </u>	
HAZARDOUS?: <u>      </u> YES <input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-22-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-22-2 5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>


COMMENTS: (WELL PURGING VOLUME: SAMPLE APPEARANCE: ODOR: COLOR: ETC.)  
Brown / Dk. Grey Soil No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>95°F</u>
SAMPLES SHIPPED TO: <u>Samnah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck <u>      </u> BUS <u>      </u> PLANE <u>      </u> COURIER <u>      </u>		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. <u>2001-9-3411</u>
		JOB NAME <u>HAA F FTA</u>
		DATE <u>1/29/99</u> TIME <u>11:25/11:40</u>
		SAMPLING POINT <u>SB-23</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-23-1</u> <u>SB-23-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <input checked="" type="checkbox"/> <u>GRAB</u> <input type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <input type="checkbox"/> <u>YES</u> <input checked="" type="checkbox"/> <u>NO</u>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~5 g</u>	<u>3</u>	<u>None</u>	<u>SB-23-1</u> <u>6.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>None</u>	<u>↓</u> <u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>None</u>	<u>↓</u> <u>↓</u>
<u>Encore</u>	<u>2.5 g</u>	<u>3</u>	<u>None</u>	<u>SB-23-2</u> <u>6.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u> <u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u> <u>↓</u>


COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Lt Brown / Dk. Brown Sand No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / BG</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>94°F</u>
SAMPLES SHIPPED TO: <u>Savannah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> <u>Car/Truck</u> <input type="checkbox"/> <u>BUS</u> <input type="checkbox"/> <u>PLANE</u> <input type="checkbox"/> <u>COURIER</u>		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>2001-9-341</u>
		JOB NAME <u>HAAF FTA</u>
		DATE <u>7/29/99</u> TIME <u>11:15 / 11:30</u>
		SAMPLING POINT <u>SB-24</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-24-1</u> <u>SB-24-2</u>
MATERIAL: <input type="checkbox"/> WATER <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER (LIST) _____	
TYPE: <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> COMPOSITE <input type="checkbox"/> OTHER (LIST) _____	
HAZARDOUS?: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-24-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-24-2 6.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>


COMMENTS: (WELL PURGING VOLUME: SAMPLE APPEARANCE: ODOR: COLOR: ETC.)  
Dk Brown / Grey Sand No odor

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>BG / PK</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>99°F</u>
SAMPLES SHIPPED TO: <u>Ground Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck <input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>HAAF FTA</u>
		DATE <u>7/22/99</u> TIME <u>10:50/10:55</u>
		SAMPLING POINT <u>SB-25</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-25-1</u> <u>SB-25-2</u>
MATERIAL: <input type="checkbox"/> WATER <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER (LIST) _____	
TYPE: <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> COMPOSITE <input type="checkbox"/> OTHER (LIST) _____	
HAZARDOUS?: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-25-1    1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-25-2    5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Brown / Dk Brown / Black Sand stained Petroleum Odor

LABORATORY RECEIPT:    DATE/TIME \_\_\_\_\_    CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

FIELD MEASUREMENTS      SAMPLES COLLECTED BY: PK/KJB

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS


GENERAL INFORMATION      WEATHER Sunny      AIR TEMP. 95 °F

SAMPLES SHIPPED TO: Samuel Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck     BUS     PLANE     COURIER



<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-341</u>
		JOB NAME <u>HAAT FTA</u>
		DATE <u>7/22/99</u> TIME <u>10:20 AM</u>
		SAMPLING POINT <u>SB-27</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-27-1</u> <u>SB-27-2</u>
MATERIAL: _____ WATER <input checked="" type="checkbox"/> SOIL _____ SLUDGE _____ OTHER (LIST) _____	
TYPE: <input checked="" type="checkbox"/> GRAB _____ COMPOSITE _____ OTHER (LIST) _____	
HAZARDOUS?: _____ YES _____ NO <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS	
TYPE	VOLUME				
<u>Encore</u>	<u>2 5g</u>	<u>3</u>	<u>None</u>	<u>SB-27-1</u>	<u>1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Encore</u>	<u>2 5g</u>	<u>3</u>	<u>None</u>	<u>SB-27-2</u>	<u>5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>


COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Black / Dk Brown sand slightly stained slight odor

LABORATORY RECEIPT:      DATE/TIME \_\_\_\_\_      CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KIB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>95 °F</u>
SAMPLES SHIPPED TO: <u>Savannah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <input checked="" type="checkbox"/> Car/Truck _____ BUS _____ PLANE _____ COURIER _____		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>HAF FTA</u>
		DATE <u>1/22/99</u> TIME <u>8:57/9:00</u>
		SAMPLING POINT <u>SB-2B</u> LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-28-1</u> <u>SB-28-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <u>GRAB</u> <input checked="" type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <u>YES</u> <input type="checkbox"/> <u>NO</u> <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encone</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-28-1</u> <u>1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Encone</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-28-2</u> <u>5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
DK Brown / Dk grey Sand      No odor

LABORATORY RECEIPT:      DATE/TIME \_\_\_\_\_      CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>95°F</u>
SAMPLES SHIPPED TO: <u>Savannah Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <u>X</u> Car/Truck <input type="checkbox"/> BUS <input type="checkbox"/> PLANE <input type="checkbox"/> COURIER		

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> ENGINEERING AND ENVIRONMENTAL SERVICES	JOB NO. <u>12001-9-341</u>
		JOB NAME <u>HAAF FTA</u>
		DATE <u>7/22/99</u> TIME <u>9:15/9:29</u>
		SAMPLING POINT <u>SB-29</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-29-1</u> <u>SB-29-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <input checked="" type="checkbox"/> <u>GRAB</u> <input type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <input type="checkbox"/> <u>YES</u> <input checked="" type="checkbox"/> <u>NO</u>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>ENCONE</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-29-1</u> <u>1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>NONE</u>	<u>↓</u> <u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>NONE</u>	<u>↓</u> <u>↓</u>
<u>ENCONE</u>	<u>~ 5g</u>	<u>3</u>	<u>NONE</u>	<u>SB-29-2</u> <u>5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u> <u>↓</u>
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	<u>↓</u>	<u>↓</u> <u>↓</u>

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
DK Brown / Black Sand No odor

SB-29-2 split w/ACOE LAB (Accura) Samples  
shipped by Fed Ex 7/22/99

LABORATORY RECEIPT: DATE/TIME \_\_\_\_\_ CONDITION \_\_\_\_\_

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

**GENERAL INFORMATION** WEATHER Sunny AIR TEMP. 95 °F

SAMPLES SHIPPED TO: Savannah Labs

SPECIAL HANDLING: \_\_\_\_\_

MODE OF SHIPMENT:  Car/Truck  BUS  PLANE  COURIER

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT  
 SITE: HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **HMW-2-W**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP DATE: 1-16-00 TIME: BEGINNING DEPTH: 14.11 END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4 Lit Poly 500ml zip	1	HNO3, Cool to 4	SW3005A	SW6010A	Total ICP Metals (Pb only)	SLS

Time (hrs:mins)	11:55	1210	1225	1240	1255	1310	1325	1340				
Volume Purged (gals)	1.5	2.5	3.0	3.5	4.0	5.0	6.0	6.5				
Temperature (Celsius)	21.79	21.86	21.84	21.97	21.94	21.94	21.92	21.95				
pH	4.76	4.73	4.70	4.69	4.70	4.69	4.68	4.68				
Specific Conductance (uS)												
Dissolved Oxygen (mg/L)												
Turbidity (NTU)	160.7	4.5	1.0	0.6	0.2	2.35	1.9	1.4				
Redox Potential (mV)												
Alkalinity (mg/L)												
Ferrous Iron (mg/L)												
Sulfide (mg/L)												
CarbonDioxide (mg/L)												

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA:  AIR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP 21.2  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS, Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Mike Horner

OBSERVER: Victor Blake

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
 SITE: HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB ( ) COMPOSITE ( ) SAMPLE ID: HMW-12-W  
 QC LEVEL AFCEE Level I DUP./REP. OF: \_\_\_\_\_  
 MATRIX WG  
 SAMPLING METHOD BP DATE: 1-19-00 TIME: \_\_\_\_\_ BEGINNING DEPTH: 11.97 END DEPTH: \_\_\_\_\_

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL. Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>904</u>	SLS
<del>1 L</del> Poly 500 ml	1	HNO3. Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

Time (hrs.mins)										
Volume Purged (gals)	3.5	7.0	<del>10.5</del>	<del>14.0</del>	17.5	21.0	24.5	28.0		
Temperature (Celsius)	18.23	17.98	16.89	16.97	17.28	17.31				
pH	5.35	5.21	5.06	5.34	5.14	5.19				
Specific Conductance (uS)	77.1	62.3	<del>110.64</del>	0.32	0.43	0.43				
Dissolved Oxygen (mg/L)										
Turbidity (NTU)	88.3	40.1	2.24	1.39	.73	.53				
Redox Potential (mV)										
Alkalinity (mg/L)										
Ferrous Iron (mg/L)										
Sulfide (mg/L)										
CarbonDioxide (mg/L)										

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR \_\_\_\_\_ OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke OBSERVER: \_\_\_\_\_

69

**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : HMW

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

SUB-PROJECT #:

PHONE: (770) 421-3400 / FAX: (770) 421-3486

GRAB (  ) COMPOSITE ( )

SAMPLE ID: HMW-14R-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 4/5/00

TIME: 1415

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics <del>Appendix IX</del> <u>Appendix IX</u>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA:  SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_



## FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: HMW

SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )

SAMPLE ID: HMW-14R-2

QC LEVEL AFCEE Level I

DUP./REP. OF: \_\_\_\_\_

MATRIX SO

SAMPLING METHOD DP DATE: 4/5/00 TIME: 1440 BEGINNING DEPTH: 7 END DEPTH: 9

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <u>cp</u>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 SUN/CLEAR \_\_\_ OVERCAST/RAIN \_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X \_\_\_ HAND DELIVER \_\_\_ COURIER \_\_\_ OTHER \_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT  
SITE : HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: HMW-14R-2MS/MSD

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00

TIME: 1440

BEGINNING DEPTH: 7

END DEPTH: 9

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>gpt</i>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : HMW

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

SUB-PROJECT #:

PHONE: (770) 421-3400 / FAX: (770) 421-3486

GRAB (  ) COMPOSITE ( )

SAMPLE ID: HMW-14R-W

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP

DATE: 1-17-00 TIME: 15:38

BEGINNING DEPTH: 12.8' END DEPTH: 12.8'

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) opt	SLS
<del>1 L Poly 200 ml</del>	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

opt

Time (hrs.mins)	10:30	11:05	11:20	11:35	11:50	12:05	12:20	12:35	12:50	13:05	13:20	13:35	13:50
Volume Purged (gals)	1.5	3.0	4.75	6.5	8.25	10.00	11.75	13.5	15.25	17.0	18.75	20.5	22.25
Temperature (Celsius)	20.54	20.61	20.63	20.79	20.90	20.85	20.99	20.90	20.89	20.46	20.44	20.44	20.44
pH	5.92	5.90	5.76	5.72	5.64	5.60	5.57	5.59	5.46	5.46	5.46	5.46	5.46
Specific Conductance (uS)													
Dissolved Oxygen (mg/L)													
Turbidity (NTU)	90.2	4.58	4.86	4.60	3.86	4.49	4.02	3.30	3.42	3.41	3.05	3.04	3.20
Redox Potential (mV)													
Alkalinity (mg/L)													
Ferrous Iron (mg/L)													
Sulfide (mg/L)													
CarbonDioxide (mg/L)													

LAST  
15:20

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: [Signature]

## FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
 SITE: HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )      SAMPLE ID: HMW-14R-WMS

QC LEVEL \_\_\_\_\_ AFCEE Level I \_\_\_\_\_  
 MATRIX \_\_\_\_\_ WG \_\_\_\_\_      DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD BP      DATE: 1-17-00 TIME: 15:38      BEGINNING DEPTH: 12.84 END DEPTH: \_\_\_\_\_

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix 1</del> ) <u>qu</u>	SLS
<del>1 L</del> Poly 500 mL	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

Time (hrs:mins)	10:50	11:05	11:20	11:35	11:50	12:05	12:20	12:35	12:50	13:05	13:20	13:35
Volume Purged (gals)	1.5	3.0	4.75	6.5	8.25	10.00	11.75	13.5	15.25	17.0	18.75	20.5
Temperature (Celsius)	20.54	20.61	20.63	20.74	20.40	20.85	20.99	20.90	20.04	20.46	20.44	20.44
pH	5.92	5.40	5.76	5.72	5.64	5.60	5.57	5.54	5.46	5.46	5.46	5.46
Specific Conductance (uS)												
Dissolved Oxygen (mg/L)												3.04
Turbidity (NTU)	90.7	6.58	4.86	4.60	3.86	4.49	4.02	3.30	3.42	3.41	3.05	<del>3.05</del> 3.20
Redox Potential (mV)												
Alkalinity (mg/L)												
Ferrous Iron (mg/L)												
Sulfide (mg/L)												
Carbon Dioxide (mg/L)												

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WATER: CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor-Clare      OBSERVER: [Signature]

LCS  
15:20

# FIELD SAMPLING REPORT

FACILITY I.D. : HUNT  
SITE : HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: HMW-14R-WMSD

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP

DATE: 1-17-00 TIME: 15:38 BEGINNING DEPTH: 12.84 END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>414</u>	SLS
<del>1 L</del> Poly	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

500 ml  
poly

20.89 20.46 20.44 20.44 <sup>Last</sup> 15:20

Time (hrs:mins)	10:50	11:05	11:20	11:35	11:50	12:05	12:20	12:35	12:50	13:05	13:20	13:35
Volume Purged (gals)	1.5	3.0	4.75	6.5	8.25	10.00	11.75	13.5	15.25	17.0	18.75	20.5
Temperature (Celsius)	20.54	20.41	20.63	20.79	20.90	20.95	20.90	20.88	20.46	20.44	20.44	20.44
pH	90.2	6.58	4.06	4.60	5.86	4.49	4.02	3.30	3.42	3.41	3.05	3.04
Specific Conductance (uS)												
Dissolved Oxygen (mg/L)												
Turbidity (NTU)												
Redox Potential (mV)												
Alkalinity (mg/L)												
Ferrous Iron (mg/L)												
Sulfide (mg/L)												
CarbonDioxide (mg/L)												

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER:

SHIPMENT VIA:

SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: [Signature]

**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : HMW

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

SUB-PROJECT #:

PHONE: (770) 421-3400 / FAX: (770) 421-3486

GRAB ( ) COMPOSITE ( )

SAMPLE ID:

**HMW-17-W**

QC LEVEL

AFCEE Level I

DUP./REP. OF:

MATRIX

WG

SAMPLING METHOD

BP

DATE: 1-19-00

TIME:

BEGINNING DEPTH: 9.48

END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix X</del> ) <u>got</u>	SLS
<del>1 L</del> Poly	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

500 mL  
got

(SC) 70.1 .63 .56 .59 .60 .61

Time (hrs mins)	1030	1120	1150	1220	1250	1320	1350	1420	1450
Volume Purged (gals)	3.5	7.0	10.5	14.0	17.5	21.0	24.5	28.0	31.5
Temperature (Celsius)	19.24	14.09	18.53	18.77	17.07	17.34	17.46	17.43	17.47
pH	6.25	6.24	6.25	6.24	5.48	5.06	5.49	5.44	5.48
Specific Conductance (uS)	0.93	1.77	<del>0.63</del>	<del>0.56</del>	<del>0.59</del>	<del>0.60</del>	<del>0.61</del>		
Dissolved Oxygen (mg/L)									
Turbidity (NTU)	158	72	36	22	14.75	10.99	9.92	10.03	9.56
Redox Potential (mV)									
Alkalinity (mg/L)									
Ferrous Iron (mg/L)									
Sulfide (mg/L)									
Carbon Dioxide (mg/L)									

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPPED VIA:  FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: \_\_\_\_\_



### FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : HMW

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: Duplicate-W

QC LEVEL AFCEE Level I

DUP./REP. OF: HMW-17-W

MATRIX WG

SAMPLING METHOD BP

DATE: 1-19-00 TIME: BEGINNING DEPTH: 9.48 END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL. Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> )	SLS
500 ml Poly	1	HNO3. Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

500ml

Time (hrs.mins)																			
Volume Purged (gals)																			
Temperature (Celsius)																			
pH																			
Specific Conductance (uS)																			
Dissoived Oxygen (mg/L)																			
Turbidity (NTU)																			
Redox Potential (mV)																			
Alkalinity (mg/L)																			
Ferrous Iron (mg/L)																			
Sulfide (mg/L)																			
CarbonDioxide (mg/L)																			

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : HMW

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: HMW-18-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00

TIME: 12:55

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>ggs</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA: CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: *Thomas Keller*

OBSERVER: *Michael Horner*

# FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: HMW

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( ) SAMPLE ID: HMW-18-2

QC LEVEL AFCEE Level I DUP./REP. OF: \_\_\_\_\_

MATRIX SO

SAMPLING METHOD DP DATE: 1-6-00 TIME: 13:05 BEGINNING DEPTH: 2 END DEPTH: 3

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>gph</i>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER:  SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA:  FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Thomas Keller OBSERVER: Michael Hooper

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: HMW

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **HMW-18-W**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP DATE: 1-20-00 TIME: 19:36 BEGINNING DEPTH: 8.66 END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>not</u>	SLS
<u>500 ml</u> Poly	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

Time (hrs:mins)												
Volume Purged (gals)	3.5	7.0	10.5	14.0	17.5	21.0	24.5	28.0				
Temperature (Celsius)	17.43	17.54	17.73	17.68	17.84	17.12	17.15	17.14				
pH	5.22	5.19	5.15	5.05	5.08	4.87	4.77	4.69				
Specific Conductance (uS)	1.78	1.66	1.78	1.66	1.80	1.79	1.57	1.50				
Dissolved Oxygen (mg/L)												
Turbidity (NTU)	36.4	3.85	1.30	0.32	1.22	0.50	0.17	0.27	0.22			
Redox Potential (mV)												
Alkalinity (mg/L)												
Ferrous Iron (mg/L)												
Sulfide (mg/L)												
CarbonDioxide (mg/L)												

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

W \_\_\_\_\_ HER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS, Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke OBSERVER: \_\_\_\_\_

## FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
 SITE: HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )      SAMPLE ID: **HMW-19-W**  
 QC LEVEL      AFCEE Level I  
 MATRIX      WG      DUP./REP. OF:  
 SAMPLING METHOD      BP      DATE: 1-20-00      TIME: 14:20      BEGINNING DEPTH: 8.94      END DEPTH: 10.26

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>gpl</u>	SLS
<del>4 L</del> Poly 500 ml	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

Time (h/s.mins)	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00
Volume Purged (gals)	3.5	7.0	10.5	14.0	17.5	21.0	24.5	28.0	31.5	35.0
Temperature (Celsius)	16.77	17.62	17.90	18.17	18.26	18.33	17.90	17.69	17.67	17.53
pH	5.68	5.66	5.57	5.54	5.54	5.53	5.35	5.23	5.19	5.20
Specific Conductance (uS)	1.63	1.61	1.66	1.78	1.82	1.82	1.79	1.79	1.79	1.78
Dissolved Oxygen (mg/L)										
Turbidity (NTU)	2.9	2.25	1.25	.81	.40	.58	.50	.28	0.63	0.40
Redox Potential (mV)										
Alkalinity (mg/L)										
Ferrous Iron (mg/L)										
Sulfide (mg/L)										
Carbon Dioxide (mg/L)										

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR:      ODOR:      OTHER:

WEATHER:      SHIPMENT VIA:      SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke      OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
SITE: HMW

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: HMW-19-WQA

QC LEVEL AFCEE Level I

DUP./REP. OF: HMW-19-W

MATRIX WG

SAMPLING METHOD BP DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BEGINNING DEPTH: \_\_\_\_\_ END DEPTH: \_\_\_\_\_

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	ACRA
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics (Appendix IX) <u>CRM</u>	ACRA
1 L Poly	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	ACRA

COE QA split sample

*\* See FSR for sample HMW-19-W for (well data).*

Time (hrs.mins)	
Volume Purged (gals)	
Temperature (Celsius)	
pH	
Specific Conductance (uS)	
Dissolved Oxygen (mg/L)	
Turbidity (NTU)	
Redox Potential (mV)	
Alkalinity (mg/L)	
Ferrous Iron (mg/L)	
Sulfide (mg/L)	
Carbon Dioxide (mg/L)	

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
/N/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: ACRA, Acura Analytical Laboratory, Inc., 6017 Financial Drive, Norcross, GA 30071

SAMPLER: *R. V. Clarke*

OBSERVER: \_\_\_\_\_



**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE: HMW

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

SUB-PROJECT #:

PHONE: (770) 421-3400 / FAX: (770) 421-3486

GRAB ( ) COMPOSITE ( )

SAMPLE ID: HMW-20-W

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP

DATE: 1-18-00 TIME: 15:07 BEGINNING DEPTH: 6.94 END DEPTH: 8.23

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>gpl</i>	SLS
<i>1 L Poly</i>	1	HNO3, Cool to 4	SW3005A	SW6010B	Total ICP Metals (As, Ba, Pb)	SLS

500 mL

*one recording every 1/2 hour due to lack of writing space.*

Time (hrs:mins)	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400
Volume Purged (gals)	3.5	7.0	10.5	14.0	17.5	21.0	24.5	28.0	31.5	35.0	38.5
Temperature (Celsius)	19.47	18.98	19.21	19.45	19.40	19.52	19.58	19.81	19.98	19.88	19.97
pH	5.79	5.79	5.80	5.79	5.74	5.79	5.79	5.79	5.80	5.81	5.82
Specific Conductance (uS)	0.70	0.65	0.66	0.68	0.69	0.64	0.70	0.70	0.71	0.69	0.71
Dissolved Oxygen (mg/L)											
Turbidity (NTU)	46.0	30.1	27.2	24.8	22.4	21.8	20.8	19.6	16.96	16.84	9.30
Redox Potential (mV)											
Alkalinity (mg/L)											
Ferrous Iron (mg/L)											
Sulfide (mg/L)											
Carbon Dioxide (mg/L)											

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP 61 SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: 

FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: SB-30-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 4/5/00

TIME: 1520

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>zpb</i>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA: CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: *[Signature]*

OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: **SB-30-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00

TIME: 1530

BEGINNING DEPTH: 6

END DEPTH: 8

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>opu</u>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPPED TO: SLS Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SAMPLER: [Signature]

OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB  COMPOSITE ( )

SAMPLE ID: SB-31-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00

TIME: 0920

BEGINNING DEPTH: 0.5 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

TEMPERATURE: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: **SB-31-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/20

TIME: 0930

BEGINNING DEPTH: 5

END DEPTH: 7

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: [Signature]

OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
SITE: SB

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-32-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO  
SAMPLING METHOD DP

DATE: 1/5/00 TIME: 0955 BEGINNING DEPTH: 0.5 END DEPTH: 2.0

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8082 D2216	PCB Compounds Moisture	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: [Signature] OBSERVER: \_\_\_\_\_



**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )

SAMPLE ID: SB-32-2

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 4/5/00 TIME: 1000 BEGINNING DEPTH: 4 END DEPTH: 6

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8082 D2216	PCB Compounds Moisture	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER:  OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: Duplicate D

QC LEVEL AFCEE Level I

DUP./REP. OF: SB-32-2

MATRIX SO

SAMPLING METHOD DP DATE: 4/5/00 TIME: 1200 BEGINNING DEPTH: 4 END DEPTH: 4

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8082 D2216	PCB Compounds Moisture	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

WIND DIRECTION AMBIENT TEMP SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: [Signature] OBSERVER:

## FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB  COMPOSITE ( )

SAMPLE ID: **SB-32-2QA**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP DATE: 4/5/00 TIME: 1000 BEGINNING DEPTH: 4 END DEPTH: 6

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8082 D2216	PCB Compounds Moisture	ACRA

COE QA Split Sample

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: ACRA: Acura Analytical Laboratory, Inc., 6017 Financial Drive, Norcross, GA 30071

SAMPLER: 

OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
SITE: SB

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB (✓) COMPOSITE ( ) SAMPLE ID: SB-33-1  
QC LEVEL AFCEE Level I  
MATRIX SO DUP./REP. OF:  
SAMPLING METHOD DP DATE: 4/5/00 TIME: 1140 BEGINNING DEPTH: 0.5 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8082	PCB Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WATER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_

SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: [Signature] OBSERVER: \_\_\_\_\_

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: **SB-33-1MS/MSD**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP DATE: 1/5/00 TIME: 1140 BEGINNING DEPTH: 0.5 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8082 D2216	PCB Compounds Moisture	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE: SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-33-2

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00 TIME: 1145

BEGINNING DEPTH: 3 END DEPTH: 5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8082	PCB Compounds	SLS

\* 48 hr TAT

Sample Equipment: \_ Hand Auger \_ Bailer \_ Ponar Dredge  Direct Push \_ Split Spoon \_ Bladder Pump \_ Hydro-cone \_ HydroPunch

COLOR: ODOR: OTHER:

WATHER:

SHIPMENT VIA:

SUN/CLEAR \_\_\_ OVERCAST/RAIN \_\_\_ WIND DIRECTION \_\_\_ AMBIENT TEMP \_\_\_ FED-X \_\_\_ HAND DELIVER \_\_\_ COURIER \_\_\_ OTHER \_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER:

OBSERVER:



**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )

SAMPLE ID: SB-34-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00

TIME: 12:15

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

at 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION E AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T.M. KELLER

OBSERVER: M. JESSUP

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )

SAMPLE ID: **SB-34-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/5/00 TIME: 1225

BEGINNING DEPTH: 2.5 END DEPTH: 4.5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION E AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T.M. KEUR

OBSERVER: M. JESSUP

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT  
 SITE: SB

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB (  ) COMPOSITE (    )

SAMPLE ID: Duplicate F

QC LEVEL            AFCEE Level I

DUP./REP. OF: SB-34-2

MATRIX            SO

SAMPLING METHOD    DP    DATE: 1/5/00    TIME: 1430    BEGINNING DEPTH: 2.5    END DEPTH: 4.5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C NONE	SW8081A D2216	Pesticides Moisture	SLS

OK 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION E AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T KENON

OBSERVER: M JESUP

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: SB-35-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX

SO

SAMPLING METHOD

DP

DATE: 1/6/00

TIME: 09:35

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>sp</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA:  AIR/CLER  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP 46  FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T M KELLEN OBSERVER: M HORNOR

## FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-35-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/6/00 TIME: 1005

BEGINNING DEPTH: 4 END DEPTH: 6

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>mt</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Thomas Keller

OBSERVER: Mike Horner

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: SB-35-1MS/MSD

QC LEVEL AFCEE Level I

MATRIX SO

DUP./REP. OF:

SAMPLING METHOD DP

DATE: 1/6/00

TIME: 9:35

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>spB</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WETTER: \_\_\_\_\_

SHIPMENT VIA:

SUN/CLEAR \_\_\_\_\_ OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X \_\_\_\_\_ HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T.M. Keller

OBSERVER: M. HORNER



**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-36-1**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00 TIME: 10:45

BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>2/1</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Thomas Kellez

OBSERVER: Mike Horner

### FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: Duplicate C

QC LEVEL AFCEE Level I

DUP./REP. OF: SB-36-1

MATRIX SO

SAMPLING METHOD DP

DATE: 6-00

TIME: 12:00

10:45 (act)

BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>gpb</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Thomas Keller

OBSERVER: Mike Horner

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-36-1QA**

QC LEVEL AFCEE Level I

DUP./REP. OF: **SB-36-1**

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00

TIME: 10:45

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	ACRA
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	ACRA
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX)	ACRA
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	ACRA

COE QA Split Sample

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: ACRA: Acura Analytical Laboratory, Inc., 6017 Financial Drive, Norcross, GA 30071

SAMPLER: THOMAS KELLER

OBSERVER: MIKE HORNOR

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: SB-36-2

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00

TIME: 12:15

BEGINNING DEPTH: 2 END DEPTH: 3

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <i>2010</i>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA: CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Thomas Keller

OBSERVER: Mike Horner

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-37-1**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00

TIME: 13:30

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <i>ggh</i>	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_

SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T. M. KEWER

OBSERVER: MIKE HORNER

# FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-37-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-6-00 TIME: 13:45

BEGINNING DEPTH: 2 END DEPTH: 3

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <del>2014</del>	SLS

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WATHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T.M. KELLER

OBSERVER: MIKE HORNER



**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-38-1**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 01/04/00

TIME: 10:50

BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <u>204</u>	SLS

✗ 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar  Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION: \_\_\_\_\_ AMBIENT TEMP 65° SHIPMENT VIA: \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T. A. KELLER

OBSERVER: Michelle Jessup

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB-38-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/4/00

TIME: 1110

BEGINNING DEPTH: 3.5

END DEPTH: 5.5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>204</u>	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

OTHER: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

## FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: Duplicate E

QC LEVEL: AFCEE Level I

DUP./REP. OF: SB-38-2

MATRIX: SO

SAMPLING METHOD: DP

DATE: 1/4/00

TIME: 1110

BEGINNING DEPTH: 3.5 END DEPTH: 5.5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics (Appendix IX) <u>SPB</u>	SLS

\* 48 W TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: SB-38-2QA

QC LEVEL AFCEE Level I

DUP./REP. OF: SB-38-2

MATRIX SO

SAMPLING METHOD DP DATE: 4/4/00 TIME: 1110 BEGINNING DEPTH: 3.5 END DEPTH: 5.5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	ACRA
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	ACRA

COE QA split Sample

Sample Equipment: \_ Hand Auger \_ Bailer \_ Ponar Dredge \_ Direct Push \_ Split Spoon \_ Bladder Pump \_ Hydro-cone \_ HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA:

SUN/CLEAR \_\_\_ OVERCAST/RAIN \_\_\_ WIND DIRECTION \_\_\_ AMBIENT TEMP \_\_\_ FED-X \_\_\_ HAND DELIVER \_\_\_ COURIER \_\_\_ OTHER \_\_\_

SHIPPED TO: ACRA: Acura Analytical Laboratory, Inc., 6017 Financial Drive, Norcross, GA 30071

SAMPLER: OBSERVER:

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-38-W

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WG

SAMPLING METHOD BP

DATE: 1/4/00

TIME: 1730

BEGINNING DEPTH:

END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics (Appendix IX) <del>4</del>	SLS

Temporary Piezometer Water Sample

Time (hrs:mins)														
Volume Purged (gals)														
Temperature (Celsius)														
pH														
Specific Conductance (uS)														
Dissolved Oxygen (mg/L)														
Turbidity (NTU)														
Redox Potential (mV)														
Alkalinity (mg/L)														
Ferrous Iron (mg/L)														
Sulfide (mg/L)														
CarbonDioxide (mg/L)														

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: Duplicate-TP

QC LEVEL AFCEE Level I

DUP./REP. OF: SB-38-W

MATRIX WG

SAMPLING METHOD BP

DATE: 1/4/00

TIME: 1730

BEGINNING DEPTH: END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL. Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <i>pp4</i>	SLS

Temporary Piezometer water Duplicate Sample

Time (hrs mins)																				
Volume Purged (gals)																				
Temperature (Celsius)																				
pH																				
Specific Conductance (uS)																				
Dissolved Oxygen (mg/L)																				
Turbidity (NTU)																				
Redox Potential (mV)																				
Alkalinity (mg/L)																				
Ferrous Iron (mg/L)																				
Sulfide (mg/L)																				
Carbon Dioxide (mg/L)																				

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

OTHER: SHIPMENT VIA:  AIR/CLAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: OBSERVER:



**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-39-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/4/00

TIME: 1445

BEGINNING DEPTH: 0

END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr. TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_

OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB (  ) COMPOSITE ( )

SAMPLE ID: SB-39-2

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 4/4/00

TIME: 1500

BEGINNING DEPTH: 2

END DEPTH: 4

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

HER: SHIPMENT VIA:

CLEAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: OBSERVER:

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-40-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 4/4/00

TIME: 1250

BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS. Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE: SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB (✓) COMPOSITE ( )

SAMPLE ID: SB-40-2

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX

SO

SAMPLING METHOD

DP

DATE: 1/4/00

TIME: 1305

BEGINNING DEPTH: 2

END DEPTH: 4

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
2oz w/mouth jar	1	Cool to 4 °C	NONE	D2216	Moisture	SLS
5-gram ENCORE	3	Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS

\* 48 hr TAT

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

✓ HER: SHIPMENT VIA:

CLEAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER:

OBSERVER:

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT  
 SITE: SB

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
 SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )      SAMPLE ID: **SB-40-W**

QC LEVEL      AFCEE Level I

MATRIX      WG      DUP./REP. OF: \_\_\_\_\_

SAMPLING METHOD      BP      DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BEGINNING DEPTH: \_\_\_\_\_ END DEPTH: \_\_\_\_\_

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <i>pm</i>	SLS

*Temporary Piezometer Water Sample*

Time (hrs mins)																			
Volume Purged (gals)																			
Temperature (Celsius)																			
pH																			
Specific Conductance (uS)																			
Dissolved Oxygen (mg/L)																			
Turbidity (NTU)																			
Redox Potential (mV)																			
Alkalinity (mg/L)																			
Ferrous Iron (mg/L)																			
Sulfide (mg/L)																			
Carbon Dioxide (mg/L)																			

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: SB

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB41-1**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1-31-00 TIME: 11:46 BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organic Compounds	ASI

48 hr TPT.

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WIND DIRECTION: \_\_\_\_\_ AMBIENT TEMP: \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_  
 CLEAR \_\_\_\_\_ OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ FED-X \_\_\_\_\_ HAND DELIVER  COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: ASI: Analytical Services Incorporated, 110 Technology Parkway, Norcross, GA 30092

SAMPLER: Victor Clarke

OBSERVER: Michelle L. Jessep



**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : SB

SUB-PROJECT #:

GRAB (X) COMPOSITE ( )

SAMPLE ID: **SB41-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/31/00

TIME: 1232

BEGINNING DEPTH: 3

END DEPTH: 5

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organic Compounds	ASI

48 hr TAT

\* HOLD sample until results are received from SB41-1.

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER:  SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: \_\_\_\_\_

FED-X \_\_\_\_\_ HAND DELIVER \_\_\_\_\_ COURIER \_\_\_\_\_ OTHER \_\_\_\_\_

SHIPPED TO: ASI: Analytical Services Incorporated, 110 Technology Parkway, Norcross, GA 30092

SAMPLER: Victor Clarke

OBSERVER: \_\_\_\_\_

FIELD SAMPLING REPORT

FACILITY I.D. : HUNT  
SITE : SB

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: SB42-1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP DATE: 1/31/00 TIME: BEGINNING DEPTH: 0 END DEPTH: 2

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organic Compounds	ASI

48 hr TTT

Sample Equipment:  Hand Auger \_ Bailer \_ Ponar Dredge \_ Direct Push \_ Split Spoon \_ Bladder Pump \_ Hydro-cone \_ HydroPunch

COLOR: ODOR: OTHER:

WATER: SHIPMENT VIA:  COURIER

SHIPPED TO: ASI: Analytical Services Incorporated, 110 Technology Parkway, Norcross, GA 30092

SAMPLER: Vicki Clarke OBSERVER: Michael J. Jessup

**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE : SB

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

SUB-PROJECT #:

PHONE: (770) 421-3400 / FAX: (770) 421-3486

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **SB42-2**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX SO

SAMPLING METHOD DP

DATE: 1/31/00

TIME: 1428

BEGINNING DEPTH: 2 END DEPTH: 3

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
4oz w/mouth jar	1	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organic Compounds	ASI

48hr TAT

*\* HOLD sample until results are received from SB42-1.*

Sample Equipment:  Hand Auger \_  Bailer \_  Ponar Dredge \_  Direct Push \_  Split Spoon \_  Bladder Pump \_  Hydro-cone \_  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR \_\_\_ OVERCAST/RAIN \_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X \_\_\_ HAND DELIVER  COURIER \_\_\_ OTHER \_\_\_

SHIPPED TO: ASI: Analytical Services Incorporated, 110 Technology Parkway, Norcross, GA 30092

SAMPLER: Victor Clarke

OBSERVER: Michelle L. Jensen

FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE: IDW

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID:

HAAFIDW-W

QC LEVEL

AFCEE Level I

DUP./REP. OF:

MATRIX

WH

SAMPLING METHOD

NA

DATE: 1/31/02

TIME: 4:57

BEGINNING DEPTH:

END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °	SW5030B	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3520C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> )	SLS
500 ml Poly	1	HNO3, Cool to 4	SW3005A METHOD	SW6010B SW7470A	ICP Metals (As,Ba,Cd,Cr, Pb,Ag,Se) Total Mercury	SLS
1 L Amber Glass	1	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS
100 ml Poly	1	Cool to 4 °C	NONE	E150.1	pH	SLS
125 ml Amber Gl	1	H2SO4, Cool to 4	NONE	E420.1	Phenols	SLS
500 ml Amber Gl	1	H2SO4, Cool to 4	NONE	E413.2	Oil & Grease	SLS

Drummed Water Composite Sample

Time (hrs:mins)																				
Volume Purged (gals)																				
Temperature (Celsius)																				
pH																				
Specific Conductance (uS)																				
Dissolved Oxygen (mg/L)																				
Turbidity (NTU)																				
Redox Potential (mV)																				
Alkalinity (mg/L)																				
Ferrous Iron (mg/L)																				
Sulfide (mg/L)																				
Carbon Dioxide (mg/L)																				

Sample Equipment: \_ Hand Auger \_ Bailer \_ Ponar Dredge \_ Direct Push \_ Split Spoon \_ Bladder Pump \_ Hydro-cone \_ HydroPunch

COLOR: ODOR: OTHER:

ATHER:

SHIPMENT VIA:

✓ CLEAR \_\_\_ OVERCAST/RAIN \_\_\_ WIND DIRECTION \_\_\_ AMBIENT TEMP \_\_\_ FED-X \_\_\_ HAND DELIVER ✓ COURIER \_\_\_ OTHER \_\_\_

SHIPPED TO: SLS, Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Victor Clarke

OBSERVER: Michelle L. Jensen



**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
 PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE: FIELD

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID: **HAAFEB-SO**

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WQ

SAMPLING METHOD NA

DATE: 1/04/03 TIME: 10:00

BEGINNING DEPTH: END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	3	HCL, Cool to 4 °C	SW5035	SW8260B	Volatile Organic Compounds	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3550C	SW8270C	Semi-Volatile Organics ( <del>Appendix IX</del> ) <u>PH</u>	SLS
1 L Amber Glass	2	Cool to 4 °C	SW3550C	SW8081A	Pesticides	SLS
			SW3550C	SW8082	PCB Compounds	

Equipment Blank for Soil Samples

Time (hrs mins)																			
Volume Purged (gals)																			
Temperature (Celsius)																			
pH																			
Specific Conductance (uS)																			
Dissolved Oxygen (mg/L)																			
Turbidity (NTU)																			
Redox Potential (mV)																			
Alkalinity (mg/L)																			
Ferrous Iron (mg/L)																			
Sulfide (mg/L)																			
CarbonDioxide (mg/L)																			

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: ODOR: OTHER:

✓ HER: SHIPMENT VIA:

LEAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  FED-X  HAND DELIVER  COURIER  OTHER

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: T.M. KELLER

OBSERVER: MICHELLE JESSUP



**FIELD SAMPLING REPORT**

FACILITY I.D. : HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411

SITE : FIELD

SUB-PROJECT #:

GRAB (  ) COMPOSITE (  )

SAMPLE ID: HAAFTB-W1

QC LEVEL AFCEE Level I

DUP./REP. OF:

MATRIX WQ

SAMPLING METHOD NA

DATE: 1/4/06

TIME: 1930

BEGINNING DEPTH:

END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	2	HCL, Cool to 4 °C	SW5030B	SW8260B	Volatile Organic Compounds	SLS

*Trip Blank*

Time (hrs mins)																			
Volume Purged (gals)																			
Temperature (Celsius)																			
pH																			
Specific Conductance (uS)																			
Dissolved Oxygen (mg/L)																			
Turbidity (NTU)																			
Redox Potential (mV)																			
Alkalinity (mg/L)																			
Ferrous Iron (mg/L)																			
Sulfide (mg/L)																			
CarbonDioxide (mg/L)																			

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR: \_\_\_\_\_ ODOR: \_\_\_\_\_ OTHER: \_\_\_\_\_

WEATHER: SUN/CLEAR  OVERCAST/RAIN  WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP \_\_\_\_\_ SHIPMENT VIA: FED-X  HAND DELIVER  COURIER  OTHER \_\_\_\_\_

SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: \_\_\_\_\_ OBSERVER: \_\_\_\_\_

125

### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

PROJECT #: 12001-9-3411

SITE: FIELD

112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569

PHONE: (770) 421-3400 / FAX: (770) 421-3486

SUB-PROJECT #:

GRAB ( ) COMPOSITE ( )

SAMPLE ID:

HAAFTB-W2

QC LEVEL

AFCEE Level I

DUP./REP. OF:

MATRIX

WQ

SAMPLING METHOD

NA

DATE: 1/5/02

TIME: 1200

BEGINNING DEPTH:

END DEPTH:

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	2	HCL Cool to 4 °C	SW5030B	SW8260B	Volatile Organic Compounds	SLS

Trip Blank

Time (hrs.mins)																				
Volume Purged (gals)																				
Temperature (Celsius)																				
pH																				
Specific Conductance (uS)																				
Dissolved Oxygen (mg/L)																				
Turbidity (NTU)																				
Redox Potential (mV)																				
Alkalinity (mg/L)																				
Ferrous Iron (mg/L)																				
Sulfide (mg/L)																				
Carbon Dioxide (mg/L)																				

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR:  ODOR:  OTHER:

CLEAR  OVERCAST/RAIN  WIND DIRECTION  AMBIENT TEMP  SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404

SAMPLER: Norman M Keller

OBSERVER: Michael Hernandez



### FIELD SAMPLING REPORT

FACILITY I.D.: HUNT  
SITE: FIELD

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
112 TOWN PARK DRIVE, KENNESAW, GA 30144-5569  
PHONE: (770) 421-3400 / FAX: (770) 421-3486

PROJECT #: 12001-9-3411  
SUB-PROJECT #:


GRAB ( ) COMPOSITE ( )		SAMPLE ID: <b>HAAFTB-W4</b>				
QC LEVEL	AFCEE Level I	DUP./REP. OF:				
MATRIX	WQ					
SAMPLING METHOD	NA	DATE:	TIME:	BEGINNING DEPTH:	END DEPTH:	
CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	LAB CODE
40 ml VOA	2	HCL, Cool to 4 °C	SW5030B	SW8260B	Volatile Organic Compounds	SLS

Trip Blank

Time (hrs:mins)																		
Volume Purged (gals)																		
Temperature (Celsius)																		
pH																		
Specific Conductance (uS)																		
Dissolved Oxygen (mg/L)																		
Turbidity (NTU)																		
Redox Potential (mV)																		
Alkalinity (mg/L)																		
Ferrous Iron (mg/L)																		
Sulfide (mg/L)																		
Carbon Dioxide (mg/L)																		

Sample Equipment:  Hand Auger  Bailer  Ponar Dredge  Direct Push  Split Spoon  Bladder Pump  Hydro-cone  HydroPunch

COLOR:	ODOR:	OTHER:
WATER:		SHIPMENT VIA:
<input type="checkbox"/> CLEAR <input type="checkbox"/> OVERCAST/RAIN <input type="checkbox"/> WIND DIRECTION _____ AMBIENT TEMP _____		FED-X <input type="checkbox"/> HAND DELIVER <input type="checkbox"/> COURIER <input type="checkbox"/> OTHER _____
SHIPPED TO: SLS: Savannah Labs, 5102 LaRoche Ave, Savannah Ga 31404		
SAMPLER:	OBSERVER:	

<b>FIELD SAMPLING REPORT</b>	 <b>LAW</b> <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small>	JOB NO. <u>12001-9-3411</u>
		JOB NAME <u>HAAP FTA</u>
		DATE <u>7/22/99</u> TIME <u>10:35/10:40</u>
		SAMPLING POINT <u>SB-26</u>
		LOCATION <u>FTA</u>

<b>SAMPLE INFORMATION</b>	SAMPLE I.D. NO. <u>SB-26-1</u> <u>SB-26-2</u>
MATERIAL: <u>WATER</u> <input checked="" type="checkbox"/> <u>SOIL</u> <input type="checkbox"/> <u>SLUDGE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
TYPE: <u>GRAB</u> <input checked="" type="checkbox"/> <u>COMPOSITE</u> <input type="checkbox"/> <u>OTHER (LIST)</u> _____	
HAZARDOUS?: <u>YES</u> <input type="checkbox"/> <u>NO</u> <input checked="" type="checkbox"/>	

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-26-1 1.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	↓	↓
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	↓	↓
<u>Encore</u>	<u>~ 5g</u>	<u>3</u>	<u>None</u>	<u>SB-26-2 5.5'</u>
<u>Glass</u>	<u>2 oz</u>	<u>1</u>	↓	↓
<u>Glass</u>	<u>4 oz</u>	<u>1</u>	↓	↓

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR; ETC.)  
Black / DK Brown Stained Sand Petroleum Odor

Duplicate A collected @ SB-26-1 (3 Encores, 1 2oz Glass, 1 4oz Glass)

LABORATORY RECEIPT:	DATE/TIME _____	CONDITION _____
COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)		

<b>FIELD MEASUREMENTS</b>	SAMPLES COLLECTED BY: <u>PK / KB</u>		
PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

<b>GENERAL INFORMATION</b>	WEATHER <u>Sunny</u>	AIR TEMP. <u>85°F</u>
SAMPLES SHIPPED TO: <u>General Labs</u>		
SPECIAL HANDLING: _____		
MODE OF SHIPMENT: <u>Car/Truck</u> <input checked="" type="checkbox"/> <u>BUS</u> <input type="checkbox"/> <u>PLANE</u> <input type="checkbox"/> <u>COURIER</u> <input type="checkbox"/>		

**WELL DEVELOPMENT FORMS**



## WELL DEVELOPMENT DATA

PROJECT NAME	<u>Hunter Army Airfield</u>	PROJECT NO.	<u>11-3551-0320</u>
DEVELOPED BY	<u>Atkinswell/Bill Craig</u>	CHECKED BY	<u>Gleason</u>
WELL NO.	<u>HMW-10</u>	SHEET	<u>1 of 4</u>
		SITE LOCATION	<u>Fire Training Area</u>

1. a. Date of installation: 10-03-95 b. Date of development: 10-07-95 to 10-09-95
2. Static Water Level
  - a. Before development: 7.54 (TCC) ft. date/time 10-07-95 823
  - b. At least 24 hrs. after development: 7.63 (TCC) ft. date/time 10-10-95 906
3. Organic Vapor
  - a. Before development: 0 ppm b. After development: 0 ppm
4. Quantity of water loss during drilling, if used: 0 gal.
5. Quantity of standing water in well and annulus before development: 8.77 gal.
6. Depth from top of well casing to bottom of well: 16.31 ft. (from well installation diagram)
7. a. Well diameter: 2 in. b. Screen length: 10.17 ft.
8. Minimum quantity of water to be removed: 177.12 gal. (attach calculation)
9. Depth to Top of Sediment
  - a. Before development: 16.09 ft. b. After development: 16.09 ft.
10. Physical character of water (before/after development): before - grayish color, slight fuel odor  
after - water has a grayish tint
11. Type and size of well development equipment: 2 in x 5 ft PVC/stainless steel airlift pump manufactured by QED Groundwater Specialist, powered driven by oilless air compressor
12. Description of surge technique, if used: manually surged with airlift pump with surge rings and wiper attached
13. Height of well casing above ground surface: 2.8 ft. (from well installation diagram)
14. a. Quantity of water removed: 49.5 gal. b. Time for removal: 4 hrs 25 mins hr/min.
15. a. 1-Liter water sample collected: 10/6 (time) 10-09-95 b. Water sample photographed? YES NO (circle one)
16. Final turbidity in nephelometric units: 49 NTUs
17. Final Imhoff cone measurements < 0.75 mL/L, if applicable: NA

# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Bob Leavelle/Bill Craig CHECKED BY OK SHEET 2 OF 4  
 WELL NO. HMW-10 SITE LOCATION Fire Training Area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-07-95 831	0	0	-	-	-	-	5 min Surge
10-07-95 939	8	0	5.73	68.2	193	7200	gray color, slight odor, stop pump, to fix pump
10-07-95 846	15	-	-	-	-	-	Start pump
10-07-95 856	25	-	-	-	-	-	gray color almost dry stopped pump
10-07-95 933	62	6	6.27	66.4	137	7200	changed pumps 5 min surge
10-07-95 1019	62	6	-	-	-	-	gray color, clean
10-07-95 1032	75	6.5	6.07	68.3	146	7200	well almost dry, pumped stopped allow for redox
10-07-95 1038	81	12	5.67	68.8	127	>200	7.54-wt (TOC) 5 min surge start pump
10-07-95 1509	81	12	-	-	-	-	gray color
10-07-95 1510	82	12	5.78	71.6	121	7200	purge dry 3ft. stop pump
10-07-95 1519	91	18	5.7	71.3	117	>200	manually purge
10-08-95 1455	91	18	5.36	72.3	114	>200	manually purge
10-08-95 1505	101	24	5.30	69.9	104	7000	brownish-gray color, foamy
10-08-95 1523	119	29	5.58	69.0	102	7200	foamy, gray color
10-08-95 1544	140	34	5.47	68.4	103	7200	

HF - Rev.

# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Heath Rowell Bill Co. Inc. CHECKED BY gr SHEET 3 OF 4  
 WELL NO. HMW-10 SITE LOCATION Fire Training Area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-08-95 1556	152	36.5	5.58	67.9	108	153.1	clearing
10-08-95 1612	168	40.0	5.42	67.8	103	159.4	
10-08-95 1637	<del>180</del> 193	45.0	5.28	68.4	106	113.0	clearing fairly
10-08-95 1647	203	45.5	-	-	-	-	stop purge NTUs will not lower
10-09-95 0415	203	45.5	-	-	-	-	Start manual purge
10-09-95 0915	204	45.5	5.59	65.5	107	85.5	clearing
10-09-95 0933	222	47	5.38	65.2	106	69.8	
10-09-95 0947	236	48	5.56	65.0	106	55.7	slightly foamy
10-09-95 0955	244	48.5	—	—	—	50.6	clearing
10-09-95 1001	250	49	—	—	—	50.9	
10-09-95 1010	265	49.5	5.47	65.4	96	49	<del>64.2</del>

4064

$$\begin{aligned} V &= 3.14 [(50 - .03) * .3 + .03] \\ &= .54 \times 8.77 \times 7.48 \\ &= 35.42 \end{aligned}$$

$$5 \times V = 177.12$$

HMW-10  
Hunter Army Airfield  
11-3551-0320  
10/07/95  
HAL

# WELL DEVELOPMENT DATA

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Matthew Crowell / Bill Cing CHECKED BY Meagan SHEET 1 OF 4  
 WELL NO. HMW-11 SITE LOCATION Fire training Area

1. a. Date of installation: 10-03-95 b. Date of development: 10-06-95 to 10-07-95
2. Static Water Level
  - a. Before development: 11.03 (700) ft. date/time 10-06-95 1448
  - b. At least 24 hrs. after development: 11.21 ft. date/time 10-08-95 1816
3. Organic Vapor
  - a. Before development: 0 ppm
  - b. After development: 0 ppm
4. Quantity of water loss during drilling, if used: 0 gal
5. Quantity of standing water in well and annulus before development: 7.21 gal
6. Depth from top of well casing to bottom of well: 18.24 ft. (from well installation diagram)
7. a. Well diameter: 2 in. b. Screen length: 10.17 ft.
8. Minimum quantity of water to be removed: 145.61 gal. (attach calculation)
9. Depth to Top of Sediment
  - a. Before development: 18.02 ft.
  - b. After development: 18.02 ft.
10. Physical character of water (before/after development): before - gray color, silty  
after - slight <sup>grayish</sup> color
11. Type and size of well development equipment: 2.0 x 5ft PVC/stainless steel airlift pump  
manufactured by QED Groundwater specialist, power driven by oilless  
air compressor
12. Description of surge technique, if used: manually surged with airlift pump  
with surge rings and wiper attached
13. Height of well casing above ground surface: 2.0 ft. (from well installation diagram)
14. a. Quantity of water removed: 19 gal b. Time for removal: 1 hr 37 min hr./min
15. a. 1-Liter water sample collected: 1450 (time) 10-07-95 b. Water sample photographed? YES NO (circle one)
16. Final turbidity in nephelometric units: 45.2 NTUs
17. Final Imhoff cone measurements < 0.75 mL/L, if applicable: N/A

## WELL DEVELOPMENT DATA (continued)

PROJECT NAME	Hunter Army Airfield	PROJECT NO.	11-3551-0320
DEVELOPED BY	Heather Lowell/Bill Craig	CHECKED BY	JK
WELL NO.	HMW-11	SHEET	2 OF 11
		SITE LOCATION	Fire training Area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-05-95 1449	0	0	-	-	-	-	5 min surge
10-06-95 1451	8	0	5.91	74.8	236	>200	gray color, s. city
10-06-95 1503	14	3	6.20	74.8	155	7200	gray color, s. city foul odor
10-06-95 1505	16	3	-	-	-	-	pumped dry, Pumped stopped allow to back
<del>10-07-95</del> 10-07-95 753	16	3.5	5.40	68.8	182	7200	start pump shen on top WL = 110.2 TOC
10-07-95 801	24	5	6.09	68.5	141	>200	almost dry, pumped stopped allow to back
10-07-95 946	24	5.5	6.03	68.9	186	7200	start pump WL = 110.2 TOC
10-07-95 954	35	7	6.52	69.4	175	7200	well dry, stoppe pump
10-07-95 1346	35	7	5.59	73.8	153	38.5	manually bailed pump dry 3 times
10-07-95 1406	55	12	6.00	75.0	166	7200	
10-07-95 1413	62	13.5	6.02	73.5	165	>200	clearing
10-07-95 1419	68	14	6.08	72.2	165	165.9	
10-07-95 1422	71	14.5	6.01	71.8	166	115.5	
10-07-95 1432	81	15.5	6.03	71.6	166	99.9	slight fuel odor
10-07-95 1442	91	17.5	6.04	71.8	169	59.4	



# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0326  
 DEVELOPED BY Bob Laswell/Bill Ciggi CHECKED BY gpl SHEET 3 OF 4  
 WELL NO. H MW-11 SITE LOCATION Fire training area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-0795 1449	97	19	6.07	71.8	168	75.2	manual purge stopped; below 60 NTUs

4 of 4

$$\begin{aligned}V &= 3.14 [(.50 - .03) \cdot 3 + .03] \\ &= .54 \times 7.21 \times 7.48 \\ &= 29.12\end{aligned}$$

$$5 \times V = 145.61$$

AMW-11  
Hunter Army Airfield  
11-3551-0320  
10/06/95  
~~111~~

# WELL DEVELOPMENT DATA

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Heather Laswell / Bill Craig CHECKED BY Heather SHEET 1 OF 3  
 WELL NO. HMW-12 SITE LOCATION Fire Training Area

1. a. Date of installation: 10-02-95 b. Date of development: 10-05-95 to 10-06-95
2. Static Water Level
  - a. Before development: 11.50 (700) ft. date/time 8:25 10-05-95
  - b. At least 24 hrs. after development: 11.59 (700) ft. date/time 1743 10-08-95
3. Organic Vapor
  - a. Before development: 0 ppm b. After development: 0 ppm
4. Quantity of water loss during drilling, if used: 0 gal
5. Quantity of standing water in well and annulus before development: 28.2 gal
6. Depth from top of well casing to bottom of well: 18.48 <sup>18.71</sup> 18.71 (700) ft. (from well installation diagram)
7. a. Well diameter: 8.5 in. b. Screen length: 10.17 ft
8. Minimum quantity of water to be removed: 140.96 gal. (attach calculation: )
9. Depth to Top of Sediment
  - a. Before development: 18.48 ft. b. After development: 18.48 ft.
10. Physical character of water (before/after development): Before - no odor, brown color  
after - no odor, water is clear
11. Type and size of well development equipment: 2in x 5ft pvc/stainless steel air lift pump  
manufactured by QED Groundwater specialist power driven by oil/air  
air compressor
12. Description of surge technique, if used: manually surged with air lift pump  
with surge rings and wiper attached
13. Height of well casing above ground surface: 2.8 ft. (from well installation diagram)
14. a. Quantity of water removed: 141 gal. b. Time for removal: 4 hrs 55 mins hr/min.
15. a. Liter water sample collected: 1300 (time) (10-06-95) b. Water sample photographed? YES NO (circle one)
16. Final turbidity in nephelometric units: 15.2 NTUs
17. Final Inhoff time measurement: 0.75 mL/L, if applicable: N/A

# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Heather Lowell Birkraig CHECKED BY JK SHEET 2 OF 2  
 WELL NO. HMW-12 SITE LOCATION Fire Training Area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-05-95 0931	5 min surge	1	5.64	68.5	134	X200	no odor, brown color, some silt & sand present
10-05-95 0958	38	15	5.02	70.0	124 <del>158</del>	7200	clearing, stop pump, allow rec
10-05-95 1017	51	15.5	5.00	71.3	140	>200	5 min surge, brown color, silt
10-05-95 1048	82	30	4.75	70.1	127	7200	clearing, stop pump, allow rec
10-05-95 1110	104	30.5	4.94	70.8	123	>200	5 min surge, brown color
10-05-95 1149	143	55	—	—	—	—	clearing, stop pump, for
10-05-95 1320	143	57	4.62	71.4	149	>200	start pump clearing
10-05-95 1351	174	77	4.55	70.7	121	199.2	clearing
10-05-95 1407	190	80	4.57	71.1	121	150.1	stop pump - allow recharge - clear sulfur odor
10-05-95 1500	—	—	—	—	—	—	stop pump
10-05-95 115	190	80	5.07	70.8	139	>200	start pump
10-05-95 1145	220	103	4.61	70.5	162	121.2	
10-05-95 1220 <del>1230</del>	255 <del>245</del>	125	4.68	71.1	157	415	clearing
10-05-95 1300	295	141	4.64	70.4	148	15.2	clear
10-05-95	—	—	—	—	—	—	—

3 of 3 <sup>140</sup>

$$\begin{aligned}V &= 3.14 [(50 - .03) \cdot 3 + .03] \\ &= .54 \times 6.98 \times 7.48 \\ &= 28.2\end{aligned}$$

$$\begin{aligned}5 \times V \\ 140.96\end{aligned}$$

## WELL DEVELOPMENT DATA

PROJECT NAME	<u>Hunter Army Airfield</u>	PROJECT NO.	<u>11-3551-0320</u>
DEVELOPED BY	<u>Boydwell/Bill Craig</u>	CHECKED BY	<u>Maym</u>
WELL NO.	<u>HMW-13</u>	SHEET	<u>21</u> OF <u>2</u>
		SITE LOCATION	<u>Fire Training Area</u>

1. a. Date of installation: 10-03-95 b. Date of development: 10-08-95
2. Static Water Level
- a. Before development: 12.81 ft. date/time 10-08-95 832
- b. At least 24 hrs. after development: 12.93 ft. date/time 10-09-95 1031
3. Organic Vapor
- a. Before development: 0 ppm b. After development: 0 ppm
4. Quantity of water loss during drilling, if used: 0 gal
5. Quantity of standing water in well and annulus before development: 2 gal
6. Depth from top of well casing to bottom of well: 20.81 ft. (from well installation diagram)
7. a. Well diameter: 2 in. b. Screen length: 10.17 ft
8. Minimum quantity of water to be removed: 157.73 gal. (attach calculation)
9. Depth to Top of Sediment
- a. Before development: 20.62 ft. b. After development: 20.60 ft
10. Physical character of water (before/after development): before - first 30 mins were grey when clearing, etc. after - the water appears clearer
11. Type and size of well development equipment: 2 in x 5 ft PVC/stainless airlift pump manufactured by QED Groundwater Specialist, power driven by oilless air compressor
12. Description of surge technique, if used: manually surged with airlift pump with surge rings and wiper attached
13. Height of well casing above ground surface: 2.5 ft. (from well installation diagram)
14. a. Quantity of water removed: 150 gal. b. Time for removal: 4 hrs 20 mins hr./min.
15. a. 1-Liter water sample collected: 1241 (time) b. Water sample photographed? YES NO (circle one)
16. Final turbidity in nephelometric units: 9.7 NTUs
17. Final Imhoff cone measurements < 0.75 mL, if applicable: NA



# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 DEVELOPED BY Walter Howell / Bill Cragg CHECKED BY gc SHEET 2 OF 3  
 WELL NO. HAW-13 SITE LOCATION Fire Training Area

DATE/TIME	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
10-08-95 835	0	0	-	-	-	-	begin the 5 min surge
10-08-95 844	9	0	5.80	63.8	260	7200	gray color foamy
10-08-95 918	43	31.5	5.95	65.3	251	39.4	clearing pump stopped foamy allow recharge
10-08-95 938	63	31.5	5.89	65.6	245	7200	5 min surge p. started, gray color foamy
10-08-95 950	75	36.	5.93	67.0	255	7200	clearing fuel odor
10-08-95 1008	83	55	5.96	67.0	252	48.5	clearing
10-08-95 1036	115	73	5.94	68.1	249	64.6	stop pump allow for recharge
10-08-95 1050	135	73.5	6.41	69.3	205	7200	5 min surge fuel odor gray color
10-08-95 1155	200	124	5.87	69.7	239	36.2	clearing
10-08-95 1200	225	137	5.92	70.3	251	14.9	clearing
10-08-95 1241	266	158	5.94	70.3	242	9.7	

3 of 3

$$\begin{aligned} V &= 3.14 [(650 - .03) * .3 + .03] \\ &= .54 \times 7.81 \times 7.48 \\ &= 31.55 \end{aligned}$$

$$5 \times V = \begin{array}{r} 157.73 \\ \cancel{157.78} \end{array}$$

HMW13  
Hunter Army Airfield  
143551-0320  
10/08/95  
HWA

**WELL DEVELOPMENT DATA**

PROJECT NAME HUNTER AAF PROJECT No. 12001-9-3411

DEVELOPED BY TAK DAK CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-14R Site Location: FIRE TRAINING AREA

2. Date of Installation: 1-7-00

3. Date of Development: 1-11-00

4. Static Water Level: Before Development 12.84 ft.; At Least 24 hrs. After 12.62 ft.

5. Organic Vapor: Before Development 0.3 ppm; After Development 0.0 ppm

6. Quantity of Water Loss During Drilling, If Used: 10 gal.

7. Quantity of Standing Water in Well and Annulus Before Development: 9.2 gal.  
*W.C. = 7.53*

8. Depth From Top of Well Casing to Bottom of Well: 20.37 ft. (from Well Installation Diagram)

9. Well Diameter: 2" in.

$$\begin{array}{r} 20.37 \\ 12.84 \\ \hline 7.53 \end{array}$$

10. Screen Length: 9.74 ft.

11. Minimum Quantity of Water to be Removed:  $(9.2 + 10) \cdot 5 = 96$  gal.

12. Depth to Top of Sediment: Before Development 20.32 ft.; After Development NA ft.

13. Physical Character of Water (Before/After Development): BEFORE VERY TURBID - MUCH FINE SAND

14. Type and Size of Well Development Equipment: AIR DISPLACEMENT PUMP

15. Description of Surge Technique, If Used: LIFT PUMP UP/DOWN RAPIDLY

16. Height of Well Casing Above Ground Surface: 2.0 ft. (from Well Installation Diagram)

17. Quantity of Water Removed: 140 gal. Time for Removal: 7.5 hrs hr./min.

18. 1-Liter Water Sample Collected: 1 (Time) Photographed? (Y) / N

19. Final Turbidity in Nephelometric Units: 15.8 NTUs

20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

WELL DEVELOPMENT DATA (continued)

PROJECT NAME HUNTER AAF PROJECT NO. 2001-9-3911  
 DEVELOPED BY THK DAN CHECKED BY \_\_\_\_\_ SHEET 2 OF \_\_\_\_\_  
 WELL NO. HMW-14R SITE LOCATION FARMER FIRE TRAINING AREA

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	pH	TEMP.	COND.	NTUS	REMARKS
11:00 9:45	START						SURGING PUMP UP/DOWN PUMP D. REACT INTO DRUM
10:50	65/65	27/27	-	-	-	-	SURGING, WATER TURBID BUT VERY HIGH SAND STOP HOPE UP PRESSURE
11:40	0/65	0/27	5.92	21.1	256	>1000	RESUME RAMPING
12:00	20/85	6/36	5.78	21.2	193	>1000	
12:18	18/103	5/41	5.72	21.2	182	402	SURGED PUMP UP/DOWN
12:35	17/120	6/47	5.81	21.1	164	460	
12:50	15/135	5/52	5.65	21.3	152	440	SURGED
13:05	15/150	6/58	5.65	21.3	170	-	
13:35	30/180 STOP FOR WORK	10/68	5.61	21.2	160	-	STOP FOR WORK
14:10	0/180	0/68	-	-	-	-	RESUME
14:20	10/190	4/72	5.62	21.2	164	381	SURGE
14:45	25/215	8/80	5.87 <del>5.74</del>	21.1	155	673	
15:00	15/230	6/86	5.57	21.1	176	241	PUMPING AIR
15:15	15/245	3/89	5.56	21.1	165	178	PUMPING AIR
15:30	15/260	3/92	5.55	21.07	163	-	

FIGURE B-3

WELL DEVELOPMENT DATA (continued)

PROJECT NAME HUNTER AAF PROJECT NO. 1201-9-341  
 DEVELOPED BY TMK / D. HICK CHECKED BY \_\_\_\_\_ SHEET 3 OF \_\_\_\_\_  
 WELL NO. 4MW-14R SITE LOCATION FORMER FIRE TRAINING AREA

DATE/TIME	MINUTE DEV./ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
1-11-00 15:45	15/ 275	3/95	5.54	21.07	162	96.8	
16:00	15/290	2/97	5.54	21.06	162	73.4	
16:15	15/305	3/100.64	5.53	21.02	161	58.3	
16:30	15/320	3/103	5.53	21.00	162	50	
16:45	15/335	3/106	5.51	20.99	160	41.3	
17:05	20/355	5/111	5.51	20.93	160	31.6	
17:17	12/367	-	5.51	20.90	159	28.5	
17:30	13/380	-	5.51	20.85	160	24.6	
17:45	15/395	-/125	5.51	20.81	159	21.3	
18:00	15/410	3/128	5.49	20.77	159	19.4	
18:20	20/430	8/136	5.51	20.73	158	15.7	
18:30	10/450	4/140	5.49	20.71	158	15.8	
	STOP						

**WELL DEVELOPMENT DATA**

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-3411  
DEVELOPED BY GH and MJ CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-15 Site Location: FTA - Hunter Army Airfield
2. Date of Installation: 7-28-99
3. Date of Development: 8-26-99
4. Static Water Level: Before Development 7.09 ft.; At Least 24 hrs. After \_\_\_\_\_ ft.
5. Organic Vapor: Before Development 0.0 ppm; After Development 0.0 ppm
6. Quantity of Water Loss During Drilling, If Used: 2.0 gal.
7. Quantity of Standing Water in Well and Annulus Before Development: 8.52 gal.
8. Depth From Top of Well Casing to Bottom of Well: 16.20<sup>?</sup> ft. (from Well Installation Diagram)
9. Well Diameter: 2 in.
10. Screen Length: 10 ft.
11. Minimum Quantity of Water to be Removed: 52 gal.
12. Depth to Top of Sediment: Before Development 116.15 ft.; After Development 116.16 ft.
13. Physical Character of Water (Before/After Development): Extremely turbid; dark gray to black in color; petroleum odor and/or sulfur odor
14. Type and Size of Well Development Equipment: QED 65" development pump (PVC)
15. Description of Surge Technique, If Used: Hand surged with pump that contained washers on top + bottom. Surged 10 times then pumped 40 to 50 mins.; surged 10 times, pumped 40-50 mins, etc.
16. Height of Well Casing Above Ground Surface: 1.5 ft. (from Well Installation Diagram)
17. Quantity of Water Removed: 162 gal. Time for Removal: 7.0 hr./min.
18. 1-Liter Water Sample Collected: 8-31-99 / 1741 (Time) Photographed? (Y) / N
19. Final Turbidity in Nephelometric Units: 452 NTUs
20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA



WATER ANALYSIS REPORT  
(Continued)

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-3411  
 DEVELOPED BY QAH / YJ CHECKED BY \_\_\_\_\_ SHEET 2 OF 2  
 Well No.: 14MW-15 Site Location: FTA

Date/Time	Hrs. Dev / Cum. Hrs. Dev.	Gals. Purged / Cum. Gals. Purged	pH	Temp. °C	Cond. ms/cm	NTUs	Remarks
8-26-99 1517	∅	∅	7.01	23.9	0.025	over cal	very turbid; black to dark gray
1650	1hr, 33min <del>20</del>	~ 20/20	6.40	23.9	0.024	over cal	same as above / slight petroleum odor
1738	48min / 2hrs, 21mins	~ 30/50	6.98	22.9	0.024	over cal	↓
1800	22 mins / 2hrs, 43mins	~ <del>60</del> <sup>10</sup> / 60	7.11	23.2	0.026	558	↓
8-31-99 0930	∅ / 2hrs 43min	3 <del>∅</del> <sup>ms</sup> / 63	6.60	23.1	0.103	over cal	very turbid; black to dark gray; sulfur odor
1040	1hr 10mins / 3hrs 53mins	35 / 98	6.25	22.6	0.076	439	↓
1118	38mins / 4hrs 31mins	15 / 113	5.72	23.4	0.075	482	↓
1208	50 mins / 5hrs 21mins	12.5 / 125.5	5.74	24.2	0.076	248	light gray - brown sulfur odor
1245	37 mins / 5hrs 58mins	7.5 / 133	5.91	23.9	0.064	576	very turbid; black to dark gray; sulfur odor
1508	∅ / 5hrs 58mins	∅ / 133	5.90	23.7	0.065	558	↓
1635	20 mins / 6hrs 18mins	5 / 138	5.91	22.8	0.063	612	↓
1711	36 mins / 6hrs 54mins	9 / 147	5.91	22.7	0.063	604	↓
1741	30 mins / 7hrs, 24mins	15 / 162	5.87	22.4	0.063	452	↓

**WELL DEVELOPMENT DATA**

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-3411  
DEVELOPED BY JAH / KB / MJ CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

- 1. Well No.: HMW-16 Site Location: FTA - Hunter Army Airfield
- 2. Date of Installation: 7-29-99
- 3. Date of Development: 9-2-99
- 4. Static Water Level: Before Development 11.72 ft.; At Least 24 hrs. After \_\_\_\_\_ ft.
- 5. Organic Vapor: Before Development 0.2 ppm; After Development 0.0 ppm  
Borehole PID 4.0 ppm Borehole PID 3.4 ppm
- 6. Quantity of Water Loss During Drilling, If Used: 2.0 gal.
- 7. Quantity of Standing Water in Well and Annulus Before Development: 4.08 gal.
- 8. Depth From Top of Well Casing to Bottom of Well: 16.06 ft. (from Well Installation Diagram)
- 9. Well Diameter: 2 in.
- 10. Screen Length: 10 ft.
- 11. Minimum Quantity of Water to be Removed: 30.4 gal.
- 12. Depth to Top of Sediment: Before Development 16.06 ft.; After Development \_\_\_\_\_ ft.
- 13. Physical Character of Water (Before/After Development): Black, very turbid, strong petroleum odor.
- 14. Type and Size of Well Development Equipment: QED 65" development pump (PVC)
- 15. Description of Surge Technique, If Used: Hand surged with pump equipped with washers at top and bottom. Surged 10 times initially. Pumped at optimum rate of 0.2 Liters per minute.
- 16. Height of Well Casing Above Ground Surface: 1.77 ft. (from Well Installation Diagram)
- 17. Quantity of Water Removed: \_\_\_\_\_ gal. Time for Removal: \_\_\_\_\_ hr. / min.
- 18. 1-Liter Water Sample Collected: \_\_\_\_\_ (Time) Photographed? Y / N
- 19. Final Turbidity in Nephelometric Units: \_\_\_\_\_ NTUs
- 20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

**WELL DEVELOPMENT DATA**  
(Continued)

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 10001-9-3411  
 DEVELOPED BY JAH/KB/MJ CHECKED BY \_\_\_\_\_ SHEET 2 OF 2  
 Well No.: HMW-16 Site Location: FTA

Date/Time	Hrs. Dev/ Cum. Hrs. Dev.	Gals. Purged/ Cum. Gals. Purged	pH	Temp.	mS/cm Cond.	NTUs	Remarks
<del>9-2-99</del> 0920	<del>1</del> 1	<del>3</del> 3	6.04	22	6.097	OVER CAL	Gray-black, petroleum odor
9-2-99/ 1033	1hr 13min 2hr 13min	6 9	5.80	22.1	6.096	599	↓
9-2-99/ 1102	29min 2hr 42min	4 13	5.92	22.2	6.698	520	↓
9-2-99/ 1152	30min 3hr 32min	5 18	5.98	22.6	0.093	395	Milky brown; strong petroleum odor
9-2-99/ 1249	57min 4hr 29min	4 22	6.05	24.5	0.101	130	↓
9-2-99/ 1327	38min 5hr 7min	2 24	6.18	22.8	0.097	75	Light milky color; strong petroleum odor
9-2-99 1430	1hr 3min 6hr 10min	2 26	6.11	23.2	0.098	206	Milky Brown; petroleum odor
9-2-99 1600	∅ 6hr 10mins	∅ 26	5.989	23.4	0.097	168	Milky brown; petroleum odor
9-2-99 1650	50mins 7.0 hrs	6 32	5.72	23.4	0.099	104	↓
9-2-99 1720	30 mins 7.0 hrs 30	5 37	5.92	23.2	0.099	67.6	↓
9-3-99 0748	∅ 7.0 hrs 30m	∅ 37	5.40	22.2	0.094	160	↓
0830	42mins 8 hrs 12mins	~3.5 40.5	5.73	21.8	0.095	278	↓
0900	30mins 8 hrs 42 mins	~3.5 44	5.88	21.8	0.094	128	↓
0930	30mins 9 hrs 12mins	~3.5 47.5	5.97	22.1	0.096	87	↓
1000	30mins 9 hrs 42 mins	~3.5 51	5.87	22.4	0.097	71	↓
1030	30mins 10 hrs 12min	~1.5 52.5	5.94	22.5	0.097	38	↓

**WELL DEVELOPMENT DATA**  
(Continued)

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-3411  
 DEVELOPED BY JAH/MLJ/KB CHECKED BY \_\_\_\_\_ SHEET 23 OF 23  
 Well No.: HMW-16 Site Location: FTA

Date/Time	Hrs. Dev/ Cum. Hrs. Dev.	Gals. Purged/ Cum. Gals. Purged	pH	Temp.	Cond.	NTUs	Remarks
9-3-99 1115	45 mins <del>10 hrs, 57 mins</del>	0.5 <del>53.54</del>	5.88	22.6 <del>20.99</del>	0.099	33	light milky clear; strong petroleum odor
1150	35 mins <del>11 hrs, 32 mins</del>	0.25 <del>53.25</del>	5.81	23.2	0.101	25	↓
1225	35 mins <del>12 hr 7 mins</del>	0.25 <del>53.5</del>	5.85	24.6	0.104	33	↓
1307	42 mins <del>12 hr 44 mins</del>	0.25 <del>53.75</del>	5.64	23.2	0.103	23.1	clear; strong petroleum odor
1340	33 mins <del>13 hrs 22 mins</del>	0.25 <del>54.0</del>	5.77	25.0	0.106	19.1	↓

**WELL DEVELOPMENT DATA**

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-341

DEVELOPED BY QPH/MJ CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-17 Site Location: ETA - Hunter Army Airfield

2. Date of Installation: 7-28-99

3. Date of Development: 9-1-99

4. Static Water Level: Before Development 8.10 ft.; At Least 24 hrs. After \_\_\_\_\_ ft.

5. Organic Vapor: Before Development 0.0 ppm; After Development 0.0 ppm

6. Quantity of Water Loss During Drilling, If Used: 2.0 gal.

7. Quantity of Standing Water in Well and Annulus Before Development: 7.18 gal.

8. Depth From Top of Well Casing to Bottom of Well: 15.91 ft. (from Well Installation Diagram)

9. Well Diameter: 2 in.

10. Screen Length: 10 ft.

11. Minimum Quantity of Water to be Removed: 45.9 gal.

12. Depth to Top of Sediment: Before Development 15.74 ft.; After Development 16.17 ft.

13. Physical Character of Water (Before/After Development): Very turbid; dark brown in color; no odors

14. Type and Size of Well Development Equipment: QED 65" development pump (PVC)

15. Description of Surge Technique, If Used: Hand surged with pump equipped with washers at top and bottom. Surged 10 times initially; pumped at a rate of approximately 2 gallons/min for 1hr; surged again, pump; surge again and pump

16. Height of Well Casing Above Ground Surface: 1.91 ft. (from Well Installation Diagram)

17. Quantity of Water Removed: 382 gal. Time for Removal: 6.0 hr. / min.

18. 1-Liter Water Sample Collected: 9-1-99 / 1900 (Time) Photographed? (Y) / N

19. Final Turbidity in Nephelometric Units: 23.1 NTUs

20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

**WELL DEVELOPMENT DATA**  
(Continued)

PROJECT NAME Hunter Army Airfield CSR PROJECT No. 12001-9-3411

DEVELOPED BY JPH/MJ CHECKED BY \_\_\_\_\_ SHEET 2 OF 2

Well No.: HMW-17 Site Location: FTA

Date/Time	Hrs. Dev/ Cum. Hrs. Dev.	Gals. Purged/ Cum. Gals. Purged	pH	Temp.	Cond.	NTUs	Remarks
9-1-99/ 1045	<del>∅</del>	<del>∅</del>	6.18	27.9	0.083	1200	turbid; dark brown no odor
9-1-99/ 1145	1.0 hr 1.0 hr	25 25	5.90	27.1	0.074	991	↓
1245	1.0 hr 2.0 hrs	55 80	5.86	26.6	0.079	508	light brown ↓
1320	35 mins 2 hrs, 35 mins	66 146	5.83	26.7	0.079	250	↓
1545	<del>∅</del> 2 hrs, 35 mins	<del>∅</del> 146	5.53	28.1	0.083	102	tan
1620	35 mins 3 hrs, 10 mins	55 201	5.97	26.8	0.081	60	Light yellowish color
1652	32 mins 3 hrs, 42 mins	45 246	5.82	26.6	0.081	28.1	very light yellowish color
1725	33 mins 4 hrs, 15 mins	37 283	5.81	27.0	0.082	38	Light milky color
1800	45 mins 5.0 hrs	27 310	5.52	26.3	0.082	42	Light milky color
1830	30 mins 5 hrs, 30 mins	36 346	5.82	26.6	0.082	26.6	almost clear ↓
1900	30 mins 6.0 hrs	36 382	5.94	25.9	0.080	23.1	↓



**WELL DEVELOPMENT DATA**

PROJECT NAME HUNTER AAF PROJECT No. 12-001-9-3411

DEVELOPED BY Victor Clark CHECKED BY J. Hartness SHEET 1 OF 2

1. Well No.: HMW-13 Site Location: FORM FIRE TRAINING AREA

2. Date of Installation: 1-8-00

3. Date of Development: 1-14-00 through 1-15-00

4. Static Water Level: Before Development 8.66 ft.; At Least 24 hrs. After 8.46 ft.

5. Organic Vapor: Before Development NA ppm; After Development 1.8 ppm

6. Quantity of Water Loss During Drilling, If Used: 20 gal.

7. Quantity of Standing Water in Well and Annulus Before Development: 7.7 x 5<sup>ft</sup> <sup>TOTAL</sup> gal.

8. Depth From Top of Well Casing to Bottom of Well: 14.93 ft. (from Well Installation Diagram)

9. Well Diameter: 2" in.

10. Screen Length: 9.74 ft.

11. Minimum Quantity of Water to be Removed: 138 gal.

12. Depth to Top of Sediment: Before Development 14.88 ft.; After Development 14.98 ft.

13. Physical Character of Water (Before/After Development): Turbid

14. Type and Size of Well Development Equipment: QED Purge Pump

15. Description of Surge Technique, If Used: Pump + Surge

16. Height of Well Casing Above Ground Surface: 2.5 ft. (from Well Installation Diagram)

17. Quantity of Water Removed: 139 gal. Time for Removal: 6.0 hr. / min.

18. 1-Liter Water Sample Collected: 1-15-00 at 16:17 (Time) Photographed? (Y) / N

19. Final Turbidity in Nephelometric Units: 0.58 NTUs

20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA



FIGURE B-3

WELL DEVELOPMENT DATA (continued)

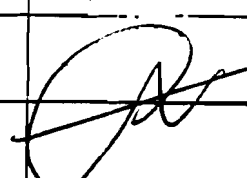
PROJECT NAME LUNTER AAF PROJECT NO. 12001-9-3411  
 DEVELOPED BY VRC & MWH CHECKED BY J. Hartness SHEET 2 OF 3  
 WELL NO. H MW-18 SITE LOCATION Former Fire Training Area

DATE/ TIME	MINUTE DEV./ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	PH	TEMP.	COND.	NTUs	REMARKS
1-15-00 0818	15/145	1/45	4.70	18.07	0.53	56.1	Surge
0833	15/150	1/46	4.69	18.25	0.54	59.4	
0848	15/165 <del>165</del>	3/49	4.63	18.18	0.57	232	Surge
0903	15/180	5/54	4.68	17.16	0.50	52.3	
0918	15/195	5/59	4.67	17.26	0.51	12.3	Surge
0933	15/210	3/62	4.63	17.48	0.54	32.8	
0949	15/225	3/65	4.64	17.63	0.55	8.4	
1004	15/240	3/68	4.61	17.76	0.56	95.4	Surge
1014	15/255	3/71	4.60	17.74	0.57	76.0	
1034	15/270	3/74	4.61	17.74	0.59	124	Surge
1049	15/285 <del>225</del>	3/77	4.58	17.85	0.59	216	
1104	15/300	3/80	4.58	17.80	0.58	76	
1119	15/315	3/83	4.57	17.79	0.60	79.5	
1134	15/330	5/88	4.58	17.62	0.60	36.6	
1149	15/345	3/91	4.59	17.86	0.59	17.3	

FIGURE B-3

WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter AAF PROJECT NO. 12001-9-3411  
 DEVELOPED BY VRC & MWH CHECKED BY J. Harness SHEET 3 OF 3  
 WELL NO. HMW-18 SITE LOCATION Former Fire Training Area

DATE/ TIME	MINUTE DEV./ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
1-15-00 12:04	15/400	5/96	4.59	18.38	0.58	72	
12:19	15/415	5/101	4.60	18.22	0.57	51	
12:34	15/430	5/106	4.61	18.42	0.59	49	
<del>12:49</del> 12:49	15/445	5/111	4.61	18.43	0.59	43	
13:05	15/460	5/116	4.62	18.51	0.59	32	
13:20	15/475	5/121	4.62	18.54	0.61	21.4	
13:35	15/490	5/124	4.56	18.24	0.61	15.2	
13:50	15/505	3/127	4.59	18.10	0.60	31.9	
14:05	15/520	3/130	4.60	18.19	0.59	20.7	
14:20	15/535	3/133	4.60	18.19	6.58	15.2	
14:35	15/550	3/136	4.60	18.33	0.56	13.3	
14:50	15/6	3/139	4.59	17.97	0.58	3.57	
		END 14:55					
		1-15-00					
							

WELL DEVELOPMENT DATA

PROJECT NAME HUNTER AAF PROJECT No. 12001-9-3411

DEVELOPED BY MH, VC CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-19 Site Location: FORMER FIRE TRAINING AREA

2. Date of Installation: 1-8-00

3. Date of Development: 1-13-00 →

4. Static Water Level: Before Development 8.94 (TOL) ft.; At Least 24 hrs. After 8.90 ft.

5. Organic Vapor: Before Development 1.4 ppm; After Development NM ppm

6. Quantity of Water Loss During Drilling, If Used: 20 gal.

7. Quantity of Standing Water in Well and Annulus Before Development: ≈ 9.5 gal.

8. Depth From Top of Well Casing to Bottom of Well: 16.83 ft. (from Well Installation Diagram)

9. Well Diameter: 2" in.

16.83  
8.94  
-----  
7.89 w.c. loss

10. Screen Length: 9.80 ft.

11. Minimum Quantity of Water to be Removed: 47 + 100 = 147 gal.

12. Depth to Top of Sediment: Before Development 16.77 ft.; After Development NA ft.

13. Physical Character of Water (Before/After Development): V. Dark brown grey

14. Type and Size of Well Development Equipment: Air Displacement pump

15. Description of Surge Technique, If Used: Surge Pump up & down

16. Height of Well Casing Above Ground Surface: 2.3 ft. (from Well Installation Diagram)

17. Quantity of Water Removed: 41 gal. Time for Removal: 7.5 hrs hr. / min.

18. 1-Liter Water Sample Collected: \_\_\_\_\_ (Time) Photographed? (Y) / N

19. Final Turbidity in Nephelometric Units: 4.4 NTUs

20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

FIGURE B-3

WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter AFB PROJECT NO. 12001-9-3411  
 DEVELOPED BY VRC/MWH/TMK CHECKED BY \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 WELL NO. MMW-19 SITE LOCATION Former Fire Training Area

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	pH	TEMP.	COND.	NTUS	REMARKS
<del>1-13-00</del> <del>14:45</del>		20	-	-	-	-	SETUP PERISTALTIC PUMP C1100 - PUMP AT 12:00
14:45	START	START 20	-	-	-	-	SETUP DEV PUMP - PURGE SILVER - REMOVED PERISTALTIC PUMP
15:30	45/45	10/30	5.59	19.49	243	7100	SURGE SER # Beta 4417
15:45	15/60	5/35	6.02	19.36	<del>233</del> 233	>1000	
16:00	15/75	5/40	5.48	19.28	241	158	SURGE TEST ARTER READING
16:15	15/90	2/42	5.49	19.26	240	159.0	
16:30	15/95	2/44	5.46	19.33	237	20.4	
16:45	15/110	12/46	5.57	19.17	247	463	
17:00	15/125	24/48.5	5.54	19.14	240	130	
17:15	15/140	2.5/51.0	5.52	19.05	233	304	
17:30	15/155	3/54	5.49	19.03	231	88	
17:45	15/210	3/57	5.50	19.04	<del>225</del> 225	73.4	

FIGURE B-3

# WELL DEVELOPMENT DATA (continued)

PROJECT NAME Hunter AAF PROJECT NO. 12001-9-34H  
 DEVELOPED BY VCL & MLJ CHECKED BY \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 WELL NO. HMW-19 SITE LOCATION Exxon Fire Training Area

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	PH	TEMP. °C	COND. µS/cm	NTUS	REMARKS
<del>1-14-00</del> <del>1-15-00</del>		5	-	-	-	-	Set up pump get flow set
8:00	start	5	-	-	-	-	Begin readings
8:15	30/30	5/11=6	5.66	16.53	227	52.8	Flowing clearing up surge well after taking readings
8:30	15/45	2.5/8.5	5.60	16.52	198	151	Surged after reading
8:45	<sup>15</sup> 30 / <sup>MLJ</sup> 60	2.5/11	<sup>MLJ</sup> 5.58	16.53	195	373	Surged after reading
9:00	<sup>15</sup> 45 / <sup>MLJ</sup> 75	2.5/13.5	5.58	16.54	193	65.3	Surged after reading
09:15	15/90	2.5/16	5.56	16.68	192	302	
09:30	15/105	2.5/18.5	5.55	16.70	195	87.2	(Surged AR)
09:45	15/120	2.5/21	5.56	17.07	196	137.2	
10:00	15/135	2.5/23.5	5.55	17.48	204	59.8	Surged
10:15	15/150	3.5/26	5.55	17.52	207	233	
10:30	15/165	2.5/28.5	5.53	17.41	207	70.0	(Surge)
10:45	15/180	2.5/31	5.54	17.58	196	177.5	
11:00	15/195	2.5/33.5	5.54	17.96	197	55.9	
11:15	15/210	2.5/36	5.54	18.15	196	19.3	



# WELL DEVELOPMENT DATA (continued)

PROJECT NAME <u>Hunter AAF</u>	PROJECT NO. <u>13601-9-3411</u>
DEVELOPED BY <u>VRC &amp; MLJ</u>	CHECKED BY _____ SHEET _____ OF _____
WELL NO. <u>HMW-19</u>	SITE LOCATION <u>Former Fire Training Area</u>

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
1130	15/325	2.5/38.5	5.52	18.18	200	7.50	Called Dave
1145	15/240	2.5/41	5.52	17.94	200	4.40	

**WELL DEVELOPMENT DATA**

PROJECT NAME HUNTER AAF PROJECT No. 17201-9-3411

DEVELOPED BY TMK/DAH/MLN CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-20 Site Location: FORMER FIRE TRAINING AREA

2. Date of Installation: 1-9-00

3. Date of Development: 1-12-00

4. Static Water Level: Before Development 6.91 ft.; At Least 24 hrs. After 6.50 ft.

5. Organic Vapor: Before Development 1.6 ppm; After Development \_\_\_\_\_ ppm

6. Quantity of Water Loss During Drilling, If Used: 15 gal for charging gal.

7. Quantity of Standing Water in Well and Annulus Before Development: w.c. - 3.06' \_\_\_\_\_ gal.

8. Depth From Top of Well Casing to Bottom of Well: 14.97 ft. (from Well Installation Diagram)

9. Well Diameter: 2" in.

10. Screen Length: 9.69 ft.

14.97  
- 5.91  
-----  
8.06 WATER COLUMN

11. Minimum Quantity of Water to be Removed: 115 gal.

12. Depth to Top of Sediment: Before Development 14.91 ft.; After Development NA ft.

13. Physical Character of Water (Before/After Development): Very turbid dark grey brown

14. Type and Size of Well Development Equipment: AIR DISPLACEMENT PUMP

15. Description of Surge Technique, If Used: SURGE PUMP UP/DOWN

16. Height of Well Casing Above Ground Surface: 2.5 ft. (from Well Installation Diagram)

17. Quantity of Water Removed: 222 gal. Time for Removal: 7.2 hrs hr./min.

18. 1-Liter Water Sample Collected: 12:00 (Time) Photographed? Y/N

19. Final Turbidity in Nephelometric Units: 45.5 NTUs

20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: \_\_\_\_\_

WELL DEVELOPMENT DATA (continued)

PROJECT NAME HUNTERS AAF PROJECT NO. 12-01-9-3411  
 DEVELOPED BY TMK MWH CHECKED BY \_\_\_\_\_ SHEET 2 OF \_\_\_\_\_  
 WELL NO. HMW-20 SITE LOCATION FORMER FILE TRAINING AREA

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	PH	TEMP.	COND.	NTUs	REMARKS
11:00	START	—	—	—	—	—	SURGING PUMP UP/DOWN FROM SED. 12500/10000
11:10	10/10	1/1	6.31	20.14	80	>1000	SURGE
12:15	65/75	12/13	6.03	20.35	69	>1000	SURGE
12:30	15/90	3/16	6.02	20.31	71	>1000	SURGE
12:45	15/105	3/19	6.04	20.27	77	620	SURGE FLOW 203 TO 1000 ml/min
13:05	20/125	6/25	6.19	20.27	75	496	SURGE FLOW 1400 ml/min
13:25	20/145	9/34	6.05	20.36	75	491	
13:45	20/165	9/43	5.99	20.38	77	499	SURGE
14:05	20/185	9/52	5.96	20.43	77	—	
14:35	30/215	18/70	6.02	20.35	79	484	
15:00	25/240	6/76	5.94	20.34	80	493	SURGE
15:15	15/255	3/79	5.92	20.35	83	500	SURGE
15:30	15/270	3/82	5.94	20.36	73	365	SURGE
15:45	15/285	4/86	5.92	20.31	78	490	SURGE
16:00	15/300	4/90	5.91	20.28	79	420	

FIGURE B-3

WELL DEVELOPMENT DATA (continued)

PROJECT NAME HUNTER AAF PROJECT NO. 12001-9-3411  
 DEVELOPED BY TMR/TMH CHECKED BY \_\_\_\_\_ SHEET 3 OF \_\_\_\_\_  
 WELL NO. HMW-22 SITE LOCATION FORMER FIRE TRAINING ARE

DATE/ TIME 1-12-00	MINUTE DEV/ CUM. MIN. DEV.	GALS. PURGED/ CUM. GALS. PURGED	pH	TEMP.	COND.	NTUs	REMARKS
16:15	15/315	5/95	5.91	20.26	80	247	
16:30	15/330	7/102	5.90	20.23	81	204	
16:45	15/345	6/108	5.9	20.21	82	198	
17:00	15/360	3/111	5.89	20.19	83	173	PUMP HOSE ON GROUND, PARKING ELOW
17:20	20/380	4/115	5.89	20.15	84	166	
17:35	15/415	6/121	5.89	20.14	85	154	
17:45	10/425	5/126	5.89	20.11	85	143	
18:00	15/440	6/132	5.89	20.09	86	142	
-	-	STOP FOR NIGHT	-	-	-	-	
0800	15/455	12/150	5.76	20.02	88	105.5	
0815	15/470	6/156	5.75	20.04	NOT	78.3	NOT WORKING
0845	15/485	6/162	5.76	20.04	81	67.1	USED BACKUP BETA SER # 9407-3
0900	15/500	6/168	5.75	20.06	86	69.7	
0915	15/515	6/174	5.74	20.6	87	73.0	
0930	15/530	6/180	5.74	20.13	87	74.9	

WELL DEVELOPMENT DATA (continued)

PROJECT NAME HUNTER AAF PROJECT NO. 12001-9-3411  
 DEVELOPED BY VRC/MWH CHECKED BY \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 WELL NO. HMW-20 SITE LOCATION FORMER FIRE TRAINING AREA

DATE/TIME	MINUTE DEV./CUM. MIN. DEV.	GALS. PURGED/CUM. GALS. PURGED	pH	TEMP.	COND.	NTUS	REMARKS
0945	15/545	4/85	5.74	20.13	87	74.9	
1000	15/600	4/189	5.74	20.19	87 <del>86</del>	89.5 <del>75.7</del> u	
1015	15/615	4/193	5.74	20.21	88	95.2	
1030	15/630	4/197	5.72	20.10	86	56.2	
1045	15/645	4/201	5.72	20.14	95	55.5	
1100	15/660	4/205	5.72	20.17	1.03	52.0	
1115	15/675	4/209	5.71	20.23	1.10	47.0	
1130	15/700	4/214	5.71	20.25	1.13	46.4	
1145	15/715	4/218	5.71	20.28	1.15	46.0	
1200	15/730	4/222	5.71	20.28	1.17	45.5	
		STOP PHOTOGRAPH WATER					

ATTACHMENT 5.3  
WELL DEVELOPMENT DATA

PROJECT NAME Noween AAF PROJECT No. 12001-9-3411  
DEVELOPED BY John Martin CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HAW-21 Site Location: FTA, SB-43
2. Date of Installation: 11-1-01
3. Date of Development: 11-2-01
4. Static Water Level: Before Development 10.43 ft.; At Least 24 hrs. After 10.54 ft.
5. Organic Vapor: Before Development 0.0 ppm; After Development 0.0 ppm
6. Quantity of Water Loss During Drilling, If Used: 0.0 gal.
7. Quantity of Standing Water in Well and Annulus Before Development: 8.52 gal.
8. Depth From Top of Well Casing to Bottom of Well: 14.97 ft. (from Well Installation Diagram)  
MEASURED
9. Well Diameter: 2 in.
10. Screen Length: +0 9.5 ft.
11. Minimum Quantity of Water to be Removed: 42.6 gal.
12. Depth to Top of Sediment: Before Development 0 ft.; After Development \_\_\_\_\_ ft.
13. Physical Character of Water (Before/After Development): LIGHT to MEDIUM GREY, CLOUDY  
WITH SUSPENDED FINES. / SAME AFTER
14. Type and Size of Well Development Equipment: 2" PVC SURGE BLOCK, WHALE  
SUBMERSIBLE 921 12V D.C. PUMP ~ 1 1/2" O.D.
15. Description of Surge Technique, If Used: SURGED THROUGH FULL H<sub>2</sub>O COLUMN FOR ~ 10 MIN.  
PAUSE TO PURGE, REPEATED (AS WELL RECHARGED) 3 TIMES. ADDED 3 gal OF D.I. H<sub>2</sub>O  
AND SURGED FOR ~ 20 MIN. ALSO SURGED w/ PUMP WHILE PURGING.
16. Height of Well Casing Above Ground Surface: 3 ft. (from Well Installation Diagram)
17. Quantity of Water Removed: 34 gal <sup>11-2-01</sup> / 57 <sup>11-5-01</sup> gal. Time for Removal: 1 1/2 hr <sup>11-2-01</sup> PURGE + 6 <sup>11-5-01</sup> hr. 1 mir  
Chp 10 min TOTAL 12 hr 10 min TOTAL
18. 1-Liter Water Sample Collected: 1730 <sup>11-2-01</sup> / 2000 <sup>11-5-01</sup> (Time) Photographed? (Y) N
19. Final Turbidity in Nephelometric Units: >1000 <sup>11-2-01</sup> / 100.2 <sup>11-5-01</sup> NTUs
20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

C-140

ATTACHMENT 5.3 (CONTD)  
WELL DEVELOPMENT DATA  
 (Continued)

PROJECT NAME HUNTER AAF PROJECT No. 12001-9-3411  
 DEVELOPED BY JOHN MARTIN CHECKED BY \_\_\_\_\_ SHEET 2 OF 2  
 Well No.: HAW-21 Site Location: FTA, SR-43

Date/Time	Hrs. Dev./ Cum. Hrs. Dev.	Gals. Purged/ Cum. Gals. Purged	pH	Temp.	Cond.	NTUs	Remarks
11-2-01 1120	1.5 min / 1.5 min	1.5 / 1.5	5.72	72.5	132.3	>1000	WELL COINS DRZ IMMEDIATELY
11-2-01 1442	12 min / 13.5 min	19.5 / 16.5	5.71	73.2	137.0	71000	ADDED 3 gal H <sub>2</sub> O AND SURGED FOR 20 min
11-2-01 1510	7 min / 20.5 min	1.5 / 18.0	5.76	72.6	106.4	>1000	No Improvement
9/15 1535 1625	15 min / 35.5 min	3.0 / 21.0	5.78	72.6	101.3	>1000	OUT FLOW RATE TO A TACKLE
9/15 1600 1635	10 min / 45.5 min	2.0 / 23.0	5.78	72.1	975.0	>1000	
11-2-01 1620	20 min / 1 hr 5.5 min	2.0 / 25.0	5.79	72.2	978.0	71000	
11-2-01 1700	10 min / 1 hr 15.5 min	5.0 / 30.0	5.76	72.0	977.2	71000	
11-2-01 1730	15 min / 1.5 hr	4.5 / 34.5	5.75	71.9	977.0	>1000	
11-5-01 1836	30 min / 30 min	2.5 / 37.0	5.96	70.9 69.3	151.0	>1000	MAINTAINED FLOW AT A TACKLE
11-5-01 1500	30 min / 1 hr	1 / 38.0	6.04	72.1 70.9	145	767	~3 to 3.5 gal/hr.
11-5-01 1530	30 min / 1.5 hr	2.0 / 40.0	6.06	71.3	146	404	
11-5-01 1600	30 min / 2.0 hr	1.5 / 41.5	6.09	71.2	143	407	
11-5-01 1700	1 hr / 3.0 hr	4.0 / 45.5	6.15	70.8	140	247	
11-5-01 1800	1 hr / 4.0 hr	3.0 / 48.0	6.13	70.9	136	146	
11-5-01 1900	1 hr / 5.0 hr	3.5 / 51.5	6.10	70.9	135	106.6	
11-5-01 2000	1 hr / 6.0 hr	5.5 / 57.0	6.14	70.8	130	100.2	WORKS WELL AT A TACKLE



ATTACHMENT 5.3  
WELL DEVELOPMENT DATA

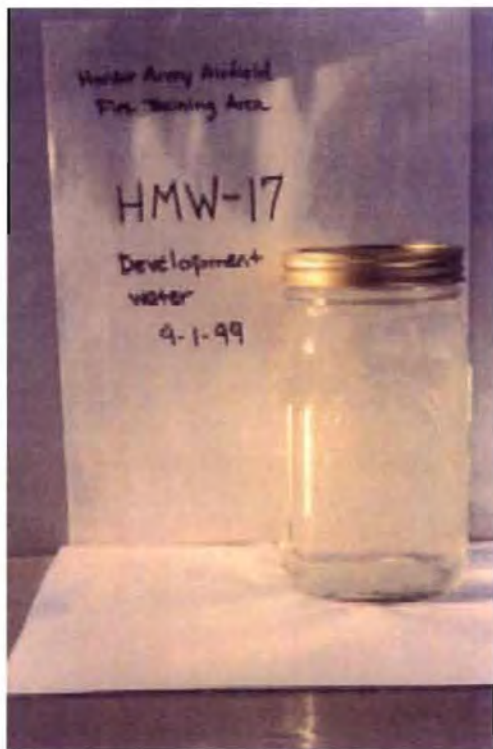
PROJECT NAME HUNTER AAF PROJECT No. 12001-9-344  
DEVELOPED BY J. MARTIN CHECKED BY \_\_\_\_\_ SHEET 1 OF 2

1. Well No.: HMW-22 Site Location: HUNTER AAF, FTA
2. Date of Installation: 11-1-01
3. Date of Development: 11-2-01
4. Static Water Level: Before Development 16.79 b.t.o.f.; At Least 24 hrs. After 16.82 ft.
5. Organic Vapor: Before Development 0.0 ppm; After Development 0.0 ppm
6. Quantity of Water Loss During Drilling, If Used: NA gal.
7. Quantity of Standing Water in Well and Annulus Before Development: 13.7 gal.
8. Depth From Top of Well Casing to Bottom of Well: 23.83 ft. (from Well Installation Diagram)
9. Well Diameter: 2 in.
10. Screen Length: 9.5 ft.
11. Minimum Quantity of Water to be Removed: 68.6 gal.
12. Depth to Top of Sediment: Before Development 0 ft.; After Development 0 ft.
13. Physical Character of Water (Before/After Development): CLOUDY, GREY, THICK WITH FUMES / CRYSTAL CLEAR
14. Type and Size of Well Development Equipment: 2"-PVC SURGE BLOCK; WHALE SUBMERSIBLE 921 12V D.C. PUMP ~ 1 1/2" O.D.
15. Description of Surge Technique, If Used: SURGED 2"-PVC SURGE BLOCK THROUGH FULL HEIGHT OF H<sub>2</sub>O COLUMN FOR ~ 10 MIN BEFORE SURGING, THEN REPEATED 2-MORE TIMES AT ABOUT 30 MIN INTERVALS.
16. Height of Well Casing Above Ground Surface: 2.8 ft. (from Well Installation Diagram)
17. Quantity of Water Removed: 130 gal. Time for Removal: 1 hr 25 min hr. / min
18. 1-Liter Water Sample Collected: 0915 (Time) Photographed?  Y  N
19. Final Turbidity in Nephelometric Units: 0.34 NTUs
20. Final Imhoff Cone Measurements < 0.75 mL/L, If Applicable: NA

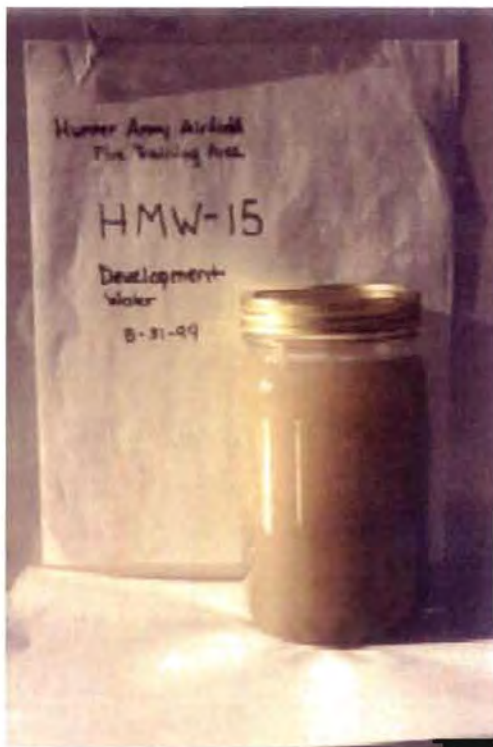
C-142



**WELL DEVELOPMENT PHOTOGRAPHS**



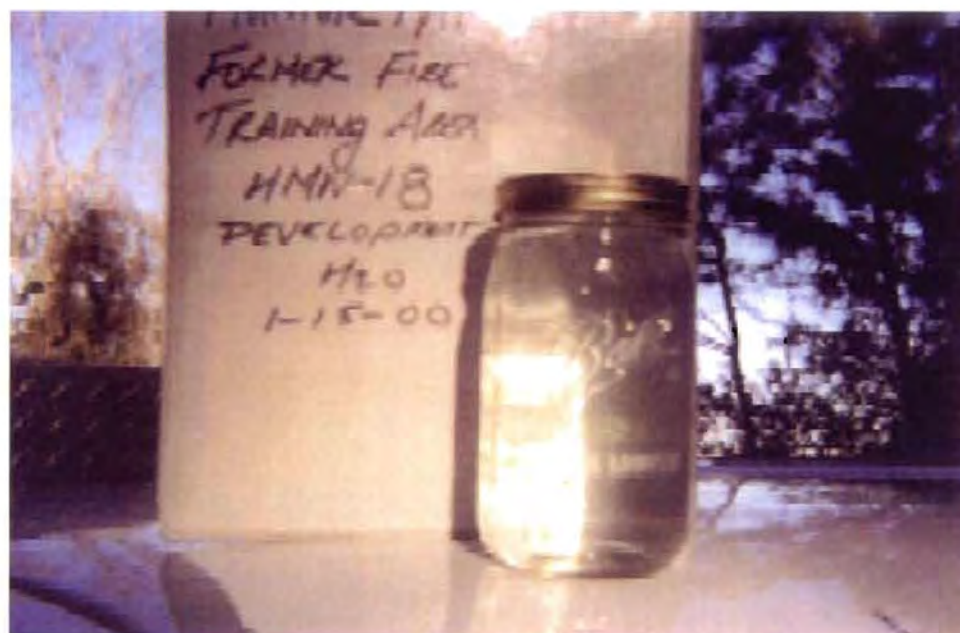
**HMW - 17**



**HMW - 15**



**HMW - 19**



**HMW - 18**



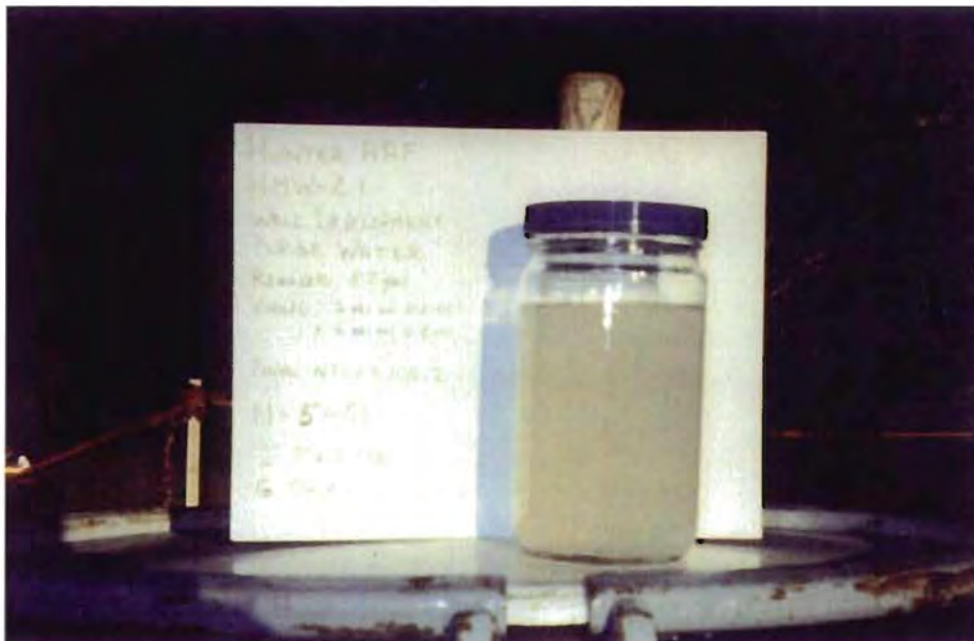
**HMW - 14**



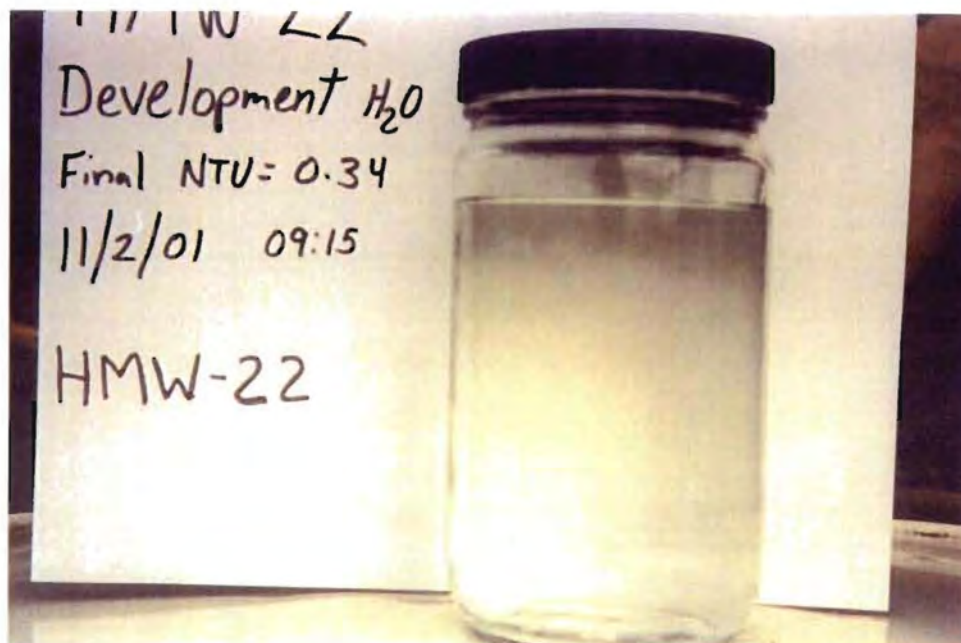
**HMW - 20**

C-146





**HMW - 21**



**HMW - 22**



**2001 Field Sampling Reports**

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNTER AAF      LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.      PROJECT #: 12001-9-3461  
 SITE: FTA      114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569      SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_      SAMPLE ID: HMM-14R  
 MATRIX AQUEOUS      DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD PERMEALITE PUMP      MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: \_\_\_\_\_ END DEPTH: \_\_\_\_\_      DATE: 11-6-01      TIME: 1540  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

3 - 40ml VOA VIALS HCL

VOCS

Volume Purged	0	1.921	2.921	3.921		
pH	5.28	5.40	5.40	5.39		
Temperature	71.9	70.3	69.7	69.8		
Specific Conductance	335	302	268	264		
Dissolved Oxygen						
Redox Potential						
Turbidity	>1000	20.8	5.11	4.07		

COLOR: PALE YELLOW  
 ODOR: ROTTEN EGGS  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**

WEATHER: SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      WIND DIRECTION NE      AMBIENT TEMP ~70°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_      HAND DELIVER X      COURIER \_\_\_\_\_      OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JOM      OBSERVER: GAC

FIGURE 2-4

FACILITY I.D. : <u>HUNTER AAF</u>		<b>FIELD SAMPLING REPORT</b>		PROJECT #: <u>12001-9-346</u>	
SITE : <u>FJA</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593		SUB-PROJECT #:	
<b>SAMPLE INFORMATION</b>			SAMPLE ID: <u>HMW-21</u>		
QC LEVEL _____			DUP./REP. OF: _____		
MATRIX <u>ROOEOSS</u>			MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)		
SAMPLING METHOD <u>TELEON BAIER</u>			DATE: <u>11/6/01</u> TIME: <u>1035</u>		
BEGINNING DEPTH: _____ END DEPTH: _____			GRAB <input checked="" type="checkbox"/> COMPOSITE ( )		
CONTAINER		PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
SIZE/TYPE	#				

3 - 40ml VOA VIAW HEL

↓ OCS

Volume Purged	<u>1 gal</u>				
pH	<u>5.71</u>				
Temperature					
Specific Conductance	<u>141</u>				
Dissolved Oxygen					
Redox Potential					
Turbidity	<u>116</u>				

COLOR: CLOUDY PAIS YELLOW/WHITES  
 ODOR: NONE  
 OTHER: \_\_\_\_\_

<b>GENERAL INFORMATION</b>					
WEATHER:	SUNCLEAR <input checked="" type="checkbox"/>	OVERCAST/RAIN _____	WIND DIRECTION <u>CALM</u>	AMBIENT TEMP <u>45°</u>	
SHIPMENT VIA:	FED-X _____	HAND DELIVER <input checked="" type="checkbox"/>	COURIER _____	OTHER _____	
SHIPPED TO:	_____				
SAMPLER:	<u>JDM</u>	OBSERVER:	<u>GAO</u>		

FIGURE 2-4

**FACILITY I.D.:** HUNESL AAF **FIELD SAMPLING REPORT** **PROJECT #:** 12001-9-3461  
**SITE:** FTA **LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.** **114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569**  
**PHONE: (770) 499-6800 / FAX: (770) 421-3593** **SUB-PROJECT #:**       

**SAMPLE INFORMATION**  
**QC LEVEL** \_\_\_\_\_ **SAMPLE ID:** HMW-22  
**MATRIX** GW/AQUEOUS **DUP./REP. OF:** \_\_\_\_\_  
**SAMPLING METHOD** PULSATILE / **MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)**  
**BEGINNING DEPTH:** \_\_\_\_\_ **END DEPTH:** \_\_\_\_\_ **DATE:** 11-6-01 **TIME:** 12:34  
**GRAB**  **COMPOSITE ( )**

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3-40 ml                      HCL                                      VOCS

Volume Purged	<u>0</u>	<u>1 gal</u>	<u>2 gal</u>	<u>3 gal</u>	<u>3.5 gal</u>
pH	<u>4.89</u>	<u>5.20</u>	<u>5.18</u>	<u>5.17</u>	<u>5.18</u>
Temperature	<u>76.3</u>	<u>76.2</u>	<u>76.3</u>	<u>76.3</u>	<u>76.3</u>
Specific Conductance	<u>196</u>	<u>208</u>	<u>203</u>	<u>205</u>	<u>202</u>
Dissolved Oxygen					
Redox Potential					
Turbidity	<u>27.6</u>	<u>12.0</u>	<u>2.37</u>	<u>1.28</u>	<u>1.10</u>

**COLOR:** CLEAR  
**ODOR:** NONE  
**OTHER:** NONE

**GENERAL INFORMATION**  
**WEATHER:** SUN/CLEAR     OVERCAST/RAIN \_\_\_\_\_    WIND DIRECTION NE    AMBIENT TEMP 65°F  
**SHIPMENT VIA:** FED-X \_\_\_\_\_    HAND DELIVER     COURIER \_\_\_\_\_    OTHER \_\_\_\_\_  
**SHIPPED TO:** \_\_\_\_\_  
**SAMPLER:** JOM                      **OBSERVER:** GAG

FIGURE 2-4

FIELD SAMPLING REPORT					
FACILITY I.D. : <u>HUNTER AAF</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569		PROJECT #: <u>12001-9-35</u>	
SITE : <u>FIA</u>		PHONE: (770) 499-6800 / FAX: (770) 421-3593		SUB-PROJECT #: <u>    </u>	
SAMPLE INFORMATION			SAMPLE ID: <u>HMW-27 MS/MSD</u>		
QC LEVEL		DUP./REP. OF: <u>    </u>			
MATRIX <u>AQUEOUS</u>		MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES ( <input checked="" type="checkbox"/> ) NO ( <input type="checkbox"/> )			
SAMPLING METHOD <u>PULSATILE</u>		DATE: <u>11-6-01</u> TIME: <u>12:30</u>			
BEGINNING DEPTH: <u>    </u> END DEPTH: <u>    </u>		GRAB ( <input checked="" type="checkbox"/> ) COMPOSITE ( <input type="checkbox"/> )			
CONTAINER	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

MS 3-40 ml

HCL

VOCS

MSD 3-40 ml

HCL

VOCS

Volume Purged	0 gal	1 gal	2 gal	3 gal	3.5
pH	4.89	5.20	5.18	5.17	5.18
Temperature	76.3	76.2	76.3	76.3	76.3
Specific Conductance	196	208	203	205	202
Dissolved Oxygen					
Redox Potential					
Turbidity	27.6	12.0	2.37	1.28	1.10
COLOR:					
ODOR:					
OTHER:					

GENERAL INFORMATION					
WEATHER: SUNCLEAR <input checked="" type="checkbox"/>	OVERCAST/RAIN <input type="checkbox"/>	WIND DIRECTION <u>N/E</u>	AMBIENT TEMP <u>66</u>		
SHIPMENT VIA: FED-X <input type="checkbox"/>	HAND DELIVER <input checked="" type="checkbox"/>	COURIER <input type="checkbox"/>	OTHER <input type="checkbox"/>		
SHIPPED TO: <u>    </u>					
SAMPLER: <u>JOM</u>		OBSERVER: <u>GAO</u>			

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNTEL AAF      LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.      PROJECT #: 12001-9-344  
 SITE: ETA      114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569      SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_      SAMPLE ID: SB-43 (0-2)  
 MATRIX SOIL      DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD DRILL RIG, SS-SAMPLER      MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: 0' END DEPTH: 2' ogs      DATE: 11-1-01 TIME: 10:15  
 GRAB (X) COMPOSITE ( )

CONTAINER	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
SIZE/TYPE	#			

3 - 5g ENCORE SAMPLERS      VOLs  
 1 - 125ml w/m GLASS IAA w/ SEPTA      BULK VOLs  
 1 - 250ml w/m GLASS IAA      SVOLs  
 1 - 250ml w/m PLASTIC IAA      CHROMIUM

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: PALE GREY/BROWN  
 ODOR: EARTHY  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**

WEATHER: SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      WIND DIRECTION E      AMBIENT TEMP 60°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_      HAND DELIVER X      COURIER \_\_\_\_\_      OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JOM      OBSERVER: GAO

FIGURE 2-4

FACILITY I.D.: HUNTER AAF FIELD SAMPLING REPORT PROJECT #: 12001-8-34  
SITE: F/A LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 SUB-PROJECT #:  
PHONE: (770) 499-6800 / FAX: (770) 421-3593

SAMPLE INFORMATION SAMPLE ID: SB-43(2-4)  
QC LEVEL \_\_\_\_\_ DUP./REP. OF: \_\_\_\_\_  
MATRIX SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
SAMPLING METHOD DRILL RIG, SS-SAMPLE BEGINNING DEPTH: 2' END DEPTH: 4' bgs DATE: 11-1-01 TIME: 10:30

GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

- 3 - 5g ENCORE SAMPLERS VOCs
- 1 - 125ml w/m GLASS JAR w/ SEPTA BULK VOCs
- 1 - 250ml w/m GLASS JAR SVOCs
- 1 - 250ml w/m PLASTIC JAR CHROMIUM

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					
COLOR: <u>0.5</u>					
ODOR:					
OTHER:					

GENERAL INFORMATION  
WEATHER: SUNCLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION Calh AMBIENT TEMP 65  
SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
SHIPPED TO: \_\_\_\_\_  
SAMPLER: TJM OBSERVER: GAO



FIGURE 2-4

FACILITY I.D.: HUNTER AAF FIELD SAMPLING REPORT PROJECT #: 12001-9-344  
 SITE: FZA LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

SAMPLE INFORMATION SAMPLE ID: SB-43(2-4) MC/MSD  
 QC LEVEL \_\_\_\_\_ DUP./REP. OF: \_\_\_\_\_  
 MATRIX SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES  NO   
 SAMPLING METHOD DRILL RIG, SS-SAMPLER BEGINNING DEPTH: 2' END DEPTH: 4' bgs DATE: 11-7-01 TIME: 10:30  
 GRAB  COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

3 - 5g ENCORE SAMPLES VOCs  
 1 - 125 ml 1/4" GLASS JAR w/SEPTA BULK VOCs  
 1 - 250 ml 1/4" GLASS JAR 5 VOCs  
 1 - 250 ml 1/4" PLASTIC JAR CHROMIUM

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: GRAY  
 ODOR: \_\_\_\_\_  
 OTHER: \_\_\_\_\_

GENERAL INFORMATION  
 WEATHER: SUN/CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION CALM AMBIENT TEMP 65°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER  COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: IDA OBSERVER: CAO

FIGURE 2-4

FACILITY I.D.: <u>HUNTER AAF</u>		<b>FIELD SAMPLING REPORT</b>		PROJECT #: <u>12001-9-34</u>	
SITE: <u>ETA</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569		SUB-PROJECT #:	
PHONE: (770) 499-6800 / FAX: (770) 421-3593					
<b>SAMPLE INFORMATION</b>			SAMPLE ID: <u>SB-43A(0-2)</u>		
QC LEVEL			DUP./REP. OF: _____		
MATRIX	<u>SOIL</u>		MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)		
SAMPLING METHOD	<u>HAND AUGER</u>		DATE: <u>11-5-01</u> TIME: <u>1040</u>		
BEGINNING DEPTH:	<u>0'</u>	END DEPTH:	<u>2' bgs</u>		
GRAB (X) COMPOSITE ( )					
CONTAINER	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS	
SIZE/TYPE	#				

3- 5g ENCORE SAMPLES

VOCs

1- 125ml w/in GLASS w/SEPTA

Bulk VOCs

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR:	
ODOR:	
OTHER:	

<b>GENERAL INFORMATION</b>					
WEATHER:	SUN/CLEAR <u>X</u>	OVERCAST/RAIN _____	WIND DIRECTION <u>Calh</u>	AMBIENT TEMP <u>60°</u>	
SHIPMENT VIA:	FED-X _____	HAND DELIVER <u>X</u>	COURIER _____	OTHER _____	
SHIPPED TO:	_____				
SAMPLER:	<u>Tom</u>	OBSERVER:	<u>GAO</u>		

FIGURE 2-4

FACILITY I.D.: HUNTEL AAF FIELD SAMPLING REPORT PROJECT #: 12001-9-3411  
 SITE: ETA LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

SAMPLE INFORMATION SAMPLE ID: SB-44 (2-7)  
 QC LEVEL \_\_\_\_\_ DUP./REP. OF: \_\_\_\_\_  
 MATRIX SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES ( ) NO (X)  
 SAMPLING METHOD SS-SAMPLE DATE: 11-1-01 TIME: 1750  
 BEGINNING DEPTH: 2' END DEPTH: 4' bgs  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3 - 5g EN CORE SAMPLES VOCs  
 1 - 125ml w/m GLASS JAR w/SEPA BULK VOCs  
 1 - 250ml w/m GLASS JAR SVOCs  
 1 - 250ml w/m PLASTIC JAR CHROMIUM

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

COLOR: DARK GREY  
 ODOR: \_\_\_\_\_  
 OTHER: \_\_\_\_\_

GENERAL INFORMATION  
 WEATHER: SUN/CLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION CALL AMBIENT TEMP 60°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: IDA OBSERVER: BAO

FIGURE 2-4

FACILITY I.D. : <u>HUNTER AAF</u>	<b>FIELD SAMPLING REPORT</b>	PROJECT #: <u>12001-9-341</u>		
SITE : <u>EIA</u>	LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593	SUB-PROJECT #:		
<b>SAMPLE INFORMATION</b>				
QC LEVEL _____	SAMPLE ID: <u>SB-100 (2-4)</u>			
MATRIX <u>SOIL</u>	DUP./REP. OF: <u>SB-44 (2-4)</u>			
SAMPLING METHOD <u>SI-SAMPLER</u>	MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)			
BEGINNING DEPTH: <u>2'</u> END DEPTH: <u>4' bgs</u>	DATE: <u>11-1-01</u>	TIME: <u>1200</u>		
GRAB (X) COMPOSITE ( )				
CONTAINER SIZE/TYPE	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
#				

3 - 5g EN CORE SAMPLERS                      VOCs

1 - 125ml w/m GLASS JAR w/SEPTA              Bulk VOCs

1 - 250ml w/m GLASS JAR                      SVOCs

1 - 250ml <sup>1/2</sup> PLASTIC JAR                      CHROMIUM

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

COLOR: DARK GRAY

ODOR: \_\_\_\_\_

OTHER: \_\_\_\_\_

<b>GENERAL INFORMATION</b>					
WEATHER: SUN/CLEAR <u>X</u>	OVERCAST/RAIN _____	WIND DIRECTION <u>Calh</u>	AMBIENT TEMP <u>60'</u>		
SHIPMENT VIA: FED-X _____	HAND DELIVER <u>X</u>	COURIER _____	OTHER _____		
SHIPPED TO: _____					
SAMPLER: <u>IDM</u>			OBSERVER: <u>BAD</u>		

FIGURE 2-4

FACILITY I.D. : <u>HUNTER AAF</u>		<b>FIELD SAMPLING REPORT</b>		PROJECT #: <u>12001-9-3411</u>	
SITE : <u>FTA</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569		SUB-PROJECT #:	
PHONE: (770) 499-6800 / FAX: (770) 421-3593					
<b>SAMPLE INFORMATION</b>			SAMPLE ID: <u>57-44(6-8)</u>		
QC LEVEL			DUP./REP. OF: _____		
MATRIX	<u>SOIL</u>		MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)		
SAMPLING METHOD	<u>SS-SAMPLER</u>		DATE: <u>11-1-01</u> TIME: <u>1800</u>		
BEGINNING DEPTH:	<u>6'</u>	END DEPTH:	<u>8' bgs</u>		
GRAB ( ) COMPOSITE ( )					
CONTAINER	PRESERVATIVE/	EXTRACTION	ANALYTICAL	ANALYSIS	
SIZE/TYPE	PREPARATION	METHOD	METHOD		

3 - 5g EN CONE SAMPLES      VOCs

1 - 125ml w/m GLASS IAN w/SEPTA      BULK VOCs

1 - 250 ml w/m GLASS IAN      SVOCs

1 - 250 ml w/m PLASTIC IAN      CHROMIUM

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

COLOR: LIGHT BROWN

ODOR: ---

OTHER: \_\_\_\_\_

<b>GENERAL INFORMATION</b>					
WEATHER:	SUN/CLEAR <u>X</u>	OVERCAST/RAIN _____	WIND DIRECTION <u>CAW</u>	AMBIENT TEMP <u>60°F</u>	
SHIPMENT VIA:	FED-X _____	HAND DELIVER <u>X</u>	COURIER _____	OTHER _____	
SHIPPED TO:	_____				
SAMPLER:	<u>JDM</u>	OBSERVER:	<u>GAO</u>		

FIGURE 2-4

FACILITY I.D. : <u>HUNTER AAF</u>		<b>FIELD SAMPLING REPORT</b>		PROJECT # : <u>12001-9-2</u>	
SITE : <u>FTA</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593		SUB-PROJECT #:	
<b>SAMPLE INFORMATION</b>			SAMPLE ID: <u>SB-45 (0-2)</u>		
QC LEVEL			DUP./REP. OF: _____		
MATRIX	<u>SOIL</u>		MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)		
SAMPLING METHOD	<u>HAND AUGER</u>		DATE: <u>10-31-01</u> TIME: <u>0930</u>		
BEGINNING DEPTH:	<u>0'</u>	END DEPTH:	<u>2' logs</u>		
GRAB (X) COMPOSITE ( )					
CONTAINER		PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
SIZE/TYPE	#				

1- 250 ml w/m GLASS JAR

SVOCs

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: DARK BROWN  
 ODOR: EARTH  
 OTHER:

<b>GENERAL INFORMATION</b>					
WEATHER:	SUN/CLEAR <input checked="" type="checkbox"/>	OVERCAST/RAIN _____	WIND DIRECTION <u>CALM</u>	AMBIENT TEMP <u>60</u>	
SHIPMENT VIA:	FED-X _____	HAND DELIVER <input checked="" type="checkbox"/>	COURIER _____	OTHER _____	
SHIPPED TO:	_____				
SAMPLER:	<u>JDM</u>	OBSERVER:	<u>BAO</u>		

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: Hunter AAF PROJECT #: 12001-9-3461  
 SITE: ETA LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. SUB-PROJECT #:  
 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_ SAMPLE ID: 58-46 (4-6)  
 MATRIX SOIL DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD DRILLING; SS SAMPLER MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: 4' END DEPTH: 6' bgs DATE: 10-31-01 TIME: 1735

GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3 - 5g ENCORE SAMPLES VOCs  
 1 - 125ml w/m GLASS JAR w/SEPTA BULK VOCs  
 1 - 250ml w/m GLASS JAR SVOCs  
 1 - 250ml w/m PLASTIC JAR CHROMIUM

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: LIGHT YELLOW/Orange  
 ODOR: NONE  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**

WEATHER: SUNCLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION NE AMBIENT TEMP ~70°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JDM OBSERVER: GAO



FIGURE 2-4

FACILITY I.D. : <u>HUNTER AAF</u>	<b>FIELD SAMPLING REPORT</b>	PROJECT #: <u>12001-9-</u>
SITE : <u>FIA</u>	LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593	SUB-PROJECT #:

<b>SAMPLE INFORMATION</b>		SAMPLE ID: <u>SD-46 (12-14)</u>
QC LEVEL _____		DUP./REP. OF: _____
MATRIX <u>SOIL</u>		MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)
SAMPLING METHOD <u>DRILL RIG, SS-SAMPLER</u>		DATE: <u>10-31-01</u> TIME: <u>1750</u>
BEGINNING DEPTH: <u>12'</u> END DEPTH: <u>14' 09"</u>		
GRAB <input checked="" type="checkbox"/> COMPOSITE ( )		

CONTAINER	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
-----------	---	---------------------------	-------------------	-------------------	----------

3 - 5g En Core Samplers	VOCs
1 - 125ml w/m GLASS JAR w/ SEPTA	BULK VOCs
1 - 250ml w/m GLASS JAR	SVOCs
1 - 250 ml w/m PLASTIC JAR	CHROMIUM

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

COLOR: <u>WHITE</u>	
ODOR: <u>NONE</u>	
OTHER:	

<b>GENERAL INFORMATION</b>					
WEATHER: SUN/CLEAR <input checked="" type="checkbox"/>	OVERCAST/RAIN _____	WIND DIRECTION <u>W/E</u>	AMBIENT TEMP <u>65</u>		
SHIPMENT VIA: FED-X _____	HAND DELIVER <input checked="" type="checkbox"/>	COURIER _____	OTHER _____		
SHIPPED TO: _____					
SAMPLER: <u>IDM</u>			OBSERVER: <u>GAO</u>		

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: Hunter AAF      LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.      PROJECT #: 12001-9-344  
 SITE: FIA      114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569      SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_      SAMPLE ID: SR-47 (2-4)  
 MATRIX SOIL      DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD HAND AUGER      MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: 2' END DEPTH: 4' bgs      DATE: 10-01-01<sup>PM</sup> TIME: 11:45  
 GRAB (X) COMPOSITE ( )

CONTAINER	PRESERVATIVE/	EXTRACTION	ANALYTICAL	ANALYSIS
SIZE/TYPE	PREPARATION	METHOD	METHOD	

1- 250 ml w/m Plastic Jar

BARJUM

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

COLOR: Dark Brown to Black  
 ODOR: SLIGHT OIL SMELL ("TIN")  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**

WEATHER: SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      WIND DIRECTION \_\_\_\_\_      AMBIENT TEMP ~70°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_      HAND DELIVER X      COURIER \_\_\_\_\_      OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JOM      OBSERVER: GAO

FIGURE 2-4

**FIELD SAMPLING REPORT**  
 FACILITY I.D.: HUNTER AAF LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. PROJECT #: 12001-9-E  
 SITE: FIA 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**  
 QC LEVEL \_\_\_\_\_ SAMPLE ID: SB-48 (2-5)  
 MATRIX SOIL DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD HAND AUGER MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: 2' END DEPTH: 5' 6" DATE: 10-31-01 TIME: 1050  
 GRAB (X) COMPOSITE ( )

CONTAINER	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
SIZE/TYPE #				

1 - 250 ml w/ur PLASTIC JAR

CHROMIUM

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: DARK BROWN  
 ODOR: EDIBLY  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**  
 WEATHER: SUN/CLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION \_\_\_\_\_ AMBIENT TEMP 65  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JDM OBSERVER: GAO

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: HOLZER AAF      LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.      PROJECT #: 12001-9-3411  
 SITE: F7A      114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569      SUB-PROJECT #:  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_      SAMPLE ID: 5B-49 (0-2)  
 MATRIX SOIL      DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD HAND AUGER      MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: 0' END DEPTH: 2'      DATE: 10-31-01      TIME: 1005

GRAB  COMPOSITE ( )

CONTAINER	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

1 - 250 ml w/m GLASS JAR

5 VOL

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					
COLOR: <u>LIGHT BROWN</u>					
ODOR: <u>EARTHY</u>					
OTHER:					

**GENERAL INFORMATION**

WEATHER: SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      WIND DIRECTION CAU      AMBIENT TEMP 60°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_      HAND DELIVER X      COURIER \_\_\_\_\_      OTHER \_\_\_\_\_

SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JRM      OBSERVER: BAO

FIGURE 2-4

FACILITY I.D.: <u>HUNTER AAF</u>		<b>FIELD SAMPLING REPORT</b>		PROJECT #: <u>12001-9-3</u>	
SITE: <u>EIA</u>		LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593		SUB-PROJECT #:	
<b>SAMPLE INFORMATION</b>			SAMPLE ID: <u>SB-50 (0-2)</u>		
QC LEVEL _____			DUP./REP. OF: _____		
MATRIX <u>SOIL</u>			MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)		
SAMPLING METHOD <u>HAND AUGER</u>			DATE: <u>10-31-01</u> TIME: <u>08:00</u>		
BEGINNING DEPTH: <u>0'</u> END DEPTH: <u>2' bgs</u>			GRAB ( <input checked="" type="checkbox"/> ) COMPOSITE ( )		
CONTAINER		PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
SIZE/TYPE	#				

1 - 250 ml w/m glass JAR

5 DOCs

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: <u>BROWN / GREY</u>	
ODOR: <u>FADING</u>	
OTHER:	

<b>GENERAL INFORMATION</b>			
WEATHER: SUN/CLEAR <input checked="" type="checkbox"/>	OVERCAST/RAIN _____	WIND DIRECTION <u>CALM</u>	AMBIENT TEMP <u>55</u>
SHIPMENT VIA: FED-X _____	HAND DELIVER <input checked="" type="checkbox"/>	COURIER _____	OTHER _____
SHIPPED TO: _____			
SAMPLER: <u>JDM</u>		OBSERVER: <u>CAO</u>	

FIGURE 2-4

**FACILITY I.D.:** HUNTER AAF      **FIELD SAMPLING REPORT**      **PROJECT #:** 1001-9-3411  
**SITE:** FTA      **LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.**      **PHONE:** (770) 499-6800 / **FAX:** (770) 421-3593      **SUB-PROJECT #:** \_\_\_\_\_  
**114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569**

**SAMPLE INFORMATION**      **SAMPLE ID:** SB-EQBUNK01  
**QC LEVEL** \_\_\_\_\_      **DUP./REP. OF:** \_\_\_\_\_  
**MATRIX** AQUEOUS      **MATRIX SPIKE/MATRIX SPIKE DUPLICATE** YES( ) NO(X)  
**SAMPLING METHOD** \_\_\_\_\_      **DATE:** 10-31-01      **TIME:** 0805  
**BEGINNING DEPTH:** —      **END DEPTH:** —  
**GRAB** (X) **COMPOSITE** ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS

3 - 40 ml VOA, HCL      VOCs  
 2 - 1L AMBERS      SVOCs  
 1 - 250ml NALGENE H<sub>2</sub>O<sub>2</sub>      METALS (CHROMIUM)  
~~1 - 250ml NALGENE H<sub>2</sub>O<sub>2</sub>      Hg~~

EQUIPMENT RINSE/BLANK OF DROWNED HAND AUGER BUCKET + SS BOWL w/SPD

Volume Purged						
pH						
Temperature						
Specific Conductance						
Dissolved Oxygen						
Redox Potential						
Turbidity						

**COLOR:** CLEAR  
**ODOR:** NONE  
**OTHER:** \_\_\_\_\_

**GENERAL INFORMATION**

**WEATHER:** SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      **WIND DIRECTION:** CALM      **AMBIENT TEMP:** 50°F  
**SHIPMENT VIA:** FED-X \_\_\_\_\_      HAND DELIVER X      **COURIER:** \_\_\_\_\_      **OTHER:** \_\_\_\_\_  
**SHIPPED TO:** \_\_\_\_\_  
**SAMPLER:** JDM      **OBSERVER:** GAO

FIGURE 2-4

**FIELD SAMPLING REPORT**  
 FACILITY I.D.: HUNTER AAF      LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.      PROJECT #: \_\_\_\_\_  
 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593      SUB-PROJECT #: \_\_\_\_\_  
 SITE: \_\_\_\_\_

**SAMPLE INFORMATION**      SAMPLE ID: SB-EQBLANK 02  
 QC LEVEL \_\_\_\_\_      DUP./REP. OF: \_\_\_\_\_  
 MATRIX AQUEOUS  
 SAMPLING METHOD -      MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: - END DEPTH: -      DATE: 11-1-01 TIME: 11:00  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
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3- 40 ml VOAS HCL      VOCs  
 2- 1 L-AMBEAS      SVOCs  
 1- 250 ml NALGENE HNO<sub>3</sub>      CARBONIUM

*EQUIPMENT RINSE BLANK OF DECONTAMINATED SS-SAMPLER, SS-BOWL & SPOON*

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: Clear  
 ODOR: -  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**  
 WEATHER: SUN/CLEAR X      OVERCAST/RAIN \_\_\_\_\_      WIND DIRECTION \_\_\_\_\_      AMBIENT TEMP 60i  
 SHIPMENT VIA: FED-X \_\_\_\_\_      HAND DELIVER X      COURIER \_\_\_\_\_      OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: IDM      OBSERVER: GAO



FIGURE 2-4

FACILITY I.D.: HUNTER AAF **FIELD SAMPLING REPORT** PROJECT #: 12001-9-344  
 SITE: FIA LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569 PHONE: (770) 499-6800 / FAX: (770) 421-3593 SUB-PROJECT #:

**SAMPLE INFORMATION** SAMPLE ID: TDW-DFCON  
 QC LEVEL \_\_\_\_\_ DUP./REP. OF: \_\_\_\_\_  
 MATRIX AQUEOUS MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 SAMPLING METHOD COLLECTED IN 4 LITRE DIRECTLY IN 2 HANDED CONTAINERS DATE: 11-6/01 TIME: 2150  
 BEGINNING DEPTH: - END DEPTH: -  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3 - 40ml VOA<sub>s</sub> HCL VOCs  
 2 - 1L - AMBER SVOCS, OIL & GREASE  
 1 - 250ml NALGENE HNO<sub>3</sub> METALS (7 REEA)  
 1 - 250ml NALGENE HNO<sub>3</sub> Hg (84 REEA)

Volume Purged					
pH					
Temperature					
Specific Conductance					
Dissolved Oxygen					
Redox Potential					
Turbidity					

COLOR: CLOUDY w/ SVOCS  
 ODOR: ALONE NOTED  
 OTHER:

**GENERAL INFORMATION**  
 WEATHER: DAVE CLEAR  OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION SW AMBIENT TEMP 50°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER  COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: TDW OBSERVER: GAO

FIGURE 2-4

**FIELD SAMPLING REPORT**  
 FACILITY I.D.: HUNTER AAF LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. PROJECT #: 12001-9-3411  
 SITE: ETA 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593 SUB-PROJECT #:

**SAMPLE INFORMATION**  
 QC LEVEL \_\_\_\_\_ SAMPLE ID: HMW-100  
 MATRIX AQUEOUS DUP./REP. OF: HMW-3  
 SAMPLING METHOD PERMUTATED BALANCE MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES( ) NO(X)  
 BEGINNING DEPTH: \_\_\_\_\_ END DEPTH: \_\_\_\_\_ DATE: 11-6-01 TIME: 1200  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3 - 40 ml VOA VIALS	HCL	VOCs
2 - 1 LITER AMBERS		SVOCS
1 - 250 ml NALGENE	HNO <sub>3</sub>	METALS (TOF8 REND)
1 - 250 ml NALGENE	HNO <sub>3</sub>	- Hg

Volume Purged	0	4	7	10	13	17
pH	5.80	5.78	5.73	5.75	5.70	5.78
Temperature	59.4	57.0	55.8	57.7	57.8	57.7
Specific Conductance	148	134	136	139	146	144
Dissolved Oxygen						
Redox Potential						
Turbidity	5.59	3.38	2.83	2.86	1.83	1.17

COLOR: CLEAR  
 ODOR: NOISE  
 OTHER:

**GENERAL INFORMATION**  
 WEATHER: SUN/CLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION CAUM AMBIENT TEMP 50°F  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: JDM OBSERVER: BAU

FIGURE 2-4

**FIELD SAMPLING REPORT**

FACILITY I.D.: HUNTER AAF PROJECT #: 12001-9-  
 SITE: ETA LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. 114 TOWN PARK DRIVE, SUITE 400 KENNESAW, GA 30144-5569  
 PHONE: (770) 499-6800 / FAX: (770) 421-3593 SUB-PROJECT #:

**SAMPLE INFORMATION**

QC LEVEL \_\_\_\_\_ SAMPLE ID: HMW-3  
 MATRIX AQUEOUS DUP./REP. OF: \_\_\_\_\_  
 SAMPLING METHOD INSTANT MATRIX SPIKE/MATRIX SPIKE DUPLICATE YES ( ) NO (X)  
 BEGINNING DEPTH: \_\_\_\_\_ END DEPTH: \_\_\_\_\_ DATE: 11-6-01 TIME: 2015 M  
 GRAB (X) COMPOSITE ( )

CONTAINER SIZE/TYPE	#	PRESERVATIVE/ PREPARATION	EXTRACTION METHOD	ANALYTICAL METHOD	ANALYSIS
---------------------	---	---------------------------	-------------------	-------------------	----------

3 - 40ml VOA VIALS	HCL	VOCS
2 - 1 LITER AMBOLS		SVOCS
1 X - 250 ml NALGENE	HNO <sub>3</sub>	METALS (7 OF THE 8-PCPT)
1 - 250 ml NALGENE	HNO <sub>3</sub>	Hg

Volume Purged	0	4	7	10	13	17
pH	5.80	5.78	5.73	5.75	5.70	5.78
Temperature	59.4	57.0	55.8	57.7	57.8	57.7
Specific Conductance	148	134	130	139	146	144
Dissolved Oxygen						
Redox Potential						
Turbidity	5.59	3.38	2.83	2.86	1.83	1.17

COLOR: CLEAR  
 ODOR: NONE  
 OTHER: \_\_\_\_\_

**GENERAL INFORMATION**

WEATHER: SUN/CLEAR X OVERCAST/RAIN \_\_\_\_\_ WIND DIRECTION CALM AMBIENT TEMP 50°  
 SHIPMENT VIA: FED-X \_\_\_\_\_ HAND DELIVER X COURIER \_\_\_\_\_ OTHER \_\_\_\_\_  
 SHIPPED TO: \_\_\_\_\_  
 SAMPLER: IDM OBSERVER: GAO

**APPENDIX D****Soil Boring Logs and Monitoring Well Diagrams**

Extracted from 2002 CSR prepared by Law Engineering and  
Environmental Services, Inc.

<b>Hunter AAF, Fire Training Area Fort Stewart, GA</b>	<b>Log of Boring No. HSB-01</b>	Sheet No. 1 of 1
Client: U.S. Army Corps of Engineers Project Number: 3902018 Drilling Contractor: Layne Environmental, Inc. Driller: M. Barton Logged By: T. Trent Drilling Method: CME Continuous Sampler Boring Location: 97' North of Northwest Corner of Pit	Boring Started: 2/12/90 Boring Completed: 2/12/90 Boring Diameter: N/A Well Casing Diameter: N/A Surface Elevation: N/A Elevation Datum: N/A Type of Drill Rig: Mobile B-57	

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" / % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									X			
									20	40	60	80
		CS	5'	5'				(SM) SAND, silty, medium to coarse grained, black, with trace organics, wet (PID = 0)				
								3 ft - fine grained, light brown (PID = 0)				
	5	CS	5'	5'				5 ft - gray, saturated (PID = 0)				
								(SC) SAND, clayey, gray and reddish-brown				
								(SP) SAND, poorly graded, fine to medium grained, light brown, saturated (PID = 0)				
	10							BORING TERMINATED AT 10.0 FT BGS				

Client: U.S. Army Corps of Engineers  
 Project Number: 3902018  
 Drilling Contractor: Layne Environmental, Inc.  
 Driller: M. Barton  
 Logged By: T. Trent  
 Drilling Method: CME Continuous Sampler  
 Boring Location: 42' Southwest of Northwest Corner of Pit

Boring Started: 2/13/90  
 Boring Completed: 2/13/90  
 Boring Diameter: N/A  
 Well Casing Diameter: N/A  
 Surface Elevation: N/A  
 Elevation Datum: N/A  
 Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									20	40	60	80
									X			
									PL	LL		
									20	40	60	80
		CS	5'	5'				(SM) SAND, silty, fine to medium grained, brown, moist (PID = 50 - 100)				
								2 ft - black (PID = 500)				
								4 ft - light brown and gray, wet				
	5	CS	5'	5'				(SW) SAND, well graded, fine to coarse grained, gray and white, saturated (PID = 360)				
								8 ft - light gray (PID = 240)				
	10							BORING TERMINATED AT 10.0 FT BGS				

CS = CME Continuous Sampler  
 = Water Level Encountered During Drilling

= Water Level After Well Development

LL = Liquid Limit  
 PL = Plastic Limit

<b>Hunter AAF, Fire Training Area Fort Stewart, GA</b>	<b>Log of Boring No. HSB-03</b>	Sheet No 1 of 1
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Client: U.S. Army Corps of Engineers	Boring Started: 2/13/90
Project Number: 3902018	Boring Completed: 2/13/90
Drilling Contractor: Layne Environmental, Inc.	Boring Diameter: N/A
Driller: M. Barton	Well Casing Diameter: N/A
Logged By: T. Trent	Surface Elevation: N/A
Drilling Method: CME Continuous Sampler	Elevation Datum: N/A
Boring Location: 75' West Northwest of Southwest Corner of Pit	Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample "N" Blows "N" Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent X			
									20	40	60	80
									PL	LL		
									20	40	60	80
		CS	5'	5'				(SM) SAND, silty, fine to medium grained, black and brown, with little organics, moist (PID = 0)				
	5							3 ft - fine to coarse grained, light gray and brown, wet 4 ft - gray and black, wet (PID = 0)				
		CS	5'	5'				5 ft - black				
								(SP) SAND, poorly graded, coarse grained, light gray, saturated (PID = 186)				
	10							8 ft - light gray and brown (PID = 84)				
								BORING TERMINATED AT 10.0 FT BGS				



Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: CME Continuous Sampler  
Boring Location: 122' Southwest of Southwest Corner of Pit

Boring Started: 2/13/90  
Boring Completed: 2/13/90  
Boring Diameter: N/A  
Well Casing Diameter: N/A  
Surface Elevation: N/A  
Elevation Datum: N/A  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent X			
									20	40	60	80
									PL	LL		
									20	40	60	80
		CS	5'	5'				(SC) SAND, clayey, fine to medium grained, red and brown, moist (PID = 4)				
								(SM) SAND, silty, fine to medium grained, black and gray, wet (PID = 166)				
	5	CS	5'	5'				5 ft - fine to coarse grained, saturated (PID = 61)				
								(PID = 53)				
	10							BORING TERMINATED AT 10.0 FT BGS				

CS = CME® Continuous Sampler  
= Water Level Encountered During Drilling

= Water Level After Well Development

LL = Liquid Limit  
PL = Plastic Limit

<b>Hunter AAF, Fire Training Area Fort Stewart, GA</b>	<b>Log of Boring No. HSB-05</b>	Sheet No. 1 of 1
Client: U.S. Army Corps of Engineers Project Number: 3902018 Drilling Contractor: Layne Environmental, Inc. Driller: M. Barton Logged By: T. Trent Drilling Method: CME Continuous Sampler Boring Location: 34' Southwest of Southeast Corner of Pit	Boring Started: 2/13/90 Boring Completed: 2/13/90 Boring Diameter: N/A Well Casing Diameter: N/A Surface Elevation: N/A Elevation Datum: N/A Type of Drill Rig: Mobile B-57	

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent X			
									20	40	60	80
									PL	LL		
									20	40	60	80
		CS	5'	5'				(SM) SAND, silty, fine to medium grained, brown, with trace organics, moist (PID = 0)				
								2 ft - gray and black, wet (PID = 5)				
	5	CS	5'	5'				5 ft - fine to coarse grained, saturated (PID = 25)				
								8 ft - brown (PID = 20)				
	10							<b>BORING TERMINATED AT 10.0 FT BGS</b>				

Client: U.S. Army Corps of Engineers  
 Project Number: 3902018  
 Drilling Contractor: Layne Environmental, Inc.  
 Driller: M. Barton  
 Logged By: T. Trent  
 Drilling Method: CME Continuous Sampler  
 Boring Location: 75' Southwest of Southeast Corner of Pit

Boring Started: 2/13/90  
 Boring Completed: 2/13/90  
 Boring Diameter: N/A  
 Well Casing Diameter: N/A  
 Surface Elevation: N/A  
 Elevation Datum: N/A  
 Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample "N" Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION				Moisture Content Percent X					
												20	40	60	80	20	40
								PL   LL									
								20	40	60	80	20	40	60	80		
		CS	5'	5'			(SC) SAND, clayey, fine to medium grained, reddish-brown, moist (PID = 4)										
							(SM) SAND, silty, fine to coarse grained, gray and black, wet (PID = 31)										
	5	CS	5'	5'			5 ft - white and brown, saturated (PID = 27)										
							(PID = 36)										
	10						BORING TERMINATED AT 10.0 FT BGS										

CS = CME® Continuous Sampler  
 W = Water Level Encountered During Drilling

W = Water Level After Well Development

LL = Liquid Limit  
 PL = Plastic Limit

Hunter AAF, Fire Training Area  
Fort Stewart, GA

Log of Boring No. HMW-01

Sheet No  
1 of 2

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734794.83 E816369.15

Boring Started: 2/7/90  
Boring Completed: 2/7/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 35.1 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									X			
									20	40	60	80
									PL   LL			
									20	40	60	80
35		SS	1.5		2-3-3			(SM) SAND, silty, fine grained, brown, gray, and tan, loose (PID=0)				
		SS	1.5		2-1-2			(SP) SAND, poorly graded, fine grained, light brown, loose, wet (PID=0)				
	5	SS	1.5	0.4	2-2-3			4 ft - (PID=0)				
30		SS	1.5	1.1	4-6-11			(SC) SAND, clayey, gray and reddish-brown, medium dense, wet (PID=0)				
		SS	1.5	0.4	4-3-2			(SP) SAND, poorly graded, fine to medium grained, white and gray, loose, saturated (PID=0)				
25	10	SS	1.5	1.1	6-7-7			10 ft - light gray, medium dense, with trace clay (PID=0)				
		SS	1.5	0.4	4-6-9			(SM) SAND, silty, white-gray and reddish-brown, medium dense, saturated (PID=0)				
	15	SS	1.5	1.5	7-9-9			14 ft - light gray-brown (PID=0)				
20		SS	1.5	1.5	9-10-10			(SP) SAND, poorly graded, fine to medium grained, light brown and very pale brown, medium dense, saturated (PID=0)				
		SS	1.5	1.5	3-5-6			18 ft - dark grayish-brown and very pale brown (PID=0)				
15	20	SS	1.5	1.5	1-2-1			(SM) SAND, silty, gray, loose, saturated (PID=0)				
		SS	1.5	1.5	1-0-1			22 ft - (PID=0)				
		SS	1.5	1.5	1-1-1			24 ft - (PID=0)				
10	25	SS	1.5	0.8	3-2-1			26 ft - (PID=0)				
		SS	1.5		6-3-3			28 ft - (PID=0)				
	30	SS	1.5	1.1	3-2-3			30 ft - (PID=0)				
5		SS	1.5	1.5	3-3-4			32 ft - (PID=0)				
		SS	1.5	1.5	3-2-6			34 ft - (PID=0)				

SS = Splitspoon

≡ = Water Level Encountered During Drilling

≡ = Water Level After Well Development

LL = Liquid Limit

PL = Plastic Limit

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734794.83 E816369.15

Boring Started: 2/7/90  
Boring Completed: 2/7/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 35.1 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	Moisture Content Percent					
								X					
								20	40	60	80		
								PL   LL					
								20	40	60	80		
0		SS	1.5	1.5	1-1-2		36 ft - (PID=0)						
		SS	1.5	1.5			38 ft - (PID=0)						
-5	40	SS	1.5	1.5			40 ft - (PID=0)						
		SS	1.5	1.5	5-7-13		42 ft - (PID=0)						
-10	45	SS	1.5	1.5	8-8-4		(SM-SC) SAND, silty, clayey, fine to coarse grained, medium dense, saturated (PID=0)						
		SS	1.5	1.5	4-7-6		(SM) SAND, silty, fine to coarse grained, gray, medium dense, saturated (PID=0)						
		SS	1.5	1.5			(SP) SAND, poorly graded, fine to medium grained, gray, saturated (PID=0)						
50							BORING TERMINATED AT 50.0 FT BGS						

SS = Splitspoon  
= Water Level Encountered During Drilling

= Water Level After Well Development

LL = Liquid Limit  
PL = Plastic Limit

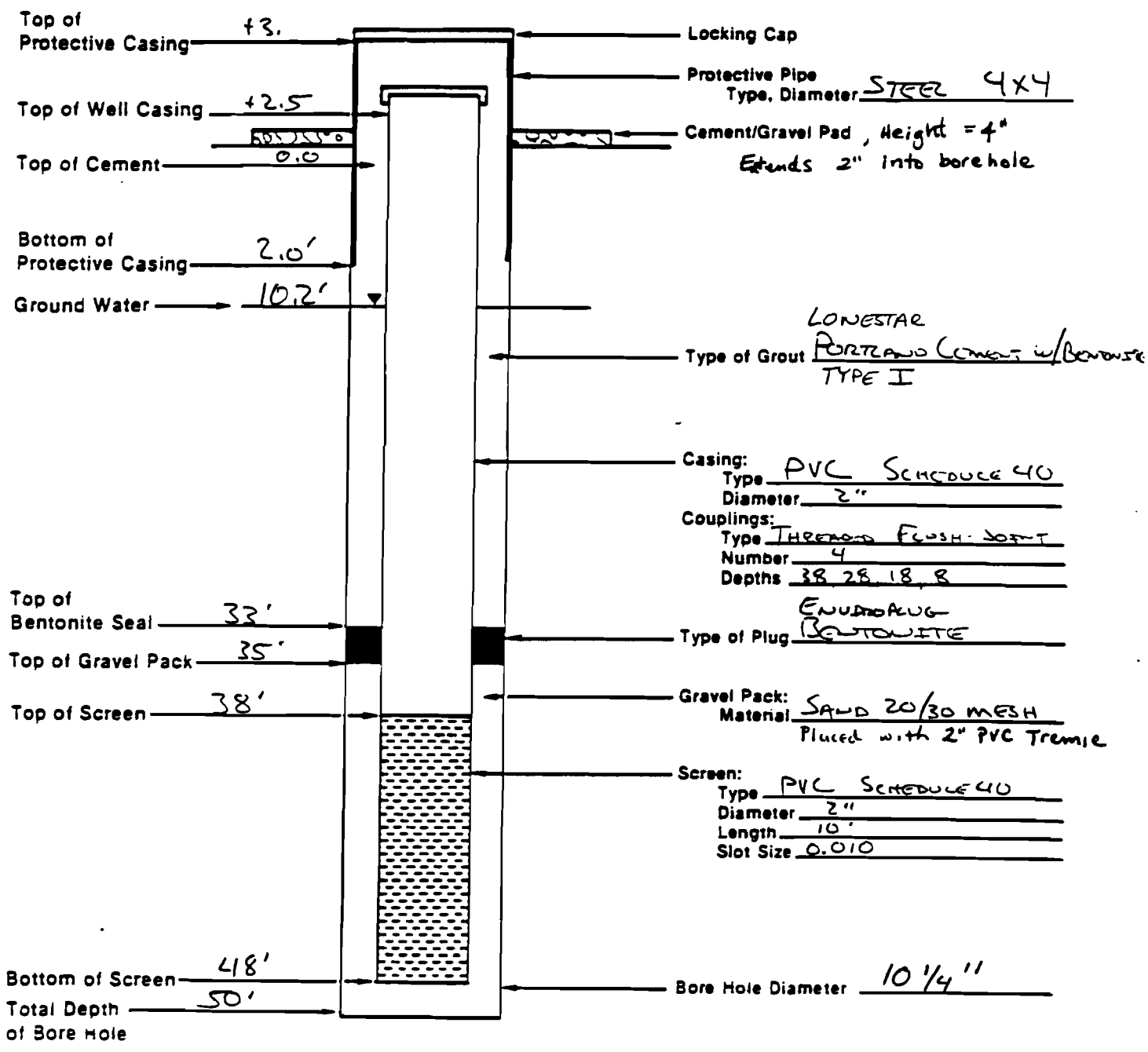
### MONITOR WELL CONSTRUCTION

Logged By: Tom TROUT  
 Drilling Contractor: LOYNE ENVIRONMENTAL  
 Driller's Name: MARK BARTON  
 Well Number: HMCW-1

Client: ARMY CORPS OF ENGINEERS  
 Location: FT STEWART - HUNTER AAP  
 Job Number: 3702018  
 Date/Time: Start 2-29-15 Finish 2-29-15

Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):  
 Complete Grout : 1830 , 2-7  
 Begin Development : 1600 , 2-12  
 Elapsed Time : 117.5  
 Method of Development : Pumping  
 Total Volume of Water Extracted : 60 gal.

Depths in Reference to Ground Level



NOT TO SCALE

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734786.66 E816362.34

Boring Started: 2/9/90  
Boring Completed: 2/9/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 34.6 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" / % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									20	40	60	80
									PL	LL		
									20	40	60	80
35								NO SAMPLES COLLECTED				
5												
30												
10												
25												
15								BORING TERMINATED AT 15.0 FT BGS				

SS = Splitspoon  
 = Water Level Encountered During Drilling

 = Water Level After Well Development

LL = Liquid Limit  
 PL = Plastic Limit



MONITOR WELL CONSTRUCTION

Logged By: T. TRENT  
Drilling Contractor: LYNNE ENVIRONMENTAL  
Driller's Name: SEAN MARL RABTON  
Well Number: HMW-2

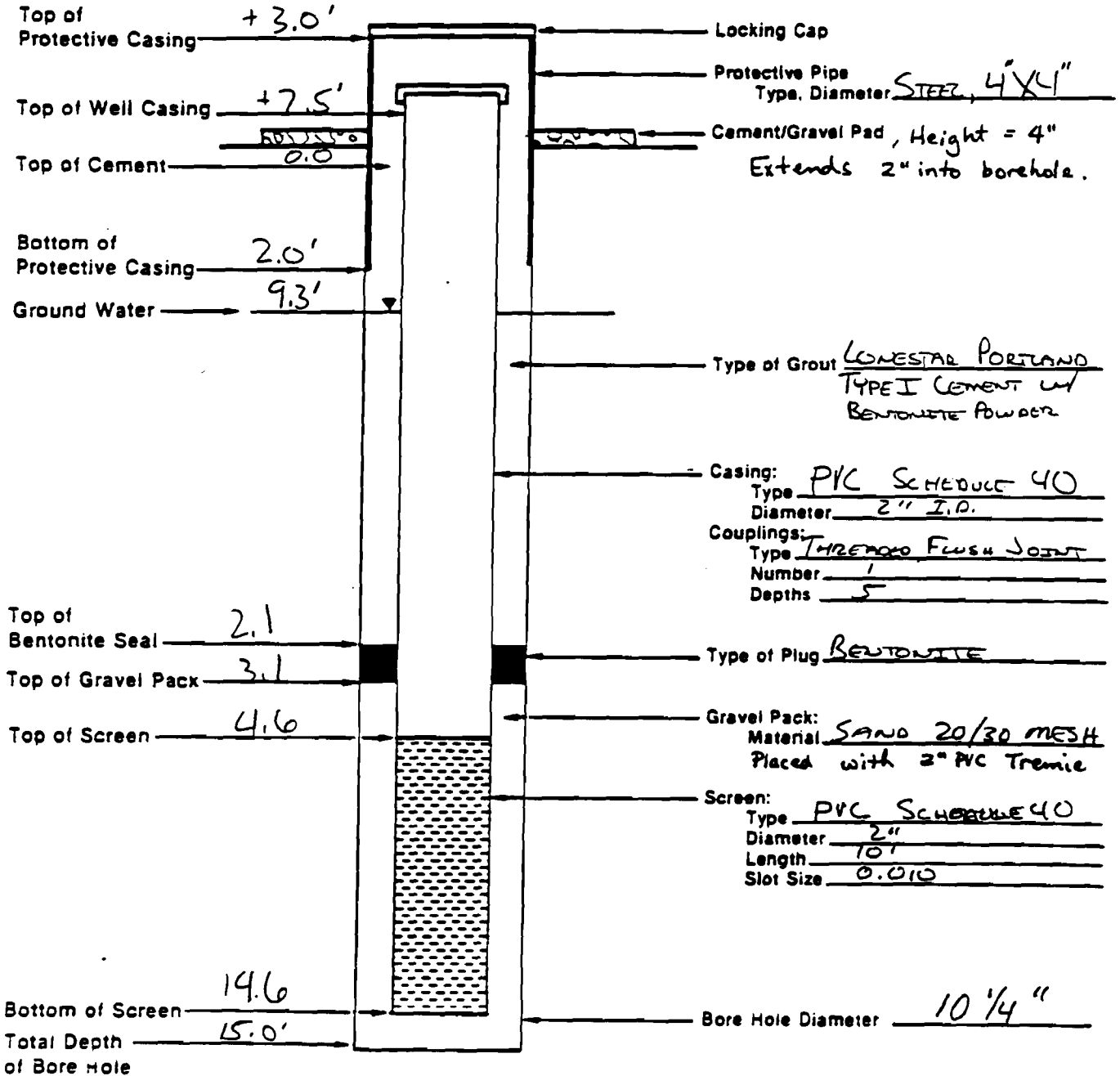
Client: ARMY CORPS OF ENGINEERS  
Location: FT. STEWART - HUNTER AAF  
Job Number: 3902018  
Date/Time: Start 1600/2-9-90 Finish 1820/2-9-90

Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

Complete Grout: 1820, 2-9  
Begin Development: 740, 2-13  
Elapsed Time: 85.3 hrs.

Method of Development: Pumping  
Total Volume of Water Extracted: 115 gal.

Depths in Reference to Ground Level



NOT TO SCALE

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734719.69 E816011.23

Boring Started: 2/6/90  
Boring Completed: 2/9/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 26.6 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" / Core Recovery	Well Construction	Lithology	Moisture Content Percent			
								20	40	60	80
MATERIAL DESCRIPTION								PL	LL		
								20	40	60	80
25		SS	1.5	1.5	2-3-5		(SM) SAND, silty, fine grained, with organics, black, loose, moist (PID=0)				
5		SS	1.5	0.8	1-3-3		5 ft - fine to medium grained, black and gray (PID=0)				
20		SS	1.5	1.1	4-5-4		9 ft - light brown and black (PID=0)		X		
10		SS	1.5	0.8	3-4-7		14 ft - gray, black, and brown, medium dense, saturated (PID=0)				
15		SS	1.5	1.1	0-4-6		19 ft - medium to coarse grained, gray (PID=0)				
20		SS	1.5		3-4-3		24 ft - loose, moist (PID=0)				
25		SS	1.5		3-3-3		29 ft - wet (PID=0)				
30		SS	1.5		3-4-4		(SP) SAND, poorly graded, fine to medium grained,				

SS = Splitspoon  
= Water Level Encountered During Drilling

∇ = Water Level After Well Development

LL = Liquid Limit  
PL = Plastic Limit

Hunter AAF, Fire Training Area  
Fort Stewart, GA

Log of Boring No. HMW-03

Sheet No.  
2 of 2

Client: U.S. Army Corps of Engineers  
Project Number: 3902016  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734719.69 E816011.23

Boring Started: 2/8/90  
Boring Completed: 2/9/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 26.6 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" / % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									20	40	60	80
									PL	LL		
									20	40	60	80
-10								loose, wet (PID=0)				
	40	SS	1.5		2-4-9			39 ft - medium dense		X		
-15												
	45	SS	1.5									
-20												
	50							BORING TERMINATED AT 50.0 FT BGS				

SS = Splitspoon  
W = Water Level Encountered During Drilling

W = Water Level After Well Development

LL = Liquid Limit  
PL = Plastic Limit

MONITOR WELL CONSTRUCTION

Logged By: TORRENT  
 Drilling Contractor: LAYNE ENVIRONMENTAL  
 Driller's Name: MARL BARTON  
 Well Number: H MW-3

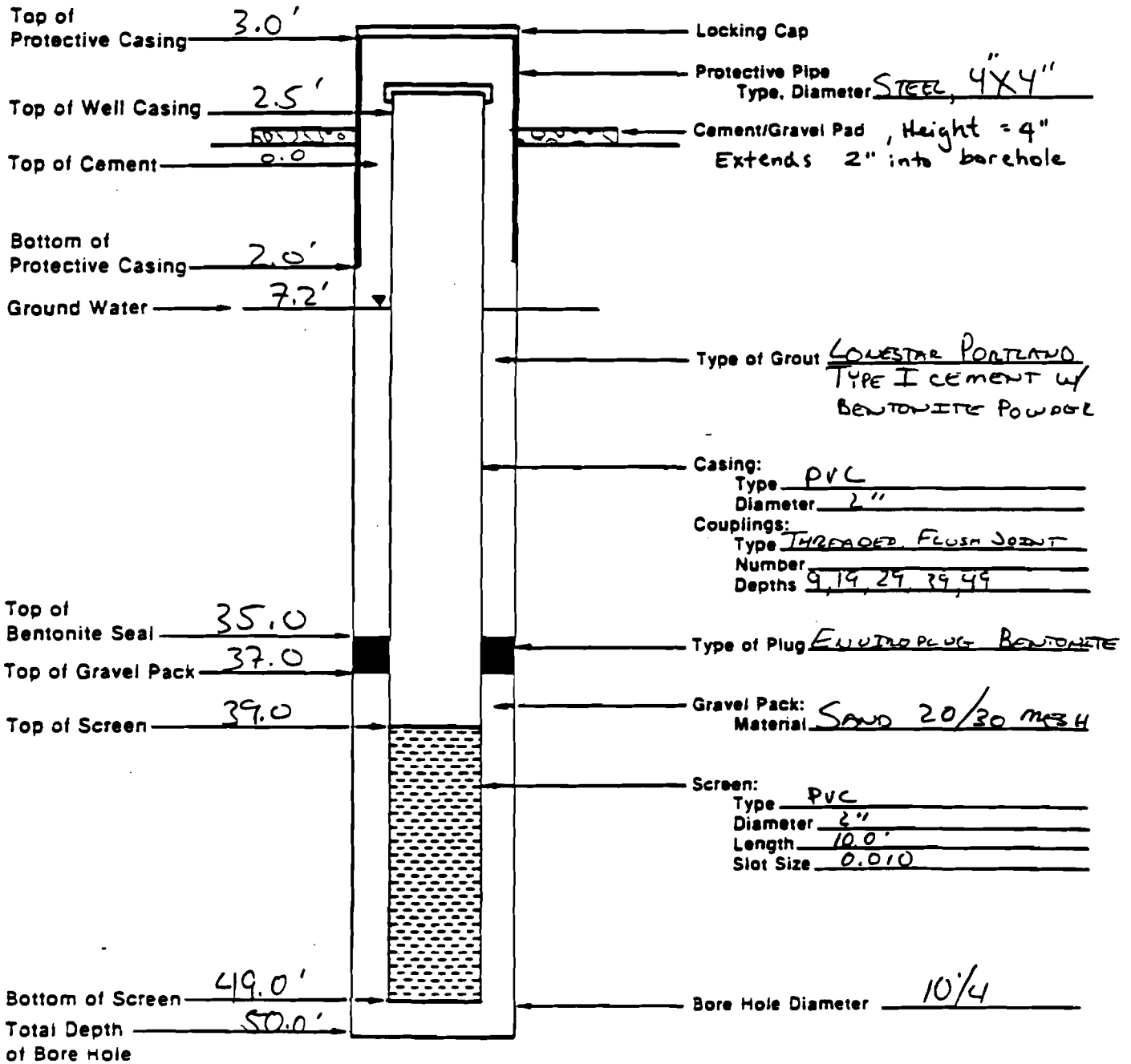
Client: ARMY CORPS OF ENGINEERS  
 Location: FT. STEWART - HUNTER AAF  
 Job Number: 3902018  
 Date/Time: Start 2-10-90/1200 Finish 2-10-90/1630

Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

Complete Grout : 1630, 2-10  
 Begin Development: 1300, 2-13  
 Elapsed time : 68.5 hr

Method of Development : Pumping  
 Total Volume of Water Extracted: 260gal.

Depths in Reference to Ground Level



NOT TO SCALE

Hunter AAF, Fire Training Area  
Fort Stewart, GA

Log of Boring No. HMW-04

Sheet No.  
1 of 1

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734718.92 E816017.56

Boring Started: 2/12/90  
Boring Completed: 2/12/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 27.2 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									20	40	60	80
									PL	LL		
									20	40	60	80
25								NO SAMPLES COLLECTED				
20	5											
15	10											
15	15							BORING TERMINATED AT 15.0 FT BGS				

SS = Splitspoon      LL = Liquid Limit  
 = Water Level Encountered During Drilling      = Water Level After Well Development      PL = Plastic Limit

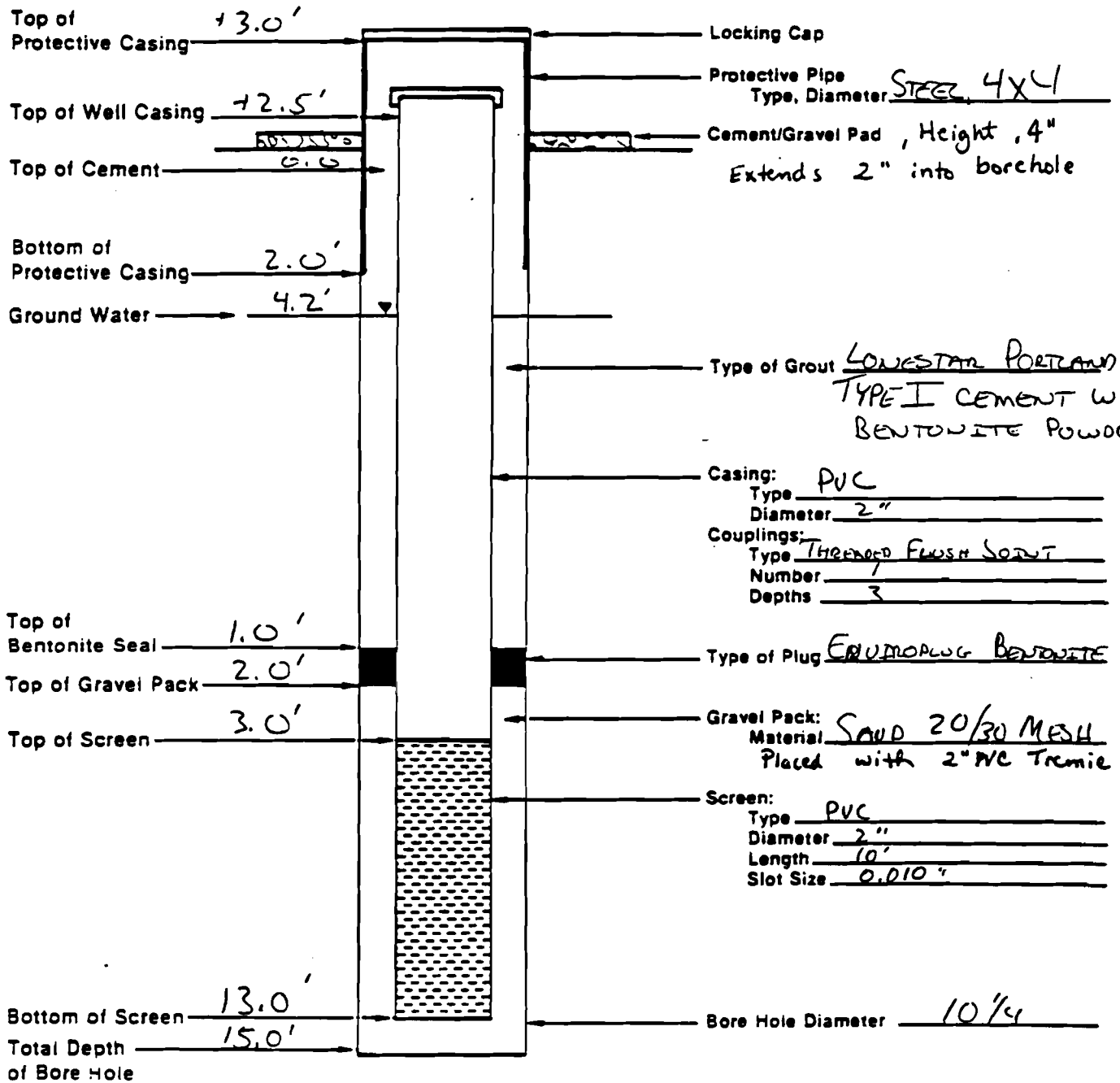


MONITOR WELL CONSTRUCTION

Logged By: J. TRENT  
 Drilling Contractor: LAYNE ENVIRONMENTAL  
 Driller's Name: MARK BARTON  
 Well Number: HMW-4  
 Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):  
 Complete Grout: 1530, 2:12  
 Begin Well Development: 1500, 2-13  
 Elapsed Time: 23.5 hr.

Client: ARMY CORPS OF ENGINEERS  
 Location: FT. STEWART - HUNTER AAF  
 Job Number: 3902018  
 Date/Time: Start 2-12-90/143 Finish 2-12-90/1530  
 Method of Development: Pumping  
 Total Volume of Water Extracted: 150 gal

Depths in Reference to Ground Level!



NOT TO SCALE

Hunter AAF, Fire Training Area  
Fort Stewart, GA

Log of Boring No. HMW-05

Sheet No  
1 of 2

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734495.13 E816073.98

Boring Started: 2/11/90  
Boring Completed: 2/11/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 28.8 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample Blows "N" % Core Recovery	Well Construction	Lithology	Moisture Content Percent			
								20	40	60	80
								X			
								PL	LL		
								20	40	60	80
		SS	1.5		3-5-8		(SM) SAND, silty, fine grained, with some organics, black, medium dense, moist (PID=0)				
25	5	SS	1.5	1.1	5-8-9		5 ft - medium to coarse grained, light gray, wet (PID=1)				
20	10	SS	1.5	0.8	2-2-3		10 ft - fine to medium grained, light brown, loose, saturated (PID=2)				
15	15	SS	1.5		2-3-0						
10	20	SS	1.5	0.8	1-2-7		20 ft - gray (PID=1)				
5	25	SS	1.5		5-4-3		25 ft - (PID=0)				
0	30	SS	1.5		2-3-5		30 ft - (PID=0)				
-5											

SS = Splitspoon  
 = Water Level Encountered During Drilling

= Water Level After Well Development

LL = Liquid Limit  
 PL = Plastic Limit



Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734495.13 E816073.95

Boring Started: 2/11/90  
Boring Completed: 2/11/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 28.8 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample "N" Blows / % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent			
									X			
									20	40	60	80
									PL   LL			
									20	40	60	80
		SS	1.5	1.5	2-2-7			(SP) SAND, poorly graded, fine to medium grained, gray, loose, saturated (PID=0)				
-10	40	SS	1.5	1.1	3-5-9			40 ft - medium dense (PID=0)				
-15	45	SS	1.5		3-3-5			45 ft - loose (PID=0)				
-20	50							BORING TERMINATED AT 50.0 FT BGS				

SS = Splitspoon  
W = Water Level Encountered During Drilling

W = Water Level After Well Development

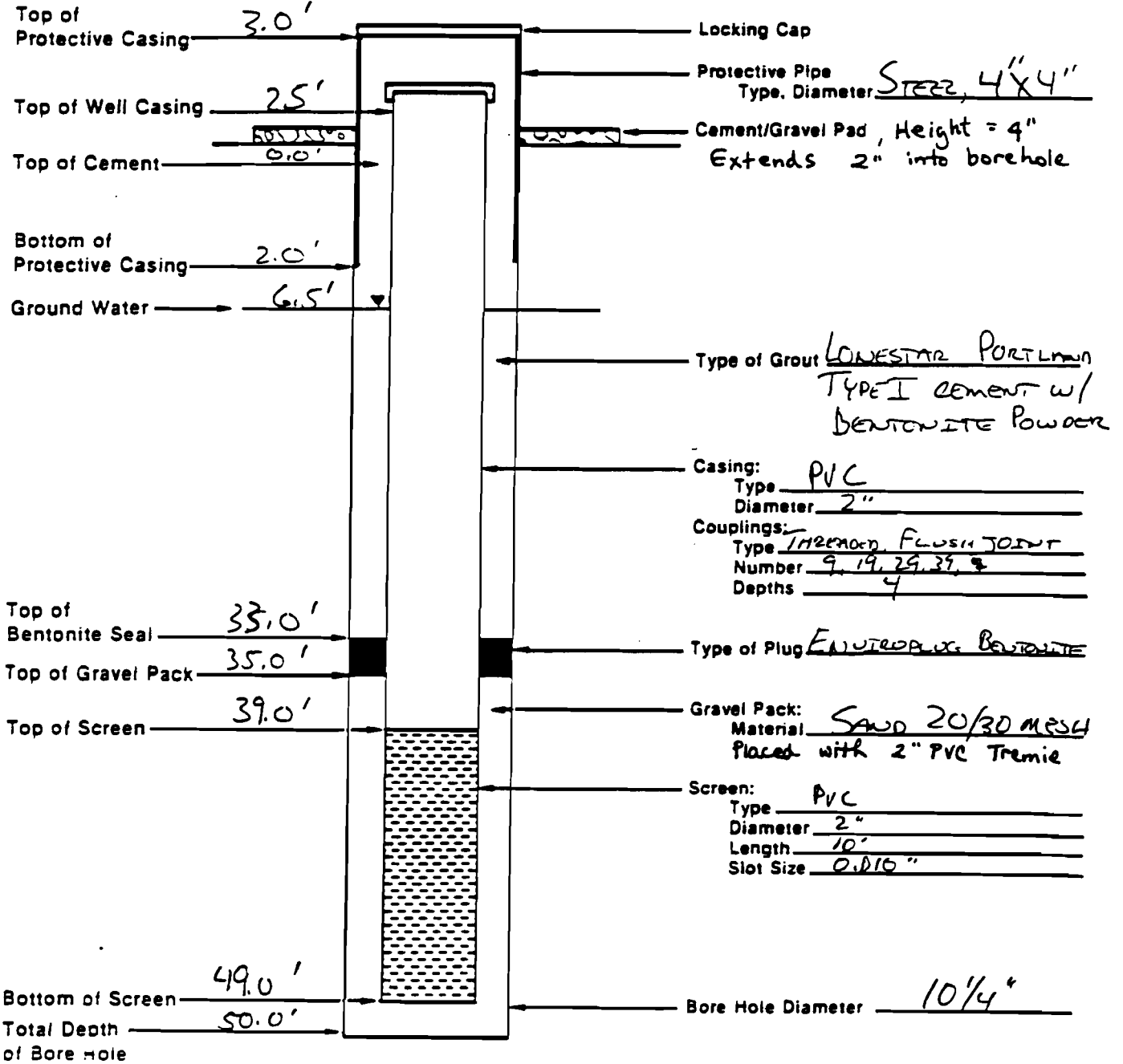
LL = Liquid Limit  
PL = Plastic Limit

MONITOR WELL CONSTRUCTION

Logged By: T. TRENT  
 Drilling Contractor: LAYNE ENVIRONMENTAL  
 Driller's Name: MARK BARTON  
 Well Number: AMW-5  
 Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):  
 Complete Grout : 1800, 2-11  
 Begin Well Development : 0950, 2-13  
 Elapsed Time : 39.8 hr.

Client: ARMY CORPS OF ENGINEERS  
 Location: FT. STEWART - HUNTER AFB  
 Job Number: 3902016  
 Date/Time: Start 2-11-90/1530 Finish 2-11-90/1800  
 Method of Development : Pumping  
 Total Volume of Water Extracted : 220 gal.

Depths in Reference to Ground Level:



NOT TO SCALE

Client: U.S. Army Corps of Engineers  
Project Number: 3902018  
Drilling Contractor: Layne Environmental, Inc.  
Driller: M. Barton  
Logged By: T. Trent  
Drilling Method: Hollow-Stem Auger  
Boring Location: N734497.93 E816067.08

Boring Started: 2/12/90  
Boring Completed: 2/12/90  
Boring Diameter: 10 inch  
Well Casing Diameter: 2 inch  
Surface Elevation: 28.3 ft  
Elevation Datum: NGVD  
Type of Drill Rig: Mobile B-57

Elevation	Depth	Samp. Type and Diam.	Samp. Adv. Len Core	Sample Rec. Core Rec.	Sample "N" Blows "N" % Core Recovery	Well Construction	Lithology	MATERIAL DESCRIPTION	Moisture Content Percent						
									20	40	60	80			
									PL   LL						
									20	40	60	80			
25	4					Well Construction		NO SAMPLES COLLECTED							
15	15							BORING TERMINATED AT 15.0 FT BGS							

SS = Splitspoon      W = Water Level Encountered During Drilling      LL = Liquid Limit  
 W = Water Level After Well Development      PL = Plastic Limit

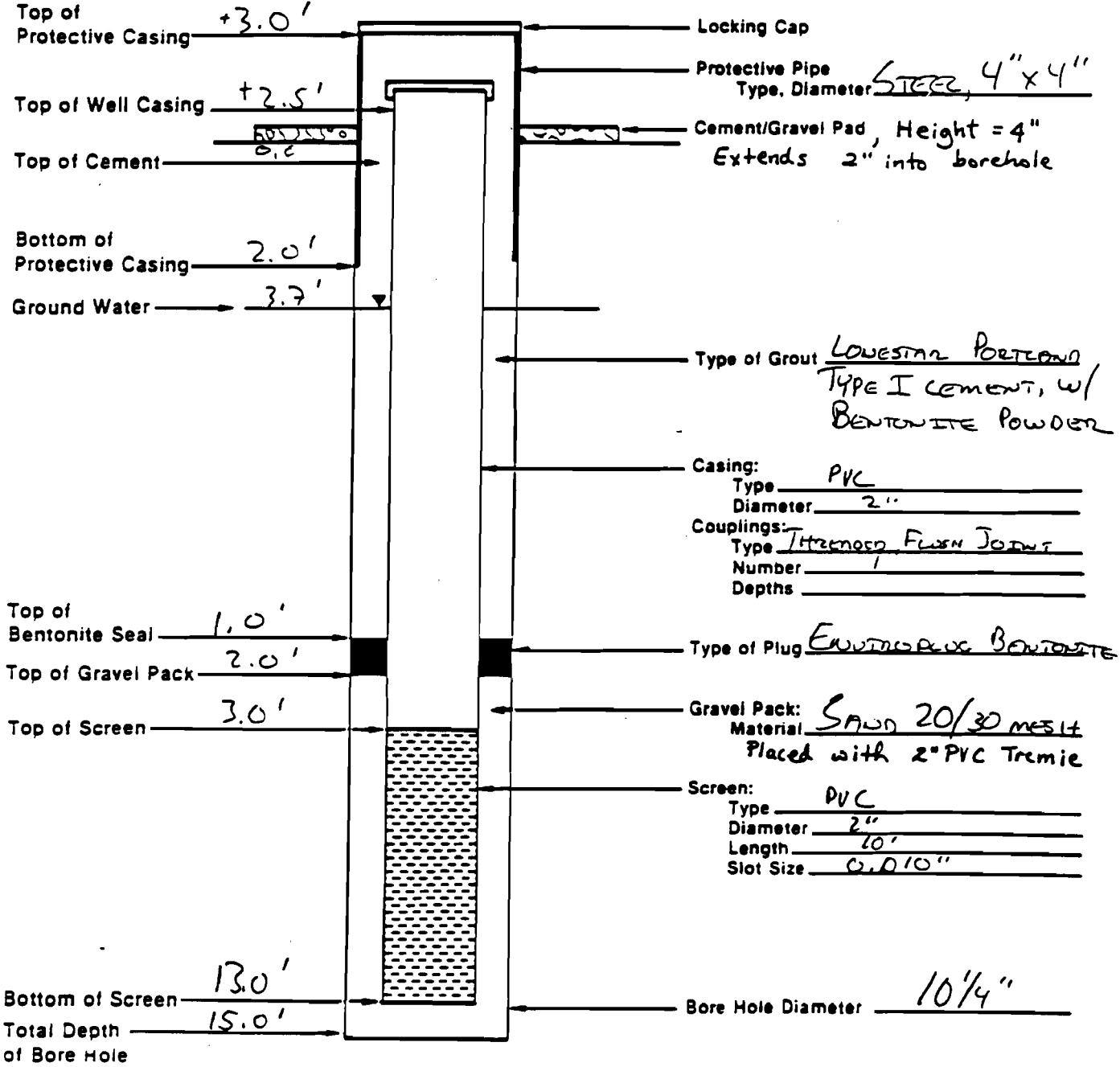
MONITOR WELL CONSTRUCTION

270

Logged By: J. Trawt  
 Drilling Contractor: LATAC Environmental  
 Driller's Name: Mark Barlow  
 Well Number: H MW-6  
 Comments (Lost circulation interval, Water level changes, Hole collapse interval, etc.):  
 Complete Grout: 1415, 2-12  
 Begin Development: 0915, 2-13  
 Elapsed Time: 19.0 hr.

Client: Army Corps of Engineers  
 Location: FT. STEWART - Hunter Arms  
 Job Number: 2902018  
 Date/Time: Start 2-12-90/1315 Finish 2-12-90/1415  
 Method of Development: Pumping  
 Total Volume of Water Extracted: 85 gal.

Depths in Reference to Ground Level



NOT TO SCALE

Client:	US Army Corps of Engineers, Kansas City Division	Boring Started:	3/4/92
Project Number:	3912015G	Boring Completed:	3/4/92
Drilling Contractor:	Layne Environmental Services	Boring Diameter:	8 inch
Driller:	D. Nichols	Well Casing Diameter:	2 inch
Logged By:	G. Foster	Type of Drill Rig:	Mobile B-57
Location:		Drilling Method:	Hollow Stem Auger

Elevation	Depth	Samp Type	Samp Rec ft	PID ppm	Blows Per 6"	Well Construction	Lithology	MATERIAL DESCRIPTION	Dynamic Penetration Resistance Blows/ft ×							
									8	16	24	32				
									PID (ppm)							
									100	200	300	400				
	4							(SM) SAND, silty, fine-grained, dark brown, moist								
	5	CS	5.0	3				4 ft - becomes orangish-yellow, wet								
	10	CS	5.0	0				(SM-ML) SAND AND SILT, intermixed silty sand and sandy silt, fine-grained sand, bluish-gray, wet, micaceous								
								BORING TERMINATED AT 14 FT BGS								
								<b>WELL CONSTRUCTION DETAILS</b> Well stickup from surface to 2.0 ft AGS Volclay grout interval from surface to 1.5 ft BGS Sand filter pack from 1.5 to 14.0 ft BGS Well screen interval from 3.0 to 13.0 ft BGS Pipe and well screen material = Sch 40 PVC Pipe and well screen diameter = 2 inch Well screen slot size = 0.010 inch								

SS = Splitspoon      CS = CMS Continuous Sampler      PID = Photoionisation Detector (HNU)

Hunter Army Airfield  
Fort Stewart, Savannah, GA

Log of Boring No. HMW-8

Sheet No.  
1 of 1

Client:	US Army Corps of Engineers, Kansas City Division	Boring Started:	3/3/92
Project Number:	3912015G	Boring Completed:	3/3/92
Drilling Contractor:	Layne Environmental Services	Boring Diameter:	8 inch
Driller:	D. Nichols	Well Casing Diameter:	2 inch
Logged By:	G. Foster	Type of Drill Rig:	Mobile B-57
Location:		Drilling Method:	Hollow Stem Auger

Elevation	Depth	Samp Type	Samp Rec ft	PID ppm	Blows Per 6"	Well Construction	Lithology	MATERIAL DESCRIPTION	Dynamic Penetration Resistance Blows/ft X			
									15	24	32	
									PID (ppm)			
									100	200	300	400
		CS	4.1	0				(SM) SAND, silty, dark brown, fine-grained, moist				
	5	CS	3.9	0				4 to 5 ft - becomes tan mottled with gray 5 ft - becomes fine- to medium-grained, light to medium gray, wet				
	10	CS	3.5	0								
	15							(SM-ML) SAND-SILT, intermixed silty sand and sandy silt, fine-grained sand, greenish-gray, wet, micaceous BORING TERMINATED AT 15 FT BGS				
									<b>WELL CONSTRUCTION DETAILS</b> Well stickup from surface to 2.0 ft AGS Volclay grout interval from surface to 1.5 ft BGS Sand filter pack from 1.5 to 15.0 ft BGS Well screen interval from 3.0 to 13.0 ft BGS Pipe and well screen diameter = 2 inch Pipe and well screen material = Sch 40 PVC Well screen slot size = 0.010 inch			

SS = Splitspoon      CS = CMS Continuous Sampler      PID = Photoionization Detector (HNU)

Client:	US Army Corps of Engineers, Kansas City Division	Boring Started:	3/2/92
Project Number:	3912016G	Boring Completed:	3/2/92
Drilling Contractor:	Layne Environmental Services	Boring Diameter:	8 inch
Driller:	D. Nichols	Well Casing Diameter:	2 inch
Logged By:	G. Foster	Type of Drill Rig:	Mobile B-57
Location:		Drilling Method:	Hollow Stem Auger

Elevation	Depth	Samp Type	Samp Rec ft	PID ppm	Blows Per 8"	Well Construction	Lithology	MATERIAL DESCRIPTION	Dynamic Penetration Resistance Blows/ft ×							
									8	16	24	32				
									PID (ppm)							
									100	200	300	400				
		CS	2.3	15				(SM) SAND, silty, medium-brown becoming dark brown with depth, fine-grained, moist								
	5	CS	3.0	50				4 ft - grades to medium gray								
		SS			1-1			9 to 10 ft - wood in sample interval								
	10	SS	2.0	175	2-3			10 ft - becomes brown to orangish-brown, wet								
		SS	2.0	125	1-4											
					5-6											
	15				6-11											
					29-14											
BORING TERMINATED AT 15 FT BGS																
<b>WELL CONSTRUCTION DETAILS</b> Well stickup from surface to 2.5 ft AGS Volclay grout interval from 2.5 to 3.0 ft BGS Sand filter pack from 3.0 to 15.0 ft BGS Well screen interval from 5.0 to 15.0 ft BGS Pipe and well screen diameter = 2 inch Pipe and well screen material = Sch 40 PVC Well screen slot size = 0.010 inch																

SS = Splitspoon      CS = CMS Continuous Sampler      PID = Photoionization Detector (HNU)



# HTW DRILLING LOG

HOLE NO.  
FTASB-01

224

SHEET 1  
OF 2 SHEETS

1. COMPANY NAME <i>LAW Engineering &amp; Environmental</i>		2. DRILLING SUBCONTRACTOR <i>hand auger</i>	
3. PROJECT <i>Hunter Army Airfield</i>		4. LOCATION (CITY, STATE) <i>Savannah GA</i>	
5. NAME OF DRILLER <i>N/A</i>		6. MANUFACTURER'S DESIGNATION OF DRILL	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	<i>3/8 inch Steels, steel</i>		9. HOLE LOCATION (SITE) <i>Fire training area</i>
	<i>hand auger</i>		10. SURFACE ELEVATION
8. WEATHER <i>Sunny; Very hot; slight breeze</i>		11. DATE STARTED <i>08/21/95 13:40</i>	12. DATE COMPLETED <i>8/21/95 14:20</i>
13. OVERBURDEN THICKNESS <i>NA</i>		18. DEPTH GROUNDWATER ENCOUNTERED <i>9.9 bgs @ 14:20</i>	
14. DEPTH DRILLED INTO ROCK <i>NA</i>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
15. TOTAL DEPTH OF HOLE <i>10p</i>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES <i>NA</i>
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)
	<i>✓</i>	<i>✓</i>	<i>Semi-VOC</i>
23. DISPOSITION OF HOLE <i>bone hole</i>		BACK FILLED	24. SIGNATURE OF INSPECTOR <i>Hunter chips [Signature]</i>
25. CHECKED BY: <i>[Signature]</i>		26. NAME OF INSPECTOR <i>Heather A Laswell</i>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	<i>SAND, soft, silty, reddish black {2.5yr, 2.5/13} (SM)</i>	<i>Borehole 0 HS 0</i>		<i>A</i>		
	2.0						
	3.0	<i>Same; color change dark reddish grey {2.5 yr 4/13} (SM)</i>	<i>Borehole 9 HS 70</i>		<i>B</i>		<i>fuel odor</i>
	4.0	<i>Same</i>	<i>Borehole 13 HS 13</i>		<i>C</i>		

MRK FORM JUN 89 55

PROJECT NAME & NO.

*Hunter Army Airfield 11-3551-0320*

HOLE NO.  
FTASB-01  
HF - Rev. 5/94

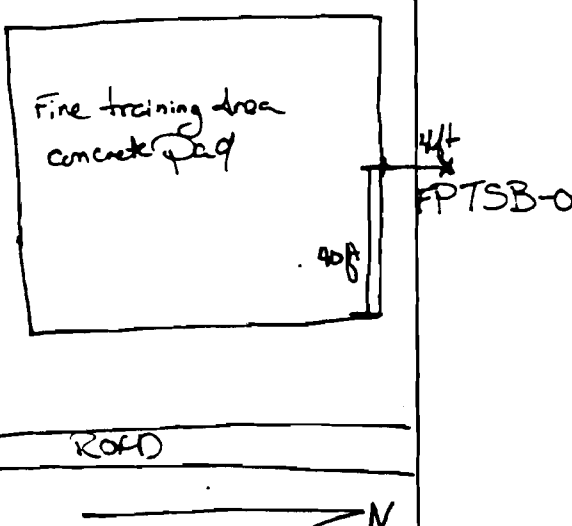
# HTW DRILLING LOG

HOLE No. FTASB-01

PROJECT Hunter AAF

INSPECTOR H. Laswell

SHEET 2 OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0	Same, soft, weak red { 2.5% 5/2 } (SM)					
	6.0			HS 50		D	
	7.0	Same, oil-like substance on auger					
	8.0			HS 60		E	fuel color
	9.0						
▽	10.0	wet Boring terminated at 10.0 ft bgs					
							
		ROAD					
		N					

MRK FORM JUN 86 55-2

PROJECT NAME & NO

Hunter Army Airfield

11-3556-0320

HOLE No.

FTASB-01

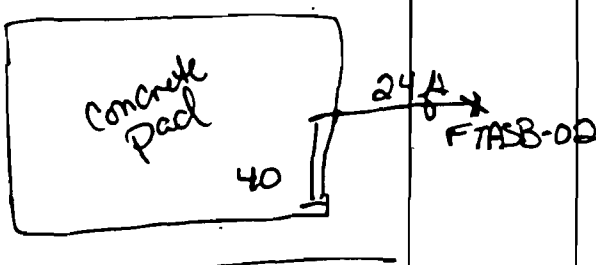
HF - Rev. 5/79

# HTW DRILLING LOG

HOLE No. **FTASB-02**  
 SHEET 1  
 OF 1 SHEETS

226

1. COMPANY NAME <b>LAW Engineering &amp; Environment</b>		2. DRILLING SUBCONTRACTOR <b>hand awyer</b>	
3. PROJECT <b>Hunter Army Airfield - Fire Training Area</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3/4 in stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
10. SURFACE ELEVATION		11. DATE STARTED <b>8/21/95 14:50</b>	
12. DATE COMPLETED <b>8/21/95 15:01</b>		13. OVERBURDEN THICKNESS <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		15. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
16. TOTAL DEPTH OF HOLE <b>3.0 ft bop</b>		17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)		20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS		22. TOTAL CORE RECOVERY % <b>NA</b>	
23. DISPOSITION OF HOLE <b>bore hole</b>		24. SIGNATURE OF INSPECTOR <i>Heather A Laswell</i>	
25. CHECKED BY: <i>G. Keenan</i>		26. NAME OF INSPECTOR <b>Heather A Laswell</b>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		topsoil					
	1.0	SAND, silty, soft, brown {10R 5/3} (5m)	Hs ND		A		fuel odor
	2.0	Same, reddish black {25R 2.5/13} greenish grey discoloration 25R/13 black EN 2.3 (5m)	Hs 30 HS 60		B		fuel odor
	4.0						

MRK FORM JUN 89 55

PROJECT NAME & NO.

**Hunter Army Airfield 11-3551-0330**

HOLE No.

**FTASB-02**

HF - Rev. 5/94

# HTW DRILLING LOG

HOLE No  
**FTA5B-03**

1. COMPANY NAME <b>LAW Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>		HOLE No <b>FTA5B-03</b>		
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>		SHEET / OF / SHEETS		
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3 1/2 in stainless steel hand auger</b>		
8. WEATHER <b>sunny, hot, bright</b>		11. DATE STARTED <b>8/01/95 15:10</b>		12. DATE COMPLETED <b>8/01/95 15:30</b>		
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>		9. MOLE LOCATION (SITE) <b>Fire Training Area</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>		10. SURFACE ELEVATION		
15. TOTAL DEPTH OF HOLE <b>30</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>		19. GEOTECHNICAL SAMPLES (#) <b>—</b>		
20. TOTAL NUMBER OF CORE BOXES <b>NA</b>		DISTURBED <b>—</b>		UNDISTURBED <b>—</b>		
21. SAMPLES FOR CHEMICAL ANALYSIS <b>—</b>		VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>Semi VOC</b>	OTHER (SPECIFY) <b>—</b>	22. TOTAL CORE RECOVERY% <b>NA</b>
23. DISPOSITION OF HOLE <b>bore hole</b>		BACKFILLED <input checked="" type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY) <b>—</b>	24. SIGNATURE OF INSPECTOR <i>Heather A. Laswell</i>	
25. CHECKED BY: <i>Geri Kenge</i>		26. NAME OF INSPECTOR <i>Heather A. Laswell</i>				

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, ss, lty, soft, weak red. (SM) 22.5R 5/33	Borehole 2.5 HS 0		A		fuel odor
	2.0	same	Borehole 2.5 HS 60		B		
	3.0						
	4.0	<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     concrete pad 40                 </div>					69ft → FTA5B-03

MRK FORM JUN 89 55

PROJECT NAME & NO  
**Hunter Army Airfield 11-3551-030**

HOLE No  
**FTA5B-03**  
HF - Rev. 5/94

# HTW DRILLING LOG

HOLE No. **FTASB-04** 228

SHEET 1 OF 2 SHEETS

1. COMPANY NAME <b>(AW) Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>		3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3 1/2 in stainless steel hand auger</b>		8. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
9. WEATHER <b>bright, sunny, hot, breezy</b>		11. DATE STARTED <b>8/22/95 07:40</b>		12. DATE COMPLETED <b>8/22/95 0850</b>		13. OVERBURDEN THICKNESS <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		15. TOTAL DEPTH OF HOLE <b>10.5 ft bgs</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED		20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC		METALS		OTHER (SPECIFY)	
<b>WB 6</b>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<b>Semi vol</b>	
23. DISPOSITION OF HOLE <b>bore hole</b>		BACKFILLED		MONITORING WELL		OTHER (SPECIFY)	
<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
25. CHECKED BY: <b>Gmi Kerp</b>		26. NAME OF INSPECTOR <b>Heather A. Laswell</b>		24. SIGNATURE OF INSPECTOR <i>Heather A. Laswell</i>		22. TOTAL CORE RECOVERY% <b>NA</b>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, silty, soft, dark reddish brown SYR 3/23 (5m)	HS 0.0 Borehole 0.0		A		
	2.0	SAND, silty, soft, yellow SYR 7/63 (5m)	Borehole 0 HS 0.0		B		
	3.0	SAME					
	4.0	SAME	Borehole 0 HS 0.0		C		

MRK FORM 55 JUN 89

PROJECT NAME & NO.

Hunter Army Airfield 11-3551-0320

HOLE No. **FTASB-04**  
HF - Rev. 5/94

# HTW DRILLING LOG

FTASB-04

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0	SAME; color change yellowish red { 8YR 5/3 }					
	6.0	SAME, very pale brown, { 10YR 9/4 } (SM)					
	7.0		Borehole 00 HS 0.0			D	
	8.0	SAME					
	9.0		Borehole 00 HS 0.0			E	
	9.0	SAME, color change greyish brown { 10YR 5/2 } damp					
	10.0		Borehole 0 HS 0			F	
		Boring terminated at 10.5 ft bgd					

MRK FORM JUN 68 55-2

PROJECT NAME & NO

Hunter Army Airfield

11-3551-0320

HOLE No.

FTASB-04

HF - Rev. 5'

# HTW DRILLING LOG

HOLE No. **FTA5B-05** 230  
SHEET OF **2** SHEETS

1. COMPANY NAME <b>LAW Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>	
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3 1/2 in stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
		10. SURFACE ELEVATION	
8. WEATHER <b>Sunny, hot, breezy</b>		11. DATE STARTED <b>8/22/95 0900</b>	12. DATE COMPLETED <b>8/22/95 1008</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>10.0 ft bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>Semi-VOC</b>
			OTHER (SPECIFY)
			OTHER (SPECIFY)
23. DISPOSITION OF HOLE <b>Borehole</b>	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)
	<input checked="" type="checkbox"/>		
25. CHECKED BY: <b>gkeeper</b>	26. NAME OF INSPECTOR <b>Feather A. Laswell</b>		

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, silty, soft dusky red $\Sigma$ 2.5 YR 4/25 (SM)	320 HS 0		A		
	2.0	SAME	B20 HS 20		B		
	3.0						
	4.0	Color change <del>light brown</del> $\Sigma$ 7.5 YR 6/43	32100 HS 20		C		

MRK FORM JUN 89 55

PROJECT NAME & NO.  
**Hunter Army Airfield**  
**11-3551-0320**

HOLE No. **FTA5B-05**  
HF - Rev. 5/94



# HTW DRILLING LOG

HOLE No. FTASB-05

SHEET 2 OF 2 SHEETS

PROJECT Hunter AAF

INSPECTOR

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0	SAME					slight fuel odor
	6.0	SAME, damp					fuel odor
	7.0	same; some black string	HS 70		D		
	8.0						
	9.0	same	HS 60		E		
	10.0	Boring terminated at 10ft bgs					

MRK FORM JUN 88 55-2

PROJECT NAME & NO

Hunter - Army Airfield

11-3551-0320

HOLE No. FTASB-05

HF - Rev. 55

# HTW DRILLING LOG

HOLE NO. FTASB06 232

SHEET OF 2 SHEETS

1. COMPANY NAME <i>AW Engineering &amp; Environmental</i>		2. DRILLING SUBCONTRACTOR <i>hand auger</i>				
3. PROJECT <i>Hunter Army Airfield</i>		4. LOCATION (CITY, STATE) <i>Savannah GA</i>				
5. NAME OF DRILLER <i>NA</i>		6. MANUFACTURER'S DESIGNATION OF DRILL <i>NA</i>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <i>3/8 in stainless steel hand auger</i>		9. HOLE LOCATION (SITE) <i>Fire Training Area</i>				
8. WEATHER <i>Sunny hot breeze</i>		11. DATE STARTED <i>8/22/75 1015</i>	12. DATE COMPLETED <i>8/22/75 043</i>			
13. OVERBURDEN (THICKNESS) <i>NA</i>		16. DEPTH GROUNDWATER ENCOUNTERED <i>9 ft bgs @ 1243 8/22/75</i>				
14. DEPTH DRILLED INTO ROCK <i>NA</i>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <i>NA</i>				
15. TOTAL DEPTH OF HOLE <i>0.0 ft bgs</i>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <i>NA</i>				
19. GEOTECHNICAL SAMPLES (#) <i>5</i>	DISTURBED <i>—</i>	UNDISTURBED <i>—</i>	20. TOTAL NUMBER OF CORE BOXES <i>NA</i>			
21. SAMPLES FOR CHEMICAL ANALYSIS <i>5</i>	VOC <i>✓</i>	METALS <i>✓</i>	OTHER (SPECIFY) <i>SEMIVOC</i>	OTHER (SPECIFY) <i>—</i>	OTHER (SPECIFY) <i>—</i>	22. TOTAL CORE RECOVERY% <i>NA</i>
	23. DISPOSITION OF HOLE <i>borehole</i>	BACKFILLED <i>—</i>	MONITORING WELL <i>—</i>	OTHER (SPECIFY) <i>—</i>	24. SIGNATURE OF INSPECTOR <i>Heather A. Laswell</i>	
25. CHECKED BY: <i>gnie Keyser</i>			26. NAME OF INSPECTOR <i>Heather A. Laswell</i>			

ELEV. <small>a</small>	DEPTH <small>b</small>	DESCRIPTION OF MATERIALS <small>c</small>	FIELD SCREENING RESULTS (ppm) <small>d</small>	GEOTECH SAMPLE OR CORE BOX No. <small>e</small>	ANALYTICAL SAMPLE No. <small>f</small>	BLOW COUNTS <small>g</small>	REMARKS <small>h</small>
	1.0	SAND, silty, dry, weak red E2.5R 5/23 (5M)	HS 0		A		
	2.0	SAME			B		
	3.0		BZC HS 0				
	4.0	Color change reddish yellow E7.5R 7/63 (5M)			C		
			HS C				

MRK FORM JUN 80 55

PROJECT NAME & NO.  
*Hunter Army Airfield*

HOLE NO. FTASB-06 HF - Rev. 5/94

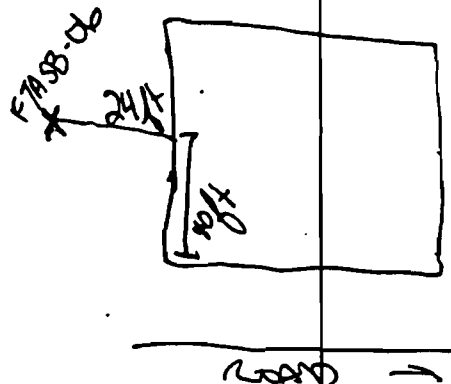
# HTW DRILLING LOG

HOLE NO. **F7A58-06**  
SHEET **2** OF **2** SHEETS

PROJECT **Hunter AAF**

INSPECTOR **H Laswell**

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0						
	6.0	same	BZ 0				
	7.0	same, color change, light brown {7.5 ft / 1/3}	AS 0		D		
	8.0	color change, black & brown {7.5 ft / 4 / 3}	BZ 0				
	9.0	wet	HS < 1		E		
	10.0	<del>wet</del> boring terminated 10.0 ft bgs					



MRK FORM JUN 89 55-2

PROJECT NAME & NO.  
**Hunter Army Air field**  
D-34

HOLE NO. **F7A58-06**  
HF - Rev. 55

41-3551-0320

# HTW DRILLING LOG

HOLE No. **FTASB07** 234  
 SHEET 1 OF 2 SHEETS

1. COMPANY NAME <b>IAW Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>hamd auger</b>	
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3/8 in stainless steel hard auger</b>		8. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
9. WEATHER <b>Sunny hot breezy</b>		11. DATE STARTED <b>8/22/95 1330</b>	12. DATE COMPLETED <b>8/22/95 1403</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>9.7 @ 1403</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>10.0</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>semi VOC</b>
23. DISPOSITION OF HOLE <b>bone hole</b>	BACKFILLED <input checked="" type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY) <input type="checkbox"/>
25. CHECKED BY: <b>Gari Keyser</b>		26. NAME OF INSPECTOR <b>Heather A. Laswell</b>	
22. TOTAL CORE RECOVERY % <b>NA</b>		24. SIGNATURE OF INSPECTOR <i>Heather A. Laswell</i>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, silty soft, dark reddish brown SYR 3/13 (SM)	BZ 0 HS 0		A		
	2.0	SAME					
	3.0			Corehole D HS 16	B		slight fuel color
	4.0	SAME					
			HS 50		C		


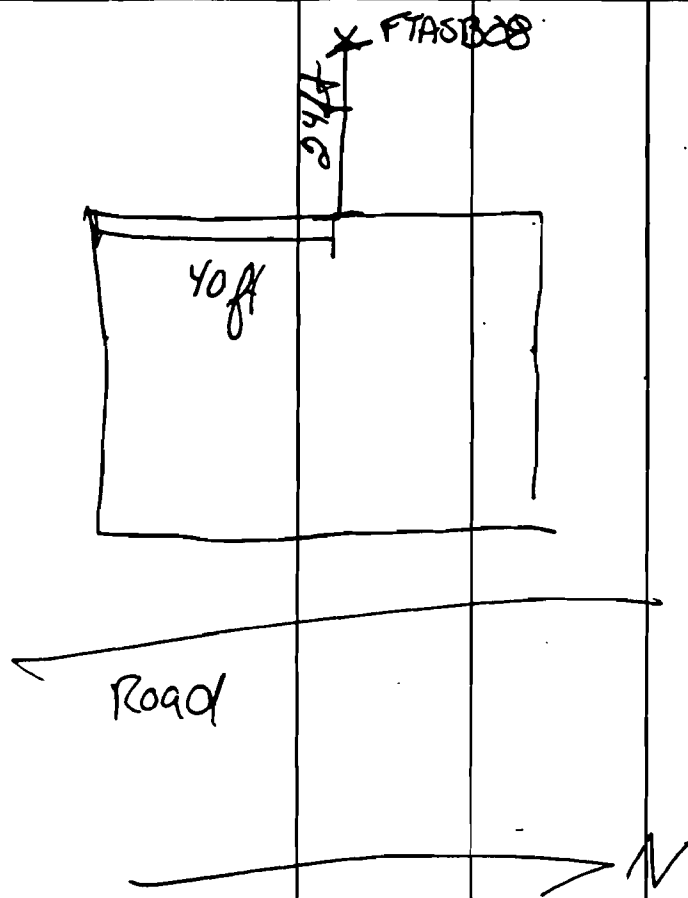
# HTW DRILLING LOG

F7A-SB08

PROJECT *Hunter AAF*

INSPECTOR *H Caswe 11*

SHEET *2*  
OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
							

MRK FORM JUN 89 55-2

PROJECT NAME & NO  
*Hunter Army Airfield 11-3551-0320*

HOLE No.  
*F7A-SB-08*  
HF - Rev. 54

# HTW DRILLING LOG

HOLE No. **F7ASB-09** 236  
SHEET OF **2** SHEETS

1. COMPANY NAME <b>CAW Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>NA</b>	
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3/8 in stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
8. WEATHER <b>sunny hot, breezy</b>		11. DATE STARTED <b>8/22/95 1432</b>	12. DATE COMPLETED <b>8/22/95 1455</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED (ft) <b>7.2 ft bgs @ 1455</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>7.3 ft bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED <b>—</b>	UNDISTURBED <b>—</b>	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC <b>—</b>	METALS <b>—</b>	OTHER (SPECIFY) <b>semi voc</b>
<b>2</b>	<b>✓</b>	<b>✓</b>	<b>—</b>
23. DISPOSITION OF HOLE <b>bone hole</b>	BACKFILLED <b>✓</b>	MONITORING WELL <b>—</b>	24. SIGNATURE OF INSPECTOR <b>Heather Aswell</b>
25. CHECKED BY: <b>J. Keen</b>	26. NAME OF INSPECTOR <b>Heather A. Lowell</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, silty, soft, yellowish brown E101R 5/63 (5m) HS 0.0			A		
	2.0	color change very dark grey E 75 YR 3/13	15		B		
	4.0	Same <del>moist</del>		Borehole 00	C		
			HS 0.0				

MRK FORM JUN 89 55	PROJECT NAME & NO. <b>Hunter Army Airfield 11-3551-0320</b>	HOLE No. <b>F7ASB-09</b> Rev. 5/94
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# HTW DRILLING LOG

FTASB-09

SHEET 2  
OF 2 SHEETS

PROJECT *Hunter AAF*

INSPECTOR *Hlaswell*

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0	<i>same</i>					
	6.0	<i>same, few wood pieces</i>		<i>#5 O.D</i>			<i>D</i>
	7.0	<i>wet</i>					
		<i>Boring terminated at 7.3</i>					

\* FTASB-09  
4.8 ft  
+ FTASB-08  
2.8 ft  
+ FTASB-07  
ROAD  
N

MRK FORM JUN 89 55-2

PROJECT NAME & NO  
*Hunter Army Airfield*

*11-3651-0320*

HOLE No. *FTASB-09*  
HF - Rev. 5A



# HTW DRILLING LOG

HOLE No. **FTASB-10**  
 SHEET **1** OF **2** SHEETS

238

1. COMPANY NAME <b>Law Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>Hard Auger</b>	
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3/8 in stainless steel hard auger</b>		9. HOLE LOCATION (SITE) <b>Fire training area</b>	
8. WEATHER <b>Sunny, hot, breezy</b>		11. DATE STARTED <b>8/22/95 01514</b>	12. DATE COMPLETED <b>8/22/95 1550</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>10.4 @ 1548</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>10.4 ft</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)	<input checked="" type="checkbox"/> DISTURBED	<input type="checkbox"/> UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>
21. SAMPLES FOR CHEMICAL ANALYSIS	<input type="checkbox"/> VOC	<input type="checkbox"/> METALS	<input type="checkbox"/> OTHER (SPECIFY)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. DISPOSITION OF HOLE <b>borehole</b>	<input checked="" type="checkbox"/> BACKFILLED	<input type="checkbox"/> MONITORING WELL	<input type="checkbox"/> OTHER (SPECIFY)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. CHECKED BY <b>gleeper</b>	26. NAME OF INSPECTOR <b>Heather A Laswell</b>		

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Sand, silty, soft + dark reddish gray E10R 3/13 (S10)	#S 60		A		fuel odor
	2.0						
	3.0	SAME	#S 50		B		
	4.0						
			#S 35		C		

MRK FORM JUN 89 55

PROJECT NAME & NO.  
**Hunter Army Airfield**  
**11-3551-0320**


HOLE No. **FTASB-10**  
HF - Rev. 5/94

# HTW DRILLING LOG

STAGE 10  
SHEET 2 OF 2 SHEETS

PROJECT Hunter AAF

INSPECTOR H. Caswell

ELEV a	DEPTH	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0						
	6.0	SAME					
	7.0		HS 60		D		
	8.0						
	9.0	SAME	HS 40		F		
	10.0		HS 70		F		
	10.4	wet					
		Boring terminated at 10.4ft bgs					
				the location of FTASB-10 is also the location for FTASB-2			

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320

HOLE No.  
FTASB-10

HF - Rev. 5

# HTW DRILLING LOG

HOLE NO. **FTASB-11** 740  
SHEET **1**  
OF **2** SHEETS

1. COMPANY NAME		2. DRILLING SUBCONTRACTOR <i>hand auger NA</i>		3. PROJECT <i>Hunter Army Airfield</i>		4. LOCATION (CITY, STATE) <i>Savannah GA</i>	
5. NAME OF DRILLER <i>NA</i>		6. MANUFACTURER'S DESIGNATION OF DRILL <i>NA</i>		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <i>3/8 in stainless steel hand auger</i>		8. WEATHER <i>wet rainy</i>	
9. HOLE LOCATION (SITE) <i>Fire training Area</i>		10. SURFACE ELEVATION		11. DATE STARTED <i>8/23/95 0730</i>		12. DATE COMPLETED <i>8/23/95 0755</i>	
13. OVERBURDEN THICKNESS <i>NA</i>		14. DEPTH DRILLED INTO ROCK <i>NA</i>		15. TOTAL DEPTH OF HOLE <i>10.0 ft bgs</i>		16. DEPTH GROUNDWATER ENCOUNTERED <i>9.5 ft bgs @ 752</i>	
17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <i>NA</i>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <i>NA</i>		19. GEOTECHNICAL SAMPLES (#)		20. TOTAL NUMBER OF CORE BOXES <i>NA</i>	
21. SAMPLES FOR CHEMICAL ANALYSIS		DISTURBED		UNDISTURBED		22. TOTAL CORE RECOVERY%	
23. DISPOSITION OF HOLE <i>bore hole</i>		VOC		METALS		OTHER (SPECIFY)	
24. SIGNATURE OF INSPECTOR <i>Heather A Laswell</i>		BACKFILLED		MONITORING WELL		OTHER (SPECIFY) <i>boat chips</i>	
25. CHECKED BY <i>[Signature]</i>		26. NAME OF INSPECTOR <i>Heather A Laswell</i>		OTHER (SPECIFY)		OTHER (SPECIFY)	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	<i>SAND, silty, soft light yellowish brown 258 6/33 (SM)</i>		<i>H50</i>	<i>A</i>		
	2.0						
	3.0	<i>SAME</i>		<i>H50</i>	<i>B</i>		
	4.0	<i>SAME</i>		<i>H50</i>	<i>C</i>		

MRK FORM JUN 80 55

PROJECT NAME & NO.  
*Hunter Army Airfield*

*11-3551-0320*

HOLE NO. **FTASB-11**  
HF - Rev. 5/94

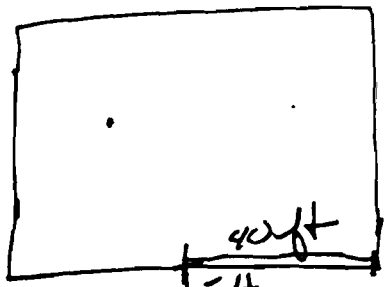
# HTW DRILLING LOG

FTA SB-11  
SHEET 2  
OF 2 SHEETS

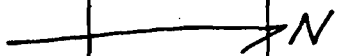
PROJECT Hunter AAF

INSPECTOR H. Caswell

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	30	same					
	60	SAND, clayey, bluish FTASB 513 (SC)					
	70	SAND, silty, very fine brown silty 7/33 (SM)	HS 2		D		fuel odor
	80	same					
	90		HS 10		E		fuel odor
	100	same, wet	HS 20		F		
	Boring terminated at 100 ft						



ROADS



MRK FORM JUN 89 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320 FTA SB-11

HOLE No.  
FTA SB-11  
HF - Rev. 5

# HTW DRILLING LOG

HOLE NO. **F7A SB-12** 242  
SHEET OF 2 SHEETS

1. COMPANY NAME <b>CAW Engineering &amp; Environmental</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>	
3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3 1/2 in stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Firetraining Area</b>	
8. WEATHER <b>wet, rainy</b>		11. DATE STARTED <b>8/23/95 0818</b>	12. DATE COMPLETED <b>8/23/95 0858</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#) <b>-</b>	DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2</b>	VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>Semi VOC</b>
			OTHER (SPECIFY) <b>-</b>
			OTHER (SPECIFY) <b>-</b>
22. TOTAL CORE RECOVERY % <b>NA</b>			
23. DISPOSITION OF HOLE <b>bone hole</b>	BACKFILLED <input type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY) <b>bat chips</b>
25. CHECKED BY: <b>Jeeper</b>	24. SIGNATURE OF INSPECTOR <b>Heather Aswell</b>		
	26. NAME OF INSPECTOR <b>Heather A Aswell</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAWD, silty, soft, dusky red (sm) <b>HS 15</b>			<b>A</b>		
	2.0	SAME		<b>HS 10</b>	<b>B</b>		
	3.0						
	4.0	SAME		<b>HS 10</b>	<b>C</b>		

MRK FORM JUN 89 55

PROJECT NAME & NO.  
**Hunter Army Airfield 11-3551-0320**

HOLE NO. **F7A SB-12** Rev. 5/94

# HTW DRILLING LOG

FTASB-12

PROJECT Hunter Army Airfield

INSPECTOR H. Laswell

SHEET 2  
OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0	SAME					
	6.0						
	7.0		HS 12		D		
	8.0	SAME					
	9.0		HS 11		E		
▽ 100		wet					
		Boring terminated at 10.0 ft bgs					
		<div style="border: 1px solid black; width: 200px; height: 100px; margin: 0 auto; padding: 5px;">                     FTASB-12 X                 </div>					The location of FTASB-12 is also the location of FTACO-4
		ROAD					

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320

HOLE No  
FTASB-12  
HF - Rev. 5

# HTW DRILLING LOG

FT5B013  
SHEET  
OF 1 SHEETS

244

1. COMPANY NAME <i>Law Engineering &amp; Environmental</i>		2. DRILLING SUBCONTRACTOR <i>NA - Hand Auger</i>		SHEET OF 1 SHEETS	
3. PROJECT <i>Hunter Army Airfield</i>			4. LOCATION (CITY, STATE) <i>Savannah, GA</i>		
5. NAME OF DRILLER <i>Jim Beaver</i>			6. MANUFACTURER'S DESIGNATION OF DRILL <i>NA (Hand Auger)</i>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <i>Hand Auger (3" stainless steel)</i>		9. HOLE LOCATION (SITE) <i>Directly adjacent to HMW-10 (See attached map)</i>		10. SURFACE ELEVATION	
8. WEATHER <i>73°F, Breezy (from east)</i>		11. DATE STARTED <i>10/3/95</i>		12. DATE COMPLETED <i>10/3/95</i>	
13. OVERBURDEN THICKNESS <i>NA</i>		16. DEPTH OF GROUNDWATER ENCOUNTERED <i>5.0</i>			
14. DEPTH DRILLED INTO ROCK <i>NA</i>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <i>5.0 ft.</i>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
		-	-	<i>NA</i>	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
<i>2 (A+B)</i>		✓	✓	<i>TPH</i>	<i>SV</i>
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
<i>Backfill</i>		✓			<i>Jim Beaver</i>
25. CHECKED BY <i>gklyan</i>			26. NAME OF INSPECTOR <i>Jim Beaver</i>		

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	<i>Fine to medium SAND with minor fine gravel and silt; block 7.5 x 2.5 / (5P)</i>	0		A		<i>Submitted for laboratory chemical analysis</i>
	2.0	<i>same as above</i>	0		B		<i>Submitted for laboratory chemical analysis</i>
	3.0	<i>same as above</i>	0		C		
	4.0	<i>same as above</i>	0				
<i>Boring Terminated at 5.0 ft.</i>							

MRK FORM JUN 89 55

PROJECT NAME & NO.  
*Hunter Army Airfield, Fire Training Area*

11-3551-0320

HOLE NO.  
*FT5B013*  
RF - Rev. 5/94



# HIW DRILLING LOG

F145DD112

PROJECT **Hunter Army Airfield**      INSPECTOR **Jim Power**      SHEET **2** OF **2** SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		<p><b>LEGEND</b></p> <p>* Hand auger soil boring location.</p>					

MRK FORM JUN 89 55-2      PROJECT NAME & NO **Hunter Army Airfield**      11-3551-0320      HOLE No **F1A5B013** HF - Rev. 5/

# HTW DRILLING LOG

HOLE No. **FH5B-14**  
SHEET OF **2** SHEETS 246

1. COMPANY NAME <b>LAW Eng &amp; Env. Services Inc</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>		3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3" stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Fire training Area</b>	
8. WEATHER <b>Sunny hot 86°; winds from S</b>		11. DATE STARTED <b>10-04-95 1436</b>		12. DATE COMPLETED <b>10-04-95 1512</b>		10. SURFACE ELEVATION	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>5.5 at 1512</b>		14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
15. TOTAL DEPTH OF HOLE <b>6.0</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		19. GEOTECHNICAL SAMPLES (#) <b>NA</b>		20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (A&amp;C)</b>		DISTURBED <b>—</b>	UNDISTURBED <b>—</b>	VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>TPH ✓</b>	OTHER (SPECIFY) <b>Semivolat ✓</b>
23. DISPOSITION OF HOLE <input checked="" type="checkbox"/>		BACKFILLED <input checked="" type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR <i>Heather Caswell</i>		22. TOTAL CORE RECOVERY % <b>NA</b>
25. CHECKED BY <i>OKeeper</i>		26. NAME OF INSPECTOR <b>Heather A Caswell</b>					

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, fine to med grain, some roots and rocks, brown {7.5YR 4/2} [SP]	HS 0 <sup>10</sup> 20		A		
	3.0	SAND, fine to med. grain, reddish brown {2.5YR 3/1} [SP]	HS 0 <sup>50</sup> 50		B		fuel odor
	4.0	same	HS 7 <sup>100</sup> 100		C		fuel odor

MRK FORM JUN 89 55 PROJECT NAME & NO **Hunter Army Airfield 11-3551-0320** HOLE No **FH5B-14** HF - Rev. 5/94

# HIW DRILLING LOG

FTASB 14

PROJECT *Hunter Army Airfield*

INSPECTOR *Heather A Laswell*

SHEET *2*  
OF *2* SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0						
▽	6.0	Boring terminated					CW at 55 at 1512
	7.0						
		<p style="text-align: center;">road</p> <p style="text-align: center;">N</p> <p style="text-align: center;">storage tank</p> <p style="text-align: center;">concrete pad</p> <p style="text-align: center;">X. FTASB-14</p>					

MRK FORM JUN 89 55-2

PROJECT NAME & NO  
*Hunter Army Airfield 11-3551-0320*

HOLE No  
*FTASB-14*  
HF - Rev. 5/8

# HTW DRILLING LOG

FLASH-DIS-148

1. COMPANY NAME <b>LAW Eng. &amp; Env. Services Inc</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>		SHEET 1 OF 2 SHEETS		
3. PROJECT <b>Hunter Army Airfield</b>			4. LOCATION (CITY, STATE) <b>Savannah GA</b>			
5. NAME OF DRILLER <b>NA</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3 in stainless steel hand auger</b>		9. HOLE LOCATION (SITE) <b>Fire training area</b>		10. SURFACE ELEVATION		
8. WEATHER <b>Sunny 85°</b>		11. DATE STARTED <b>10-04-95 1334</b>	12. DATE COMPLETED <b>10-04-95 1405</b>			
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>6.9 at 1415</b>				
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>-</b>				
15. TOTAL DEPTH OF HOLE <b>7.0</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>-</b>				
19. GEOTECHNICAL SAMPLES (#) <b>NA</b>	DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>			
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (A &amp; C)</b>		VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>TPH</b> <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>semi-vocs</b>	22. TOTAL CORE RECOVERY % <b>NA</b>
23. DISPOSITION OF HOLE <input checked="" type="checkbox"/>		BACKFILLED <input checked="" type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY) <input type="checkbox"/>	24. SIGNATURE OF INSPECTOR <i>Heather A Laswell</i>	
25. CHECKED BY: <i>Officer</i>			26. NAME OF INSPECTOR <b>Heather A Laswell</b>			

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, fine to med grain, roots and some rocks, brown [SR] 7.5 YR 4/3	HS 1		A		
	2.0						
	3.0	SAME w/ some black [SR] 7.5 YR 2.5/1	HS 0		B		
	4.0						
		SAND, silty, light brown [SR] 7.5 YR 4/3 very dark grey 7.5 YR 3/3	HS 0		C		

MRK FORM JUN 89 55	PROJECT NAME & NO. <b>Hunter Army Airfield 11-3551-0320</b>	HOLE No <b>FLASH-K HF - Rev. 5/94</b>
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# HTW DRILLING LOG

FTASB-15

PROJECT		INSPECTOR			SHEET		
Hunter Army Airfield		Heather A Caswell			OF 2 SHEETS		
ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
5.0	5.0						
6.0	6.0						
7.0	7.0	Boring terminated at 7.0 ft bgs					gw at 6.9 at 2:15
8.0	8.0						
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border-bottom: 1px solid black; width: 200px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; width: 200px; margin-bottom: 5px;"></div> </div> <p style="margin-left: 100px;">road → N</p> <p style="margin-left: 50px;">storage tank</p> <p style="margin-left: 50px;">1307 HMW-9</p> <p style="margin-left: 50px;">FTASB 15</p>							

MRK FORM JUN 89 55-2

PROJECT NAME & NO

Hunter Army Airfield 11-3551-0320

HOLE No.

FTASB-615 HF - Rev. 5/

# HTW DRILLING LOG

HOLE No. FTASB-16  
SHEET OF 2 SHEETS 250

1. COMPANY NAME <b>Law Eng. &amp; Env. Services Inc</b>		2. DRILLING SUBCONTRACTOR <b>hand auger</b>		3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>NA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>hand auger (3 in stainless steel)</b>		9. HOLE LOCATION (SITE) <b>Fire Training Area</b>	
8. WEATHER <b>overcast 80's, windy winds from SW</b>		11. DATE STARTED <b>10-04-95 0948</b>		12. DATE COMPLETED <b>10-04-95 1020</b>		13. OVERBURDEN THICKNESS <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>—</b>		15. TOTAL DEPTH OF HOLE <b>8.1 ft bop</b>		16. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>—</b>	
19. GEOTECHNICAL SAMPLES (#) <b>NA</b>		DISTURBED <b>—</b>		UNDISTURBED <b>—</b>		20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (A &amp; C)</b>		VOC <b>✓</b>		METALS <b>✓</b>		OTHER (SPECIFY) <b>TPA ✓</b>	
23. DISPOSITION OF HOLE <b>✓</b>		BACKFILLED <b>✓</b>		MONITORING WELL <b>—</b>		OTHER (SPECIFY) <b>—</b>	
25. CHECKED BY <b>JKerr</b>		24. SIGNATURE OF INSPECTOR <i>Heather A Caswell</i>		26. NAME OF INSPECTOR <b>Heather A Caswell</b>		22. TOTAL CORE RECOVERY % <b>NA</b>	

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Asphalt					
	1.0	Sand, silt, fine to med grain dark yellow to brown 10YR 4/4 (SP)	HS 30		A		fuel odor
	2.0	color change to gray 10YR 5/1 (SP)					
	3.0	SAND, fine to med grain brown 10YR 5/3 (SP)	HS 40		B		
	4.0	(SP) SAND, fine to med grain light gray 10YR 7/2	HS		C		

MRK FORM JUN 80 55

PROJECT NAME & NO  
**Hunter Army Airfield 11-3551-0320**

HOLE No. FTASB-16  
HF - Rev. 5/94

# HIW DRILLING LOG

F112046

PROJECT Hunter Army Airfield INSPECTOR Heather A Laswell SHEET 2 OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	<div style="text-align: center;">5.0</div>	<p>Sand, silty fine to med grain yellowish brown 10 4R 5/42 to light gray 85104R 7/13</p> <hr style="border: 1px solid black;"/> <p>Boring terminated at 8.1</p>			D		Gwat 7.8 at 10.9
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">concrete Pad</div> <div style="display: flex; justify-content: center; gap: 20px;"> <span>34.6</span> <span>24.5</span> </div> <div style="text-align: center;"> <p>FTASB-16</p> <p>SPORN</p> </div>					N

MRK FORM JUN 89 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320

HOLE No.  
FTASB-16  
HF - Rev. 55



# HTW DRILLING LOG

FILE NO. **F7ASB-017**

1. COMPANY NAME <i>Law Eng. &amp; Env. Services Inc</i>		2. DRILLING SUBCONTRACTOR <i>Hard Auger</i>		SHEET OF <b>3</b> SHEETS		
3. PROJECT <i>Hunter Army Airfield</i>		4. LOCATION (CITY, STATE) <i>Savannah GA</i>				
5. NAME OF DRILLER <i>NA</i>		6. MANUFACTURER'S DESIGNATION OF DRILL <i>NA</i>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <i>Hand auger (3 in stainless steel)</i>		9. HOLE LOCATION (SITE) <i>Fire Training Area</i>		10. SURFACE ELEVATION		
8. WEATHER <i>overcast, 80's windy from SW</i>		11. DATE STARTED <i>10-04-95 1110</i>		12. DATE COMPLETED <i>10-04-95 1155</i>		
13. OVERBURDEN THICKNESS <i>NA</i>		18. DEPTH GROUNDWATER ENCOUNTERED <i>6.9 at 1154</i>				
14. DEPTH DRILLED INTO ROCK <i>NA</i>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <i>7.8 ft</i>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)				
19. GEOTECHNICAL SAMPLES (#) <i>NA</i>		DISTURBED <input type="checkbox"/>		UNDISTURBED <input type="checkbox"/>		
		20. TOTAL NUMBER OF CORE BOXES <i>NA</i>				
21. SAMPLES FOR CHEMICAL ANALYSIS <i>2 (A &amp; C)</i>		VOC <input checked="" type="checkbox"/>	METALS <input type="checkbox"/>	OTHER (SPECIFY) <i>TPH</i> <input checked="" type="checkbox"/>	OTHER (SPECIFY) <i>semi-voc</i> <input checked="" type="checkbox"/>	22. TOTAL CORE RECOVERY% <i>NA</i>
23. DISPOSITION OF HOLE <input checked="" type="checkbox"/>		BACKFILLED <input checked="" type="checkbox"/>	MONITORING WELL <input type="checkbox"/>	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR <i>Leather Alaswell</i>	
25. CHECKED BY <i>Allen</i>		26. NAME OF INSPECTOR <i>Leather Alaswell</i>				

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, silty, brown, some roots {7.5 YR 4/3} [SP]	HS 0		A		
	2.0	stone in borehole					1.5 ft of rock
	3.0	SAME [SP]	HS 2		B		
	4.0	Sand, fine to med [SP] light brown {7.5 YR 4/3}	HS 0		C		

MRK FORM JUN 89 55      PROJECT NAME & NO *Hunter Army Airfield*      *11-3551-0320*      HOLE NO *F7ASB-017*  
HF - Rev. 5/94

# HIW DRILLING LOG

FTASB-017

PROJECT Hunter Army Airfield

INSPECTOR Heather Laswell

SHEET 2  
OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0						
	6.0	same, saturated					
▽	7.0				D H12		Gw at 6.9 at 1154
	8.0	Boring terminated at 7.8 ft					
		road		Concrete Pad			

FTASB-017  
x/ 13.5    H11W5  
                  H11W6

MRK FORM JUN 88 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320

HOLE NO  
FTASB-017  
HF - Rev. 5A

# HIW DRILLING LOG

HAW 10

754

1. COMPANY NAME <b>LAW Eng &amp; Env. Services Inc</b>		2. DRILLING SUBCONTRACTOR <b>LAW Eng.</b>		SHEET 1 OF 3 SHEETS			
3. PROJECT <b>Hunter Army Airfield</b>			4. LOCATION (CITY, STATE) <b>Savannah GA</b>				
5. NAME OF DRILLER <b>Russell Murdock</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 55 (ATV)</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>140 lb hammer 2 in stainless steel split spoon</b>		9. HOLE LOCATION (SITE) <b>Fire Training Area, within treeline</b>					
		10. SURFACE ELEVATION <b>27.96'</b>					
8. WEATHER <b>Sunny, wind from E 78°</b>		11. DATE STARTED <b>10-03-95 1230</b>		12. DATE COMPLETED <b>10-03-95 1343</b>			
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>5.6' 1307</b>					
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED (700) <b>7.36 1550 10/04/95</b>					
15. TOTAL DEPTH OF HOLE <b>14 ft</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>5.6 1311 5.5 1318</b>					
19. GEOTECHNICAL SAMPLES (#) <b>1 (F)</b>		DISTURBED <b>NA</b>	UNDISTURBED <b>NA</b>	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>			
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (A+B)</b>		VOC <input checked="" type="checkbox"/>	METALS <input checked="" type="checkbox"/>	OTHER (SPECIFY) <b>semi-VOC</b>	OTHER (SPECIFY) <b>TPH</b>	OTHER (SPECIFY) <b>—</b>	22. TOTAL CORE RECOVERY % <b>NA</b>
23. DISPOSITION OF HOLE		BACKFILLED <input type="checkbox"/>	MONITORING WELL <input checked="" type="checkbox"/>	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR <i>Heather A Laswell</i>		
25. CHECKED BY <i>Keegan</i>		26. NAME OF INSPECTOR <b>Heather A Laswell</b>					

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, fine to med grain, some roots, organics dark reddish gray S10R 3/13 [SP]	HS 0		A	3	100% recovery
	2.0	SAND, fine to med, dusky red {2.5YR 4/3} [SP]	HS 0		B	5	90% recovery
	3.0					4	
	4.0	Sand, fine to med, dark reddish brown {5YR 3/2}, wet [SP]	HS C		C	4	
						3	
						3	
						2	

MRK FORM JUN 89 55      PROJECT NAME & NO **Hunter Army Airfield 11-3551-0320**      HOLE No **HMW-10**      HF - Rev. 5/94

# MHW DRILLING LOG

HMW 10

PROJECT **Hunter Army Airfield**      INSPECTOR **Heather A Laswell**      SHEET **2** OF **3** SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0					2	
	6.0	Sand fine to med v. dark brown { 7.5 YR 2.5/3 } saturated [SP]	HS 0	D		2 3	CW at 5.6 at 1307 100% recovery some wood fragments
	7.0					1 1	
	8.0	same { 2.5 YR 5/1 } gray, saturated [SP]	HS X1	E		4 5	100% recovery
	9.0					3 5 2	
	10.0	SAND Fine to med grain, saturated gray { 2.5 Y 5/1 } [SP]	HS X1	F		2 2 2	100 recovery
	11.0	w/color change to v. dark gray { 5 YR 3/1 } [SP]				6	
	12.0	SAND, gray { 2.5 Y 5/1 } saturated, fine to med [SP]	HS X1	G		2 2 2	100% recovery
	13.0					2	
		Spring terminated 14ft bgs		see attached map			

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
**Hunter Army Airfield 11-3551-0320**

HOLE No  
**HMW-10**

HF - Rev. 55

HW DRILLING LOG

HW10

PROJECT

Hunter Army Airfield

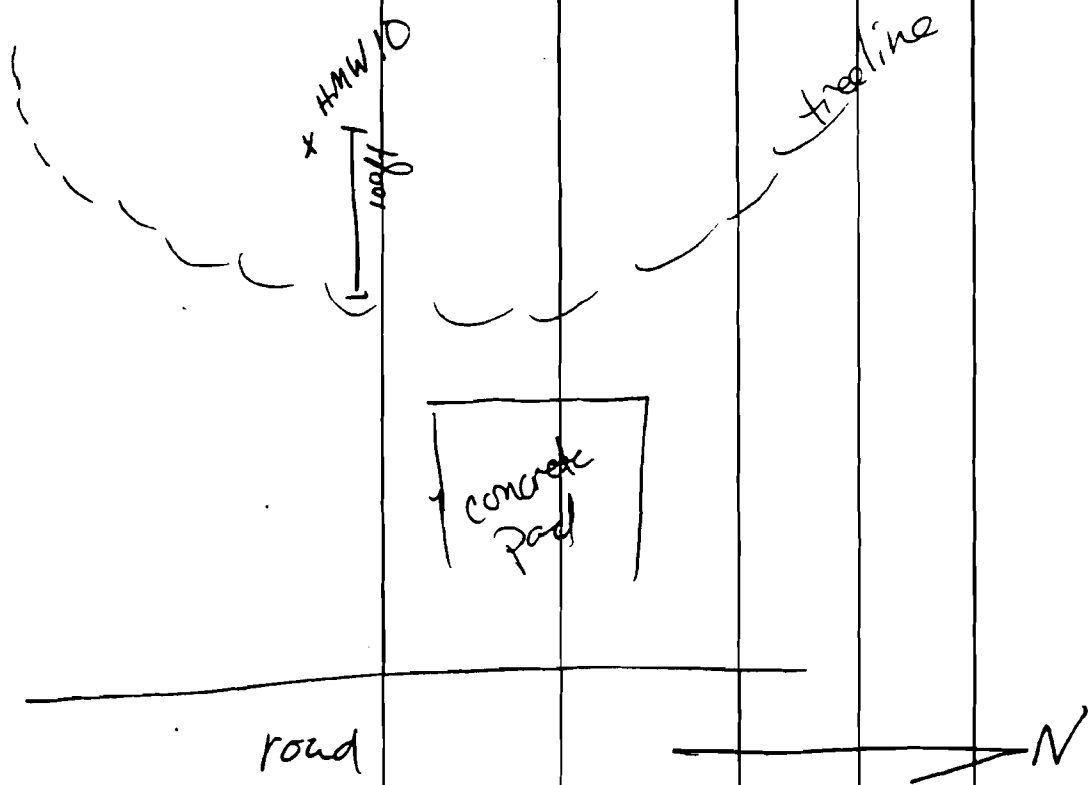
INSPECTOR

Heather Laswell

SHEET 3 OF 3 SHEETS

256

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h



MRK FORM JUN 80 55-2

PROJECT NAME & NO

Hunter Army Airfield

11-3551-0320

HOLE No

HW10

HF - Rev. 5'

# H/W DRILLING LOG

H/W 11  
SHEET 1  
OF 3 SHEETS

1. COMPANY NAME <i>LAW Environmental &amp; Engineering</i>		2. DRILLING SUBCONTRACTOR <i>LAW Engineering</i>		3. PROJECT <i>Hunter Army Airfield</i>		4. LOCATION (CITY, STATE) <i>Savannah GA</i>	
5. NAME OF DRILLER <i>Russell Murdock</i>		6. MANUFACTURER'S DESIGNATION OF DRILL <i>CME 55 (ATV)</i>				7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <i>2 in split spoon 140lb hammer (cathead)</i>	
8. WEATHER <i>Sunny 74° slight breeze from E</i>		11. DATE STARTED <i>10-03-95 0740</i>		12. DATE COMPLETED <i>10-03-95 0920</i>			
13. OVERBURDEN THICKNESS <i>NA</i>		18. DEPTH GROUNDWATER ENCOUNTERED <i>8.58 0840</i>				14. DEPTH DRILLED INTO ROCK <i>NA</i>	
15. TOTAL DEPTH OF HOLE <i>15 ft</i>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <i>10.83 1544 10/04/95</i>				19. GEOTECHNICAL SAMPLES (#) <i>1 (F)</i>	
21. SAMPLES FOR CHEMICAL ANALYSIS <i>2 (B&amp;D)</i>		VOC <input checked="" type="checkbox"/>		METALS <input checked="" type="checkbox"/>		OTHER (SPECIFY) <i>PPH</i>	
23. DISPOSITION OF HOLE <input type="checkbox"/> BACKFILLED <input checked="" type="checkbox"/> MONITORING WELL <input type="checkbox"/> OTHER (SPECIFY)		20. TOTAL NUMBER OF CORE BOXES <i>NA</i>		22. TOTAL CORE RECOVERY% <i>NA</i>		24. SIGNATURE OF INSPECTOR <i>Heather A. Caswell</i>	
25. CHECKED BY <i>Kemper</i>		26. NAME OF INSPECTOR <i>Heather A Caswell</i>					

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	SAND, fine to med grain yellowish brown $\{10\mu\}$ Some roots [SP]	HS 0		4A 6 <del>5</del>	4 6 7 1	70% recovery
	2.0	SAND, fine to med grain, black $\{10\mu\}$ 2/13 [SP]	HS X1		B	10 9 6 6	75% recovery
	4.0	SAND, fine to med grain, silty black $\{10\mu\}$ 2/13 [SP]	HS 9		C	4 3	50% recovery

NEW DRILLING LOG

HMLW11

PROJECT Hunter Army Airfield

INSPECTOR Heather Caswell

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
5.0						3	
						3	
6.0		SAND fine to med, silty black $\{10\%R\} \frac{2}{3}$ very pale brown $\{10\%R\} \frac{1}{3}$ ; most $\{SP\}$	HS 9		D	4	90% recovery
						3	
7.0						2	
						2	
8.0		same, wet SAND, yellowish brown $\{10\%R\} \frac{5}{4}$ wet $\{SP\}$			E	11	100% recovery Gwat 8.58 at 0841
		2 in of saturated at 8.5 ft bgd				9	
9.0						3	
						3	
10.0		SAND, black $\{10\%R\} \frac{2}{3}$ to gray $\{5\%R\} \frac{5}{13}$ wet do saturated $\{SP\}$		F		8	90% recovery
						5	
11.0						3	
						3	
12.0		SAME, saturated		G		9	
						7	
13.0						7	
						9	

MRK FORM JUN 60 55-2

PROJECT NAME & NO  
Hunter Army Airfield

11-3551-0320

HOLE No  
HMLW 11

HF - Rev. 5/84



RTW DRILLING LOG

#M W 11

PROJECT **Hunter Army Airfield**

INSPECTOR **Heather Laswell**

SHEET **3**  
OF **3** SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	14.0	SAND, fine to med grain saturated black $\xi 5425/15$ [SP2]		H		2 5	
	15.0	color change to gray $\xi 545/15$ [SP2]				4 5	
	16.0	sampled to 16 ft bag augered to 15 ft bag					

MRK FORM JUN 69 55-2

PROJECT NAME & NO  
**Hunter Army Airfield**

**11-3551-0320**

HOLE No  
**#M W 11**

HF - Rev. 5/9

# HIW DRILLING LOG

HOLE NO. **HMW-12** 760  
SHEET **1**  
OF **3** SHEETS

1. COMPANY NAME <b>LA Environmental Service, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>LAH</b>		3. PROJECT <b>Hunter Army Airfield</b>		4. LOCATION (CITY, STATE) <b>Savannah GA</b>	
5. NAME OF DRILLER <b>Russell Murdock</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 55 (ATV)</b>		7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>2 in steel split spoon 140 lb hammer jackhead</b>		9. HOLE LOCATION (SITE) <b>Fire training area - opposite side of canal</b>	
8. WEATHER <b>Sunny, mid 80s, breeze from N</b>		11. DATE STARTED <b>10-02-95 1410</b>		12. DATE COMPLETED <b>10-02-95 1810</b>		10. SURFACE ELEVATION <b>29.29'</b>	
13. OVERBURDEN THICKNESS <b>N/A</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>17.27 - 9.2 ft bgs</b>		14. DEPTH DRILLED INTO ROCK <b>N/A</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>10-03-95 1700 @ 11.48 ft TOC</b>	
15. TOTAL DEPTH OF HOLE <b>16 ft</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>17.35 - 9.2 ft bgs</b>		19. GEOTECHNICAL SAMPLES (#) <b>1</b>		20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (BED)</b>		VOC <input checked="" type="checkbox"/>		METALS <input checked="" type="checkbox"/>		OTHER (SPECIFY) <b>pH</b>	
23. DISPOSITION OF HOLE <b>BACKFILLED</b>		MONITORING WELL <input checked="" type="checkbox"/>		OTHER (SPECIFY)		22. TOTAL CORE RECOVERY% <b>NA</b>	
25. CHECKED BY <b>gkasper</b>		26. NAME OF INSPECTOR <b>Heather L. Lewis</b>		24. SIGNATURE OF INSPECTOR <i>Heather Lewis</i>			

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	med SAND, rich in organic roots; thin nodules or bedding, reddish brown to yellowbrown to black; Reddish black (5% 25/13) [SP]	HS 0		A	6	75% recovery
	2.0	SAND, sl. silty, black [SP] {5% 25/13}	HS X		B	6	30% recovery
	3.0					4	
	4.0	SAND, fine to med. sl. silt med grade, damp, black {5% 25/13} [SP]	HS 1		C	4	75% recovery
						4	

MRK FORM JUN 89 55      PROJECT NAME & NO **Hunter Army Airfield**      HOLE No **HMW 12**      HF - Rev. 5/94

11-3551-0320

# MHW DRILLING LOG

H MW 12

PROJECT **Hunter Army Airfield**

INSPECTOR **Heather A Caswell**

SHEET 2  
OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0		<del>MS</del> <del>BS</del>			3	
	6.0	color change to Hgray SAND, fine to med grain black {5YR 7/1} [SP]					
	7.0	med grain SAND, moist, black {5YR 2.5/1} [SP] reddish brown {5YR 5/3} [SP] sl. silty	MS 2 1		D <del>EE</del>	4 1 0 1	70% recovery 60% recovery
	8.0	SAND [SP] black {5YR 2.5/1} [SP] reddish brown {5YR 5/3}	X1		<del>F</del>	1 2 3	60% recovery
	9.0	Sand, brownish yellow {10YR 6/6} saturated to moist [SP]		<del>6</del>	<del>F</del>	11 21 24	6' wet 9.2 ft @ 1727
	10.0					18	75% recovery
	11.0	SAND, fine to med, brownish yellow {10YR 6/6} wet [SP]		<del>6</del> H	<del>G</del>	16 14	
	12.0	SAND, light yellowish brown {10YR 6/4} saturated fine to med. grain [SP]		<del>6</del> I		4 8 8	100% recovery
	13.0						

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
**Hunter Army Airfield**

**11-3551-0320**

HOLE No  
**H MW-12**  
HF - Rev. 5/9

HIW DRILLING LOG

7 MW 1-3

762

PROJECT **Hunter Army Airfield** INSPECTOR **Heather A Laswell** SHEET **3** OF **3** SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	14	SAND fine grain, sl. silty saturated, gray { 5% / 1 } [5%]		J		4	5% recovery
	15					2 4	
	16	SAME		K		4	95% recovery
	17					2 2	
		Sampler driven to 17 ft bgs Augers drilled to 16 ft bgs					

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
**Hunter Army Airfield**

11-3551-0320

HOLE No **HMW 12**  
HF - Rev. 5/5

# HMW DRILLING LOG

HMW 13

1. COMPANY NAME <b>LAW Eng &amp; Env Services Inc</b>		2. DRILLING SUBCONTRACTOR <b>LAW Engineering</b>		SHEET 1 OF 3 SHEETS	
3. PROJECT <b>Hunter Army Airfield</b>			4. LOCATION (CITY, STATE) <b>Savannah GA</b>		
5. NAME OF DRILLER <b>Russell Murdoch</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 55(A74)</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>140 lb Hammer (cathhead) 2 in Stainless Steel split spoon</b>		8. HOLE LOCATION (SITE) <b>Fire training Area</b>			
		10. SURFACE ELEVATION <b>32.54'</b>			
8. WEATHER <b>Sunny, 79, breeze from E</b>		11. DATE STARTED <b>10-03-95 1445</b>		12. DATE COMPLETED <b>10-03-95 1613</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>11.7 at 1542</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>12.64 (TOC) 1548 10-04-95</b>			
15. TOTAL DEPTH OF HOLE <b>18 ft</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>11.0 at 1547</b>			
19. GEOTECHNICAL SAMPLES (#) <b>1 (D)</b>		DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>NA</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS <b>2 (B&amp;E)</b>		VOC <b>✓</b>	METALS <b>✓</b>	OTHER (SPECIFY) <b>TPA ✓</b>	OTHER (SPECIFY) <b>semivoc ✓</b>
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL <b>✓</b>	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY% <b>NA</b>
25. CHECKED BY <b>gleyer</b>		24. SIGNATURE OF INSPECTOR <i>Heather A. Laswell</i>			
		26. NAME OF INSPECTOR <b>Heather A. Laswell</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	0.0	Sand, fine to med, redish brown some roots [SP]	HS 16		A	4	100% recovery
	1.0					4	
	2.0	SAND, fine to med grain, brown [7.5 YR 4/3] [SP]	HS 30		B	5	10% recovery
	3.0					5	
	4.0	color change to light brown SAND, fine to med grain pale yellow [2.5 Y 7/4] [SP]	HS 40		C	4	slight fuel odor
						3	100% recovery
						3	

MRK FORM JUN 89 55

PROJECT NAME & NO  
**Hunter Army Airfield**

**11-3551-0320**

HOLE No **HMW 13**

HF - Rev. 5/94

# HIW DRILLING LOG

HMN 13

PROJECT **Hunter Army Airfield**

INSPECTOR **Heather Laswell**

SHEET **2**  
OF **3** SHEETS

Ddd

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	5.0						
	6.0	SAME, some nuts, wood fragments, some black staining [SP]	HS 130		D	4 4 5 4	90% recovery fuel odor
	7.0					3 4	
	8.0	same	HS 90		E	6 3	100% recovery fuel odor
	9.0					3 8	
	10.0	SAND, pale yellow {2.5Y 7/4} wet, some wood fragments [SP]	HS 100		F	6 6	20% recovery
	11.0	color Orange to black {2.5Y 2.5/1} [SP]				3 5	GW at 11.7 ft bgs at 15.47
	12.0	SAND, pale yellow {2.5Y 7/4} saturated, wood fragments [SP]	HS 1	G	G <sup>48</sup>	7 7	100% recovery
	13.0					12 14	

MRK FORM JUN 68 55-2

PROJECT NAME & NO  
**Hunter Army Airfield**

**11-3551-0320**

HOLE No  
**HMN 13**

HF - Rev. 5/8

# HIW DRILLING LOG

HAW13

PROJECT **Hunter Army Airfield**

INSPECTOR **Heather Laswell**

SHEET **3** OF **3** SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	14.0	same	HS 2	H		9	100% recovery
	15.0					8	
	16.0	same, color change to gray { 2.5% 5/13 } [R]	HS 0	I		7	
	17.0					6	
	18.0	same.	HS 2	J		3	100% recovery
	19.0	augers drilled to 18ft bgs samplers taken to 20ft bgs				4	
	20.0					2	
		concrete pad		straggetanks	x HAW13	1	
						2	
						1	
		Road					N

MRK FORM JUN 80 55-2

PROJECT NAME & NO  
**Hunter Army Airfield 1-3551-0320**

HOLE No.  
**HAW13**

HF - Rev. 5/



# HTW DRILLING LOG

HOLE No. **HMW-14**  
 SHEET **1**  
 OF **3** SHEETS

266

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL				7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>4-1/4 ID HSA</b>	
		<b>CME 55</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
		<b>AW Rods - SS</b>		10. SURFACE ELEVATION <b>34.6 ft.</b>			
8. WEATHER <b>Very Hot, 98° +</b>		11. DATE STARTED <b>7/28/99</b>		12. DATE COMPLETED <b>7/28/99</b>			
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED					
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED					
15. TOTAL DEPTH OF HOLE <b>16.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)					
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>2</b>		UNDISTURBED <b>0</b>		20. TOTAL NUMBER OF CORE BOXES <b>0</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
		<b>Type II</b>					
25. CHECKED BY: <b>David Goershel</b>				26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
34.6	1.0 2.0 3.0 4.0	Firm medium to coarse clayey SAND (CL-SA)	-	1.5-3	6-9-11	VOC, SVOC Analysis

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**MRK** FORM JUN 89 **55**

PROJECT NAME & NO. **D-67**  
**Hunter AAF - CSR 12001-9-3411**

HOLE No. **HMW-14**  
**HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No.

**HMW-14**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Patrick J. Kelley**

SHEET 2

OF 3 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
29.6		Firm medium to coarse clayey SAND (CL-SA)				
	6.0		NM	6-7	6-7-14	VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0				7-10-13	
	12.0					
	13.0					

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MRK FORM JUN 89 **55-2**

PROJECT NAME &amp; NO.

**D-68****Hunter AAF - CSR 12001-9-3411**

HOLE No.

**HMW-14****HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No. **HMW-14**

*268*

PROJECT  
**Hunter AAF CSR**

INSPECTOR  
**Patrick J. Kelley**

SHEET **3**  
OF **3** SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
20.6		Firm to medium coarse clayey SAND (CL-SA)			9-11-16	
	15.0					
18.6	16.0	Boring terminated at 16.0 feet				
	17.0					
	18.0					
	19.0					
	20.0					
	21.0					
	22.0					

**MRK** FORM JUN 89 **55-2**

PROJECT NAME & NO. **D-69**  
**Hunter AAF - CSR 12001-9-3411**

HOLE No. **HMW-14**  
**HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No.  
**HMW-14R**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>			SHEET <b>1</b> OF <b>3</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>				4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>				6. MANUFACTURER'S DESIGNATION OF DRILL <b>Dradrich 0-50 (well) - SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		Soil Samples by DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
		Well by 6.25" ID HSA				
		10. SURFACE ELEVATION <b>32.7 ft.</b>				
8. WEATHER				11. DATE STARTED <b>1/05/00</b>		12. DATE COMPLETED <b>1/05/00</b>
13. OVERBURDEN THICKNESS <b>NA</b>				16. DEPTH GROUNDWATER ENCOUNTERED <b>9.5 ft.</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>				17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>18.0 ft.</b>				18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
		<b>0-2</b> <b>7-9</b>		<b>SVOC:0-2</b> <b>7-9</b>		
22. TOTAL CORE RECOVERY %		23. DISPOSITION OF HOLE		24. SIGNATURE OF INSPECTOR		
		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)		
25. CHECKED BY: <b>Rhonda Quinn</b>				26. NAME OF INSPECTOR <b>Thomas M. Keller</b>		

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
32.7	1.0	Yellowish-brown fine slightly silty SAND (SP) [10YR 5/6]	0.7	0-2		VOC, SVOC Analysis
30.7	2.0	Dark grayish-brown fine slightly silty SAND [10YR 4/2]	0.3			

**MRK** FORM JUN 89 **55**

PROJECT NAME & NO. **D-70**  
**Hunter AAF - CSR 12001-9-3411**

HOLE No. **HMW-14R**  
**HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No. 270

HMW-14R

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 3 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
26.7	6.0	Very dark grayish-brown fine silty SAND (SM) [10YR 3/2]				
	7.0					
	8.0		0.3	7-9		VOC, SVOC Analysis
	9.0					
	10.0	Light gray fine slightly silty SAND (SP)[10YR 7/2]				Wet at 9.5 ft.
22.7	11.0					
	12.0					
	13.0					

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# HTW DRILLING LOG

HOLE No.

**HMW-14R**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Thomas M. Keller**

SHEET **3**

OF **3** SHEETS

C:\LOGS\HMW-14R.PL3 C.JG.-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
18.7		Light gray fine slightly silty SAND (SP) [2.5Y 7/1]				
	15.0					
	16.0					
	17.0					
14.7	18.0	Boring terminated at 18.0 feet	-			
	19.0					
	20.0					
	21.0					
	22.0					

# HTW DRILLING LOG

HOLE No.  
**HMW-15**

272

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>3</b> SHEETS		
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		4-1/4 ID HSA		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
		CME 55				
		AW Rods - SS				
8. WEATHER <b>Very Hot, 98° +</b>		11. DATE STARTED <b>7/28/99</b>		12. DATE COMPLETED <b>7/28/99</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>11-12 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>16.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>2</b>	UNDISTURBED <b>0</b>	20. TOTAL NUMBER OF CORE BOXES <b>0</b>		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
			<b>Type II</b>			
25. CHECKED BY: <b>David Goershel</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.1		Firm dark gray to brown medium to coarse clayey SAND (CL-SA)				
	1.0					
	2.0		NM	1.5-3	4-6-6	VOC, SVOC Analysis
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.  
**HMW-15**

PROJECT  
**Hunter AAF CSR**

INSPECTOR  
**Patrick J. Kelley**

SHEET **2**  
OF **3** SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
17.1		Firm dark gray to brown medium to coarse clayey SAND (CL-SA)				
	6.0					
	7.0					
	8.0		NM	7.5-9	7-5-10	VOC, SVOC Analysis
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

274

# HTW DRILLING LOG

HOLE No. **HMW-15**

PROJECT **Hunter AAF CSR**

INSPECTOR **Patrick J. Kelley**

SHEET **3**  
OF **3** SHEETS

C:\LOGS\HMW-15.PL3 C.JG.-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
8.1		Firm dark gray to brown medium to coarse clayey SAND (CL-SA)				
	15.0					
6.1	16.0	Boring terminated at 16.0 feet				
	17.0					
	18.0					
	19.0					
	20.0					
	21.0					
	22.0					

# HTW DRILLING LOG

HOLE No.  
**HMW-17**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET 1 OF 3 SHEETS			
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Cody Prasley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		4-1/4 ID HSA		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
		CME 55					
		AW Rods - SS					
8. WEATHER <b>Very Hot, 98° +</b>		11. DATE STARTED <b>7/29/99</b>		12. DATE COMPLETED <b>7/29/99</b>			
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED				
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <b>16.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>31.3 ft.</b>				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>2</b>	UNDISTURBED <b>0</b>	20. TOTAL NUMBER OF CORE BOXES <b>0</b>			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		<b>Type II</b>
25. CHECKED BY: <b>David Goershel</b>				26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
31.3		Firm brown to dark gray to orangish-tan medium to coarse clayey SAND (CL-SA)				
	1.0		NM	1.5	7-8-8	VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No. **HMW-16** 276

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
OF <b>3</b> SHEETS		3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>	
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		4-1/4 ID HSA		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
		CME 55		10. SURFACE ELEVATION <b>27.1 ft.</b>	
		AW Rods - SS			
8. WEATHER <b>Very Hot, 98° +</b>			11. DATE STARTED <b>7/28/99</b>		12. DATE COMPLETED <b>7/28/99</b>
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>16.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>2</b>	UNDISTURBED <b>0</b>	20. TOTAL NUMBER OF CORE BOXES <b>0</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
					22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
			<b>Type II</b>		
25. CHECKED BY: <b>David Goershel</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.1		Firm dark grayish-brown medium to coarse clayey SAND (CL-SA) with orangish-tan rocks	-			
	1.0					
	2.0		NM	1.5-3	3-3-4	VOC, SVOC Analysis
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.  
**HMW-16**

PROJECT: **Hunter AAF CSR**      INSPECTOR: **Patrick J. Kelley**      SHEET **2**  
OF **3** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.1		Firm dark grayish-brown medium to coarse clayey SAND (CL-SA) with orangish-tan rocks				
	6.0					
	7.0					
	8.0		NM	7-8.5	9-9-10	VOC. SVOC Analysis
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

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# HTW DRILLING LOG

HOLE No.

278

HMW-16

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 3

OF 3 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
13.1		Firm dark grayish-brown medium to coarse clayey SAND (CL-SA) with orangish-tan rocks				
	15.0					
11.1	16.0	Boring terminated at 16.0 feet				
	17.0					
	18.0					
	19.0					
	20.0					
	21.0					
	22.0					

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# HTW DRILLING LOG

HOLE No.

HMW-17

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 3 SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
26.3		Firm brown to dark gray to orangish-tan medium to coarse clayey SAND (CL-SA)				
	6.0					
	7.0					
	8.0		NM	7-8.5	5-6-7	VOC, SVOC Analysis
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					



# HTW DRILLING LOG

HOLE No. 280

HMW-17

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 3

OF 3 SHEETS

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ELEV. <small>a</small>	DEPTH <small>b</small>	DESCRIPTION OF MATERIALS <small>c</small>	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. <small>f</small>	BLOW COUNTS <small>g</small>	REMARKS <small>h</small>
17.3		Firm brown to dark gray to orangish-tan medium to coarse clayey SAND (CL-SA)				
	15.0					
15.3	16.0	Boring terminated at 16.0 feet				
	17.0					
	18.0					
	19.0					
	20.0					
	21.0					
	22.0					

**MRK** FORM JUN 89 **55-2**

PROJECT NAME & NO. **D-81**  
Hunter AAF - CSR 12001-9-3411

HOLE No. **HMW-17**  
HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **HMW-18**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET 1 OF 2 SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME55</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		Soil Samples by DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
		Well by 6.25" ID HSA			
8. WEATHER		11. DATE STARTED <b>1/06/00</b>		12. DATE COMPLETED <b>1/08/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>3.5 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>14.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES		21. SAMPLES FOR CHEMICAL ANALYSIS		22. TOTAL CORE RECOVERY %	
		VOC		METALS	
		OTHER (SPECIFY)		OTHER (SPECIFY)	
		OTHER (SPECIFY)		OTHER (SPECIFY)	
		0-2 2-3		SVOC:0-2 2-3	
				Pest:0-2	
23. DISPOSITION OF HOLE		BACKFILLED		MONITORING WELL	
				OTHER (SPECIFY)	
				24. SIGNATURE OF INSPECTOR	
		<b>Type II</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>		

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.4		Very dark gray slightly silty fine SAND (SP) with some organics [5YR 3/1]	0	0-2		VOC, SVOC, Pesticide Analysis
	1.0					
	2.0		0	2-3		VOC, SVOC Analysis
	3.0					
	4.0	Light yellowish-brown fine SAND (SP) [10YR 6/4]				Wet at 3.5 ft.
23.4						

# HTW DRILLING LOG

HOLE No. **HMW-18**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Thomas M. Keller**

SHEET **2**

OF **2** SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
21.4	6.0	Light yellowish-brown trace silt fine SAND (SP) [2.5Y 6/4]	NM	6-10		Grain Size Analysis
17.4	10.0	Light gray slightly silty fine SAND (SP)				
13.4	14.0	Boring terminated at 14.0 feet				

**MRK** FORM JUN 89 **55-2**

PROJECT NAME & NO.

**D-83**

**Hunter AAF - CSR 12001-9-3411**

HOLE No.

**HMW-18**

**HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No. **SB-38/HMW-19**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		3. SHEET 1 OF 2 SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 55</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		Soil Samples by DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
		Well by 6.25" ID HSA			
8. WEATHER		11. DATE STARTED <b>1/04/00</b>		12. DATE COMPLETED <b>1/08/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>5.5 ft.</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>14.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		0-2 3.5-5.5		SVOC: 0-2 3.5-5.5	
22. TOTAL CORE RECOVERY %		23. DISPOSITION OF HOLE		24. SIGNATURE OF INSPECTOR	
		BACKFILLED	MONITORING WELL	<b>Thomas M. Keller</b>	
		<b>Type II</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>		

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.3		Light brown slightly silty fine SAND (SP-SM) with organics [7.5YR 6/3]	0.6	0-2		VOC, SVOC Analysis
	1.0					
	2.0	Reddish-black very silty fine SAND (SM) with organics [2.5YR 2.5/1]				
20.3						
	3.0					
	4.0		0.1	3.5-5.5		Very Moist at 3.5 ft.  VOC, SVOC Analysis

**MRK** FORM JUN 89 **55**

PROJECT NAME & NO. **D-84**  
**Hunter AAF - CSR 12001-9-3411**

HOLE No. **SB-38/HMW-19**

# HTW DRILLING LOG

HOLE No. 24

SB-38/HMW-19

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 2 SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
						Wet at 5.5 ft.
16.3	6.0	Reddish-black very silty fine SAND (SM) with organics [2.5YR 2.5/1]				
14.8	8.0	Pale brown fine SAND (SP) [10YR 6/3], wet				
11.3	11.0	Gray trace clay slightly silty fine to medium SAND (SM) [2.5YR 5/1]				
8.3	14.0	Boring terminated at 14.0 feet				

# HTW DRILLING LOG

HOLE No.  
SB-40/HMW-20

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET 1 OF 2 SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>CME 55</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		Soil Samples by DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
		Well by 6.25" ID HSA			
8. WEATHER		11. DATE STARTED <b>1/04/00</b>		12. DATE COMPLETED <b>1/09/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>14.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		0-2			
		2-4			
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
			Type II		
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
21.0		Black silty fine SAND (SP-SM) with organics [2.5Y 2.5/1]	11.7	0-2		VOC Analysis
	1.0					
	2.0					
	3.0		3.2	2-4		VOC Analysis
	4.0					

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# HTW DRILLING LOG

HOLE No. **SB-40/HMW-20**

286

PROJECT **Hunter AAF CSR**

INSPECTOR **Thomas M. Keller**

SHEET **2**  
OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
16.0		Pale brown trace silt with minor clay lenses fine SAND (SP) [10YR 6/3]				
	6.0					
	7.0		0.7	6-10		Grain Size Analysis
13.0	8.0	Gray trace silt with minor clay lenses fine SAND (SM) [5Y 5/1]				
	9.0					
	10.0		0			
	11.0					
	12.0					
8.5		Gray trace silt fine to medium SAND (SP) [5Y 5/1]				
	13.0					
7.0		Boring terminated at 14.0 feet				

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# HTW DRILLING LOG

HOLE No. **SB-18**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
		10. SURFACE ELEVATION <b>31.8 ft.</b>			
8. WEATHER		11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>7.0 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>8.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES					
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
31.8	1.0 2.0 3.0 4.0	Fine SAND		1.5		VOC, SVOC Analysis

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# HTW DRILLING LOG

HOLE No.

288

**SB-18**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Patrick J. Kelley**

SHEET **2**

OF **2** SHEETS

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ELEV. <small>a</small>	DEPTH <small>b</small>	DESCRIPTION OF MATERIALS <small>c</small>	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. <small>f</small>	BLOW COUNTS <small>g</small>	REMARKS <small>h</small>
23.8	6.0			6.0		VOC, SVOC Analysis
	7.0					
	8.0	Boring terminated at 8.0 feet				
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

# HTW DRILLING LOG

HOLE No. **SB-19**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>			
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>					
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>					
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>					
		10. SURFACE ELEVATION <b>34.7 ft.</b>					
		8. WEATHER		11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED					
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED					
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)					
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
				<b>Sealed with Bentonite</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>					

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
34.7		Fine SAND				
	1.0			1.5		VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

SB-19

290

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-19.PL3 C.JG-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
28.7	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-91

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-19

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-20**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>			SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
				10. SURFACE ELEVATION <b>35.6 ft.</b>		
8. WEATHER			11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR  <b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
35.6	0.0	Fine SAND	-	1.5		VOC, SVOC Analysis
	1.0					
	2.0					
	3.0					
	4.0					

C:\LOGS\SB-20.P13 C.JG--1 3-01-00

# HTW DRILLING LOG

HOLE No.

SB-20

292

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-20.P13 C.JG-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
29.6	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

# HTW DRILLING LOG

HOLE No. **SB-21**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
				10. SURFACE ELEVATION <b>26.3 ft.</b>	
8. WEATHER			11. DATE STARTED <b>7/22/99</b>	12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
26.3	1.0	Fine SAND	-	1.5		VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No. 294

SB-21

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-21.PL3 C.JG.1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
20.3	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-95

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-21

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-22**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		OF <b>2</b> SHEETS	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
			10. SURFACE ELEVATION <b>22.3 ft.</b>		
8. WEATHER		11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES					
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.3		Fine SAND	-			
	1.0			1.5		VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

296

SB-22

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-22.PL3 C.JG..1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
16.3	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Pesticide Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-97

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-22

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-23**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
				10. SURFACE ELEVATION <b>22.5 ft.</b>	
8. WEATHER			11. DATE STARTED <b>7/22/99</b>	12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>6.5 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.5	0.0	Fine SAND	-	1.5		VOC, SVOC, Pesticide Analysis
	1.0					
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

298

SB-23

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-23 PL3 C.JG--1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
16.0	6.0	Boring terminated at 6.5 feet		6.5		VOC, SVOC Pesticide Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-99

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-23

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-24**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>		
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>				
		10. SURFACE ELEVATION <b>24.1 ft.</b>				
		8. WEATHER		11. DATE STARTED <b>7/29/99</b>	12. DATE COMPLETED <b>7/29/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED				
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <b>6.5 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>				

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
24.1	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">1.0</div> <div style="margin-bottom: 10px;">2.0</div> <div style="margin-bottom: 10px;">3.0</div> <div style="margin-bottom: 10px;">4.0</div> </div>	Fine SAND	-	1.5		VOC, SVOC, Pesticide Analysis

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# HTW DRILLING LOG

HOLE No.

SB-24

300

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
17.6	6.0	Boring terminated at 6.5 feet		6.5		VOC, SVOC Pesticide Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-101

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-24

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-25**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		OF <b>2</b> SHEET	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
		10. SURFACE ELEVATION <b>27.6 ft.</b>			
8. WEATHER		11. DATE STARTED <b>7/22/99</b>	12. DATE COMPLETED <b>7/22/99</b>		
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
					22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
			<b>Sealed with Bentonite</b>		
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.6	0.0	Fine SAND	-	1.5		VOC, SVOC, Pesticide Analysis
	1.0					
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

**SB-25**

302

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Patrick J. Kelley**

SHEET **2**

OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
21.6	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Pesticide Analysis

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**MRK** FORM JUN 89 **55-2**

PROJECT NAME & NO.

**D-103**

**Hunter AFF - CSR 12001-9-3411**

HOLE No.

**SB-25**

**HF - Rev. 4/94**

# HTW DRILLING LOG

HOLE No. **SB-26**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>			SHEET <b>1</b> OF <b>2</b> SHEETS		
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
				10. SURFACE ELEVATION <b>33.5 ft.</b>			
8. WEATHER			11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED				
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
				<b>Sealed with Bentonite</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>				

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
33.5	1.0	Fine SAND	-	1.5		VOC, SVOC, Pesticide Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

SB-26

304

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-26.PL3 C.JG--1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.5	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Pesticide Analysis

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-105

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-26

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-27**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Prasley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>	
				10. SURFACE ELEVATION <b>27.6 ft.</b>	
8. WEATHER			11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.6	1.0	Fine SAND	-	1.5		VOC, SVOC, Pesticide Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.  
**SB-27**

306

PROJECT  
**Hunter AAF CSR**

INSPECTOR  
**Patrick J. Kelley**

SHEET **2**  
OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
21.6	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

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# HTW DRILLING LOG

HOLE No. **SB-28**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
			10. SURFACE ELEVATION <b>33.5 ft.</b>		
8. WEATHER		11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES					
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	
				<b>Sealed with Bentonite</b>	
24. SIGNATURE OF INSPECTOR					
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
33.5	1.0	Fine SAND	-	1.5		VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No. **SB-28**

308

PROJECT **Hunter AAF CSR**

INSPECTOR **Patrick J. Kelley**

SHEET **2**  
OF **2** SHEETS

C:\LOGS\SB-28.PL3 CJG--1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.5	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

# HTW DRILLING LOG

HOLE No. **SB-29**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
		10. SURFACE ELEVATION <b>34.2 ft.</b>			
8. WEATHER		11. DATE STARTED <b>7/22/99</b>		12. DATE COMPLETED <b>7/22/99</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES					
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Patrick J. Kelley</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
34.2	1.0	Fine SAND	-	1.5		VOC, SVOC Analysis
	2.0					
	3.0					
	4.0					

C:\LOGS\SB-29.PL3 C.JG-1 3-01-00

# HTW DRILLING LOG

HOLE No.

310

SB-29

PROJECT

Hunter AAF CSR

INSPECTOR

Patrick J. Kelley

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-29.P13 C.JG-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
28.2	6.0	Boring terminated at 6.0 feet		5.5		VOC, SVOC Analysis
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-111

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-29

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-30**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>			SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>				
		10. SURFACE ELEVATION <b>31.6 ft.</b>				
		8. WEATHER <b>Windy, Clear</b>		11. DATE STARTED <b>1/05/00</b>	12. DATE COMPLETED <b>1/05/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>9.0 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
		<b>0-2 6-8</b>		<b>SVOC:0-2 6-8</b>		
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
				<b>Sealed with Bentonite</b>		
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>			

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
31.6	1.0	Fine slightly silty brown SAND (SM) [7.5YR 5/4]	0.5	0-2		VOC, SVOC Analysis
29.6	2.0	Fine slightly silty dark black (SP-SM) [5YR 2.5/1] (SP-SM)	0.5			



# HTW DRILLING LOG

HOLE No.

312

SB-30

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-30.PL3 C.J.G.-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
25.6	6.0	Fine to medium slightly silty some hard lumps very dark grayish brown SAND (SP) [10YR 3/2]				
	7.0		0.5	6-8		VOC, SVOC Analysis
	8.0					
	9.0					Wet at 9.0 ft.
21.6	10.0	Boring terminated at 10.0 feet				
	11.0					
	12.0					
	13.0					

# HTW DRILLING LOG

HOLE No. **SB-31**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS		
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
				10. SURFACE ELEVATION <b>34.2 ft.</b>		
8. WEATHER			11. DATE STARTED <b>1/05/00</b>	12. DATE COMPLETED <b>1/05/00</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>7.5 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
	<b>0-2 6-8</b>		<b>SVOC:0-2 6-8</b>			
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
			<b>Sealed with Bentonite</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
34.2		Concrete	-			
33.7		Fine light brown SAND (SP) with trace of silt [7.5YR 6/3]				
	1.0		0.3	0.5-2		VOC Analysis
	2.0					
	3.0					
	4.0					

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# HTW DRILLING LOG

HOLE No.

SB-31

314

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 2 SHEETS

C:\LOGS\SB-31.PL3 CJG-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
29.2		Fine light brown SAND (SP) with trace of silt [7.5YR 6/3]				
	6.0		0.3	5-7		
	7.0					
	8.0					
	9.0					
24.2	10.0	Boring terminated at 10.0 feet				Wet at 7.5 ft.
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-115

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-31

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-32**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		OF <b>2</b> SHEETS	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
8. WEATHER		10. SURFACE ELEVATION <b>33.7 ft.</b>		11. DATE STARTED <b>1/05/00</b>	
				12. DATE COMPLETED <b>1/05/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>7.0 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
20. TOTAL NUMBER OF CORE BOXES					
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
				<b>PCB:0.5-2 4-6</b>	
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
				<b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Thomas M. Keller</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
33.7		Concrete				
33.2		Very pale brown fine SAND (SP) with trace of silt [10YR 7/3]				
	1.0		0.3	0.5-2		PCB Analysis
	2.0					
	3.0					
	4.0		0	4-6		PCB Analysis

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# HTW DRILLING LOG

HOLE No. **SB-32**

316

PROJECT **Hunter AAF CSR**

INSPECTOR **Thomas M. Keller**

SHEET **2**  
OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	6.0					
	7.0					Wet at 7.0 ft.
26.2		Light gray clayey SAND [5Y 7/1]				
	8.0					
	9.0					
23.7	10.0	Boring terminated at 10.0 feet				
	11.0					
	12.0					
	13.0					

C:\LOGS\SB-32.PL3 C/JG-1 3-01-00

# HTW DRILLING LOG

HOLE No. **SB-33**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b> OF <b>2</b> SHEETS			
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
				10. SURFACE ELEVATION <b>33.2 ft.</b>			
8. WEATHER			11. DATE STARTED <b>1/05/00</b>	12. DATE COMPLETED <b>1/05/00</b>			
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>5.5 ft.</b>				
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
		<b>0.5-2 3-5</b>		<b>PCB:0.5-2 3-5</b>			
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
				<b>Sealed with Bentonite</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>				

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
33.2		Concrete				
32.7		Light brown fine SAND (SP) with trace of silt				
	1.0		0.1	0.5-2		VOC, PCB Analysis
31.2	2.0	Pinkish-white fine SAND (SP) [7.5YR 8/2] - clean well sorted, poor graded				
	3.0					
	4.0		0.4	3-5		VOC, PCB Analysis

C:\LOGS\SB-33.PL3 C.JG--1 3-01-00

# HTW DRILLING LOG

HOLE No. 318

**SB-33**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Thomas M. Keller**

SHEET **2**

OF **2** SHEETS

C:\LOGS\SB-33.PL3 C.JG-1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.2	6.0	Pinkish-white fine SAND (SP) [7.5YR 8/2]				Wet at 5.5 ft.
23.2	10.0	Boring terminated at 10.0 feet				

# HTW DRILLING LOG

HOLE No. **SB-34**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>			SHEET <b>1</b> OF <b>2</b> SHEETS		
3. PROJECT <b>Hunter AAF CSR</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Cody Presley</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>			
				10. SURFACE ELEVATION <b>32.5 ft.</b>			
8. WEATHER			11. DATE STARTED <b>1/05/00</b>		12. DATE COMPLETED <b>1/05/00</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>5.5 ft.</b>				
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED				
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
		<b>0-2 2.5-4.5</b>		<b>Pest:0-2 2.5-4.5</b>			
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
				<b>Sealed with Bentonite</b>			
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>				

C:\LOGS\SB-34.PL3 C.JG--1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
32.5		Yellowish-brown slightly silty fine SAND (SP)[10YR 5/4]	-			
	1.0		0.7	0-2		VOC, Pesticide Analysis
	2.0					
	3.0					
	4.0		0.1	2.5-4.5		VOC, Pesticide Analysis



# HTW DRILLING LOG

HOLE No. **SB-34**

320

PROJECT **Hunter AAF CSR**

INSPECTOR **Thomas M. Keller**

SHEET **2**  
OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
26.7	6.0	Light gray fine sandy CLAY (CH) with high plasticity [2.5Y 7/1]				Wet at 5.5 ft.
22.5	10.0	Boring terminated at 10.0 feet				

C:\LOGS\SB-34.PL3 C.JG--1 3-01-00

# HTW DRILLING LOG

HOLE No. **SB-35**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		OF <b>2</b> SHEETS	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>DPT</b>		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		10. SURFACE ELEVATION <b>32.1 ft.</b>	
8. WEATHER		11. DATE STARTED <b>1/06/00</b>		12. DATE COMPLETED <b>1/06/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>5.5 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC <b>0-2 4-6</b>	METALS	OTHER (SPECIFY) <b>SVOC:0-2 4-6</b>	OTHER (SPECIFY) <b>Pest:0-2 4-6</b>
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY) <b>Sealed with Bentonite</b>	22. TOTAL CORE RECOVERY %
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Thomas M. Keller</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
32.1	1.0 2.0 3.0 4.0	Black slightly silty fine SAND (SP) [7.5YR 25/2] with some organics	1.7	0-2		VOC, SVOC, Pesticide Analysis
27.6			0.5	4-6		VOC, SVOC, Pesticide Analysis

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# HTW DRILLING LOG

HOLE No. 327

**SB-35**

PROJECT

**Hunter AAF CSR**

INSPECTOR

**Thomas M. Keller**

SHEET **2**

OF **2** SHEETS

C:\LOGS\SB-35.PL3 C.J.G.:1 3-01-00

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
27.1		Gray slightly silty clayey fine SAND (SP-SM) [7.5YR 6/1]		4-6		
	6.0					Wet at 6.5 ft.
	7.0					
	8.0					
	9.0					
22.1	10.0	Boring terminated at 10.0 feet				
	11.0					
	12.0					
	13.0					

# HTW DRILLING LOG

HOLE No. **SB-36**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>		SHEET <b>1</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>		
			10. SURFACE ELEVATION <b>28.9 ft.</b>		
8. WEATHER		11. DATE STARTED <b>1/06/00</b>		12. DATE COMPLETED <b>1/06/00</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>3.5 ft.</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>6.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)	DISTURBED		UNDISTURBED		20. TOTAL NUMBER OF CORE BOXES
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
	<b>0-2 2-3</b>		<b>SVOC:0-2 2-3</b>	<b>Pest:0-2</b>	
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR  <b>Sealed with Bentonite</b>	
25. CHECKED BY: <b>Rhonda Quinn</b>			26. NAME OF INSPECTOR <b>Thomas M. Keller</b>		

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
28.9		Very dark gray slightly silty fine SAND (SP) [7.5YR 3/1] with some organics	-			
	1.0		0.3	0-2		VOC, SVOC, Pesticide Analysis
27.2		Very dark gray slightly silty fine SAND (SP) [7.5YR 3/1] with some organics				
	2.0			2-3		VOC, SVOC Analysis
	3.0					
25.4		Dusky red slightly silty fine SAND (SP) [2.5YR 4/3]				
	4.0		0.3			Wet at 3.5 ft.

**MRK** FORM JUN 89 **55**

PROJECT NAME & NO. **D-124**  
**Hunter AFF - CSR 12001-9-3411**

HOLE No. **SB-36**

# HTW DRILLING LOG

HOLE No.

324

SB-36

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 2 SHEETS

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ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
22.9	6.0	Boring terminated at 6.0 feet				
	7.0					
	8.0					
	9.0					
	10.0					
	11.0					
	12.0					
	13.0					

MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-125

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-36

HF - Rev. 4/94

# HTW DRILLING LOG

HOLE No. **SB-39**  
 SHEET **1**  
 OF **2** SHEETS

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering</b>	
3. PROJECT <b>Hunter AAF CSR</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>	
5. NAME OF DRILLER <b>Cody Presley</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>SIMCO Earth Probe 200</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	DPT		9. HOLE LOCATION (SITE) <b>Former Fire Training Area</b>
			10. SURFACE ELEVATION <b>19.8 ft.</b>
8. WEATHER <b>Partly Cloudy</b>		11. DATE STARTED <b>1/04/00</b>	12. DATE COMPLETED <b>1/04/00</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>4.0 ft.</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	
15. TOTAL DEPTH OF HOLE <b>10.0 ft.</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)
	0-2 2-4		
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)
			<b>Sealed with Bentonite</b>
25. CHECKED BY: <b>Rhonda Quinn</b>		26. NAME OF INSPECTOR <b>Thomas M. Keller</b>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
19.8		Black organic silty SAND (SM) [2.5Y 25/1]	-			
	1.0		0.0	0-2		VOC Analysis
17.8	2.0	Dark organic brown slightly silty fine SAND (SP-SM) [7.5YR 3.2]	0.0	2-4		VOC Analysis
	3.0					
	4.0					Wet at 4.0 ft.

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# HTW DRILLING LOG

HOLE No.

SB-39

376

PROJECT

Hunter AAF CSR

INSPECTOR

Thomas M. Keller

SHEET 2

OF 2 SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
14.4		Light brown fine SAND (SP) [7.5YR 6/3]				
	6.0					
12.8	7.0	Gray silty fine SAND (SM) [5Y 5/1]				
	8.0					
	9.0					
9.8	10.0	Boring terminated at 10.0 feet				
	11.0					
	12.0					
	13.0					

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MRK FORM JUN 89 55-2

PROJECT NAME &amp; NO.

D-127

Hunter AFF - CSR 12001-9-3411

HOLE No.

SB-39

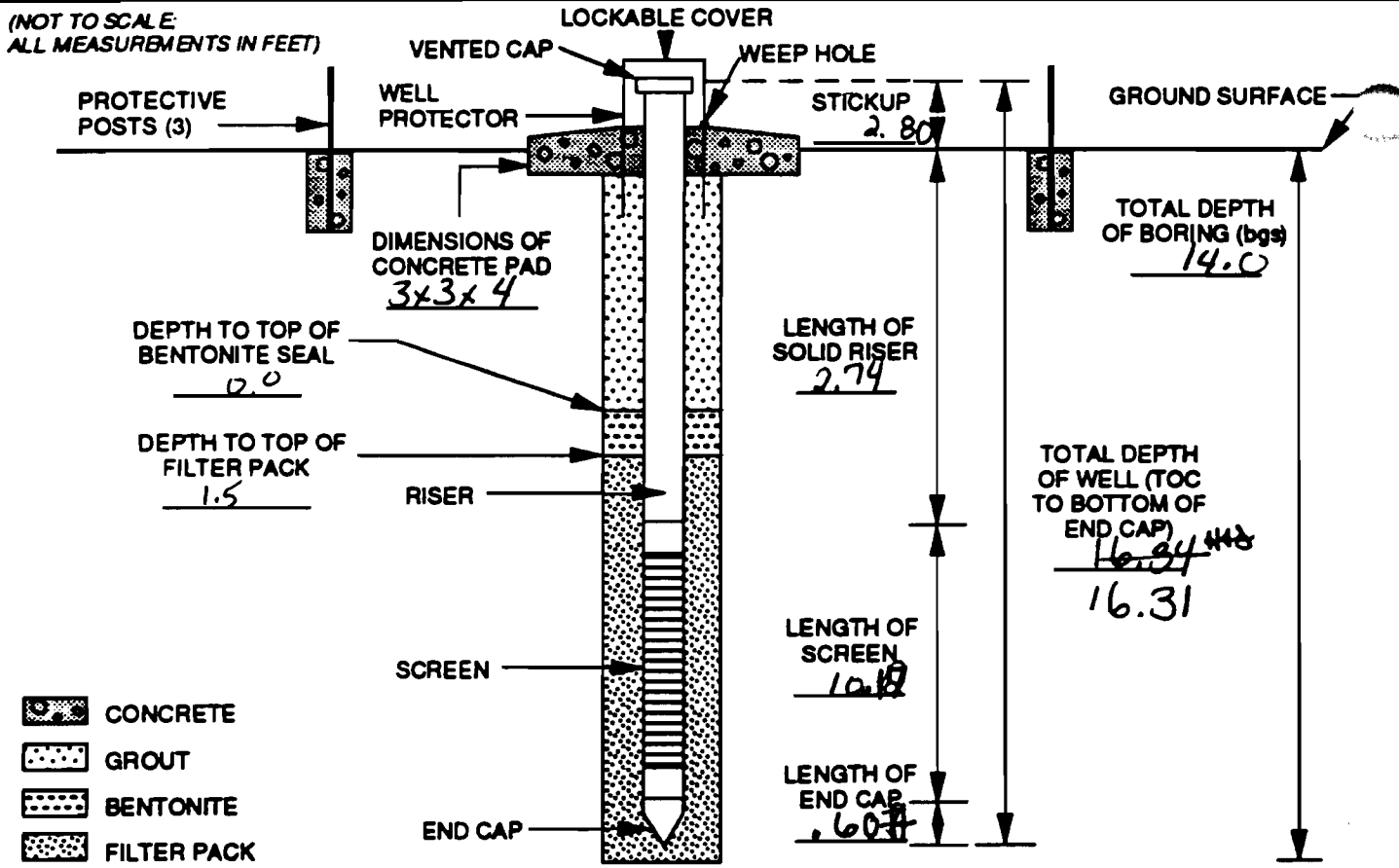
HF - Rev. 4/94

# TYPE II MONITORING WELL INSTALLATION DIA GRAM

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 WELL NO. HMW 10 WELL LOCATION Fire Training Area  
 DATE 10-03-95 TIME 13:50 - 1430

GROUND SURFACE ELEVATION 27.96  
 TOP OF SCREEN ELEVATION ~~25.68~~ 25.14  
 REFERENCE POINT ELEVATION (TP) 30.68  
 TYPE FILTER PACK SAND GRADATION #20  
 FILTER PACK MANUFACTURER MARL  
 SCREEN MATERIAL 40 PVC  
 MANUFACTURER DSI  
 SCREEN DIAMETER 2in SLOT SIZE .010  
 RISER MATERIAL 40 PVC  
 MANUFACTURER DSI  
 RISER DIAMETER 2in  
 DRILLING TECHNIQUE HSA  
 AUGER/BIT SIZE AND TYPE 4 1/2 ID  
 REMARKS repack screen (1 1/2" sand)

BENTONITE TYPE 3/8 in tablets  
 MANUFACTURER Cetra Volckey  
 CEMENT TYPE Portland  
 MANUFACTURER Signal Mountain  
 BOREHOLE DIAMETER 8.5 OD  
 LAW  
 FIELD REPRESENTATIVE H Caswell  
 DRILLING CONTRACTOR Law Eng.  
 AMOUNT BENTONITE USED (SEAL) 1 1/2 buckets  
 AMOUNT BENTONITE USED (GROUT) NA  
 AMOUNT CEMENT USED (GROUT) NA  
 AMOUNT SAND USED 4 - 50 lb bags  
 STATIC WATER LEVEL (> 24 hrs. after dev.) 7.36 (700)  
 MEASURED ON (Date/Time) 10-04-95 1550



QA/QC DRILLER: Russell Murdock INSPECTOR: Heather A Caswell  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: glerp DATE 10-03-95



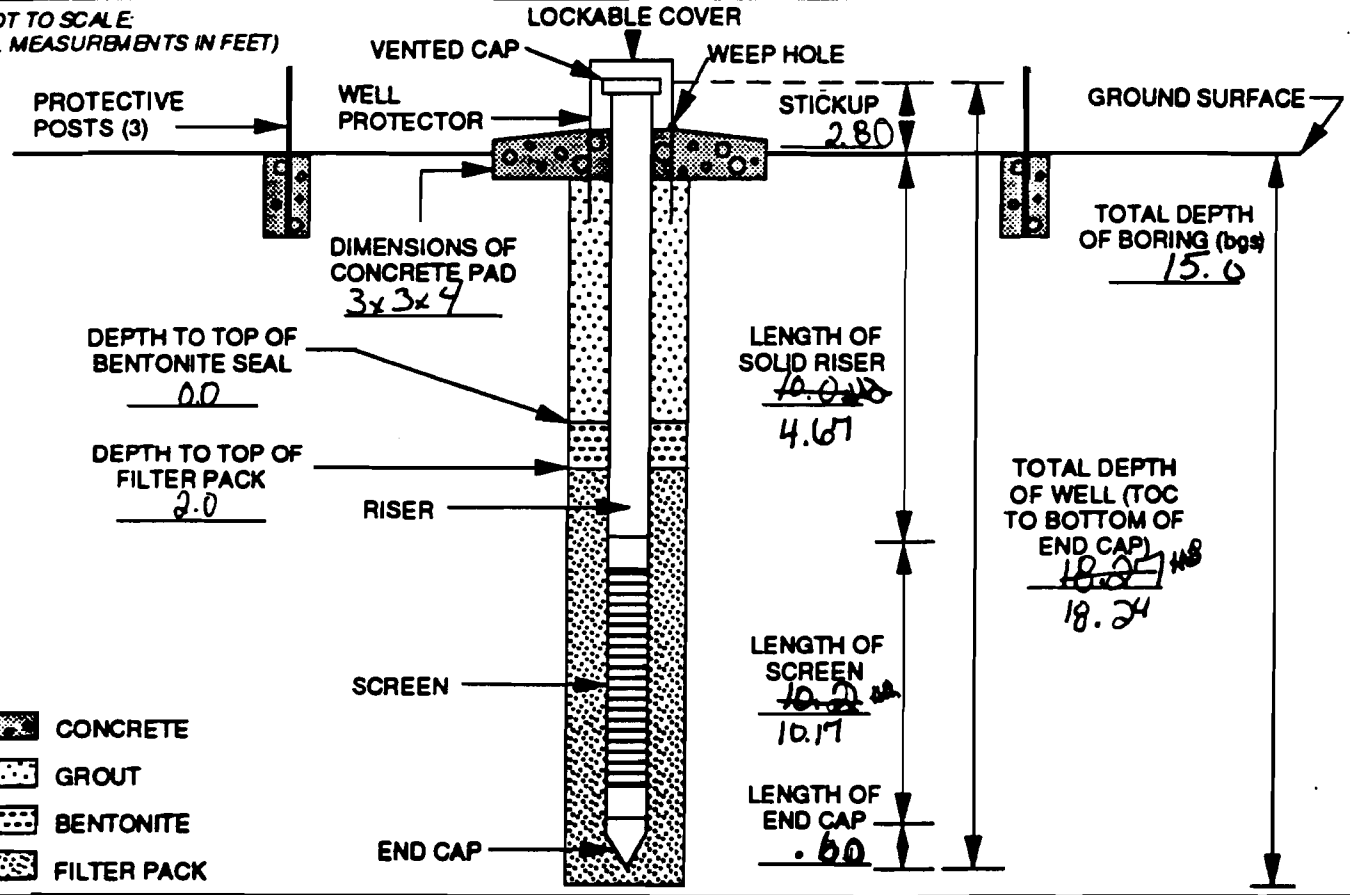
# TYPE II MONITORING WELL INSTALLATION DIAGRAM

328

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 WELL NO. HMW 11 WELL LOCATION Fire Training Area  
 DATE 10-03-95 TIME 0920-0950

GROUND SURFACE ELEVATION <u>28.82'</u>	BENTONITE TYPE <u>3/8 in tablets</u>
TOP OF SCREEN ELEVATION <u>23.83'</u>	MANUFACTURER <u>Cetco Valclay</u>
REFERENCE POINT ELEVATION <u>TOC 31.30'</u>	CEMENT TYPE <u>Portland</u>
TYPE FILTER PACK <u>SAND</u> GRADATION <u>20/40</u>	MANUFACTURER <u>Signal Mountain</u>
FILTER PACK MANUFACTURER <u>Moire</u>	BOREHOLE DIAMETER <u>8 1/2 in</u>
SCREEN MATERIAL <u>40 PVC</u>	LAW
MANUFACTURER <u>DSI</u>	FIELD REPRESENTATIVE <u>H Caswell</u>
SCREEN DIAMETER <u>2 in</u> SLOT SIZE <u>.010</u>	DRILLING CONTRACTOR <u>Russell Law Eng.</u>
RISER MATERIAL <u>40 PVC</u>	AMOUNT BENTONITE USED (SEAL) <u>1 bucket</u>
MANUFACTURER <u>DSI</u>	AMOUNT BENTONITE USED (GROUT) <u>NA</u>
RISER DIAMETER <u>2 in</u>	AMOUNT CEMENT USED (GROUT) <u>NA</u>
DRILLING TECHNIQUE <u>4 1/4 HSA</u>	AMOUNT SAND USED <u>3.5 50lb bgs</u>
AUGER/BIT SIZE AND TYPE <u>4 1/2 ID</u>	STATIC WATER LEVEL (> 24 hrs. after dev.) <u>10.83 TOC</u>
REMARKS <u>packed screen (1/80 sand)</u>	MEASURED ON (Date/Time) <u>10-04-95 1544</u>

(NOT TO SCALE  
ALL MEASUREMENTS IN FEET)



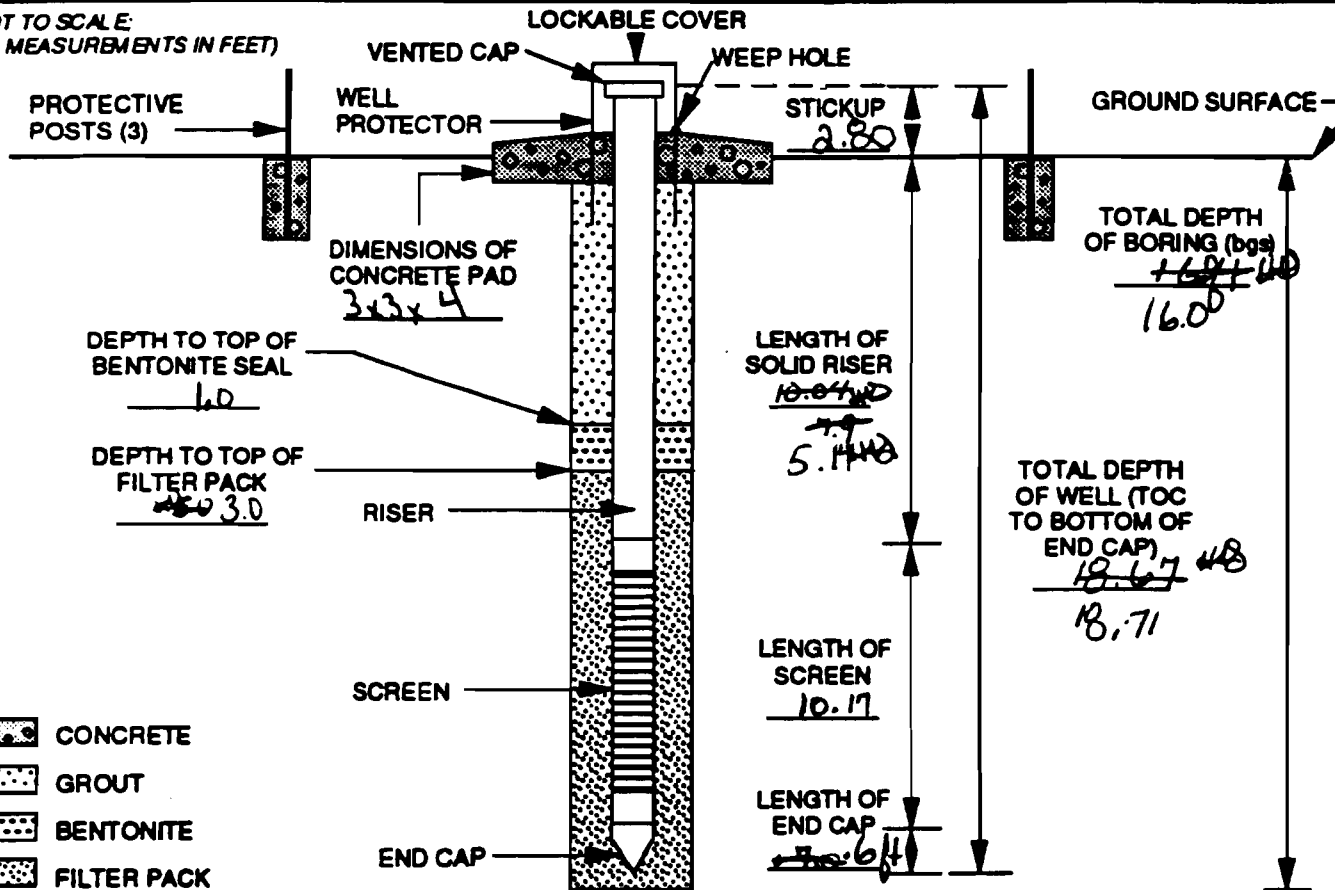
<b>QA/QC</b>	DRILLER: <u>Russell Muddick</u>	INSPECTOR: <u>Heather A. Caswell</u>
	DISCREPANCIES: _____	CHECKED BY: <u>[Signature]</u> DATE <u>10-03-95</u>

# TYPE II MONITORING WELL INSTALLATION DIAGRAM

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 WELL NO. HMW 10 WELL LOCATION Fire training area  
 DATE 10-02-95 TIME 1815 - 1835

GROUND SURFACE ELEVATION 29.29' BENTONITE TYPE 3/8 in tablets  
 TOP OF SCREEN ELEVATION 23.82' MANUFACTURER Cetco Volclay  
 REFERENCE POINT ELEVATION 31.76' CEMENT TYPE Portland  
 TYPE FILTER PACK SAND GRADATION 20/40 MANUFACTURER Signal Mountain  
 FILTER PACK MANUFACTURER MORIE BOREHOLE DIAMETER 8 1/2 OD  
 SCREEN MATERIAL 40 PVC LAW  
 MANUFACTURER DSI FIELD REPRESENTATIVE H.A. Caswell  
 SCREEN DIAMETER 2 in DRILLING CONTRACTOR Law Eng.  
 RISER MATERIAL 40 PVC AMOUNT BENTONITE USED (SEAL) 1 bucket  
 MANUFACTURER DSI AMOUNT BENTONITE USED (GROUT) NA  
 RISER DIAMETER 2 in AMOUNT CEMENT USED (GROUT) NA  
 DRILLING TECHNIQUE 4 1/4 HSA AMOUNT SAND USED 4 50lb bags  
 AUGER/BIT SIZE AND TYPE 4 1/2 ID STATIC WATER LEVEL (> 24 hrs. after dev.) 11.48 TOR  
 REMARKS prepack 16/20 filter screen MEASURED ON (Date/Time) 10-03-95 1700  
4 gallons of H<sub>2</sub>O to hydrate seal

(NOT TO SCALE)  
 ALL MEASUREMENTS IN FEET



QA / QC

DRILLER: Russell Mundak  
 DISCREPANCIES: \_\_\_\_\_

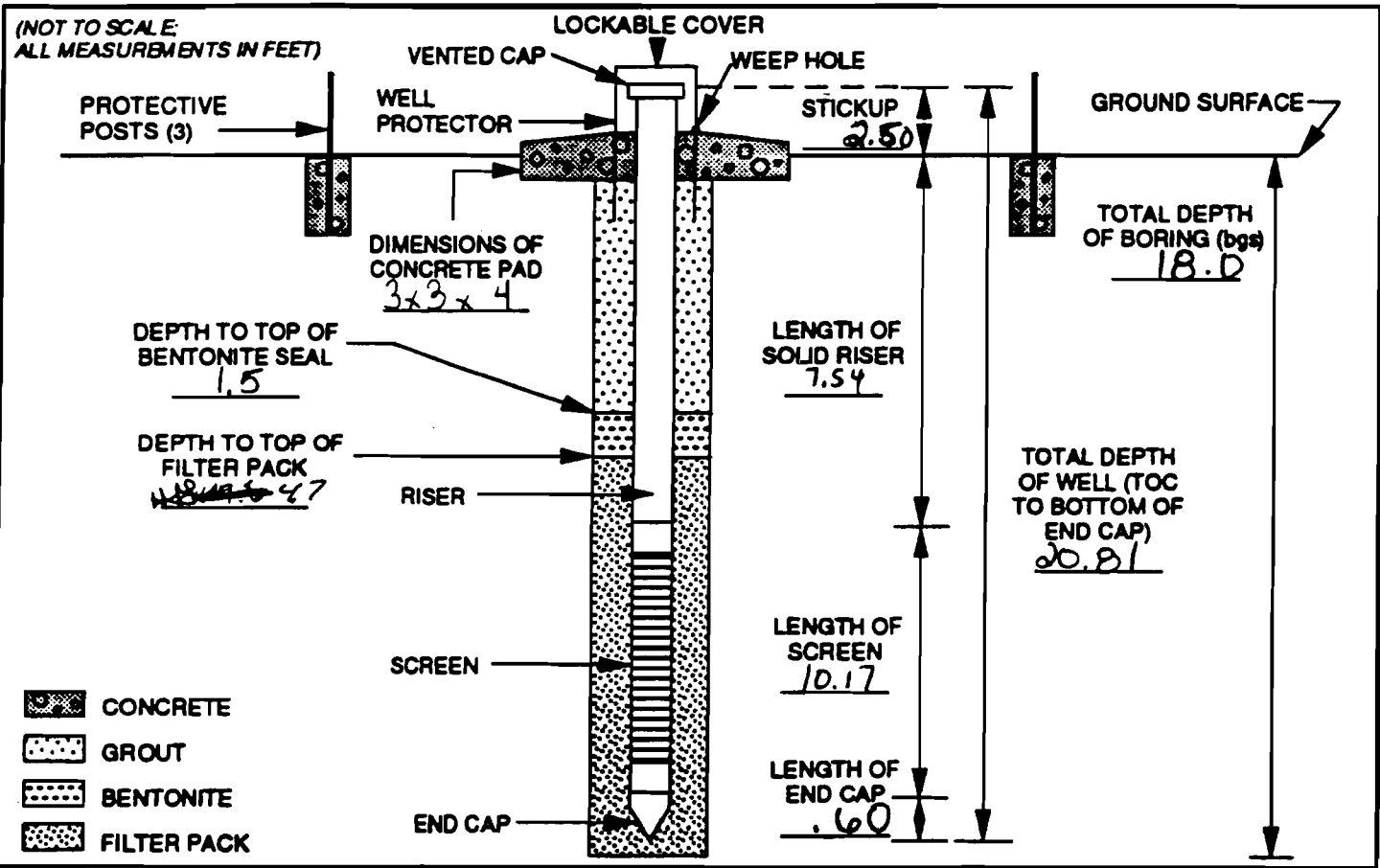
INSPECTOR: Heather A. Farnell  
 CHECKED BY: Officer DATE 10-02-95

# TYPE II MONITORING WELL INSTALLATION DIAGRAM

330

PROJECT NAME Hunter Army Airfield PROJECT NO. 11-3551-0320  
 WELL NO. HMW 13 WELL LOCATION Fire Training Area  
 DATE 10-03-95 TIME 1615 - 1630

GROUND SURFACE ELEVATION 32.54' BENTONITE TYPE 3/8 in tablets  
 TOP OF SCREEN ELEVATION 24.79' MANUFACTURER Getco Volcky  
 REFERENCE POINT ELEVATION 34.83' CEMENT TYPE Portland  
 TYPE FILTER PACK SAND GRADATION 20/40 MANUFACTURER Signal Mountain  
 FILTER PACK MANUFACTURER Marie BOREHOLE DIAMETER 8 1/2" OD  
 SCREEN MATERIAL 40 PVC LAW  
 MANUFACTURER DSI FIELD REPRESENTATIVE H Caswell  
 SCREEN DIAMETER 2 SLOT SIZE .010 DRILLING CONTRACTOR Law Eng  
 RISER MATERIAL 40 PVC AMOUNT BENTONITE USED (SEAL) 1 bucket  
 MANUFACTURER DSI AMOUNT BENTONITE USED (GROUT) NA  
 RISER DIAMETER 2 AMOUNT CEMENT USED (GROUT) NA  
 DRILLING TECHNIQUE HSA AMOUNT SAND USED 4 50 lb. bags  
 AUGER/BIT SIZE AND TYPE 4 1/2" ID STATIC WATER LEVEL (> 24 hrs. after dev.) 12.64 (700)  
 MEASURED ON (Date/Time) 10-04-95 1548  
 REMARKS prepacked screen (16/20 sand)



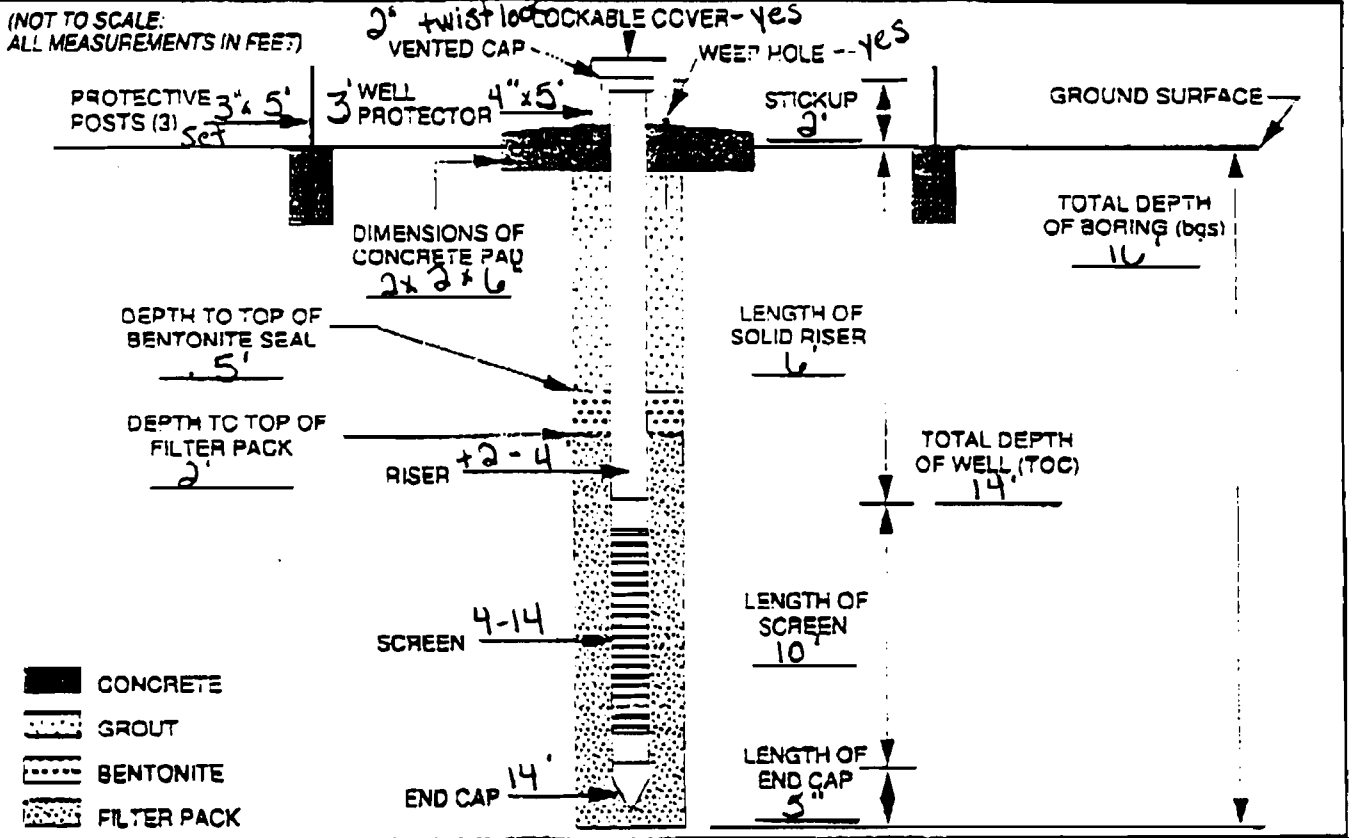
QA / QC DRILLER: \_\_\_\_\_ INSPECTOR: H Caswell  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: J Kayser DATE 12/19/95

FIGURE B-2

**TYPE II MONITORING WELL INSTALLATION DIAGRAM**

PROJECT NAME Hunter Air Field PROJECT NO. 12001-9-0331  
 WELL NO. H.M.W-14 WELL LOCATION on site see map  
 DATE 7-28-99 TIME 8 PM - 11 PM

GROUND SURFACE ELEVATION \_\_\_\_\_ BENTONITE TYPE Pure Gold - med chips  
 TOP OF SCREEN ELEVATION 4' from surface MANUFACTURER Cetco  
 REFERENCE POINT ELEVATION \_\_\_\_\_ CEMENT TYPE Sakrete  
 MANUFACTURER Southern Products + Silica  
 TYPE FILTER PACK #1 GRADATION 20/40 BOREHOLE DIAMETER 8"  
 FILTER PACK MANUFACTURER DSI LAW FIELD REPRESENTATIVE Pot Kelly  
 SCREEN MATERIAL SCH 40 P.V.C. DRILLING CONTRACTOR LAW Engineering  
 MANUFACTURER BOART LONGYEAR AMOUNT BENTONITE USED (SEAL) 1 Bag - 1.5'  
 AMOUNT BENTONITE USED (GROUT) \_\_\_\_\_  
 SCREEN DIAMETER 2" SLOT SIZE 0.10 AMOUNT CEMENT USED (GROUT) \*3 - 80 lb. Bags  
 RISER MATERIAL SCH 40 P.V.C. AMOUNT SAND USED 8-50 lb. Bags  
 MANUFACTURER BOART LONGYEAR STATIC WATER LEVEL (> 24 hrs. after dev.) \_\_\_\_\_  
 MEASURED ON (Date/Time) \_\_\_\_\_  
 RISER DIAMETER 2" DRILLING TECHNIQUE Hollow Stem Auger  
 AUGER/BIT SIZE AND TYPE CME 4 1/4" ID HD  
 REMARKS Wet Sand \* pad to top of bentonite seal using sakrete



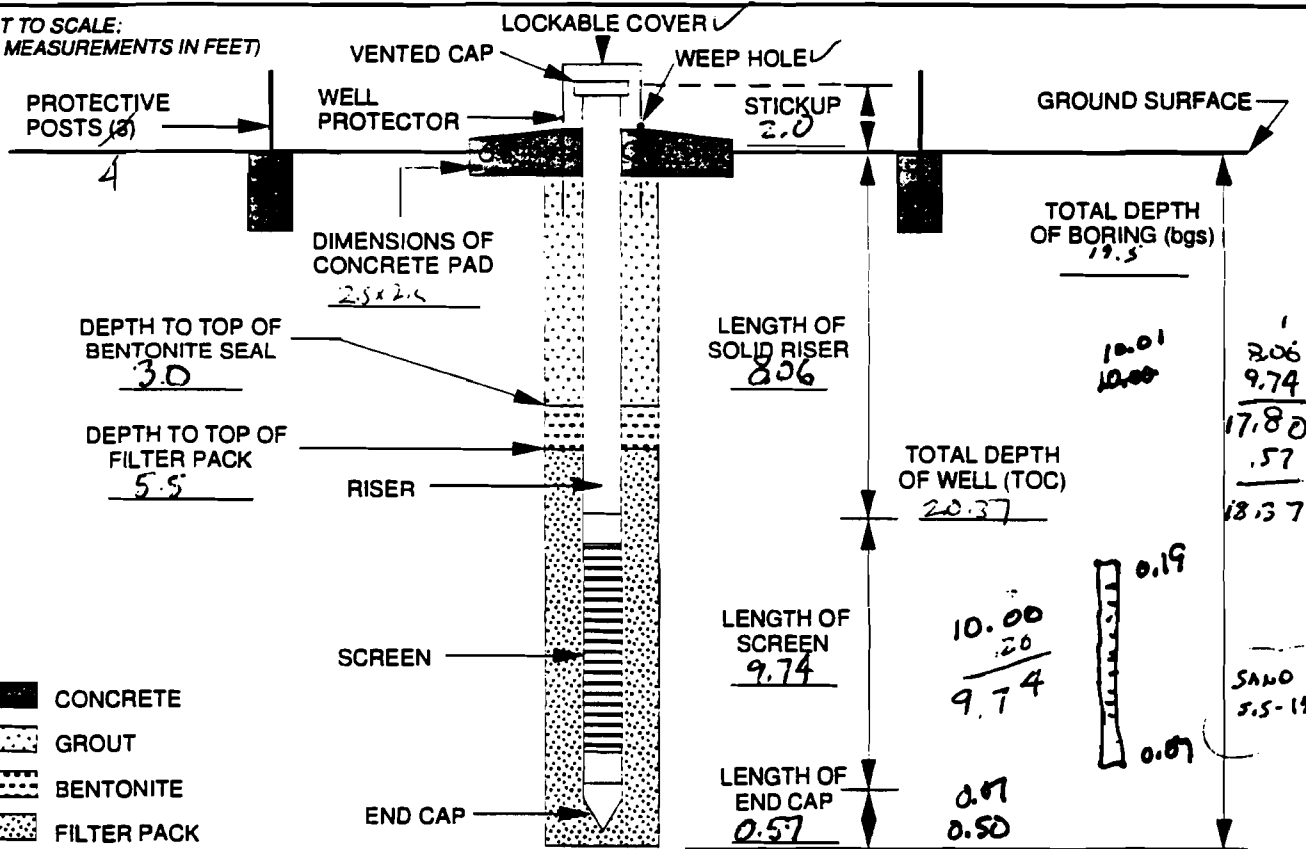
QA / QC | DRILLER: Cody Priestley INSPECTOR: \_\_\_\_\_  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

## TYPE II MONITORING WELL INSTALLATION DIAGRAM

PROJECT NAME HUNTER AAF PROJECT NO. 12001-9-83411  
 WELL NO. 4MW-14R WELL LOCATION FORMER FIRE TRAINING AREA  
 DATE 1-7-00 TIME \_\_\_\_\_

GROUND SURFACE ELEVATION _____	BENTONITE TYPE <u>78" CHIP</u>
TOP OF SCREEN ELEVATION _____	MANUFACTURER <u>DEI-SHEER, INC.</u>
REFERENCE POINT ELEVATION _____	CEMENT TYPE <u>PORTLAND</u>
	MANUFACTURER <u>COCA</u>
TYPE FILTER PACK <u>Sliver Sand</u> GRADATION <u>30-65<sup>φ</sup></u>	BOREHOLE DIAMETER <u>10"</u>
FILTER PACK MANUFACTURER <u>STANDARD SAND</u>	LAW _____
SCREEN MATERIAL <u>PVC</u>	FIELD REPRESENTATIVE <u>T.M. KELLER</u>
MANUFACTURER <u>U.S. FILTER</u>	DRILLING CONTRACTOR <u>LAW CHARLOTTE</u>
SCREEN DIAMETER <u>2"</u> SLOT SIZE <u>0.06</u>	AMOUNT BENTONITE USED (SEAL) <u>50 lbs</u>
RISER MATERIAL <u>PVC</u>	AMOUNT BENTONITE USED (GROUT) <u>6 lbs</u>
MANUFACTURER <u>BOART LONGYEAR</u>	AMOUNT CEMENT USED (GROUT) <u>120 lbs (TRIP)</u>
RISER DIAMETER <u>2"</u>	AMOUNT SAND USED <u>350</u>
DRILLING TECHNIQUE <u>HSA</u>	STATIC WATER LEVEL (> 24 hrs. after dev.) _____
AUGER/BIT SIZE AND TYPE <u>3.25</u>	MEASURED ON (Date/Time) _____
REMARKS <u>ADDED 10 GNL. WATER TO WET SAND, 10 GNL TO CHARGE AUGERS</u>	

(NOT TO SCALE:  
ALL MEASUREMENTS IN FEET)



**QA / QC**

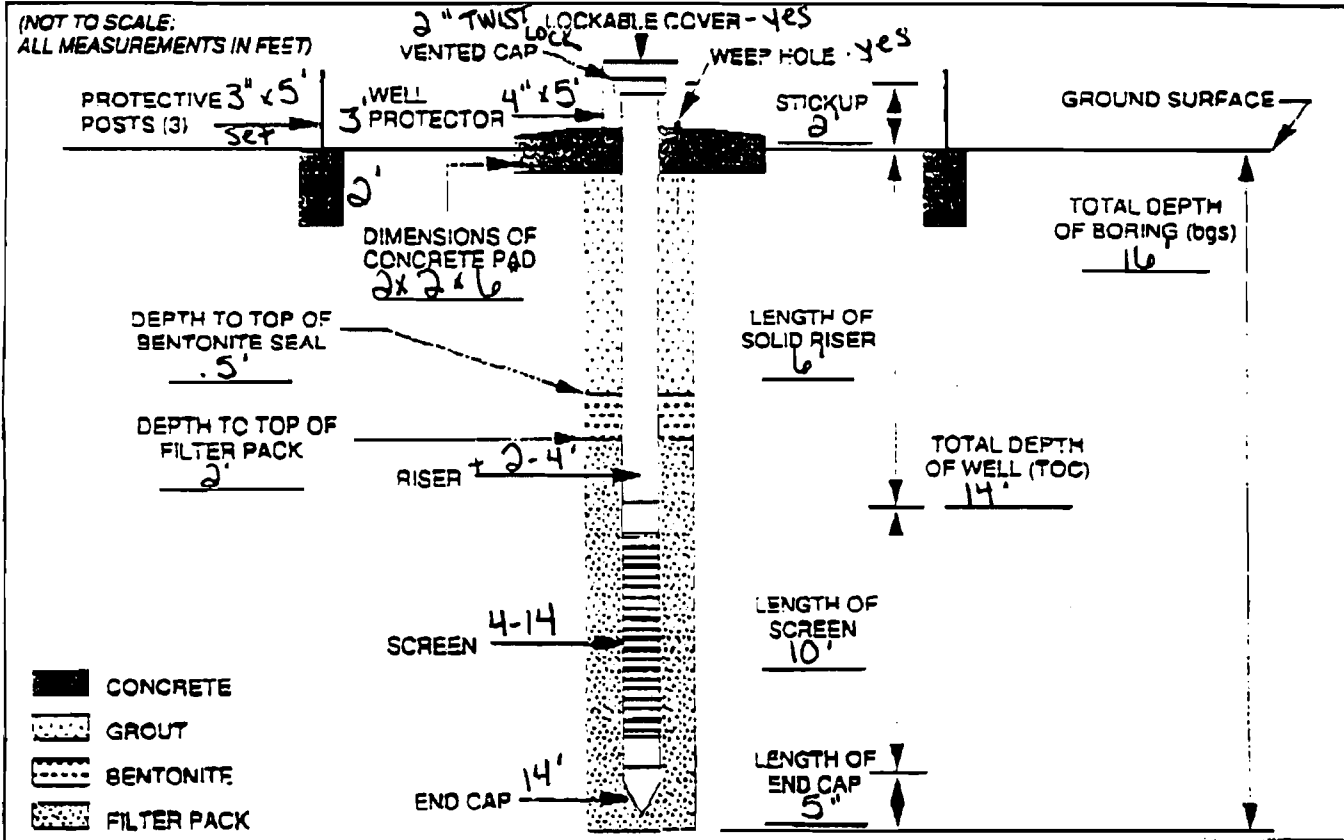
DRILLER: Indo Bradley INSPECTOR: T.M. Keller  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FIGURE B-2

**TYPE II MONITORING WELL INSTALLATION DIAGRAM**

PROJECT NAME Hunter Air Field PROJECT NO. 12001-9-0331  
 WELL NO. H.M.W-15 WELL LOCATION on site see map  
 DATE Wed 7-28-99 TIME 11PM-1PM

GROUND SURFACE ELEVATION \_\_\_\_\_ BENTONITE TYPE Pure Gold - med chips  
 TOP OF SCREEN ELEVATION \_\_\_\_\_ MANUFACTURER etco  
 REFERENCE POINT ELEVATION \_\_\_\_\_ CEMENT TYPE Sakrete  
 MANUFACTURER Southern Products + Silica  
 TYPE FILTER PACK #1 GRADATION 20/40 BOREHOLE DIAMETER 8"  
 FILTER PACK MANUFACTURER DSL LAW FIELD REPRESENTATIVE PAT KELLY  
 SCREEN MATERIAL SCH 40 P.V.C. DRILLING CONTRACTOR LAW Engineering  
 MANUFACTURER BOART LONGYEAR AMOUNT BENTONITE USED (SEAL) 1 Bag - 1.5'  
 AMOUNT BENTONITE USED (GROUT) \_\_\_\_\_  
 SCREEN DIAMETER 2" SLOT SIZE 0.10 AMOUNT CEMENT USED (GROUT) \* 3 - 80 lb. Bags  
 RISER MATERIAL SCH 40 P.V.C. AMOUNT SAND USED 8 - 50 lb. Bags  
 MANUFACTURER BOART LONGYEAR DRILLING TECHNIQUE Hollow Stem Auger  
 RISER DIAMETER 2" AUGER/RIT SIZE AND TYPE cm2 4 1/4" ID HD  
 STATIC WATER LEVEL (> 24 hrs. after dev.) \_\_\_\_\_  
 MEASURED ON (Date/Time) \_\_\_\_\_  
 REMARKS Wet Sand \* PAD to top bentonite seal using Sakrete



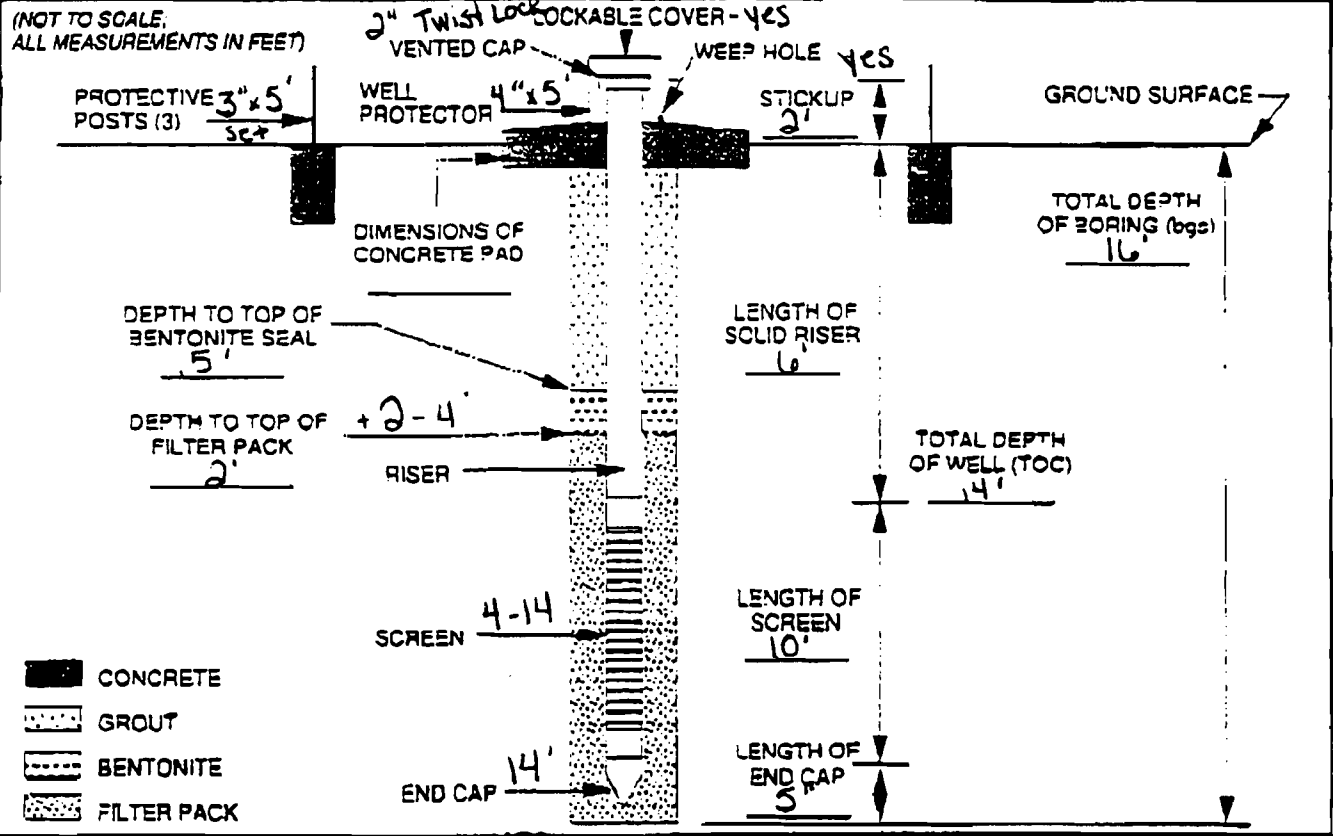
QA / QC DRILLER: Cody Presley INSPECTOR: \_\_\_\_\_  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FIGURE B-2

**TYPE II MONITORING WELL INSTALLATION DIAGRAM**

PROJECT NAME Hunter Air Field PROJECT NO. 12001-9-0331  
 WELL NO. H.M.W-16 WELL LOCATION on site see map  
 DATE 7-28-99 Wed TIME 1 PM - 3:30 PM

GROUND SURFACE ELEVATION \_\_\_\_\_ BENTONITE TYPE Pure Gold-med chips  
 MANUFACTURER Cetco  
 TOP OF SCREEN ELEVATION 4' From surface  
 CEMENT TYPE Sakrete  
 MANUFACTURER Southern Products+Silica  
 REFERENCE POINT ELEVATION \_\_\_\_\_  
 TYPE FILTER PACK #1 GRADATION 20/40 BOREHOLE DIAMETER 8"  
 FILTER PACK MANUFACTURER DSI  
 SCREEN MATERIAL Sch 40 P.V.C. LAW FIELD REPRESENTATIVE Pat Kelly  
 MANUFACTURER BOART LONGYEAR DRILLING CONTRACTOR LAW Engineering  
 SCREEN DIAMETER 2" SLOT SIZE 0.10 AMOUNT BENTONITE USED (SEAL) 1 Bag - 1.5'  
 AMOUNT BENTONITE USED (GROUT) \_\_\_\_\_  
 RISER MATERIAL SCH 40 P.V.C. AMOUNT CEMENT USED (GROUT) \* 3-80 lb bag  
 MANUFACTURER BOART LONGYEAR AMOUNT SAND USED 8-50lb Bags  
 RISER DIAMETER 2" STATIC WATER LEVEL (> 24 hrs. after dev.) \_\_\_\_\_  
 DRILLING TECHNIQUE Hollow Stem Auger MEASURED ON (Date/Time) \_\_\_\_\_  
 AUGER/BIT SIZE AND TYPE CME 4 1/4" ID HD  
 REMARKS Wet Sand \* pad to top of bentonite



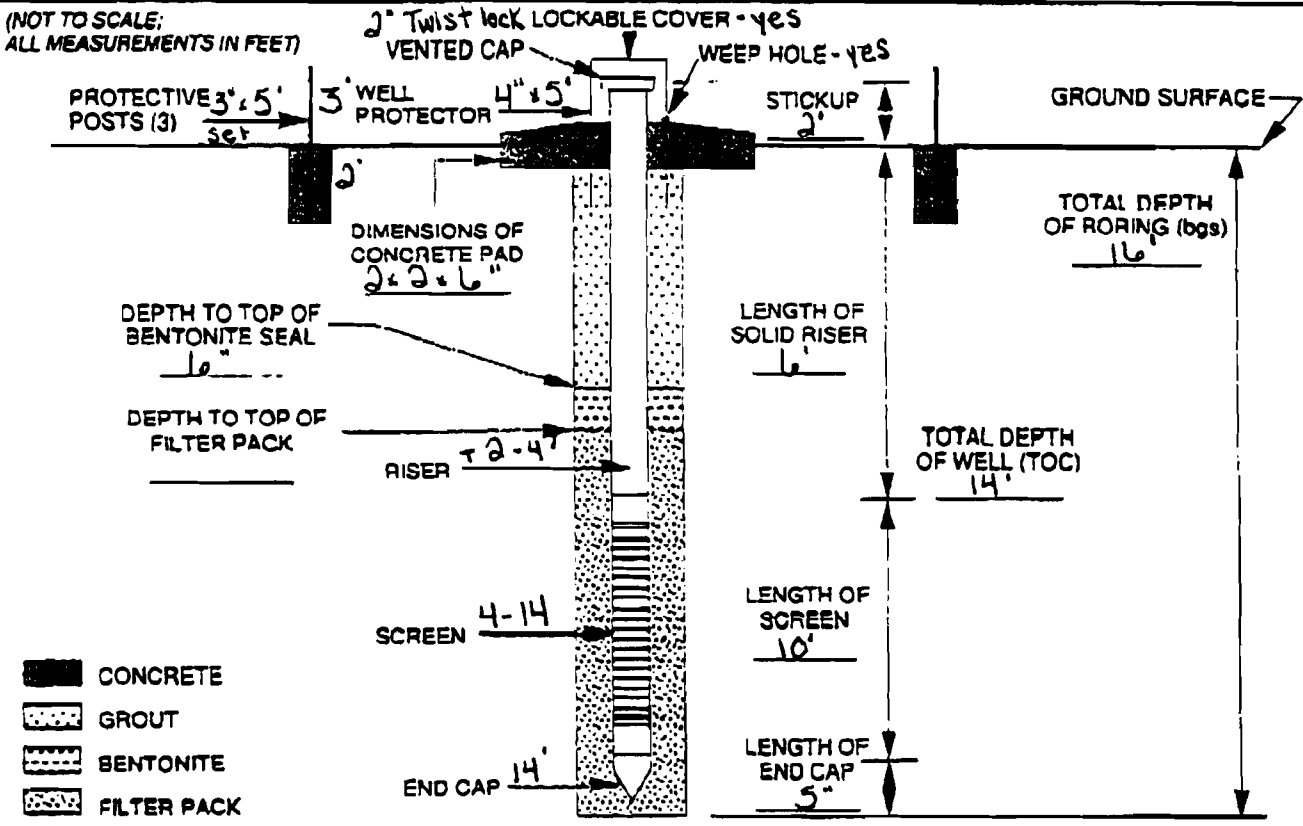
QA / QC | DRILLER: Cody Prestley | INSPECTOR: \_\_\_\_\_  
 DISCREPANCIES: \_\_\_\_\_ | CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FIGURE B-2

**TYPE II MONITORING WELL INSTALLATION DIAGRAM**

PROJECT NAME Hunter Air Field PROJECT NO. 12001-9-0331  
 WELL NO. H.M.W - 17 WELL LOCATION on site see map  
 DATE 7-29-99 TIME 8 AM - 10 AM

GROUND SURFACE ELEVATION \_\_\_\_\_ BENTONITE TYPE Pure Gold - med chips  
 TOP OF SCREEN ELEVATION \_\_\_\_\_ MANUFACTURER Cetco  
 REFERENCE POINT ELEVATION \_\_\_\_\_ CEMENT TYPE Sakrete  
 MANUFACTURER Southern Products + Silica  
 TYPE FILTER PACK #1 GRADATION 20/40 BOREHOLE DIAMETER 8"  
 FILTER PACK MANUFACTURER DST LAW  
 FIELD REPRESENTATIVE Pat Kelly  
 SCREEN MATERIAL SCH 40 P.V.C. DRILLING CONTRACTOR LAW Engineering  
 MANUFACTURER BOART LONGYEAR AMOUNT BENTONITE USED (SEAL) 1 Bag - 1.5'  
 AMOUNT BENTONITE USED (GROUT) \_\_\_\_\_  
 SCREEN DIAMETER 2" SLOT SIZE 0.10 AMOUNT CEMENT USED (GROUT) \* 3 - 80 lb. bags  
 RISER MATERIAL SCH 40 P.V.C. AMOUNT SAND USED 8 - 50 lb. Bags  
 MANUFACTURER BOART LONGYEAR DRILLING TECHNIQUE Hollow Stem Auger  
 AUGER/BIT SIZE AND TYPE CMF 4 1/4" ID HD STATIC WATER LEVEL (> 24 hrs. after dev.) \_\_\_\_\_  
 MEASURED ON (Date/Time) \_\_\_\_\_  
 REMARKS Wet Sand \* pad to top of bentonite seal using Sakrete



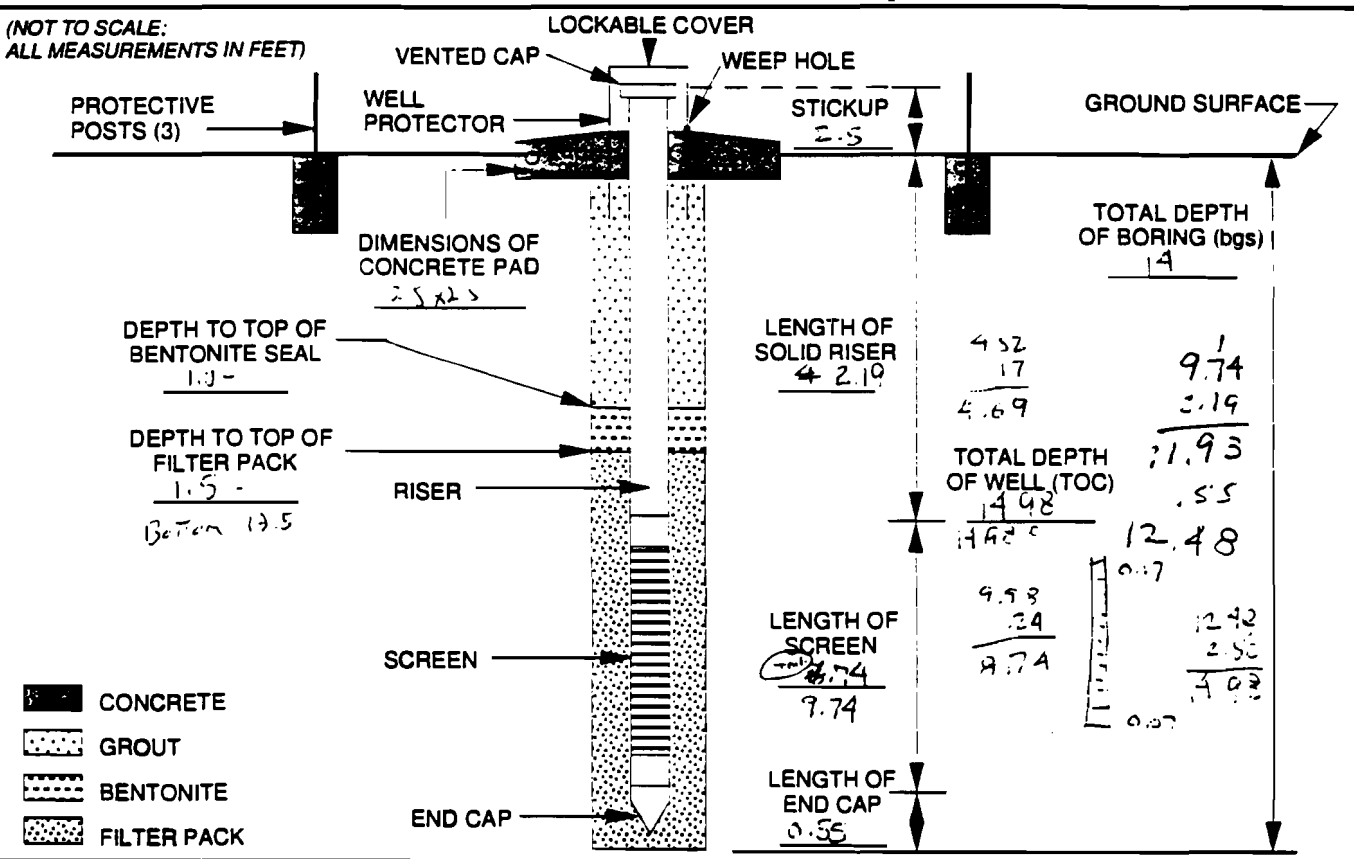
QA / QC DRILLER: Cody Presley INSPECTOR: \_\_\_\_\_  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



## TYPE II MONITORING WELL INSTALLATION DIAGRAM

PROJECT NAME HUNTER AAF PROJECT NO. 12001-9-3411  
 WELL NO. 41MW-18 WELL LOCATION 1st Fire Training Area  
 DATE 1-8-00 TIME 9:40

GROUND SURFACE ELEVATION _____	BENTONITE TYPE <u>3/2" CHBDS</u>
TOP OF SCREEN ELEVATION _____	MANUFACTURER <u>DOT SHREVE</u>
REFERENCE POINT ELEVATION _____	CEMENT TYPE <u>PORTLAND</u>
	MANUFACTURER _____
TYPE FILTER PACK <u>Silica Sand</u> GRADATION <u>30-65</u>	BOREHOLE DIAMETER <u>9 - 9.5</u>
FILTER PACK MANUFACTURER <u>STANDARD</u>	LAW
SCREEN MATERIAL <u>DVC</u>	FIELD REPRESENTATIVE <u>T.M. KELLER</u>
MANUFACTURER <u>U.S. FILTER</u>	DRILLING CONTRACTOR <u>LAW CHARLOTTE</u>
SCREEN DIAMETER <u>2"</u> SLOT SIZE <u>0.06</u>	AMOUNT BENTONITE USED (SEAL) <u>≈ 12 lbs</u>
RISER MATERIAL <u>PVC</u>	AMOUNT BENTONITE USED (GROUT) <u>≈ 3 lbs TANK</u>
MANUFACTURER <u>BURST TUBE TANK</u>	AMOUNT CEMENT USED (GROUT) <u>≈ 50 lbs (small)</u>
RISER DIAMETER <u>2"</u>	AMOUNT SAND USED <u>450 lbs</u>
DRILLING TECHNIQUE <u>HSA</u>	STATIC WATER LEVEL (> 24 hrs. after dev.) _____
AUGER/BIT SIZE AND TYPE <u>1 1/4" I.D. HSA</u>	MEASURED ON (Date/Time) _____
REMARKS _____	

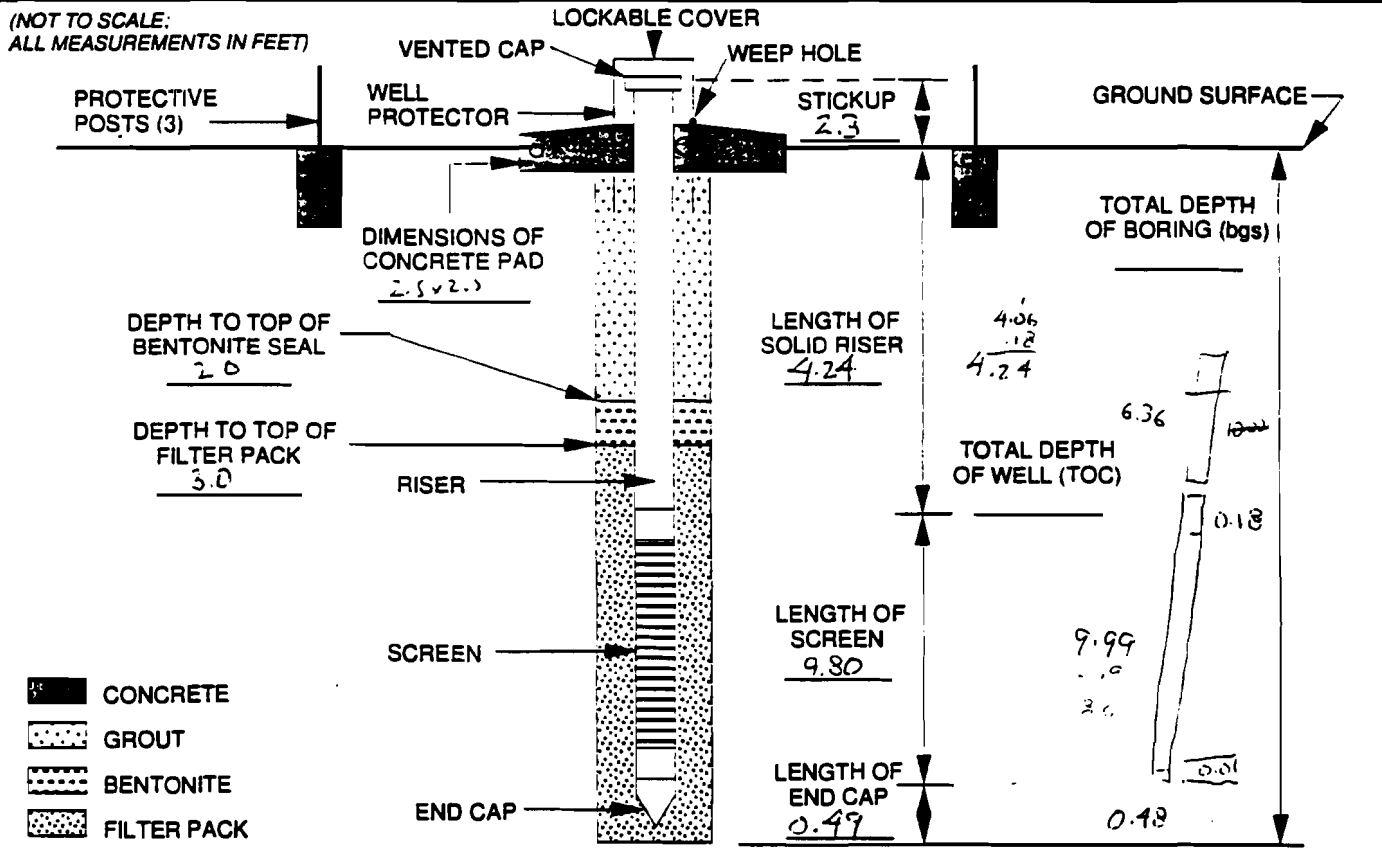


QA / QC    DRILLER: Carly Drexler    INSPECTOR: T.M. Keller  
 DISCREPANCIES: \_\_\_\_\_    CHECKED BY: \_\_\_\_\_    DATE: \_\_\_\_\_

## TYPE II MONITORING WELL INSTALLATION DIAGRAM

PROJECT NAME HUNTER AAF PROJECT NO. \_\_\_\_\_  
 WELL NO. 9B-32/P-38/HMW-19 WELL LOCATION \_\_\_\_\_  
 DATE 1-8-00 TIME \_\_\_\_\_

GROUND SURFACE ELEVATION _____	BENTONITE TYPE <u>3/8 CHIC SHUR-FULL</u>
TOP OF SCREEN ELEVATION _____	MANUFACTURER <u>DSI</u>
REFERENCE POINT ELEVATION _____	CEMENT TYPE _____
	MANUFACTURER _____
TYPE FILTER PACK <u>SOSILVERSEAL</u> GRADATION <u>30-65</u>	BOREHOLE DIAMETER <u>9.95</u>
FILTER PACK MANUFACTURER <u>STANDARD</u>	LAW _____
SCREEN MATERIAL <u>PVC</u>	FIELD REPRESENTATIVE <u>T.M. KUEHL</u>
MANUFACTURER <u>U.S. FILTER</u>	DRILLING CONTRACTOR <u>LAW</u>
SCREEN DIAMETER <u>2"</u> SLOT SIZE <u>0.06</u>	AMOUNT BENTONITE USED (SEAL) <u>25 lbs</u>
RISER MATERIAL <u>PVC</u>	AMOUNT BENTONITE USED (GROUT) <u>= 6 lbs (70%)</u>
MANUFACTURER <u>BRAET/LENGEAR</u>	AMOUNT CEMENT USED (GROUT) <u>= 180 lbs (70%)</u>
RISER DIAMETER <u>2"</u>	AMOUNT SAND USED <u>500 lbs</u>
DRILLING TECHNIQUE <u>HSA</u>	STATIC WATER LEVEL (> 24 hrs. after dev.) _____
AUGER/BIT SIZE AND TYPE _____	MEASURED ON (Date/Time) _____
REMARKS <u>ADDITIONAL = 20 GALS WATER DURING CONSTRUCTION</u>	

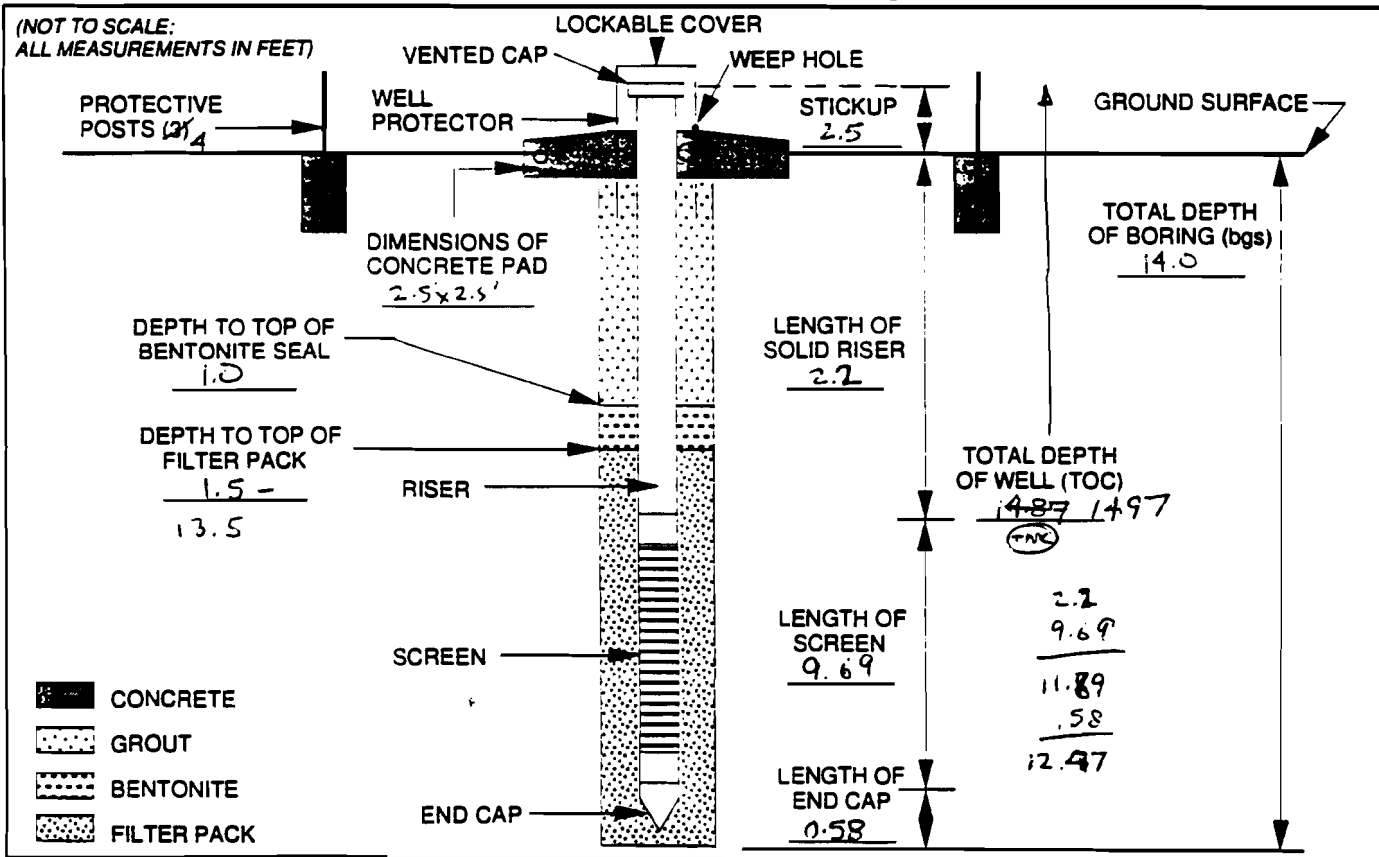


QA / QC DRILLER: Greg Frost INSPECTOR: T.M. Kuehl  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

## TYPE II MONITORING WELL INSTALLATION DIAGRAM

PROJECT NAME HUNTER AAF PROJECT NO. 12001-9-3411  
 WELL NO. HMW-20 WELL LOCATION FORMER FIRE TRAINING AREA  
 DATE 1-9-00 TIME 11:00

GROUND SURFACE ELEVATION _____	BENTONITE TYPE <u>3/8" CHIP SHU-DUG</u>
TOP OF SCREEN ELEVATION _____	MANUFACTURER <u>DSI</u>
REFERENCE POINT ELEVATION _____	CEMENT TYPE <u>PORTLAND</u>
	MANUFACTURER <u>COOSA</u>
TYPE FILTER PACK <u>Silica Sand</u> GRADATION <u>30-65</u>	BOREHOLE DIAMETER <u>9.5</u>
FILTER PACK MANUFACTURER <u>STANDARD</u>	LAW
SCREEN MATERIAL <u>PVC</u>	FIELD REPRESENTATIVE <u>T.M. KELLER</u>
MANUFACTURER <u>U.S. FILTER</u>	DRILLING CONTRACTOR <u>LAUREL CHARDLETE</u>
SCREEN DIAMETER <u>2"</u> SLOT SIZE <u>0.06</u>	AMOUNT BENTONITE USED (SEAL) <u>12 FT</u>
RISER MATERIAL <u>PVC</u>	AMOUNT BENTONITE USED (GROUT) <u>≈ 2-3 lbs</u>
MANUFACTURER <u>BOART/LONGYEAR</u>	AMOUNT CEMENT USED (GROUT) <u>≈ 50</u>
RISER DIAMETER <u>2"</u>	AMOUNT SAND USED <u>500 lbs</u>
DRILLING TECHNIQUE <u>HSA</u>	STATIC WATER LEVEL (> 24 hrs. after dev.) _____
AUGER/BIT SIZE AND TYPE <u>6.25"</u>	MEASURED ON (Date/Time) _____
REMARKS <u>USED 15 GALS WATER DURING CONSTRUCTION</u>	



QA / QC DRILLER: COO: PRESLEY INSPECTOR: T.M. KELLER  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

ATTACHMENT 5.1

HTW DRILLING LOG

HOLE No. SB-43A

1. COMPANY NAME <b>LAW</b>		2. DRILLING SUBCONTRACTOR <b>LAW ENG &amp; ENV.</b>		SHEET OF 1 SHEETS 1	
PROJECT <b>HUNTER AAF</b>		4. LOCATION (CITY, STATE) <b>SAVANNAH GA</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
5. NAME OF DRILLER <b>JOHN MARTIN &amp; GREG ORZECZKOWSKI</b>		9. HOLE LOCATION (SITE) <b>FIA</b>		10. SURFACE ELEVATION	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3" - I.D. SS-HAND AUGER SI-BOWL, SI-SPOON</b>		11. DATE STARTED <b>11-5-01</b>		12. DATE COMPLETED <b>11-5-01</b>	
8. WEATHER <b>CLEAR, 60°F</b>		13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>2 Ft bgs</b>		19. GEOTECHNICAL SAMPLES (#) <b>NO</b>		20. TOTAL NUMBER OF CORE BOXES <b>—</b>	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC		METALS	
		<input checked="" type="checkbox"/>		<input type="checkbox"/>	
23. DISPOSITION OF HOLE		BACKFILLED		MONITORING WELL	
		<input checked="" type="checkbox"/>		<input type="checkbox"/>	
25. CHECKED BY:		24. SIGNATURE OF INSPECTOR <i>[Signature]</i>			
		26. NAME OF INSPECTOR <b>John D. Martin</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. i	BLOW COUNTS g	REMARKS h
1.0		VERY DARK GREYISH BROWN, FINE SAND, WITH HIGH O.M. CONTENT, 2.54 3/2 (SP)			SB-43A(0-2)	Vols	
2.0		GRAY FINE SAND, 2.54 3/2 (SP)					
		BT					
3.0							
4.0							

# HTW DRILLING LOG

HOLE No. **SB-43**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Betts Environmental</b>			SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Jason Allwood</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>Ardeo Model L 4x4 (ATV)</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		6 1/4" HSA		9. HOLE LOCATION (SITE) <b>FTA</b>		
		2-inch SS sampler		10. SURFACE ELEVATION		
8. WEATHER <b>Clear, &lt;70°F</b>			11. DATE STARTED <b>11/1/01</b>		12. DATE COMPLETED <b>11/1/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>5 ft. bgs</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED			
15. TOTAL DEPTH OF HOLE <b>14 ft. bgs</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED -	UNDISTURBED -	20. TOTAL NUMBER OF CORE BOXES -		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
		<b>X</b>	<b>Chromium</b>	<b>SVOCs</b>	-	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
		-	<b>X</b>	-		
25. CHECKED BY:			26. NAME OF INSPECTOR <b>John Martin</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Very dark grayish-brown, fine SAND, with high organic matter content (SP) (2.5Y 3/2)	0.0		SB-43(0-2)	1-3-4-6	
-2.0	2.0	Gray, fine SAND from 2.0'-3.75' (SP) (2.5Y 5/1)					
	3.0		0.0		SB-43(2-4)	3-4-9-9	
-3.7		Very dark grayish-brown, fine SAND with SILT (SP-SM) (2.5Y 3/2)					
-4.0	4.0	Light gray, fine SAND with SILT (SP-SM) (2.5Y 7/2)					
			0.0				
						12-14-10-10	

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# HTW DRILLING LOG

341

HOLE No.

**SB-43**

PROJECT

**Hunter AAF**

INSPECTOR

**John Martin**

SHEET **2**

OF **2** SHEETS

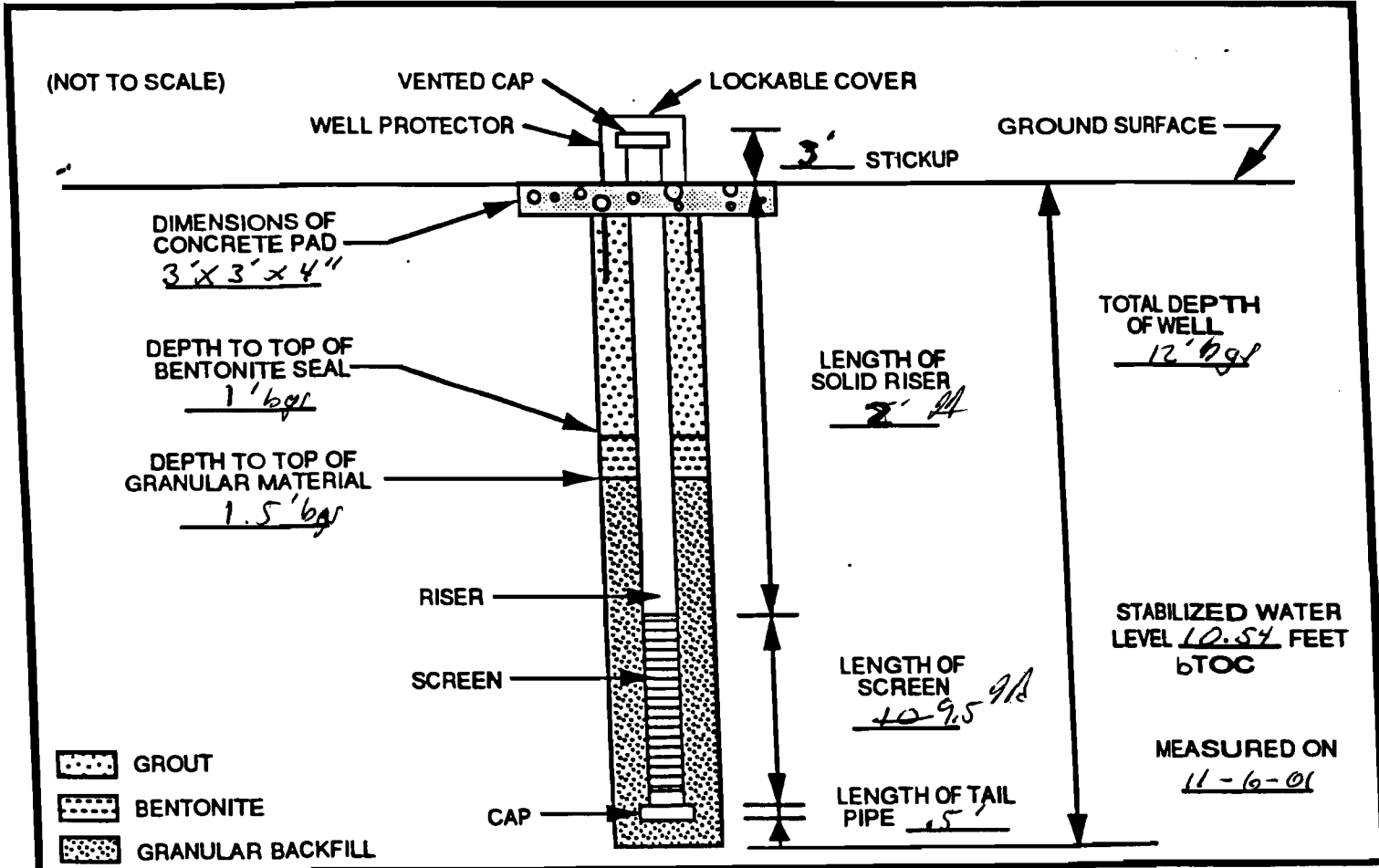
ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-5.0		Saturated at 5' bgs	0.0			12-14-10-10	
-6.0	6.0	Light gray fine silty SAND with some CLAY, wet (SP-SM) (2.5Y 5/1)					
	7.0		0.0			5-6-6-7	
	8.0						
	9.0		0.0			7-12-12-10	
	10.0						
	11.0		0.0			6-7-8-5	
	12.0	End of Sampling. Overdrilled to 14' bgs and set well at 12' bgs					
	13.0						

A:\SB-43.PL3 TLC-1 11-26-01

# TYPE II MONITORING WELL INSTALLATION DIAGRAM

JOB NAME HUNTER AAF  
 WELL NO. HMW-21 JOB NO. 12000-9-3411  
 DATE 11-1-01 TIME 10:30  
 WELL LOCATION HMW 57-43

GROUND SURFACE ELEVATION <u>19.38 FT AMSL</u>	BENTONITE TYPE <u>3/8" PELLETS VORLAY/PONEGO</u>
TOP OF SCREEN ELEVATION <u>17.38 FT AMSL</u>	MANUFACTURER <u>CETCO</u>
REFERENCE POINT ELEVATION <u>TOC = 22.28 FT AMSL</u>	CEMENT TYPE <u>TYPE 1 PORTLAND CEMENT</u>
TYPE SAND PACK <u>QTZ SAND</u> GRADATION <u>30/65</u>	MANUFACTURER <u>FLORIDA ROCK</u>
SAND PACK MANUFACTURER <u>STANDARD SANDS &amp; SILICA CO.</u>	BOREHOLE DIAMETER <u>~ 12-INCHES</u>
SCREEN MATERIAL <u>2"-PVC</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>.006</u>
MANUFACTURER <u>DIEDRICK DRILLING CORPORATION</u>	LAW ENVIRONMENTAL, INC. FIELD REPRESENTATIVE <u>JOHN MARTIN</u>
RISER MATERIAL <u>2"-PVC</u>	DRILLING CONTRACTOR <u>BETTS ENVIRONMENTAL</u>
MANUFACTURER <u>BOART LONGVEAR</u>	AMOUNT BENTONITE USED <u>1/2-5 gal PALC</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT CEMENT USED <u>1-9416 bag / 4-8016 bag F&amp;P</u>
DRILLING TECHNIQUE <u>HOLLOW STEM AUGER</u>	AMOUNT SAND USED <u>11-5016 bags</u>
AUGER SIZE AND TYPE <u>6 1/4" I.D. / HSA</u>	STATIC WATER DEPTH (after dev.) <u>10.54 FT b TOC</u>



QA / QC      INSTALLED BY: BETTS ENVIRONMENTAL      INSTALLATION OBSERVED BY: JOHN MARTIN  
 DISCREPANCIES: \_\_\_\_\_      CHECKED BY: \_\_\_\_\_      DATE: \_\_\_\_\_

343

# HTW DRILLING LOG

HOLE No. **SB-44**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Betts Environmental</b>		SHEET <b>1</b> OF <b>2</b> SHEETS		
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>Jason Allwood</b>			6. MANUFACTURER'S DESIGNATION OF DRILL			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		4 1/4" I.D. HSA		9. HOLE LOCATION (SITE) <b>FTA</b>		
		2-inch SS sampler				
8. WEATHER <b>Clear, &lt; 60s°F</b>		11. DATE STARTED <b>11/1/01</b>		12. DATE COMPLETED <b>11/1/01</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED			
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>			
15. TOTAL DEPTH OF HOLE			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
		<b>X</b>	<b>Chromium</b>	<b>SVOCs</b>	-	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR <b>John D. Martin</b>	
		-	-	<b>Grouted</b>		
25. CHECKED BY:				26. NAME OF INSPECTOR		

A:SB-44,PL3 TLC-1 11-

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Dark grayish-brown, fine SAND (SP) (2.5Y 4/2)					
-0.6		Olive yellow, fine SAND (SP) (2.5Y 6/6)	0.0				
	1.0					9-10-17-20	
-2.0	2.0	Very dark gray, fine SAND (SP) (2.5Y 3/1)	0.0		SB-44(2-4) SB-44(2-4)DUP VOCs SVOCs Chromium		
	3.0					10-13-16-18	
-3.5		Gray, fine SAND (SP) (2.5Y 6/1)					
	4.0	No recovery (4'-6')				50/3	



# HTW DRILLING LOG

HOLE No.

**SB-44**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

SHEET **2**

OF **2** SHEETS

A:\SB-44.PL3 TLC--1 11-26-01

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-6.0	6.0	Light olive brown, fine SAND (SP) (2.5Y 5/3)			SB-44(6-8) VOCs SVOCs Chromium		75% recovery
	7.0					21-25-23-6	
-8.0	8.0	Rotten wood, no soil, but saturated at 9.5'					
	9.0			-		2-3-4-1	50% recovery
-10.0	10.0	Boring terminated at 10.0 feet					
	11.0						
	12.0						
	13.0						

345

# HTW DRILLING LOG

HOLE No. **SB-45**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		3-inch I.D. SS Hand Auger		9. HOLE LOCATION (SITE) <b>FTA</b>	
		SS-Bowl, SS-Spoon			
8. WEATHER <b>Clear, 60s°F</b>			11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>		
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	-	<b>SVOCs</b>	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
		<b>X</b>	-	-	
25. CHECKED BY:			26. NAME OF INSPECTOR <b>John D. Martin</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Fine SAND (with 0.5') dark grayish brown, with organic matter (SP) (2.5Y 4/2)			SB-45(0-2) SVOCs		
-0.8	1.0	Pale yellow fine SAND (SP) (2.5Y 7/4)					
-1.5		Fine SAND (SP) (2.5YR 7/2)					
-2.0	2.0	Boring terminated at 2.0 feet					
	3.0						
	4.0						

A:SB-45-PL3 TLC-1 11-2

# HTW DRILLING LOG

HOLE No. **SB-46**  
 SHEET **1**  
 OF **3** SHEETS

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Betts Environmental</b>			HOLE No. <b>SB-46</b>		
3. PROJECT <b>Hunter AAF</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>					
5. NAME OF DRILLER <b>Jason Allwood</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>Ardco Model L 4x4 (ATV)</b>					
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	6 1/4" HSA		9. HOLE LOCATION (SITE) <b>FTA</b>				
	2-inch SS samplers						
8. WEATHER <b>Clear, windy, &lt;70°F</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>			
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>14 ft. bgs</b>					
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>-</b>					
15. TOTAL DEPTH OF HOLE <b>23 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>-</b>					
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>-</b>			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY % <b>-</b>
		<b>X</b>	<b>Chromium</b>	<b>SVOCs</b>	<b>-</b>	<b>-</b>	
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
		<b>-</b>	<b>X</b>	<b>-</b>			
25. CHECKED BY:				26. NAME OF INSPECTOR <b>John D. Martin</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-0.5		Very dark grayish-brown fine SAND, with organic matter, some SILT (SP) (10YR 4/2)	0.0				
-1.0	1.0	Brownish yellow fine SAND (SP) (10YR 6/6)				6-14-14-15	
-2.0	2.0	Brownish yellow fine SAND (SP) (10YR 6/6)					
		Dark brown 2'-2.5', fine SAND, (SP) (10YR 4/2, 10YR 7/3 (2.5-3'), 2.5Y 6/1 (3'-3.5), 2.5Y 7/3 (3.5'-4'))	0.0				
	3.0					14-13-12-7	
-4.0	4.0	Pale yellow, mottled yellow and beige fine SAND (SP) (2.5Y 7/3)	0.0		SB-46(4-6)		VOCs, SVOCs, chromium

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347

# HTW DRILLING LOG

HOLE No.

**SB-46**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

SHEET **2**

OF **3** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
						2-3-5-5	
-6.0	6.0	Pale yellow, fine SAND (SP) (2.5Y 8/2)					
	7.0		0.0			14-10-9-8	
		7.5-8' moist					
-8.0	8.0	Pale yellow, fine-medium SAND, pale yellow (SP) (2.5Y 7/2)					
-8.5			0.0				
	9.0	White CLAY, with red (ferric) staining, hand stiff CLAY (CL) (2.5Y 8/1)				14-15-17-10	
-10.0	10.0	White CLAY					
-11.0	11.0	Clayey SAND (SC) (2.5 Y 7/1)	0.0			7-8-12-14	
-12.0	12.0	Fine to medium white SAND (SP) (2.5Y 8/1)			SB-46(12-14)		VOCs, SVOCs, chromium
	13.0		0.0			7-8-10-13	
		Saturated, very moist					

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# HTW DRILLING LOG

HOLE No.

**SB-46**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

 SHEET **3**

 OF **3** SHEETS

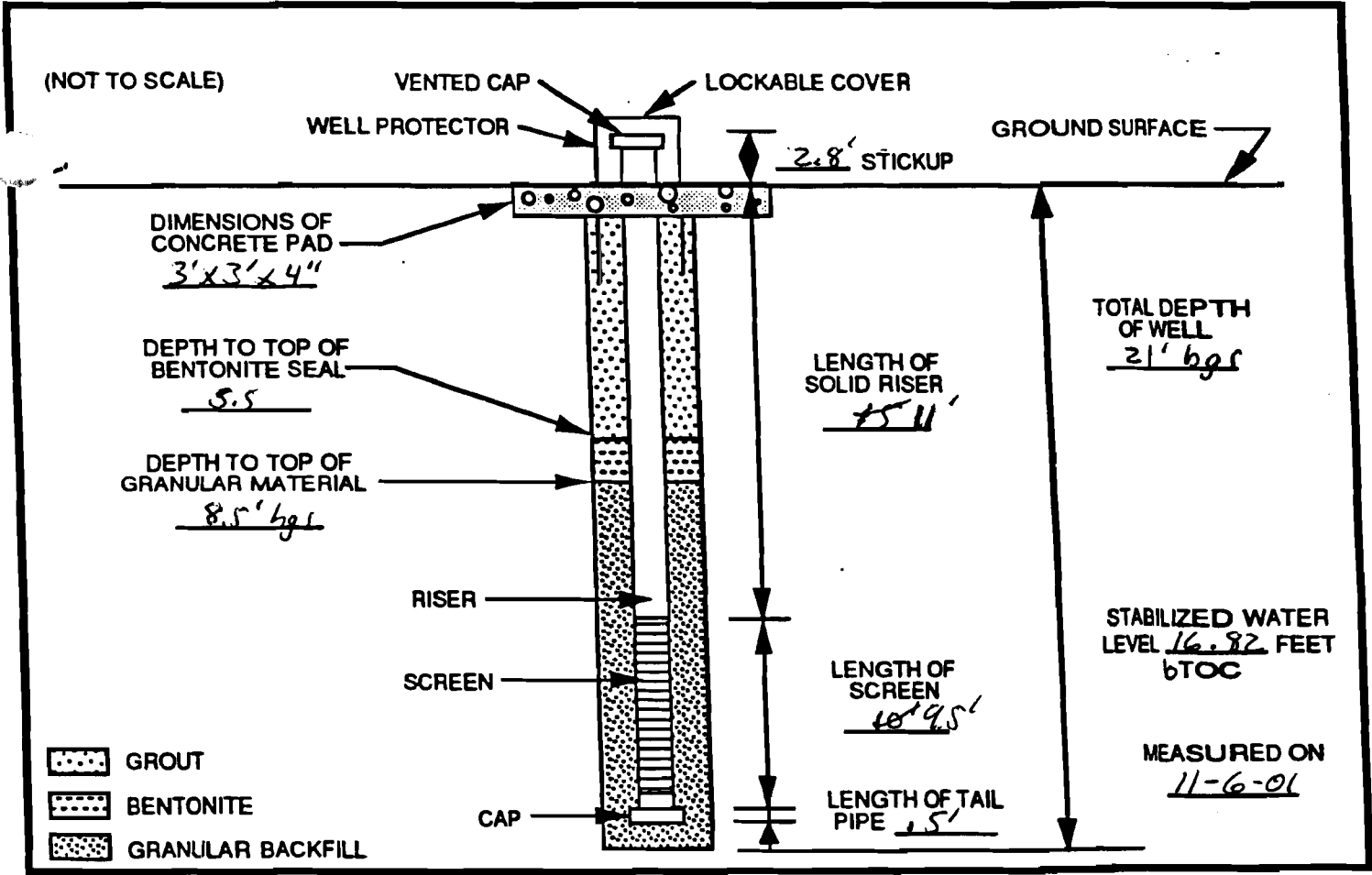
ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Fine to medium white SAND (SP) (2.5Y 8/1)					
	15.0					6-6-11-11	
	16.0						
	17.0					7-8-12-14	
-18.0	18.0	Light brownish gray medium SAND (SP) (2.5Y 6/2)					
-19.0	19.0	Dark brown medium SAND (SP) (2.5Y 4/4)				4-5-7-9	
-20.0	20.0	Light olive brown medium SAND (SP) (2.5Y 5/4)					
-21.0	21.0	Dark brown medium SAND (SP) (2.5Y 4/4)				3-4-5-9	
	22.0						
-22.9		Boring terminated at 23.0 feet					

A:\SB-46.PL3 TLC-1 11-26-01

# TYPE II MONITORING WELL INSTALLATION DIAGRAM

JOB NAME HUNTER AAF  
 WELL NO. HMW 22 JOB NO. 12001-9-3411  
 DATE 11-1-01 TIME 7:35 AM  
 WELL LOCATION SB-46

GROUND SURFACE ELEVATION 35.45 ft AMSL BENTONITE TYPE 3/8" PELLEZI VOLCLAY / POLYGLA  
 TOP OF SCREEN ELEVATION 24.45 ft AMSL MANUFACTURER CETCO  
 REFERENCE POINT ELEVATION TOC = 38.19 ft AMSL CEMENT TYPE TYPE I PORTLAND CEMENT  
 MANUFACTURER FLORIDA ROCK  
 TYPE SAND PACK QTB SAND GRADATION 30/65 BOREHOLE DIAMETER ~ 12-INCHES  
 SAND PACK MANUFACTURER STANDARD SAND F SCREEN DIAMETER 2-INCH SLOT SIZE .006  
 SILICA CO. LAW ENVIRONMENTAL, INC.  
 SCREEN MATERIAL PVC-2" FIELD REPRESENTATIVE JOHN MARTIN  
 MANUFACTURER BOALT WILLYEAR DRILLING CONTRACTOR BETT'S ENVIRONMENTAL  
 RISER MATERIAL PVC-2" AMOUNT BENTONITE USED 2-5 gal BUCKETS  
 MANUFACTURER DUNLOP DILLON CORP. AMOUNT CEMENT USED 2-94 lb bags / 4-80 lb bags  
 RISER DIAMETER 2-INCH AMOUNT SAND USED 10-50-lb bags  
 DRILLING TECHNIQUE HOLLOW STEEL AUGER STATIC WATER DEPTH (after dev.) 16.82 ft bTOC  
 AUGER SIZE AND TYPE 6 1/4" I.D. / HSA



QA / QC INSTALLED BY: BETT'S ENVIRONMENTAL INSTALLATION OBSERVED BY: JOHN MARTIN  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

# HTW DRILLING LOG

HOLE No. **SB-47**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SS 3" ID Hand Auger Bucket</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		3" ID SS Hand Auger		9. HOLE LOCATION (SITE) <b>FTA</b>	
		SS Bowl & Spoons			
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>		
15. TOTAL DEPTH OF HOLE <b>4 ft. bgs</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	<b>Barium</b>	-	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
		<b>X</b>	-	-	<b>John D. Martin</b>
25. CHECKED BY:			26. NAME OF INSPECTOR		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Very dark gray fine SAND with organic matter, and lots of pebble/gravel sized pieces of black "tar sand rocks" (SP) (10YR 3/1)					
-2.0	2.0	Dark brown fine SAND with some "tar sand rocks" (SP) (10YR 4/3)			SB-47(2-4) Barium		
-3.0	3.0	Black fine SAND (SP) (10YR 2/1)					
-4.0	4.0	Boring terminated at 4.0 feet					

A:\SB-47 PL3 TLC-1 11-26-01

D-151

351

# HTW DRILLING LOG

HOLE No. **SB-48**  
 SHEET **1**  
 OF **1** SHEETS

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>	
3. PROJECT <b>Hunter AAF</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>	
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	SS Bowl and Spoon		9. HOLE LOCATION (SITE) <b>FTA</b>
			10. SURFACE ELEVATION
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>	12. DATE COMPLETED <b>10/31/01</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>5 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)
		<b>Chromium</b>	
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)
	<b>X</b>		
25. CHECKED BY:		26. NAME OF INSPECTOR <b>John D. Martin</b>	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	-0.5	Black fine SAND with organic matter, 0-6" (SP) (2.5YR 2.5/1)					
	1.0	Very dark, same as above without organic matter, gray 0-2" (SP) (2.5YR 3/1)					
	-2.0	Dark brown, medium-fine SAND (SP) (10YR 4/3)			SB-48(2-5)		Chromium 2'-5'
	3.0						
	-3.5	Yellowish brown, medium-fine SAND (SP) (3.5'-4.0') (10YR 5/6)					
	-4.0	Light Yellow-brown, medium-fine SAND (SP) (10YR 6/4)					
	-4.8	Boring terminated at 5.0 feet					

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# HTW DRILLING LOG

HOLE No. **SB-49**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		HOLE No. <b>SB-49</b>	
3. PROJECT <b>Hunter AAF</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	SS Bowl and Spoon		9. HOLE LOCATION (SITE) <b>FTA</b>		
			10. SURFACE ELEVATION		
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>			
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>			
19. GEOTECHNICAL SAMPLES (#)	DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES		
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
	-	-	<b>SVOCs</b>	-	-
23. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
	<b>X</b>	-	-		
25. CHECKED BY:			26. NAME OF INSPECTOR <b>John D. Martin</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Light olive brown, fine SAND with organic matter (SP) (2.5Y 5/4)					
-0.5		Light yellowish brown, fine SAND (SP) (2.5Y 6/4)					
-1.0	1.0	Gray fine SAND (SP) (2.5Y 5/1)			SB-49(0-2)		SVOCs
-1.5		Olive yellow fine SAND (SP) (2.5Y 6/6)					
-2.0	2.0	Boring terminated at 2.0 feet					
	3.0						
	4.0						

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# HTW DRILLING LOG

HOLE No. **SB-50**

353

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>SS Bowl and Spoon</b>		9. HOLE LOCATION (SITE) <b>FTA</b>			
		10. SURFACE ELEVATION			
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>			
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	-	<b>SVOCs</b>	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
		<b>X</b>	-	-	
25. CHECKED BY:			26. NAME OF INSPECTOR <b>John D. Martin</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Light brownish/gray, very fine to fine, well sorted SAND with SILT with grass roots and some organic matter (SP) (2.5Y 5/3)			SB-50(0-2)		SVOCs
-1.5	2.0	Very dark gray, very fine to fine well sorted SAND with SILT (SP) (2.5Y 3/1)					
-2.0		Boring terminated at 2.0 feet					
	3.0						
	4.0						

A:\SB-50.PL3 TLC-1 11-3

*D-154*

ATTACHMENT 5.1

HTW DRILLING LOG

HOLE No. SB-43A  
SHEET OF 1 SHEETS 1

1. COMPANY NAME <b>LAW</b>		2. DRILLING SUBCONTRACTOR <b>LAW ENG &amp; ENV.</b>	
PROJECT <b>HUNTER AAF</b>		4. LOCATION (CITY, STATE) <b>SAVANNAH, GA</b>	
5. NAME OF DRILLER <b>JOHN MARTIN &amp; GREG ORZECHOWSKI</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3" - I.D. SS-HAND AUGER SS-BOWL, SS-SPOON</b>		9. HOLE LOCATION (SITE) <b>ETA</b>	
8. WEATHER <b>CLEAR, 60°F</b>		11. DATE STARTED <b>11-5-01</b>	12. DATE COMPLETED <b>11-5-01</b>
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>2 FT bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>	
19. GEOTECHNICAL SAMPLES (#) <b>NO</b>	DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>-</b>
21. SAMPLES FOR CHEMICAL ANALYSIS	VOC <b>X</b>	METALS <b>-</b>	OTHER (SPECIFY) <b>-</b>
23. DISPOSITION OF HOLE	BACKFILLED <b>X</b>	MONITORING WELL <b>-</b>	OTHER (SPECIFY) <b>-</b>
25. CHECKED BY:		26. NAME OF INSPECTOR <b>John D. Martin</b>	

LEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (ppm) d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	VERY DARK GRAY/HT BROWN, FINE SAND, WITH HIGH O.M. CONTENT, 2.54 3/2 (SP)			SB-43A(0-2)	VOCs	
	2.0	GRAY, FINE SAND, 2.54 3/2 (SP)					
		BT					
	3.0						
	4.0						

# HTW DRILLING LOG

 HOLE No. **SB-43**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Betts Environmental</b>		SHEET <b>1</b> OF <b>2</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>Jason Allwood</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>Ardeo Model L 4x4 (ATV)</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		6 1/4" HSA		9. HOLE LOCATION (SITE) <b>FTA</b>	
		2-inch SS sampler			
8. WEATHER <b>Clear, &lt;70°F</b>		11. DATE STARTED <b>11/1/01</b>		12. DATE COMPLETED <b>11/1/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>5 ft. bgs</b>		
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED		
15. TOTAL DEPTH OF HOLE <b>14 ft. bgs</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)		
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		<b>X</b>	<b>Chromium</b>	<b>SVOCs</b>	
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
			<b>X</b>		<b>-</b>
25. CHECKED BY:			26. NAME OF INSPECTOR <b>John Martin</b>		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Very dark grayish-brown, fine SAND, with high organic matter content (SP) (2.5Y 3/2)	0.0		SB-43(0-2)	1-3-4-6	
-2.0	2.0	Gray, fine SAND from 2.0'-3.75' (SP) (2.5Y 5/1)					
	3.0		0.0		SB-43(2-4)	3-4-9-9	
-3.7		Very dark grayish-brown, fine SAND with SILT (SP-SM) (2.5Y 3/2)					
-4.0	4.0	Light gray, fine SAND with SILT (SP-SM) (2.5Y 7/2)					
			0.0			12-14-10-10	

A:\SB-43.PL3 TLC-1 11-26-01

# HTW DRILLING LOG

356

HOLE No. **SB-43**

PROJECT **Hunter AAF**

INSPECTOR **John Martin**

SHEET **2**  
OF **2** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-5.0		Saturated at 5' bgs	0.0			12-14-10-10	
-6.0	6.0	Light gray fine silty SAND with some CLAY, wet (SP-SM) (2.5Y 5/1)					
	7.0		0.0			5-6-6-7	
	8.0						
	9.0		0.0			7-12-12-10	
	10.0						
	11.0		0.0			6-7-8-5	
	12.0	End of Sampling. Overdrilled to 14' bgs and set well at 12' bgs					
	13.0						

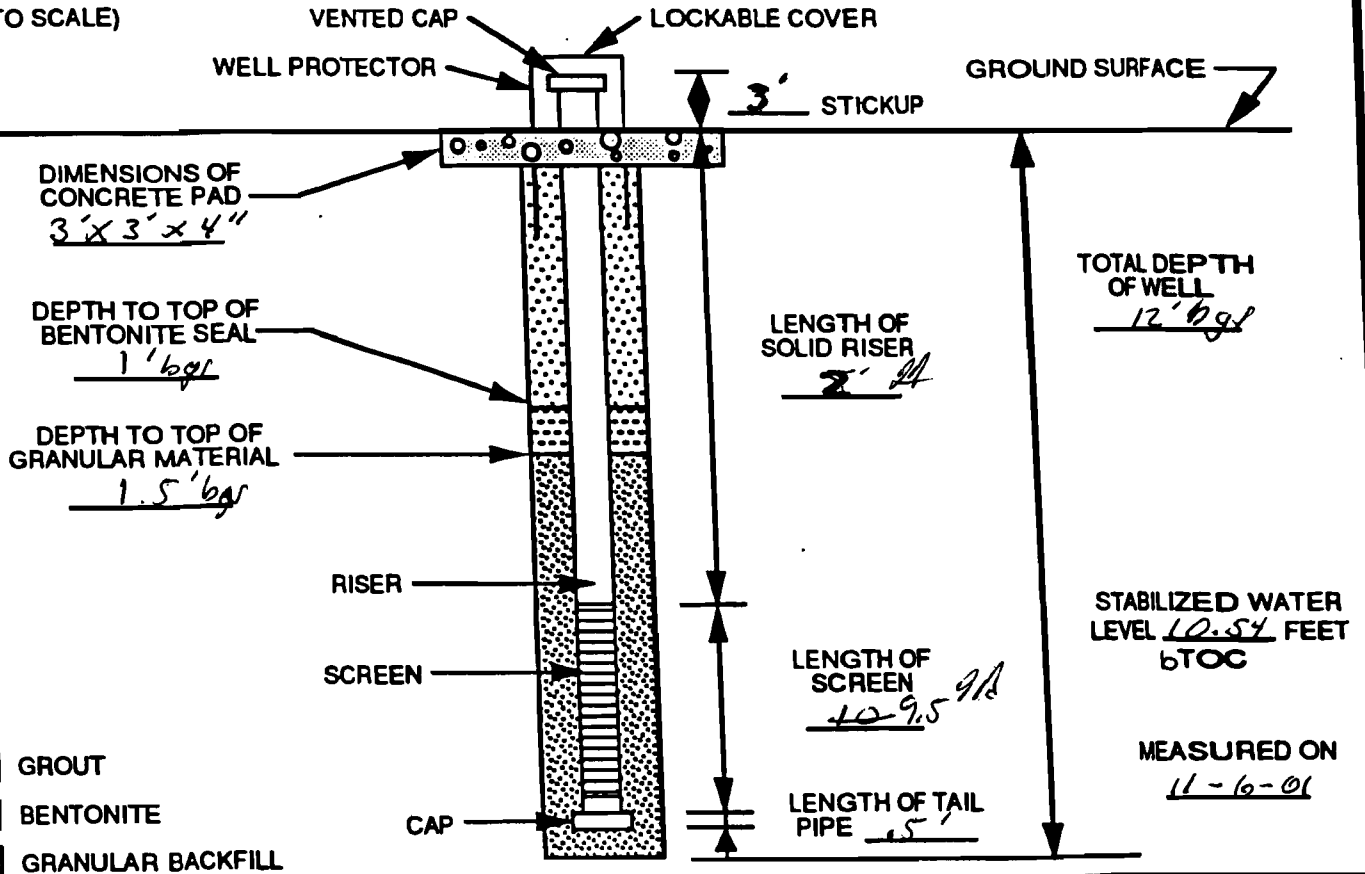
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# TYPE II MONITORING WELL INSTALLATION DIAGRAM

JOB NAME HUNTER AAF  
 WELL NO. HMW-21 JOB NO. 12000-9-3411  
 DATE 11-1-01 TIME 10:30  
 WELL LOCATION HMW 57-43

GROUND SURFACE ELEVATION <u>19.38 FT AMSL</u>	BENTONITE TYPE <u>3/8" PELLETS VORLAY/PORUGO</u>
TOP OF SCREEN ELEVATION <u>17.38 FT AMSL</u>	MANUFACTURER <u>CETCO</u>
REFERENCE POINT ELEVATION <u>TOC = 22.28 FT AMSL</u>	CEMENT TYPE <u>TYPE 1 PORTLAND CEMENT</u>
TYPE SAND PACK <u>QTE SAND</u> GRADATION <u>30/65</u>	MANUFACTURER <u>FLORIDA ROCK</u>
SAND PACK MANUFACTURER <u>STANDARD SAND &amp; SILICA CO.</u>	BOREHOLE DIAMETER <u>~ 12-INCHES</u>
SCREEN MATERIAL <u>2"-PVC</u>	SCREEN DIAMETER <u>2-INCH</u> SLOT SIZE <u>.006</u>
MANUFACTURER <u>DIEDRICK DRILLING CORPORATION</u>	LAW ENVIRONMENTAL, INC.
RISER MATERIAL <u>2"-PVC</u>	FIELD REPRESENTATIVE <u>TOM MARRIN</u>
MANUFACTURER <u>BOART LONGYEAR</u>	DRILLING CONTRACTOR <u>BETTS ENVIRONMENTAL</u>
RISER DIAMETER <u>2-INCH</u>	AMOUNT BENTONITE USED <u>1/2-5 GAL PALLET</u>
DRILLING TECHNIQUE <u>HOLLOW STEM AUGER</u>	AMOUNT CEMENT USED <u>1-9416 629 / 4-8016 629 Fed Pac</u>
AUGER SIZE AND TYPE <u>6 1/4" I.D. / HSA</u>	AMOUNT SAND USED <u>11-5016 629 S</u>
	STATIC WATER DEPTH (after dev.) <u>10.54 FT b TOC</u>

(NOT TO SCALE)



QA / QC

INSTALLED BY: BETTS ENVIRONMENTAL INSTALLATION OBSERVED BY: TOM MARRIN  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

# HTW DRILLING LOG

358

<b>HOLE No. SB-44</b>						
<b>1. COMPANY NAME</b> Law Engineering and Environmental Services, Inc.	<b>2. DRILLING SUBCONTRACTOR</b> Betts Environmental					
<b>SHEET 1 OF 2 SHEETS</b>						
<b>3. PROJECT</b> Hunter AAF	<b>4. LOCATION (CITY, STATE)</b> Savannah, GA					
<b>5. NAME OF DRILLER</b> Jason Allwood	<b>6. MANUFACTURER'S DESIGNATION OF DRILL</b>					
<b>7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT</b>	4 1/4" I.D. HSA	<b>9. HOLE LOCATION (SITE)</b> FTA				
	2-inch SS sampler	<b>10. SURFACE ELEVATION</b>				
<b>8. WEATHER</b> Clear, < 60s°F	<b>11. DATE STARTED</b> 11/1/01	<b>12. DATE COMPLETED</b> 11/1/01				
<b>13. OVERBURDEN THICKNESS</b> NA	<b>16. DEPTH GROUNDWATER ENCOUNTERED</b>					
<b>14. DEPTH DRILLED INTO ROCK</b> NA	<b>17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED</b> NA					
<b>15. TOTAL DEPTH OF HOLE</b>	<b>18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)</b> NA					
<b>19. GEOTECHNICAL SAMPLES (#)</b>	DISTURBED	UNDISTURBED	<b>20. TOTAL NUMBER OF CORE BOXES</b>			
<b>21. SAMPLES FOR CHEMICAL ANALYSIS</b>	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	<b>22. TOTAL CORE RECOVERY %</b>
	X	Chromium	SVOCs	-	-	
<b>23. DISPOSITION OF HOLE</b>	BACKFILLED	MONITORING WELL	<b>24. SIGNATURE OF INSPECTOR</b>			
	-	-	Grouted			
<b>25. CHECKED BY:</b>			<b>26. NAME OF INSPECTOR</b> John D. Martin			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Dark grayish-brown, fine SAND (SP) (2.5Y 4/2)					
-0.6		Olive yellow, fine SAND (SP) (2.5Y 6/6)	0.0			9-10-17-20	
	1.0						
		Very dark gray, fine SAND (SP) (2.5Y 3/1)	0.0		SB-44(2-4) SB-44(2-4)DUP VOCs SVOCs Chromium		
-2.0	2.0						
		Gray, fine SAND (SP) (2.5Y 6/1)				10-13-16-18	
	3.0						
-3.5							
		No recovery (4'-6')				50/3	
	4.0						

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# HTW DRILLING LOG

HOLE No.

**SB-44**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

SHEET **2**

OF **2** SHEETS

A:\SB-44.PL3.TLC--1 11-26-01

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-6.0	6.0	Light olive brown, fine SAND (SP) (2.5Y 5/3)			SB-44(6-8) VOCs SVOCs Chromium		75% recovery
	7.0					21-25-23-6	
-8.0	8.0	Rotten wood, no soil, but saturated at 9.5'					
	9.0					2-3-4-1	50% recovery
-10.0	10.0	Boring terminated at 10.0 feet					
	11.0						
	12.0						
	13.0						

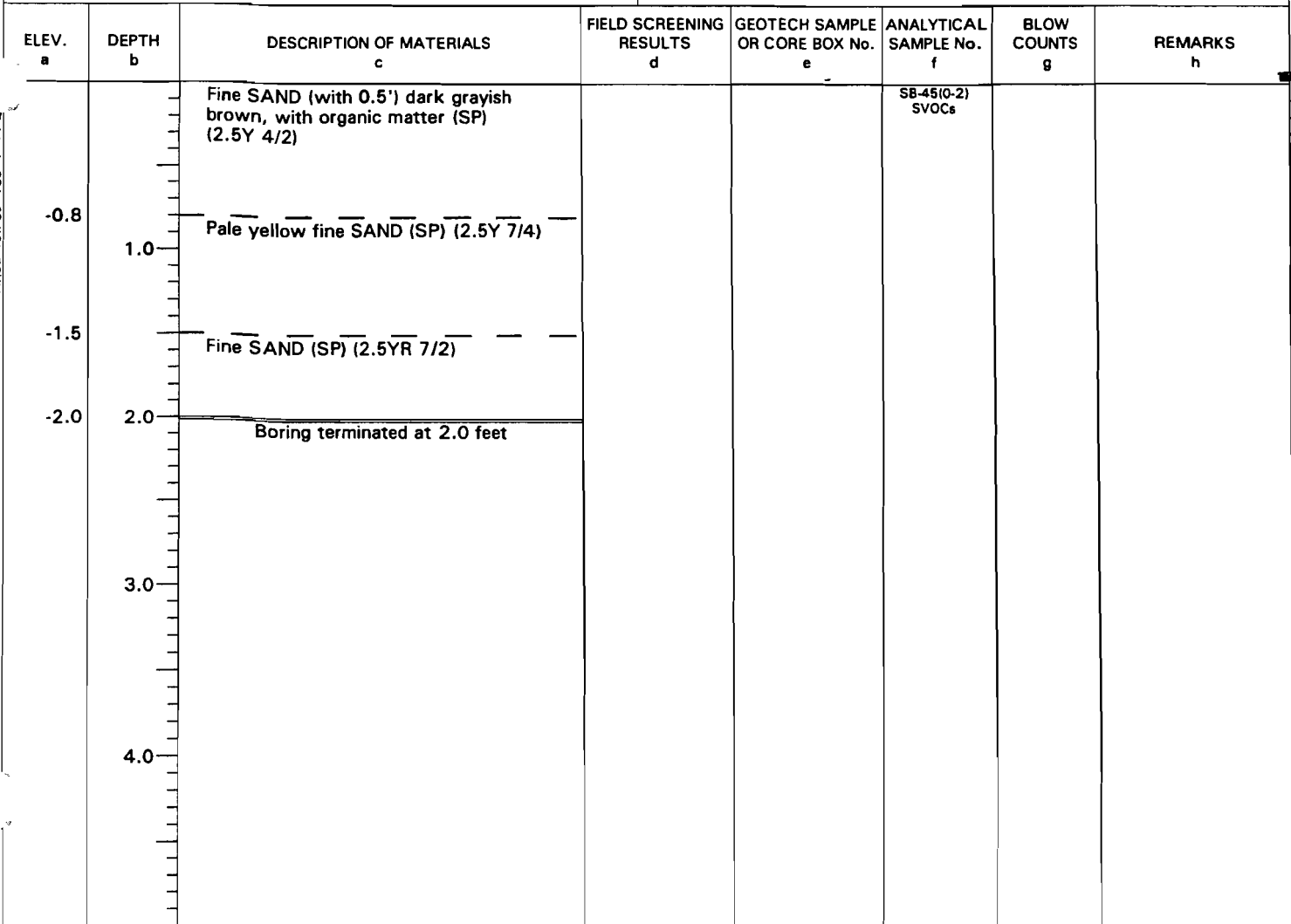


360

# HTW DRILLING LOG

HOLE No. **SB-45**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		HOLE No. <b>SB-45</b>	
3. PROJECT <b>Hunter AAF</b>		4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>		6. MANUFACTURER'S DESIGNATION OF DRILL <b>NA</b>		9. HOLE LOCATION (SITE) <b>FTA</b>	
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>3-inch I.D. SS Hand Auger</b> <b>SS-Bowl, SS-Spoon</b>		10. SURFACE ELEVATION		11. DATE STARTED <b>10/31/01</b>	
8. WEATHER <b>Clear, 60s°F</b>		12. DATE COMPLETED <b>10/31/01</b>		13. OVERBURDEN THICKNESS <b>NA</b>	
14. DEPTH DRILLED INTO ROCK <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>	
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>		19. GEOTECHNICAL SAMPLES (#) DISTURBED: -    UNDISTURBED: -	
20. TOTAL NUMBER OF CORE BOXES -		21. SAMPLES FOR CHEMICAL ANALYSIS		22. TOTAL CORE RECOVERY % -	
23. DISPOSITION OF HOLE		24. SIGNATURE OF INSPECTOR		25. CHECKED BY:	
BACKFILLED: <input checked="" type="checkbox"/>		MONITORING WELL: <input type="checkbox"/>		OTHER (SPECIFY): <input type="checkbox"/>	
OTHER (SPECIFY): <input type="checkbox"/>		OTHER (SPECIFY): <input type="checkbox"/>		OTHER (SPECIFY): <input type="checkbox"/>	
26. NAME OF INSPECTOR <b>John D. Martin</b>		27. VOC		28. METALS	
29. OTHER (SPECIFY)		30. OTHER (SPECIFY)		31. OTHER (SPECIFY)	



A:SB-45, PL3 TLC-1 11-2

# HTW DRILLING LOG

HOLE No. **SB-46**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Betts Environmental</b>		SHEET <b>1</b> OF <b>3</b> SHEETS			
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>Jason Allwood</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>Ardco Model L 4x4 (ATV)</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		6 1/4" HSA		9. HOLE LOCATION (SITE) <b>FTA</b>			
		2-inch SS samplers					
10. SURFACE ELEVATION		8. WEATHER <b>Clear, windy, &lt;70°F</b>		11. DATE STARTED <b>10/31/01</b>	12. DATE COMPLETED <b>10/31/01</b>		
13. OVERBURDEN THICKNESS <b>NA</b>			16. DEPTH GROUNDWATER ENCOUNTERED <b>14 ft. bgs</b>				
14. DEPTH DRILLED INTO ROCK <b>NA</b>			17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>-</b>				
15. TOTAL DEPTH OF HOLE <b>23 ft. bgs</b>			18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>-</b>				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED <b>-</b>	UNDISTURBED <b>-</b>	20. TOTAL NUMBER OF CORE BOXES <b>-</b>			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY % <b>-</b>
		<b>X</b>	<b>Chromium</b>	<b>SVOCs</b>	<b>-</b>	<b>-</b>	
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
		<b>-</b>	<b>X</b>	<b>-</b>			
25. CHECKED BY:				26. NAME OF INSPECTOR <b>John D. Martin</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-0.5		Very dark grayish-brown fine SAND, with organic matter, some SILT (SP) (10YR 4/2)	0.0				
-1.0	1.0	Brownish yellow fine SAND (SP) (10YR 6/6)				6-14-14-15	
-2.0	2.0	Dark brown 2'-2.5', fine SAND, (SP) (10YR 4/2, 10YR 7/3 (2.5-3'), 2.5Y 6/1 (3'-3.5), 2.5Y 7/3 (3.5'-4')	0.0				
	3.0					14-13-12-7	
-4.0	4.0	Pale yellow, mottled yellow and beige fine SAND (SP) (2.5Y 7/3)	0.0		SB-46(4-6)		VOCs, SVOCs, chromium

A:\SB-46 PL3 TLC-1 11-26-01

# HTW DRILLING LOG

362

HOLE No.

**SB-46**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

SHEET **2**

OF **3** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
						2-3-5-5	
-6.0	6.0	Pale yellow, fine SAND (SP) (2.5Y 8/2)					
	7.0		0.0			14-10-9-8	
		7.5-8' moist					
-8.0	8.0	Pale yellow, fine-medium SAND, pale yellow (SP) (2.5Y 7/2)					
-8.5			0.0				
	9.0	White CLAY, with red (ferric) staining, hand stiff CLAY (CL) (2.5Y 8/1)				14-15-17-10	
-10.0	10.0	White CLAY					
-11.0	11.0	Clayey SAND (SC) (2.5 Y 7/1)	0.0			7-8-12-14	
-12.0	12.0	Fine to medium white SAND (SP) (2.5Y 8/1)			SB-46(12-14)		VOCs, SVOCs, chromium
	13.0		0.0			7-8-10-13	
		Saturated, very moist					

A:\SB-46,PL3 TLC-1 11-26-01

# HTW DRILLING LOG

HOLE No.

**SB-46**

PROJECT

**Hunter AAF**

INSPECTOR

**John D. Martin**

SHEET **3**

OF **3** SHEETS

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
		Fine to medium white SAND (SP) (2.5Y 8/1)					
	15.0					6-6-11-11	
	16.0						
	17.0					7-8-12-14	
-18.0	18.0	Light brownish gray medium SAND (SP) (2.5Y 6/2)					
-19.0	19.0	Dark brown medium SAND (SP) (2.5Y 4/4)				4-5-7-9	
-20.0	20.0	Light olive brown medium SAND (SP) (2.5Y 5/4)					
-21.0	21.0	Dark brown medium SAND (SP) (2.5Y 4/4)				3-4-5-9	
	22.0						
-22.9		Boring terminated at 23.0 feet					

A:\SB-46.PL3 TLC--1 11-26-01

**MRK** FORM JUN 89 **55-2**

PROJECT NAME & NO.

*D-149*

Hunter AAF  
12001-9-3411

HOLE No.

**SB-46**

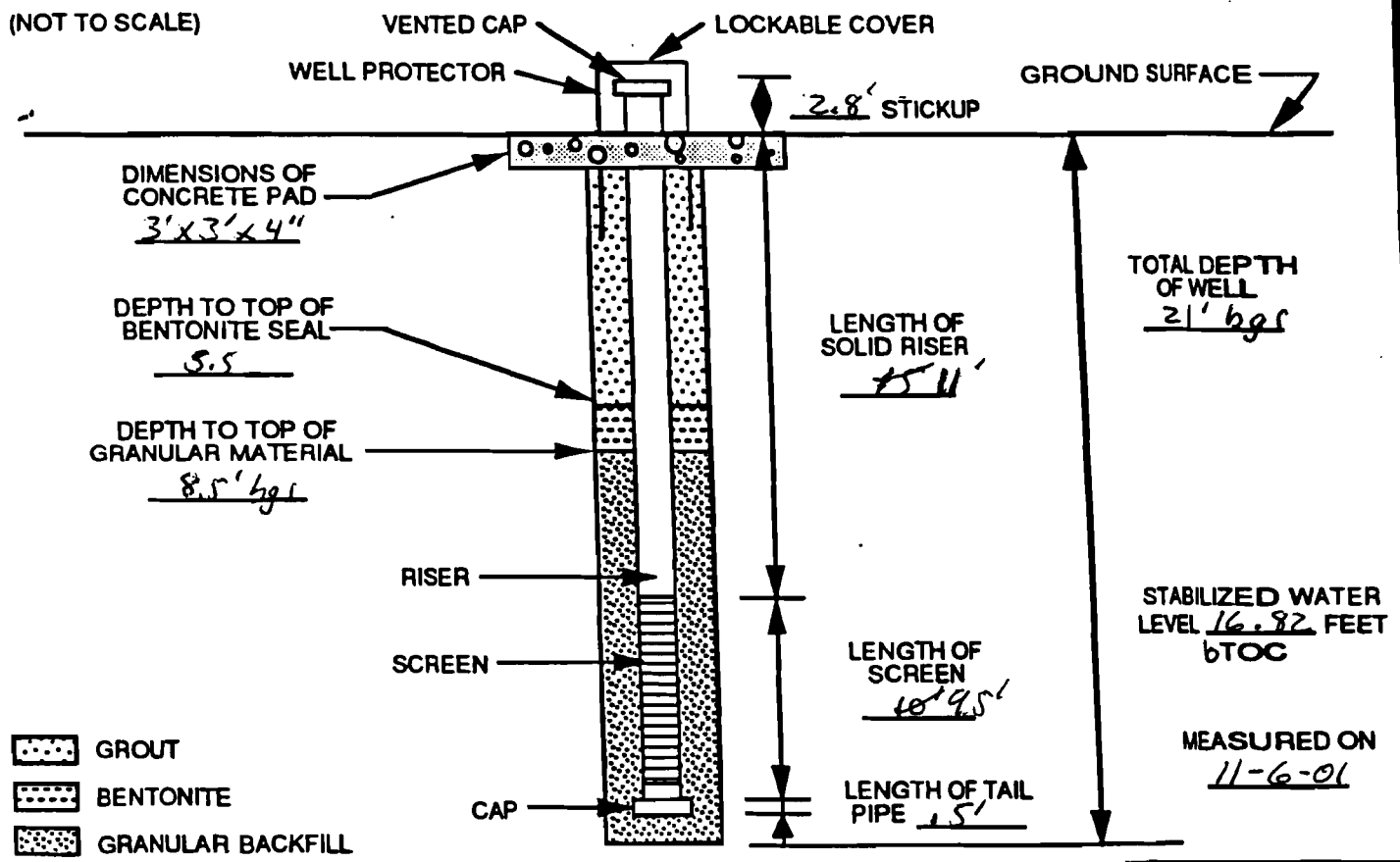
HF - Rev. 4/94

# TYPE II MONITORING WELL INSTALLATION DIAGRAM

JOB NAME MUNTEL AAF  
 WELL NO. HMW 22 JOB NO. 12001-9-3411  
 DATE 11-1-01 TIME 7:35 AM  
 WELL LOCATION SB-46

GROUND SURFACE ELEVATION 35.45 ft AMSL BENTONITE TYPE 3/8" PENNZEL VORWAY / PULFLOH  
 TOP OF SCREEN ELEVATION 24.45 ft AMSL MANUFACTURER CETCO  
 REFERENCE POINT ELEVATION TOC = 38.19 ft AMSL CEMENT TYPE TYPE I PORTLAND CEMENT  
 MANUFACTURER FLORIDA ROCK  
 TYPE SAND PACK QTE SAND GRADATION 30/65 BOREHOLE DIAMETER ~ 12-INCHES  
 SAND PACK MANUFACTURER STANDARD SAND F SCREEN DIAMETER 2-INCH SLOT SIZE .006  
 SCREEN MATERIAL PVC-2" SILICA CO. LAW ENVIRONMENTAL, INC.  
 MANUFACTURER BOALT WILLYEAR FIELD REPRESENTATIVE JOHN MARTIN  
 RISER MATERIAL PVC-2" DRILLING CONTRACTOR BETTS ENVIRONMENTAL  
 MANUFACTURER DIORIKER DILLUX CORP. AMOUNT BENTONITE USED 2-5 gal BUCKETS  
 RISER DIAMETER 2-INCH AMOUNT CEMENT USED 2-94 lb bags / 4-80 lb bags  
 DRILLING TECHNIQUE HOLLOW STEM AUGER AMOUNT SAND USED 10-50-16 bags  
 AUGER SIZE AND TYPE 6 1/4" I.D. / HSA STATIC WATER DEPTH (after dev.) 16.82 ft. bTOC

(NOT TO SCALE)



QA / QC

INSTALLED BY: BETTS ENVIRONMENTAL INSTALLATION OBSERVED BY: JOHN MARTIN  
 DISCREPANCIES: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

# HTW DRILLING LOG

HOLE No. **SB-47**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS			
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>				
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>SS 3" ID Hand Auger Bucket</b>				
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT		3" ID SS Hand Auger		9. HOLE LOCATION (SITE) <b>FTA</b>			
		SS Bowl & Spoons					
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>			
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>					
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>					
15. TOTAL DEPTH OF HOLE <b>4 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>					
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	22. TOTAL CORE RECOVERY %
		-	<b>Barium</b>	-	-	-	-
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR		
		<b>X</b>	-	-			
25. CHECKED BY:				26. NAME OF INSPECTOR <b>John D. Martin</b>			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Very dark gray fine SAND with organic matter, and lots of pebble/gravel sized pieces of black "tar sand rocks" (SP) (10YR 3/1)					
-2.0	2.0	Dark brown fine SAND with some "tar sand rocks" (SP) (10YR 4/3)			SB-47(2-4) Barium		
-3.0	3.0	Black fine SAND (SP) (10YR 2/1)					
-4.0	4.0	Boring terminated at 4.0 feet					

A:\SB-47,PL3 TLC-1 11-26-01

# HTW DRILLING LOG

HOLE No. **SB-48**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>			SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>			
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>			
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>SS Bowl and Spoon</b>		9. HOLE LOCATION (SITE) <b>FTA</b>				
		10. SURFACE ELEVATION				
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>		
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>				
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>				
15. TOTAL DEPTH OF HOLE <b>5 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>				
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED		
		-		-		
20. TOTAL NUMBER OF CORE BOXES		-				
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	<b>Chromium</b>	-	-	-
22. TOTAL CORE RECOVERY %		-				
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR	
		<b>X</b>	-	-	<b>John D. Martin</b>	
25. CHECKED BY:			26. NAME OF INSPECTOR			

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-0.5		Black fine SAND with organic matter, 0-6" (SP) (2.5YR 2.5/1)					
	1.0	Very dark, same as above without organic matter, gray 0-2" (SP) (2.5YR 3/1)					
-2.0	2.0	Dark brown, medium-fine SAND (SP) (10YR 4/3)			SB-48(2-5)		Chromium 2'-5'
	3.0						
-3.5		Yellowish brown, medium-fine SAND (SP) (3.5'-4.0') (10YR 5/6)					
-4.0	4.0	Light Yellow-brown, medium-fine SAND (SP) (10YR 6/4)					
-4.8		Boring terminated at 5.0 feet					

A:SB-48,PL3 TLC-1 11-2

# HTW DRILLING LOG

HOLE No. **SB-49**

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>SS Bowl and Spoon</b>		9. HOLE LOCATION (SITE) <b>FTA</b>			
		10. SURFACE ELEVATION			
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>			
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED	UNDISTURBED	20. TOTAL NUMBER OF CORE BOXES	
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	-	<b>SVOCs</b>	-
22. TOTAL CORE RECOVERY %					
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	24. SIGNATURE OF INSPECTOR
		<b>X</b>	-	-	<b>John D. Martin</b>
25. CHECKED BY:			26. NAME OF INSPECTOR		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
-0.5		Light olive brown, fine SAND with organic matter (SP) (2.5Y 5/4)					
-1.0	1.0	Light yellowish brown, fine SAND (SP) (2.5Y 6/4)					
-1.5		Gray fine SAND (SP) (2.5Y 5/1)			SB-49(0-2)		SVOCs
-2.0	2.0	Olive yellow fine SAND (SP) (2.5Y 6/6)					
		Boring terminated at 2.0 feet					
	3.0						
	4.0						

A:\SB-49\PL3 TLC-1 11-30-01



# HTW DRILLING LOG

HOLE No. **SB-50**

368

1. COMPANY NAME <b>Law Engineering and Environmental Services, Inc.</b>		2. DRILLING SUBCONTRACTOR <b>Law Engineering and Environmental Services, Inc.</b>		SHEET <b>1</b> OF <b>1</b> SHEETS	
3. PROJECT <b>Hunter AAF</b>			4. LOCATION (CITY, STATE) <b>Savannah, GA</b>		
5. NAME OF DRILLER <b>John Martin &amp; Greg Orzechowski</b>			6. MANUFACTURER'S DESIGNATION OF DRILL <b>3" I.D. SS Hand Auger</b>		
7. SIZE AND TYPES OF DRILLING AND SAMPLING EQUIPMENT <b>SS Bowl and Spoon</b>		9. HOLE LOCATION (SITE) <b>FTA</b>			
		10. SURFACE ELEVATION			
8. WEATHER <b>Clear, 60s°</b>		11. DATE STARTED <b>10/31/01</b>		12. DATE COMPLETED <b>10/31/01</b>	
13. OVERBURDEN THICKNESS <b>NA</b>		16. DEPTH GROUNDWATER ENCOUNTERED <b>NA</b>			
14. DEPTH DRILLED INTO ROCK <b>NA</b>		17. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED <b>NA</b>			
15. TOTAL DEPTH OF HOLE <b>2 ft. bgs</b>		18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) <b>NA</b>			
19. GEOTECHNICAL SAMPLES (#)		DISTURBED		UNDISTURBED	
		-		-	
20. TOTAL NUMBER OF CORE BOXES		-			
21. SAMPLES FOR CHEMICAL ANALYSIS		VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)
		-	-	<b>SVOCs</b>	-
22. TOTAL CORE RECOVERY %		-			
23. DISPOSITION OF HOLE		BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	
		<b>X</b>	-	-	
24. SIGNATURE OF INSPECTOR		<b>John D. Martin</b>			
25. CHECKED BY:			26. NAME OF INSPECTOR		

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX No. e	ANALYTICAL SAMPLE No. f	BLOW COUNTS g	REMARKS h
	1.0	Light brownish/gray, very fine to fine, well sorted SAND with SILT with grass roots and some organic matter (SP) (2.5Y 5/3)			SB-50(0-2)		SVOCs
-1.5	2.0	Very dark gray, very fine to fine well sorted SAND with SILT (SP) (2.5Y 3/1)					
-2.0		Boring terminated at 2.0 feet					
	3.0						
	4.0						

A:\SB-50.P13 TLC-1 11-2

## Appendix C

Field Forms, Well Construction Logs,  
and Boring Logs





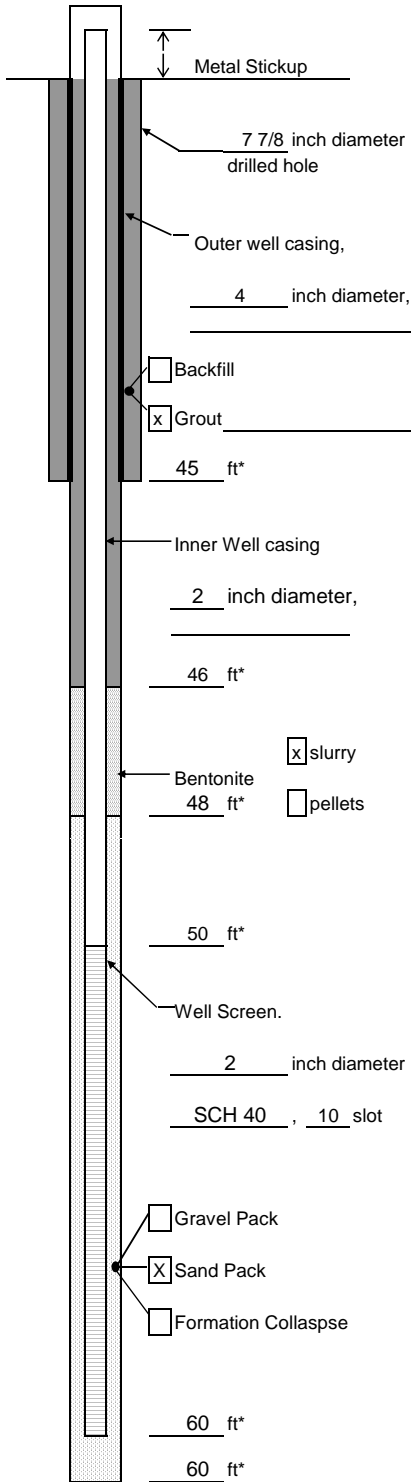












Project GP08HAFS.H01C Well H01-MW-7D  
 Town/City Savannah  
 County Chatham State GA

Installation Date(s) 2-9-2012 thru 2-15-2012  
 Drilling Method Mud Rotary  
 Drilling Contractor Parratt Wolff, Inc.  
 Drilling Fluid Bentonite Drilling Mud

Development Technique(s) and Date(s)  
Developed 2-16-2012 using electric submersible pump and surge block

Water Removed During Development 80 gallons  
 Static Depth to Water 6.8' feet below M.P.

Well Purpose Monitoring Well

Remarks

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Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

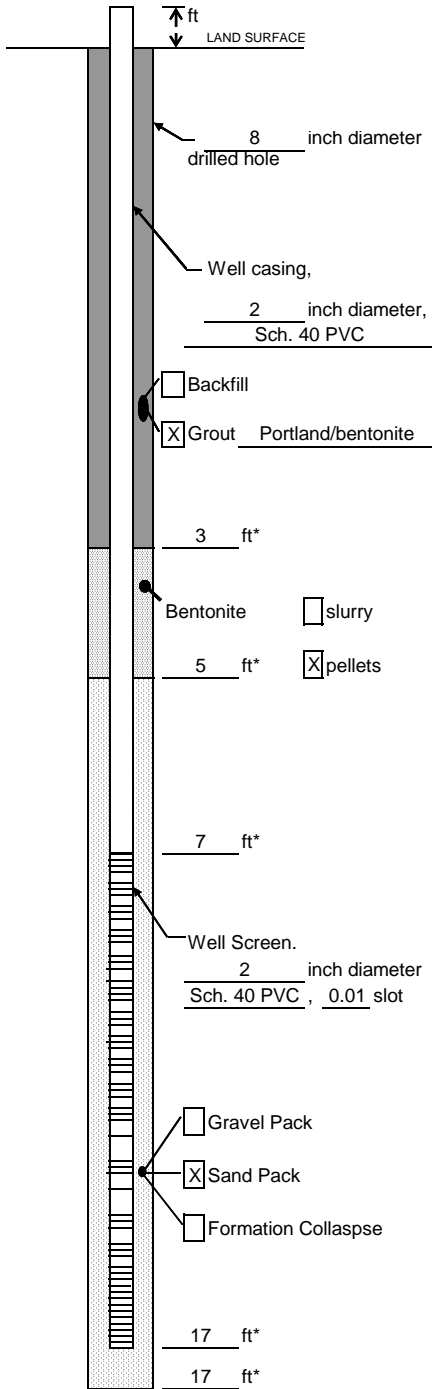
\* Depth Below Land Surface

Prepared by Valyn Pauncic





# WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-9  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:

\_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/5/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)

Submersible pump with surge block

Development conducted by ARM Environmental Services, Inc.  
 on 11/13/2009.

Fluid Loss During Drilling N/A gallons

Water Removed During Development 50 gallons

Static Depth to Water 11.72 feet below M.P.

Pumping Depth to Water 20.08 feet below M.P.

Pumping Duration 1 hours

Yield 0.833 gpm Date 11/13/2009

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks \_\_\_\_\_

Prepared by B. Wolf



SOIL CORE / SAMPLING LOG

Boring/Wel MW-10 Project/No. GP08HAFS.H01B.DG0FI Page 1 of 1

Site Location Hunter AAF (HAA-01) Drilling Started 14:20 Drilling Completed 15:16 (11/9/09)

Drilling Contractor ARM Environmental Services, Inc. Driller J. Register Helper J. Watson

Drilling Fluid Used None Drilling Method Hand-Auger, Direct Push (Geoprobe)

Length and Diameter of Coring Device 1.5' x 3" (Hand-Auger), 5' x 2.25" (MacroCore) Sampling Interval 1.0'-2.0', 3.0'-4.0' feet

Land-Surface Elev. feet [ ] Surveyed [ ] Estimated Datum

Total Depth Drilled 15.0 Feet Hole Diameter 2.25 Coring Device Hand-Auger (to 3'), MacroCore (3' - 15')

Prepared By B. Wolf Hammer Weight Hammer Drop ins.

Sampling Data:

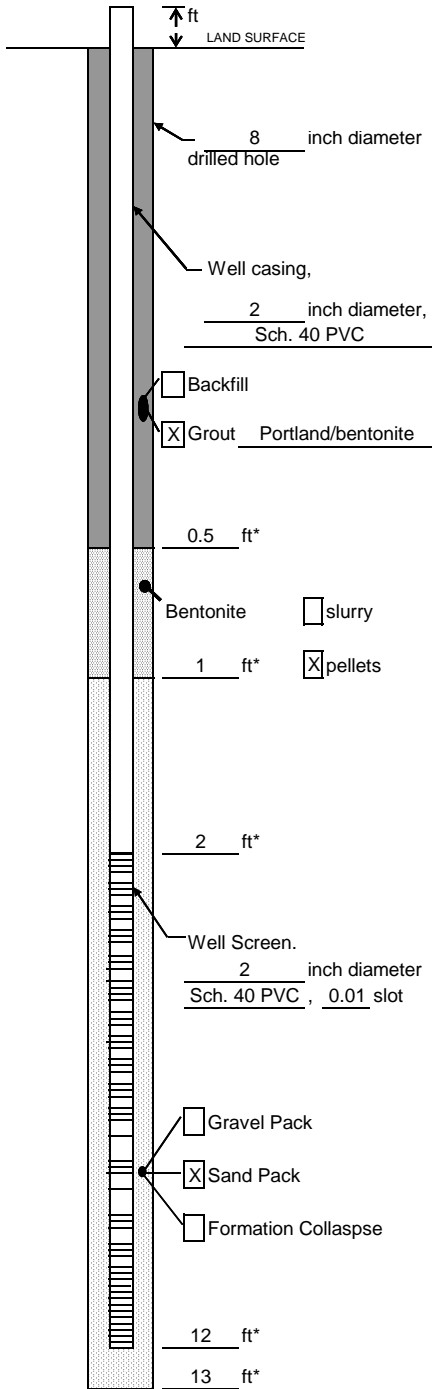
Table with 4 columns: Depth, Grab/Composite, Time, Laboratory Analysis. Rows include data for depths 1.0' - 2.0' and 3.0' - 4.0'.

Soil Characterization:

Table with 6 columns: Sample/Core Depth (From, To), Core Recovery (Feet), OVM Reading (ppm), Blow Counts per 6 Inches, Sample/Core Description. Contains detailed soil data from 0.0 to 15.0 feet.



# WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-10  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:

\_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/9/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)

Submersible pump with surge block

Development conducted by ARM Environmental Services, Inc.  
on 11/13/2009.

Fluid Loss During Drilling N/A gallons

Water Removed During Development 25 gallons

Static Depth to Water 5.76 feet below M.P.

Pumping Depth to Water 15.08 feet below M.P.

Pumping Duration 1 hours

Yield \_\_\_\_\_ gpm Date 11/13/2009

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks Well repeatedly went dry during development.

Therefore, pumping was intermittent during the 1 hour

pumping duration and an accurate yield could not be

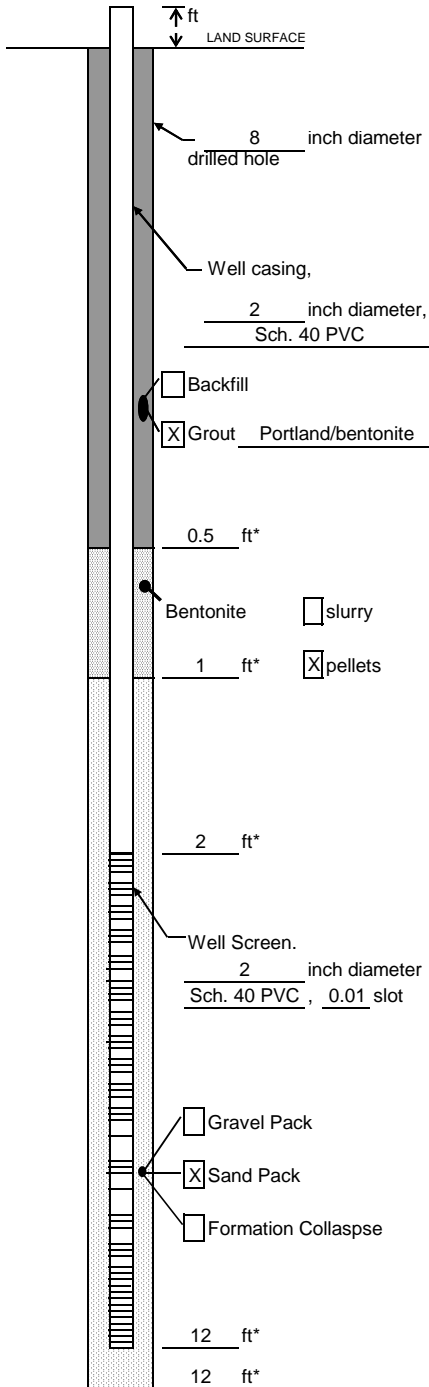
calculated.

Prepared by B. Wolf





## WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-11  
Town/City Hunter Army Airfield (HAA-01)  
County Chatham State GA  
Permit No. \_\_\_\_\_  
Land-Surface Elevation and Datum:  
\_\_\_\_\_ feet  Surveyed  
 Estimated  
Installation Date(s) 11/9/2009  
Drilling Method Hollow-Stem Auger  
Drilling Contractor ARM Environmental Services, Inc.  
Drilling Fluid None  
\_\_\_\_\_ Development Technique(s) and Date(s)  
Submersible pump with surge block  
Development conducted by ARM Environmental Services,  
Inc. on 11/24/2009.  
Fluid Loss During Drilling N/A gallons  
Water Removed During Development 48 gallons  
Static Depth to Water 4.55 feet below M.P.  
Pumping Depth to Water 15 feet below M.P.  
Pumping Duration 2.25 hours  
Yield \_\_\_\_\_ gpm Date \_\_\_\_\_  
Specific Capacity \_\_\_\_\_ gpm/ft  
Well Purpose Groundwater Monitoring  
\_\_\_\_\_ Remarks Well repeatedly went dry during development.  
Therefore, pumping was intermittent during the 2.25 hour  
pumping duration and an accurate yield could not be  
calculated.  
\_\_\_\_\_

Prepared by B. Wolf



# SOIL CORE / SAMPLING LOG

Boring/Wel MW-12 / MW-12D Project/No. GP08HAFS.H01B.DG0FI Page 1 of 2

Site Location Hunter AAF (HAA-01) Drilling Started 9:10 Drilling Completed 10:20 (11/6/09)

Drilling Contractor ARM Environmental Services, Inc. Driller M. Carey Helper J. Watson

Drilling Fluid Used None Drilling Method Hand-Auger, Direct Push (Geoprobe)

Length and Diameter of Coring Device 1.5' x 3" (Hand-Auger), 5' x 2.25" (MacroCore) Sampling Interval 1.0'-2.0', 3.0'-4.0' feet

Land-Surface Elev. \_\_\_\_\_ feet  Surveyed  Estimated Datum \_\_\_\_\_

Total Depth Drilled 50.0 Feet Hole Diameter 2.25 Coring Device Hand-Auger (to 3'), MacroCore (3' - 40')

Prepared By B. Wolf Hammer Weight \_\_\_\_\_ Hammer Drop \_\_\_\_\_ ins.

### Sampling Data:

Depth	Grab/Composite	Time	Laboratory Analysis
1.0' - 2.0'	Grab	11:00	VOCs, Metals, Pesticides
3.0' - 4.0'	Grab	11:10	VOCs, Metals
3.0' - 4.0'	Grab		VOCs, Metals (MS collected at 11:15, MSD collected at 11:20)

### Soil Characterization:

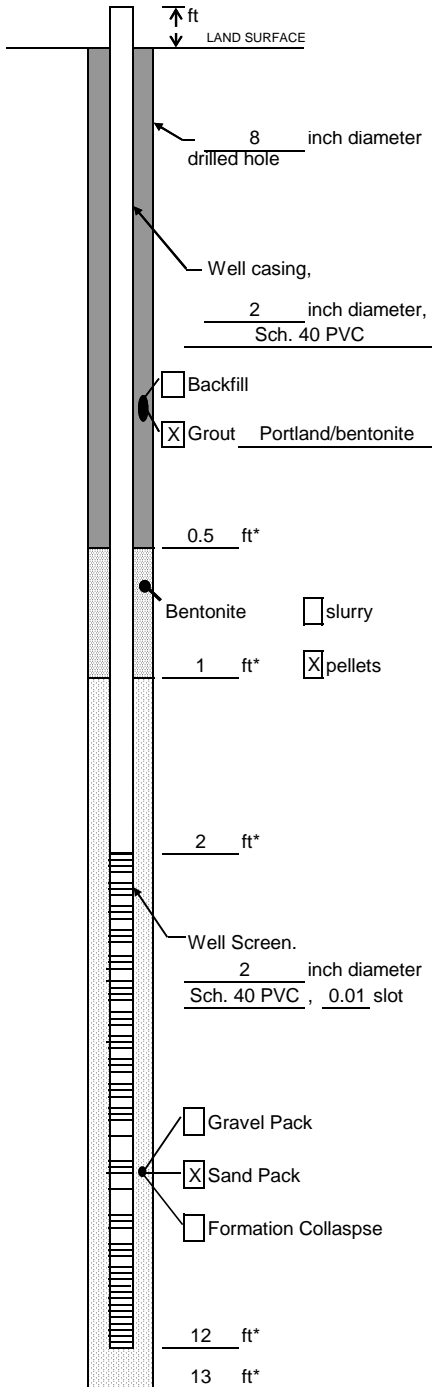
Sample/Core Depth (Feet bls) From	To	Core Recovery (Feet)	OVM Reading (ppm)	Blow Counts per 6 Inches	Sample/Core Description Soil type, %, Grain Size, Angularity, Grading, Consistency, Plasticity, Color, etc.
0.0	1.0	1.0	0.0	N/A	Dark brown, fine grained, poorly graded, silty SAND, loose, organic matter present
1.0	2.5	1.5	0.0	N/A	Brown/gray, fine grained, poorly graded, silty SAND, loose
2.5	4.5	2.0	0.0	N/A	Brown, fine grained, poorly graded, silty SAND, loose to medium dense, moist at approximately 3'
4.5	7.5	3.0	0.0	N/A	Brown, fine grained, silty SAND, with alternating bands of brown, medium stiff, plastic, sandy CLAY, wet
7.5	9.75	2.25	0.0	N/A	Tan, fine grained, poorly graded, silty SAND, medium dense, saturated
9.75	10.0	0.25	0.0	N/A	Gray, fine grained, poorly graded, SAND, medium dense, saturated
10.0	12.0	2.0	0.0	N/A	Tan, very fine grained, poorly graded, SAND, loose, saturated
12.0	15.0	3.0	0.0	N/A	Gray, fine grained, poorly graded, SAND with silt, loose, saturated
15.0	22.0	7.0	0.0	N/A	Same as above
22.0	22.25	0.25	0.0	N/A	Gray, fine to medium grained, silty SAND, loose, saturated
22.25	24.5	2.25	0.0	N/A	Gray, clayey SAND, loose, moderately plastic, saturated
24.5	27.0	2.5	0.0	N/A	Gray, fine grained, poorly graded, SAND with silt, medium dense, saturated
27.0	28.5	1.5	0.0	N/A	Gray, fine grained, poorly graded, SAND with silt, with alternating bands of gray, fine grained, silty SAND, saturated
28.5	30.0	1.5	0.0	N/A	Gray, fine to medium grained, moderately well graded, SAND with silt, loose, sub-angular to sub-rounded grains, saturated
30.0	35.0	0.5	0.0	N/A	Gray, fine to medium grained, sandy CLAY, stiff, plastic, lost most of core
35.0	37.5	2.5	0.0	N/A	Gray/tan, fine to medium to coarse grained, well graded, SAND, sub-angular to sub-rounded grains, saturated
37.5	40.0	2.5	0.0	N/A	Gray, CLAY, stiff, plastic, some fine to medium grained sand present
					Geoprobe encounters refusal at 40', resume coring with split spoons advanced through hollow-stem augers.







**WELL CONSTRUCTION LOG- UNCONSOLIDATED**



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-12  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
    Estimated

Installation Date(s) 11/9/2009  
 Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.  
 Drilling Fluid None

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Development Technique(s) and Date(s)  
Submersible pump with surge block

Development conducted by ARM Environmental Services, Inc.  
Inc. on 11/24/2009

Fluid Loss During Drilling N/A gallons  
 Water Removed During Development 48 gallons

Static Depth to Water 5.7 feet below M.P.  
 Pumping Depth to Water 15.3 feet below M.P.  
 Pumping Duration 3.8 hours

Yield \_\_\_\_\_ gpm Date \_\_\_\_\_  
 Specific Capacity \_\_\_\_\_ gpm/ft

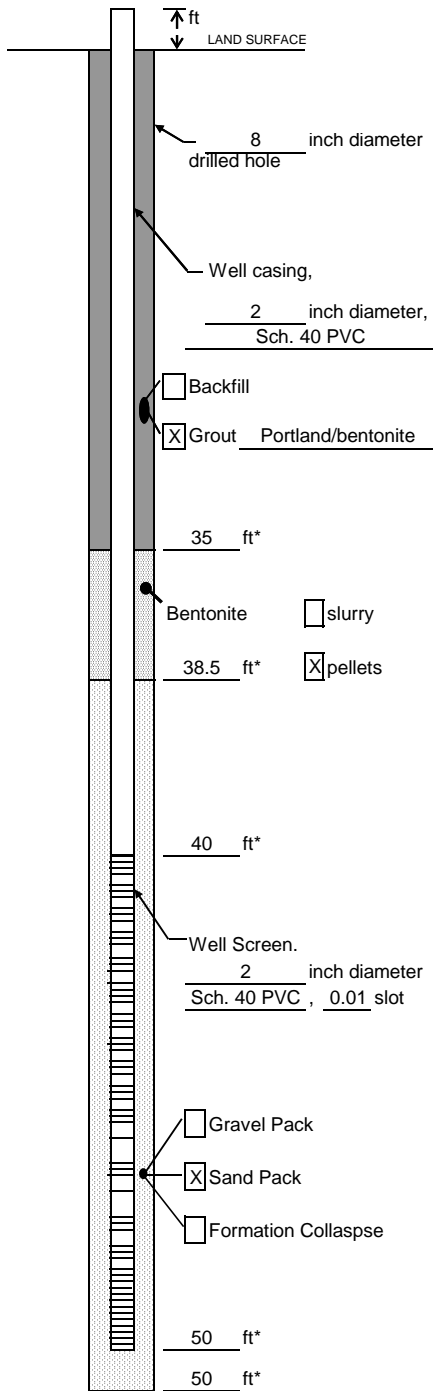
Well Purpose Groundwater Monitoring

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Remarks Well repeatedly went dry during development.  
Therefore, pumping was intermittent during the 3.8 hour  
pumping duration and an accurate yield could not be  
calculated.

Prepared by B. Wolf

**WELL CONSTRUCTION LOG- UNCONSOLIDATED**



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-12D

Town/City Hunter Army Airfield (HAA-01)

County Chatham State GA

Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
    Estimated

Installation Date(s) 11/9/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)  
 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Fluid Loss During Drilling N/A gallons

Water Removed During Development 90 gallons

Static Depth to Water 5.6 feet below M.P.

Pumping Depth to Water 53.2 feet below M.P.

Pumping Duration 3 hours

Yield 0.5 gpm Date \_\_\_\_\_

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

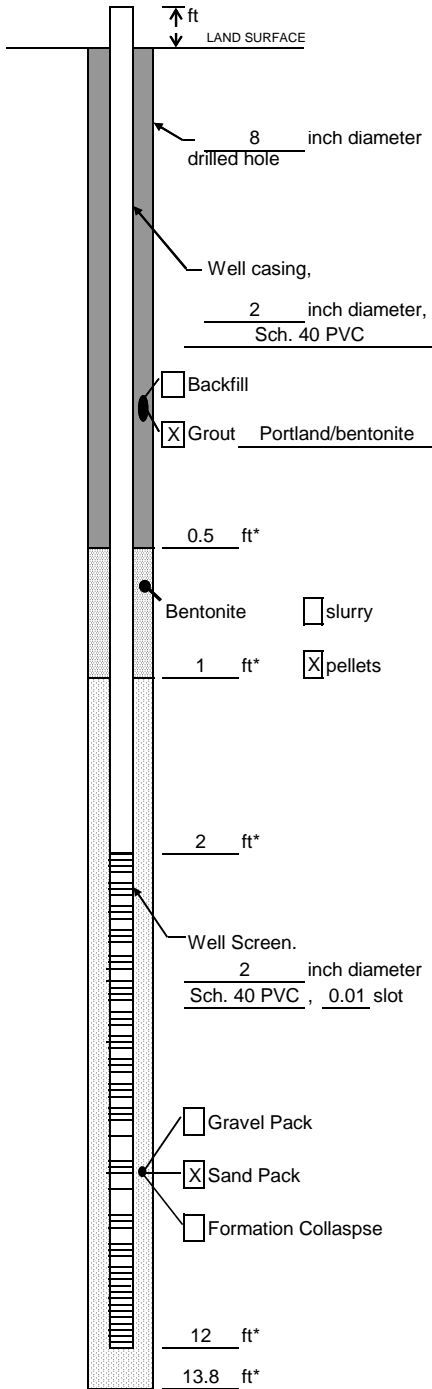
\_\_\_\_\_

Prepared by B. Wolf





# WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-13  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/10/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)  
 \_\_\_\_\_

Submersible pump with surge block

Development conducted by ARM Environmental services  
on 11/25/2009.

Fluid Loss During Drilling N/A gallons

Water Removed During Development 30.5 gallons

Static Depth to Water 4.15 feet below M.P.

Pumping Depth to Water 15 feet below M.P.

Pumping Duration 2.5 hours

Yield \_\_\_\_\_ gpm Date \_\_\_\_\_

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks Well repeatedly went dry during development.  
Therefore, pumping was intermittent during the 2.5 hour  
pumping duration and an accurate yield could not be  
calculated.

Prepared by B. Wolf



# SOIL CORE / SAMPLING LOG

Boring/Wel MW-14 / MW-14D Project/No. GP08HAFS.H01B.DG0FI Page 1 of 2

Site Location Hunter AAF (HAA-01) Drilling Started 14:45 Drilling Completed 17:20 (11/5/09)

Drilling Contractor ARM Environmental Services, Inc. Driller M. Carey Helper J. Watson

Drilling Fluid Used None Drilling Method Hand-Auger, Direct Push (Geoprobe)

Length and Diameter of Coring Device 1.5' x 3" (Hand-Auger), 5' x 2.25" (MacroCore) Sampling Interval 1.0'-2.0', 3.0'-4.0' feet

Land-Surface Elev. \_\_\_\_\_ feet  Surveyed  Estimated Datum \_\_\_\_\_

Total Depth Drilled 50.0 Feet Hole Diameter 2.25 Coring Device Hand-Auger (to 3'), MacroCore (3' - 45')

Prepared By B. Wolf Hammer Weight \_\_\_\_\_ Hammer Drop \_\_\_\_\_ ins.

**Sampling Data:**

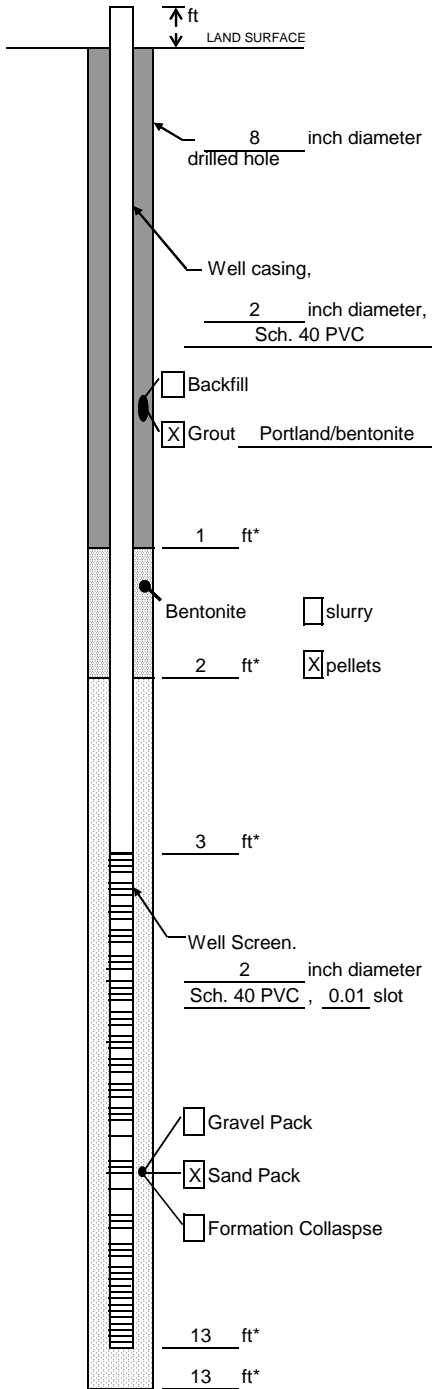
Depth	Grab/Composite	Time	Laboratory Analysis
1.0' - 2.0'	Grab	9:00	VOCs, Metals, Pesticides
3.0' - 4.0'	Grab	9:10	VOCs, Metals
Samples collected from boring advanced at MW-14 on 11/6/09			

**Soil Characterization:**

Sample/Core Depth (Feet bls) From	To	Core Recovery (Feet)	OVM Reading (ppm)	Blow Counts per 6 Inches	Sample/Core Description Soil type, %, Grain Size, Angularity, Grading, Consistency, Plasticity, Color, etc.
0.0	2.0	2.0	0.0	N/A	Brown, fine grained, poorly graded, SAND with silt, loose, organic matter present
2.0	3.0	1.0	0.0	N/A	Tan, fine grained, poorly graded, SAND with silt, loose
3.0	5.0	2.0	0.0	N/A	Dark brown and gray, fine grained, poorly graded, silty SAND, loose
5.0	5.5	0.5	0.0	N/A	Same as above, but moist
5.5	8.5	3.0	0.0	N/A	Same as above, but more silt and clay present near 8.5', and wet.
8.5	10.0	1.5	0.0	N/A	Tan, fine grained, poorly graded, SAND, loose, saturated
10.0	12.0	2.0	0.0	N/A	Same as above
12.0	13.0	1.0	0.0	N/A	Gray, fine grained, poorly graded, silty SAND, loose, saturated
13.0	15.0	2.0	0.0	N/A	Gray, fine grained, poorly graded, SAND with silt, loose, saturated
15.0	20.0	5.0	0.0	N/A	Same as above
20.0	25.0	5.0	0.0	N/A	Same as above
25.0	30.0	5.0	0.0	N/A	Same as above, but gray, fine grained, clayey SAND from 26.0' to 28.5'
30.0	32.0	2.0	0.0	N/A	Same as above
32.0	34.0	2.0	0.0	N/A	Alternating bands of gray, fine grained SAND and gray, fine grained, clayey SAND. Fine to medium to coarse grained SAND and rounded pebbles from 33.0' to 33.5'.
34.0	35.0	1.0	0.0	N/A	Tan/Gray, fine to medium to coarse grained, well graded, SAND, medium dense, sub-angular to sub-rounded grains and rounded quartz pebbles present, saturated
35.0	39.0	4.0	0.0	N/A	Same as above
39.0	40.0	1.0	0.0	N/A	Gray, fine to medium grained, SAND with alternating bands of gray, fine grained, clayey SAND, loose to medium dense, saturated
40.0	43.5	3.5	0.0	N/A	Gray, fine to medium grained, SAND with alternating bands of gray, fine to medium grained, clayey SAND, loose to medium dense, saturated



WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-14  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 \_\_\_\_\_  Estimated

Installation Date(s) 11/6/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)  
Submersible pump with surge block  
11/12/2009 to 11/13/2009

Fluid Loss During Drilling N/A gallons  
 Water Removed During Development 55 gallons  
 Static Depth to Water 6.78 feet below M.P.  
 Pumping Depth to Water 15.08 feet below M.P.  
 Pumping Duration 3 hours  
 Yield \_\_\_\_\_ gpm Date \_\_\_\_\_  
 Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

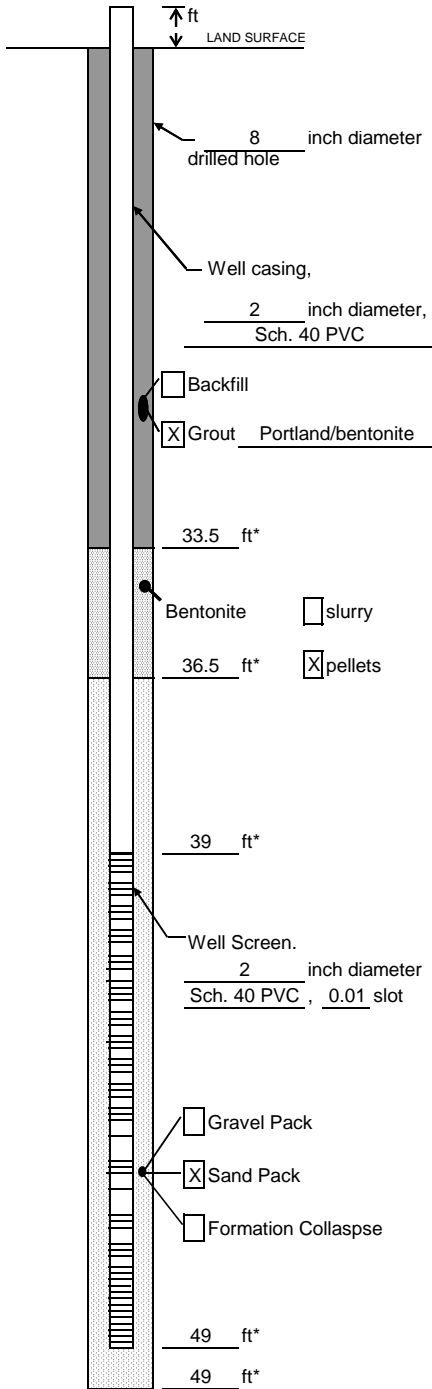
Remarks Well repeatedly went dry during development. Therefore, pumping was intermittent during the 3 hour pumping duration and an accurate yield could not be calculated.

Prepared by B. Wolf





# WELL CONSTRUCTION LOG- UNCONSOLIDATED



Project GP08HAFS.H01B.DG0FI Well MW-14D  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 Estimated  
 Installation Date(s) 11/6/2009

Drilling Method Hollow-Stem Auger  
 Drilling Contractor ARM Environmental Services, Inc.  
 Drilling Fluid None

Development Technique(s) and Date(s)  
Submersible pump 11/12/2009

Fluid Loss During Drilling N/A gallons  
 Water Removed During Development 85 gallons  
 Static Depth to Water 4.98 feet below M.P.  
 Pumping Depth to Water 52 feet below M.P.  
 Pumping Duration 1 hours  
 Yield 1.42 gpm Date 11/12/2009  
 Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks Borehole was drilled to 50.0', but bottom 1.0' collapsed, thus the well was set at 49.0'.

Measuring Point is  
 Top of Well Casing  
 Unless Otherwise Noted.

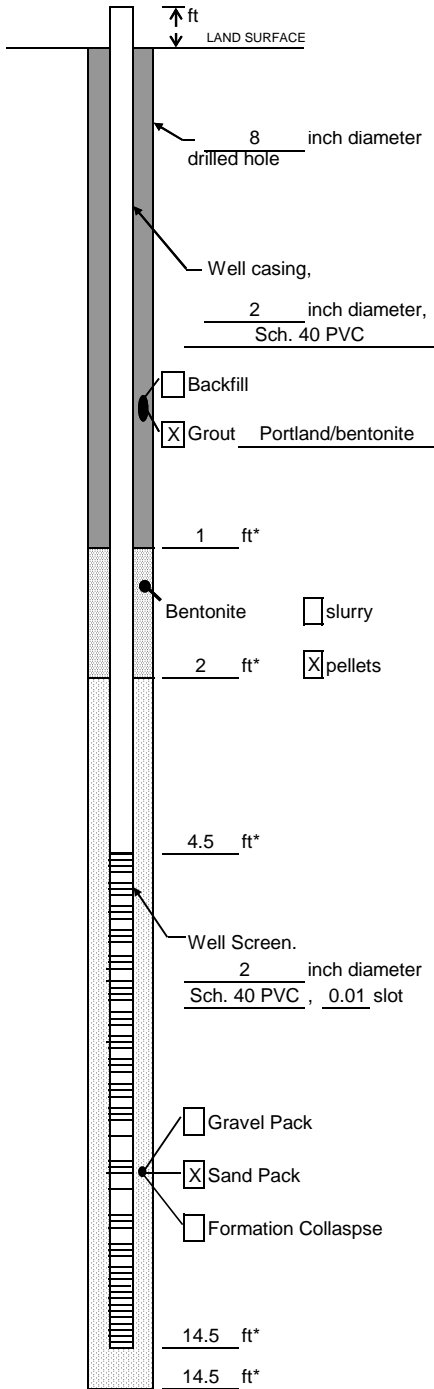
\* Depth Below Land Surface

Prepared by B. Wolf





## WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-15  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/5/2009  
 Drilling Method Hollow-Stem Auger  
 Drilling Contractor ARM Environmental Services, Inc.  
 Drilling Fluid None

Development Technique(s) and Date(s)  
Submersible pump / peristaltic pump with surge block  
11/12/2009 - 11/13/2009

Fluid Loss During Drilling N/A gallons  
 Water Removed During Development 55 gallons  
 Static Depth to Water 10.33 feet below M.P.  
 Pumping Depth to Water 16.95 feet below M.P.  
 Pumping Duration 5 hours  
 Yield \_\_\_\_\_ gpm Date \_\_\_\_\_  
 Specific Capacity \_\_\_\_\_ gpm/ft

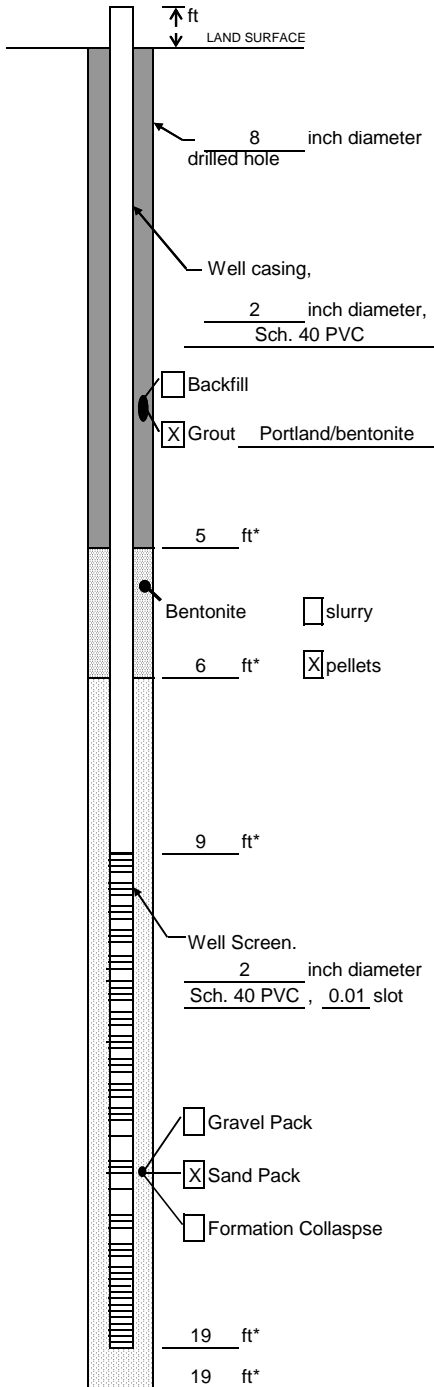
Well Purpose Groundwater Monitoring

Remarks Well repeatedly went dry during development.  
Therefore, pumping was intermittent during the 5 hour  
pumping duration and an accurate yield could not be  
calculated.

Prepared by B. Wolf



## WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-16  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:

\_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/4/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)

Submersible pump / peristaltic pump

11/11/2009 to 11/12/2009

Fluid Loss During Drilling N/A gallons

Water Removed During Development 35 gallons

Static Depth to Water 15.55 feet below M.P.

Pumping Depth to Water 22 feet below M.P.

Pumping Duration 2.5 hours

Yield \_\_\_\_\_ gpm Date \_\_\_\_\_

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks Well repeatedly went dry during development.

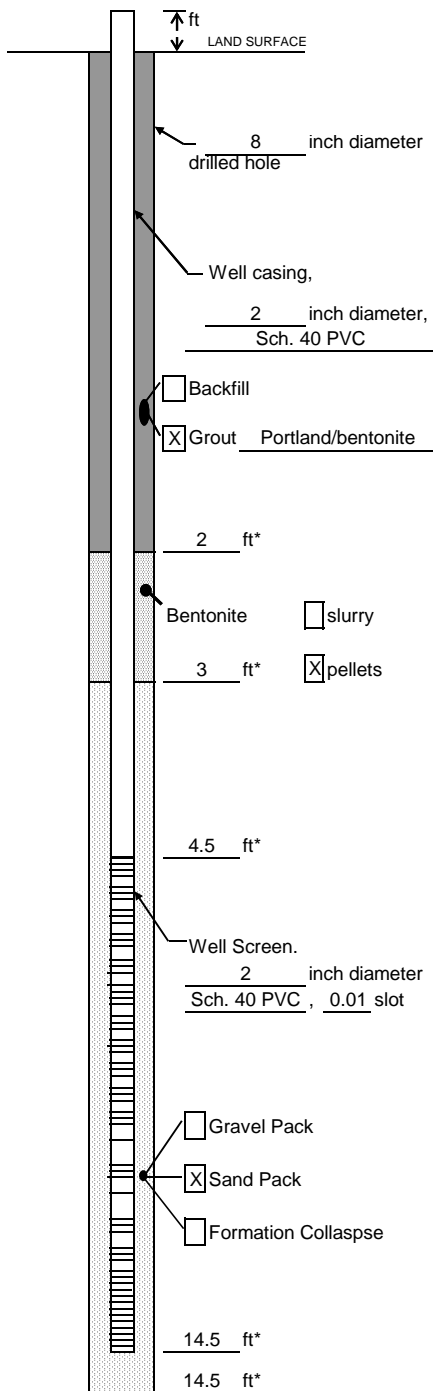
Therefore, pumping was intermittent during the 2.5 hour

pumping duration and an accurate yield could not be

calculated.

Prepared by B. Wolf





Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-17  
Town/City Hunter Army Airfield (HAA-01)  
County Chatham State GA  
Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:

\_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/4/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)

Submersible pump / peristaltic pump with surge block  
11/11/2009 - 11/13/2009

Fluid Loss During Drilling N/A gallons

Water Removed During Development 55 gallons

Static Depth to Water 7.8 feet below M.P.

Pumping Depth to Water 16.68 feet below M.P.

Pumping Duration \_\_\_\_\_ hours

Yield \_\_\_\_\_ gpm Date \_\_\_\_\_

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks Well repeatedly went dry during development.  
Therefore, pumping was intermittent and an accurate yield  
could not be calculated.

Prepared by \_\_\_\_\_

B. Wolf



# SOIL CORE / SAMPLING LOG

Boring/Wel MW-18 Project/No. GP08HAFS.H01B.DG0FI Page 1 of 2

Site Location Hunter AAF (HAA-01) Drilling Started 9:31 Drilling Completed 14:57 (11/12/09)

Drilling Contractor ARM Environmental Services, Inc. Driller B. Ewing Helper J. Watson

Drilling Fluid Used None Drilling Method Hollow-stem Auger

Length and Diameter of Coring Device 2.0' x 2.0" Sampling Interval \_\_\_\_\_ feet

Land-Surface Elev. \_\_\_\_\_ feet  Surveyed  Estimated Datum \_\_\_\_\_

Total Depth Drilled 66.0 Feet Hole Diameter 8.0" Coring Device Split Spoon Sampler

Prepared By B. Wolf Hammer Weight 180 lbs Hammer Drop 36 ins.

**Sampling Data:**

Depth	Grab/Composite	Time	Laboratory Analysis

**Soil Characterization:**

Sample/Core Depth (Feet bls)		Core Recovery (Feet)	OVM Reading (ppm)	Blow Counts per 6 Inches	Sample/Core Description Soil type, %, Grain Size, Angularity, Grading, Consistency, Plasticity, Color, etc.
From	To				
3.0	5.0	2.0	0.0	11,9,8,6	Brown, fine grained, poorly graded, SAND with silt, loose, asphalt and concrete fragments present throughout core
7.0	9.0	2.0	0.0	8,6,1,3	7.0' - 7.5': Slough 7.5' - 8.75': Tan, fine grained, poorly grade, SAND with silt, loose 8.75' - 9.0': Dark brown, fine grained, poorly graded, silty SAND, medium dense, moist
12.0	14.0	2.0	0.0	6,4,17,13	12.0' - 13.5': Dark brown, fine grained, poorly graded, silty SAND, medium dense, saturated
17.0	19.0	2.0	0.0	4,3,3,10	17.0' - 18.5': Tan/gray mottled, fine grained, poorly graded, silty SAND, medium dense, saturated 18.5' - 19.0': Tan/gray, fine grained, poorly graded, SAND with silt, loose, saturated
22.0	24.0	0.0	0.0	9,9,5,12	No recovery
27.0	29.0	2.0	0.0	4,3,3,5	Gray, fine grained, poorly graded, SAND with silt, medium dense, saturated. Slightly more silt and clay between 27.5' and 28.0', few sub-rounded coarse grains near 29.0'.
32.0	34.0	1.25	0.0	2,1,3,3	Gray, fine grained, poorly graded, silty SAND, loose, saturated
37.0	39.0	2.0	0.0	5,4,4,13	37.0' - 38.0': Gray, sandy CLAY, soft, moderately plastic, saturated 38.0' - 38.5': Gray, fine grained, poorly graded, SAND with silt, medium dense 38.5' - 39.0': Gray, fine to medium to coarse grained, well graded, silty SAND, medium dense, coarse grains are rounded to sub-rounded quartz, sub-rounded quartz pebbles present, saturated
42.0	44.0	2.0		8,15,15,12	42.0' - 43.0': Tan/gray, fine grained, poorly graded, SAND with silt, medium dense, saturated 43.0' - 43.25': Gray, fine grained, clayey SAND, loose, plastic





# SOIL CORE / SAMPLING LOG

Boring/Wel MW-18 Project/No. GP08HAFS.H01B.DG0FI Page 2 of 2

Site Location Hunter AAF (HAA-01) Drilling Started 9:31 Drilling Completed 14:57 (11/12/09)

Drilling Contractor ARM Environmental Services, Inc. Driller B. Ewing Helper J. Watson

Drilling Fluid Used None Drilling Method Hollow-stem Auger

Length and Diameter of Coring Device 2.0' x 2.0" Sampling Interval                      feet

Land-Surface Elev.                      feet  Surveyed  Estimated Datum                     

Total Depth Drilled 66.0 Feet Hole Diameter 8.0" Coring Device Split Spoon Sampler

Prepared By B. Wolf Hammer Weight 180 lbs Hammer Drop 36 ins.

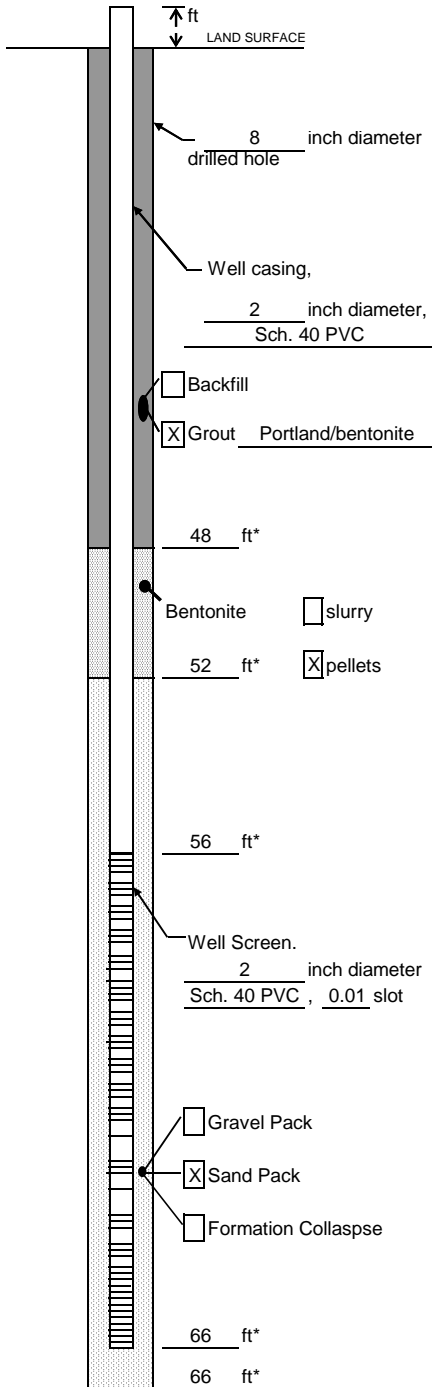
**Sampling Data:**

Depth	Grab/Composite	Time	Laboratory Analysis

**Soil Characterization:**

Sample/Core Depth (Feet bls) From To		Core Recovery (Feet)	OVM Reading (ppm)	Blow Counts per 6 Inches	Sample/Core Description Soil type, %, Grain Size, Angularity, Grading, Consistency, Plasticity, Color, etc.
					43.25' - 43.5': Tan/gray, fine grained, SAND with silt, rounded quartz pebbles present
					43.5' - 44.0': Light gray, fine to medium to coarse grained, well graded, SAND, medium dense, greenish clay stringers present, coarser grains are rounded to sub-rounded
47.0	49.0	2.0	0.0	6,3,5,10	47.0' - 47.75': Tan/gray, fine grained, poorly graded, silty SAND, medium dense, saturated
					47.75' - 48.25': Gray, sandy CLAY, soft, plastic, saturated
17.0	19.0	2.0	0.0	4,3,3,10	48.25' - 48.5': Tan/orange, fine to medium to coarse grained, well graded, clayey SAND, dense, saturated, rounded pebbles present
					48.5' - 49.0': Gray, fine to medium to coarse grained, well graded, silty SAND, medim dense, saturated
52.0	54.0	2.0	0.0	7,10,22,27	52.0' - 52.75': Gray, fine grained, poorly graded, SAND with silt, medium dense, saturated
					52.75' - 53.0': Gray, sandy CLAY, soft, plastic, saturated
					53.0' - 54.0': Gray, fine to medium to coarse grained, well graded, SAND with silt, medium dense, saturated
57.0	59.0	2.0	0.0	9,12,40,50	Gray, fine grained, moderately poorly graded, SAND, dense, few sub-angular to sub-rounded medium and coarse grains present, saturated
62.0	64.0	2.0	0.0	11,14,20,30	Same as above
64.0	66.0				Soils observed on two bottom flights of hollow-stem augers (advanced to 66.0') consisted of gray, sandy (fine grained) CLAY, soft, plastic, with rounded quartz pebbles present

# WELL CONSTRUCTION LOG- UNCONSOLIDATED



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS.H01B.DG0FI Well MW-18  
 Town/City Hunter Army Airfield (HAA-01)  
 County Chatham State GA  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) 11/12/2009

Drilling Method Hollow-Stem Auger

Drilling Contractor ARM Environmental Services, Inc.

Drilling Fluid None

Development Technique(s) and Date(s)

Submersible pump 11/13/2009

Fluid Loss During Drilling N/A gallons

Water Removed During Development 50 gallons

Static Depth to Water 11.72 feet below M.P.

Pumping Depth to Water 20.08 feet below M.P.

Pumping Duration 1 hours

Yield 0.833 gpm Date 11/13/2009

Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Groundwater Monitoring

Remarks \_\_\_\_\_

Prepared by B. Wolf

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA 001-02  
 Date: 12/16/09 Sampled By: A. PAGNON  
 Sampling Time: 1520 Recorded By: A. PAGNON  
 Weather: 50s. SUNNY Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s) YSI / TURBIDITY
Serial #:	N/A	07F100307 / M2-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 15" Screen Interval: From: 8.10 To: 18.10  
 Total Depth: 18.10 Pump Intake Setting: ~13 FT BTW  
 Depth to Water: 3.52 Volumes to be Purged: N/A Lower Flow  
 Water Column: 14.58 Total Volume Purged: ~17000 mL  
 Gallons/Foot: 0.14 Pump On: 1340 Off: 1520  
 Gallons in Well: 2.33

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1345	5	~150	~750	4.12	67.7	7.94	951	17.64	123.0	9.60	-
1350	10	~150	~1500	4.23	65.3	7.99	958	17.64	121.4	6.91	-
1355	15	~150	~2250	4.26	56.7	7.77	957	17.82	131.8	4.92	-
1400	20	~150	~3000	4.26	58.5	7.45	951	17.95	147.4	3.71	-
1405	25	~150	~3750	4.26	49.2	7.87	927	17.96	153.9	4.55	-
1410	30	~150	~4500	4.26	41.2	7.17	920	17.74	173.1	5.16	-
1415	35	~150	~5250	4.26	40.5	7.10	914	17.75	177.1	4.77	-
1420	40	~150	~6000	4.26	32.9	7.71	876	17.70	199.6	3.69	-
1425	45	~150	~6750	4.26	34.4	7.72	892	17.82	199.7	5.78	-
1430	50	~150	~7500	4.26	29.0	7.70	872	17.87	202.4	5.24	-
1435	55	~150	~8250	4.26	27.4	7.57	841	17.91	208.5	4.81	-
1440	60	~150	~9000	4.26	25.1	7.07	868	17.94	171.5	5.02	-
1445	65	~150	~9750	4.26	20.6	7.17	872	17.89	170.2	5.36	-
1450	70	~150	~10500	4.26	23.4	7.11	868	17.74	167.6	5.08	-
1455	75	~150	~11250	4.26	21.8	7.83	870	17.82	187.9	4.93	-

### Observations During Sampling

Well-Condition: Good Purge Water Disposal: DRAIN  
 Color: Clear Turbidity(qualitative): Clear - Small white particles  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>pesticides</u>	<u>SHAWLY ARCADIS</u>	
<u>pesticides</u>	<u>1 L Amber (2)</u>	
<u>VOCS</u>	<u>40 ml vials (3)</u>	<u>HCl</u>
<u>Metals</u>	<u>250 ml Plastic (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes  
 2" = 0.16    4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01  
60E-HW-08  
 Date: 12/16/2009 Sampled By: A. Pagnon  
 Sampling Time: \_\_\_\_\_ Recorded By: A. Pagnon  
 Weather: 50s Cloudy Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>SAME</u>	<u>SAME</u>

### Purging Information

Casing Material: \_\_\_\_\_ Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: \_\_\_\_\_ Screen Interval: From: \_\_\_\_\_ To: \_\_\_\_\_  
 Total Depth: \_\_\_\_\_ Pump Intake Setting: \_\_\_\_\_  
 Depth to Water: \_\_\_\_\_ Volumes to be Purged: SAME  
 Water Column: \_\_\_\_\_ Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: \_\_\_\_\_ Pump On: \_\_\_\_\_ Off: \_\_\_\_\_  
 Gallons in Well: \_\_\_\_\_

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1500	80	~150	~12000	4.26	21.8	2.09	872	18.35	167.8	5.05	-
1505	85	~150	~12750	4.26	17.9	2.43	876	18.69	149.3	5.31	-
1510	90	~150	~13500	4.26	9.61	2.75	852	18.88	119.1	5.62	-
1515	95	~150	~14250	4.26	8.63	2.81	849	18.89	108.2	5.45	-
1520	100	~150	~15000	4.26	8.62	2.80	844	18.90	105.5	5.44	-
<u>[Signature]</u> 12/16/09											

### Observations During Sampling

Well Condition: \_\_\_\_\_ Purge Water Disposal: \_\_\_\_\_  
 Color: SAME Turbidity (qualitative): \_\_\_\_\_  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	From Lab	ARCADIS	Container Description	Preservative
<u>SAME</u>	<u>SAME</u>	<u>SAME</u>		

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01-MW-9  
 Date: 12-16-09 Sampled By: Ryan Kontas  
 Sampling Time: 1650 Recorded By: Ryan Kontas  
 Weather: Clear ~60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YS1556/R9397 Comette 2020/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 7 To: 17  
 Total Depth: 17.0 Pump Intake Setting: Middle of screen 12'  
 Depth to Water: 10.78 Volumes to be Purged: Low Flow  
 Water Column: 6.22 Total Volume Purged: ~1.5gal  
 Gallons/Foot: 0.16 Pump On: 1550 Off: 1630  
 Gallons in Well: 0.99

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
<u>1555</u>	<u>5</u>	<u>150ml</u>	<u>~750ml</u>	<u>10.81</u>	<u>2.94</u>	<u>5.09</u>	<u>303</u>	<u>17.50</u>	<u>96.4</u>	<u>0.91</u>	
<u>1600</u>	<u>10</u>			<u>10.82</u>	<u>7.11</u>	<u>5.11</u>	<u>305</u>	<u>17.97</u>	<u>93.6</u>	<u>0.99</u>	
<u>1605</u>	<u>15</u>			<u>10.82</u>	<u>5.48</u>	<u>5.08</u>	<u>312</u>	<u>18.28</u>	<u>93.8</u>	<u>0.83</u>	
<u>1610</u>	<u>20</u>			<u>10.82</u>	<u>5.11</u>	<u>5.06</u>	<u>317</u>	<u>18.29</u>	<u>90.0</u>	<u>0.62</u>	
<u>1615</u>	<u>25</u>			<u>10.82</u>	<u>4.89</u>	<u>5.06</u>	<u>320</u>	<u>18.41</u>	<u>90.3</u>	<u>0.59</u>	
<u>1620</u>	<u>30</u>			<u>10.82</u>	<u>4.68</u>	<u>5.07</u>	<u>321</u>	<u>18.38</u>	<u>89.5</u>	<u>0.51</u>	
<u>1625</u>	<u>35</u>			<u>10.82</u>	<u>4.38</u>	<u>5.06</u>	<u>325</u>	<u>18.41</u>	<u>84.5</u>	<u>0.38</u>	
<u>1630</u>	<u>40</u>			<u>10.82</u>	<u>4.14</u>	<u>5.06</u>	<u>327</u>	<u>18.40</u>	<u>81.9</u>	<u>0.45</u>	

### Observations During Sampling

Well Condition: PVC Purge Water Disposal: Drum  
 Color: Clear Turbidity (qualitative): <10 NTUs  
 Odor: slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	From Lab		ARCADIS	Container Description	Preservative
	<u>VOC 8260</u>	<u>3</u>	<u>40ml</u>	<u>CG</u>	<u>HCL</u>
<u>Metals 6010</u>	<u>1</u>	<u>500ul</u>	<u>PL</u>	<u>HNO3</u>	
<u>Pesticides</u>	<u>2</u>	<u>1L</u>	<u>AG</u>		

Boring/Casing Volumes

2" = 0.16 4" = 0.85

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-2  
 Date: 12-10-09 Sampled By: Ryan Kontas  
 Sampling Time: 1525 Recorded By: Ryan Kontas  
 Weather: Clear ~60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YSI 556/R9397 Lemoite 2020 R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2.5 Screen Interval: From: 14.9 To: 19.9  
 Total Depth: 19.9 Pump Intake Setting: Middle of screen ~ 17.5  
 Depth to Water: 11.18 Volumes to be Purged: LOW FLOW  
 Water Column: 8.72 Total Volume Purged: ~1.87 gal  
 Gallons/Foot: 0.12 Pump On: 1415 Off: 1505  
 Gallons in Well: 1.04

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1420	5	150ml	750ml	11.09	10.40	5.48	141	18.50	57.4	0.66	
1425	10	150ml	750ml	12.91	9.66	5.44	141	18.57	37.8	0.75	
1430	15	↓	↓	12.65	10.59	5.38	141	18.54	12.2	0.58	
1435	20	↓	↓	12.68	10.15	5.38	140	18.51	-1.3	0.33	
1440	25	↓	↓	12.70	6.84	5.36	138	18.48	-9.4	0.36	
1445	30	↓	↓	12.71	6.01	5.36	139	18.52	-12.6	0.26	
1450	35	↓	↓	12.71	5.45	5.37	138	18.55	-15.9	0.29	
1455	40	↓	↓	12.72	3.97	5.37	139	18.57	-21.2	0.30	
1455	45	↓	↓	12.72	3.77	5.37	139	18.62	-23.3	0.27	
1505	50	↓	↓	12.72	4.01	5.37	140	18.64	-26.8	0.26	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): <10 NTU  
 Odor: slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab	ARCADIS	
VOC 8260	3	40ml CG	HCL
Metals 6010	1	500cc PL	HNO3
Pesticides	2	1L AG	

Boring/Casing Volumes

2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-3  
 Date: 12-16-09 Sampled By: Ryan Kontas  
 Sampling Time: 1210 Recorded By: Ryan Kontas  
 Weather: Clear ~85 Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YSI 556/R9397 Lomette 2020/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 1.5 Screen Interval: From: 15 To: 20  
 Total Depth: 20 Pump Intake Setting: Middle of screen ~17.5'  
 Depth to Water: 11.07 Volumes to be Purged: Low Flow  
 Water Column: 8.93 Total Volume Purged: 1.68  
 Gallons/Foot: 0.12 Pump On: 1105 Off: 1150  
 Gallons in Well: 1.07

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1110	5	150ml	750ml	11.99	5.08	5.37	282	19.36	20.6	0.20	
1115	10			13.06	4.81	5.37	286	19.25	16.7	0.71	
1120	15			13.91	4.55	5.36	290	19.51	9.01	0.62	
1125	20			14.10	3.98	5.37	290	19.46	3.6	0.38	
1130	25			14.28	3.51	5.36	291	19.40	1.9	0.33	
1135	30			14.31	3.57	5.36	291	19.36	-0.4	0.26	
1140	35			14.32	3.55	5.36	291	19.33	-3.8	0.23	
1145	40			14.32	3.21	5.36	293	19.31	-7.8	0.25	
1150	45			14.32	3.15	5.36	293	19.29	-10.5	0.20	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): <10 NTUs  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab	ARCADIS	
<u>100 8260</u>	<u>3</u>	<u>40ml CG</u>	<u>HCL</u>
<u>Metals 6010</u>	<u>1</u>	<u>500cc PL</u>	<u>HNO3</u>
<u>Pesticides</u>	<u>2</u>	<u>1L AL</u>	<u>---</u>

Boring/Casing Volumes

2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-1  
 Date: 12-16-09 Sampled By: Ryan Kostas  
 Sampling Time: 1045 Recorded By: Ryan Kostas  
 Weather: Clear Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>VSI 630/R9997 Lomette 2020/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 1.5 Screen Interval: From: 15 To: 20  
 Total Depth: 20 Pump Intake Setting: Middle of screen ~ 12.5'  
 Depth to Water: 12.58 Volumes to be Purged: Low Flow  
 Water Column: 7.42 Total Volume Purged: ~1.5 gal  
 Gallons/Foot: 0.12 Pump On: 0945 Off: 1025  
 Gallons in Well: 0.89

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C, °F)	ORP (mV)	Diss. Oxygen	Comments
0950	5	150ml	750ml	13.01	15.6	5.19	198	18.42 -31.7	1.01		
0955	10			13.28	12.5	5.17	190	18.53 -40.6	0.91		
1000	15			13.40	9.72	5.16	191	18.60 -61.1	0.80		
1005	20			13.41	4.51	5.18	193	18.61 -70.0	0.52		
1010	25			13.41	4.02	5.18	192	18.78 -77.1	0.60		
1015	30			13.41	3.89	5.19	192	18.91 -78.2	0.49		
1020	35			13.41	3.51	5.18	192	18.99 -80.1	0.44		
1025	40			13.41	3.69	5.18	192	19.05 -81.2	0.31		

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): <10 NTU's  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab	ARCADIS	
<u>VOC R260</u>	<u>3</u>	<u>40ml CG</u>	<u>HCL</u>
<u>Metals Co10</u>	<u>1</u>	<u>500cc PL</u>	<u>HNO3</u>
<u>Pesticides</u>	<u>2</u>	<u>1L AG</u>	

Boring/Casing Volumes

2" = 0.16 4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-14R  
 Date: 12-16-09 Sampled By: Ryan Kontos  
 Sampling Time: 0920px 0935 Recorded By: Ryan Kontos  
 Weather: Clear ~50° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YS1556/R9397 Lamotte 2020 R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 9.2 To: 18.9  
 Total Depth: 18.9 Pump Intake Setting: Middle of screen 14'  
 Depth to Water: 11.42 Volumes to be Purged: Low Flow  
 Water Column: 7.48 Total Volume Purged: ~2.0gal  
 Gallons/Foot: 0.16 Pump On: 0820 Off: 0915  
 Gallons in Well: 1.19

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml/min)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0825	5	150ml	750ml	11.66	10.27	4.59	278	18.10	284.0	1.13	
0830	10	150ml	750ml	11.67	6.15	4.70	255	18.55	250.2	0.88	
0835	15	150ml	750ml	11.67	4.75	4.78	247	18.93	232.1	0.71	
0840	20	150ml	750ml	11.68	4.29	4.89	240	19.19	215.0	0.67	
0845	25	150ml	750ml	11.68	3.18	5.18	280	19.46	126.9	0.70	
0850	30	150ml	750ml	11.68	3.45	5.36	291	19.83	94.1	0.54	
0855	35	150ml	750ml	11.68	24.5	5.09	243	19.77	103.1	0.61	
0900	40	150ml	750ml	11.68	16.2	5.10	240	19.81	98.2	0.44	
0905	45	150ml	750ml	11.68	5.10	5.08	230	19.66	76.1	0.49	
0910	50	150ml	750ml	11.68	4.69	5.08	227	19.59	76.8	0.41	
0915	55	150ml	750ml	11.68	3.91	5.07	224	19.53	77.2	0.39	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): <10 NTU<sup>s</sup>  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	From Lab		Container Description	Preservative
	Volume	ARCADIS		
VOC 8260	3 40ml	RC16		HCL
Metals 6010	1 500cc	PL		HNO3
Pesticides	2 1L	ALC		

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01-MW-18  
 Date: 12-16-09 Sampled By: Ryan Kontas  
 Sampling Time: 1348 Recorded By: Ryan Kontas  
 Weather: Clear ~60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	N/A	YSI 530/R9397 Lantette <del>2009</del> R9151

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 56 To: 66  
 Total Depth: 66 Pump Intake Setting: Middle of screen col'  
 Depth to Water: 8.45 Volumes to be Purged: LOW FLOW  
 Water Column: 57.55 Total Volume Purged: 1.5gal  
 Gallons/Foot: 0.16 Pump On: 1230 Off: 1315  
 Gallons in Well: 9.20

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1235	5	150ml	750ml	8.64	7.21	6.47	245	19.39	-9.5	0.71	
1240	10	150ml	750ml	8.68	4.43	6.50	244	19.36	-13.4	0.58	
1245	15			8.70	3.11	6.49	242	19.40	-15.4	0.50	
1250	20			8.71	2.95	6.48	241	19.39	-17.7	0.46	
1255	25			8.71	3.00	6.47	238	19.43	-19.5	0.41	
1300	30			8.72	2.83	6.44	235	19.42	-22.0	0.38	
1305	35			8.72	2.91	6.44	235	19.34	-24.0	0.33	
1310	40			8.72	2.95	6.43	234	19.33	-23.1	0.26	
1315	45			8.72	2.76	6.43	234	19.33	-22.7	0.25	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: DUMP  
 Color: Clear Turbidity (qualitative): <10 NTU's  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab	ARCADIS	
VOC 8260	3 40ml	CG	HCL
Metals 6010	1 500cc	PL	HNO3
Pesticides	2 1L	AG	
SVOCs 8270	2 1L	AG	

Boring/Casing Volumes

2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01  
 Date: 12/16/09 Sampled By: A. Pagnon  
 Sampling Time: 12:50 Recorded By: A. Pagnon  
 Weather: FX Slightly Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
	N/A	YSI / TURBIDITY
Serial #:	N/A	OFF100307 / ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 1.5" Screen Interval: From: 7.90 To: 17.90  
 Total Depth: 17.90 Pump Intake Setting: ~13 ft BTOC  
 Depth to Water: 3.43 Volumes to be Purged: N/A Low Flow  
 Water Column: 14.47 Total Volume Purged: ~9000 mL  
 Gallons/Foot: 0.14 Pump On: 11:50 Off: 12:50  
 Gallons in Well: 2.32

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
11:55	5	~150	~750	3.97	60.7	4.18	277	18.03	76.7	40.12	-
12:00	10	~150	~1500	4.09	51.3	4.01	281	18.28	85.2	30.00	-
12:05	15	~150	~2250	4.09	48.7	4.45	228	18.50	68.6	31.93	-
12:10	20	~150	~3000	4.09	46.1	4.47	229	18.64	59.8	23.40	-
12:15	25	~150	~3750	4.09	46.0	4.48	230	18.75	53.8	19.80	-
12:20	30	~150	~4500	4.09	39.5	4.47	226	18.81	49.6	20.76	-
12:25	35	~150	~5250	4.09	30.1	4.45	225	18.80	48.5	17.76	-
12:30	40	~150	~6000	4.09	24.9	4.44	222	18.81	45.4	15.58	-
12:35	45	~150	~6750	4.09	16.2	4.46	221	18.71	43.4	15.05	-
12:40	50	~150	~7500	4.09	15.3	4.40	212	18.66	42.3	14.18	-
12:45	55	~150	~8250	4.09	12.1	4.41	212	18.64	41.4	14.27	-
12:50	60	~150	~9000	4.09	9.7	4.41	213	18.59	40.0	14.20	-
12/16/09											

### Observations During Sampling

Well Condition: Good Purge Water Disposal: DRUM  
 Color: CLEAR Turbidity (qualitative): CLEAR - SMALL WHITE PARTICLES  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	From Lab	Container Description	Preservative
PESTICIDES	SHEALY ARCADIS	1 L AMBER (2)	-
VOCs		40ml VIALS (3)	HCl
METALS		250ml PLASTIC (1)	HNO <sub>3</sub>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01 M13-14  
 Date: 12/16/09 Sampled By: A. Pagnon  
 Sampling Time: 1125 Recorded By: A. Pagnon  
 Weather: 50% Sunny Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s) YSI / TURBIDITY
Serial #:	N/A	07M100507/ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4.5 To: 14.5 Ft BTOC  
 Total Depth: 14.5 Pump Intake Setting: 29 Ft BTOC  
 Depth to Water: 4.49 Volumes to be Purged: N/A Low Flow  
 Water Column: 10.01 Total Volume Purged: 27000 mL  
 Gallons/Foot: 0.16 Pump On: 0825 Off: 1130  
 Gallons in Well: 1.6

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged (ml)	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0830	5	150	750	4.71	258	5.01	261	17.06	31.9	1.46	
0835	10	150	1500	4.72	329	5.02	257	17.15	24.9	1.20	
0840	15	150	2250	4.74	790	5.04	249	17.18	22.1	1.08	
0845	20	150	3000	4.76	252	5.05	250	17.24	18.8	0.96	
0850	25	150	3750	4.78	240	5.06	249	17.34	15.9	0.83	
0855	30	150	4500	4.78	264	5.23	250	17.26	10.4	0.70	
0900	35	150	5250	4.78	163	5.11	251	17.15	6.3	0.69	
0905	40	150	6000	4.78	132	5.15	249	17.14	-1.0	0.74	
0910	45	150	6750	4.78	115	5.10	250	17.11	-6.1	0.81	
0915	50	150	7500	4.78	115	5.06	251	17.12	-6.5	0.86	
0920	55	150	8250	4.78	101.6	5.05	251	17.14	-7.8	0.77	
0925	60	150	9000	4.78	91.5	5.05	252	17.18	-11.5	0.68	
0930	65	150	9750	4.78	89.3	5.05	253	17.19	-13.9	0.64	
0935	70	150	10500	4.78	77.1	5.08	249	17.06	-16.2	1.20	
0940	75	150	11250	4.78	73.1	5.06	250	17.28	-18.0	0.44	

### Observations During Sampling

Well Condition: GOOD Purge Water Disposal: DRUM  
 Color: BROWN Turbidity (qualitative): BROWN -> LIGHT BROWN  
 Odor: STRONG Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>ALL VOCs PESTICIDES</u>	<u>250 mL ARCADIS</u>	
<u>VOCs</u>	<u>1 L AMBIC (2)</u>	
	<u>40 mL VIALS (3)</u>	<u>HCl</u>
<u>METALS</u>	<u>250 mL PLASTIC (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01  
 Date: 12/16/09 Sampled By: A. TAGNON  
 Sampling Time: 1125 Recorded By: A. TAGNON  
 Weather: 50% Sunny Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>S A M E</u>	

### Purging Information

Casing Material: \_\_\_\_\_ Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: \_\_\_\_\_ Screen Interval: From: \_\_\_\_\_ To: \_\_\_\_\_  
 Total Depth: \_\_\_\_\_ Pump Intake Setting: \_\_\_\_\_  
 Depth to Water: SA Volumes to be Purged: \_\_\_\_\_  
 Water Column: \_\_\_\_\_ Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: \_\_\_\_\_ Pump On: \_\_\_\_\_ Off: \_\_\_\_\_  
 Gallons in Well: \_\_\_\_\_

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or m <sup>3</sup> )	Volume Purged <sup>1</sup>	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen (%)	Comments
0945	80	150	12000	4.78	73.6	5.04	249	17.27	-20.1	0.33	-
0950	85	150	12750	4.78	57.4	5.04	250	17.31	-21.9	0.31	-
0955	90	150	13500	4.78	54.6	5.04	249	17.28	-25.3	0.32	-
1000	95	150	14250	4.78	46.4	5.03	250	17.19	-26.2	0.29	-
1005	100	150	15000	4.78	41.3	5.04	252	17.13	-26.1	0.26	-
1010	105	150	15750	4.78	40.9	5.03	250	17.07	-30.7	0.26	-
1015	110	150	16500	4.78	40.9	5.04	250	17.09	-31.2	0.27	-
1020	115	150	17250	4.78	37.4	5.02	246	16.99	-33.0	0.29	-
1025	120	150	18000	4.78	36.1	5.02	246	16.98	-33.5	0.27	-
1030	125	150	18750	4.78	34.9	5.00	248	16.96	-35.3	0.22	-
1035	130	150	19500	4.78	31.3	5.00	246	16.70	-37.5	0.22	-
1040	135	150	20250	4.78	27.2	5.00	245	16.94	-37.4	0.22	-
1045	140	150	21000	4.78	23.4	4.98	245	17.14	-38.5	0.20	-
1050	145	150	21750	4.78	21.5	4.98	244	17.28	-41.5	0.38	-
1055	150	150	22500	4.78	20.6	4.98	245	17.20	-44.7	0.38	-

### Observations During Sampling

Well Condition: \_\_\_\_\_ Purge Water Disposal: \_\_\_\_\_  
 Color: SAME Turbidity (qualitative): \_\_\_\_\_  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): SAME

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>SAME</u>	<u>A M E</u>	<u>S</u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01 HW-14  
 Date: 12/16/09 Sampled By: A. Paganini  
 Sampling Time: 1125 Recorded By: A. Paganini  
 Weather: 50% Sunny Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>SA ME</u>	

### Purging Information

Casing Material: \_\_\_\_\_ Purge Method: (circle one) Submersible Centrifugal Bladder Bater Peristaltic  
 Casing Diameter: \_\_\_\_\_ Screen Interval: From: \_\_\_\_\_ To: \_\_\_\_\_  
 Total Depth: \_\_\_\_\_ Pump Intake Setting: \_\_\_\_\_  
 Depth to Water: \_\_\_\_\_ Volumes to be Purged: SA ME  
 Water Column: \_\_\_\_\_ Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: \_\_\_\_\_ Pump On: \_\_\_\_\_ Off: \_\_\_\_\_  
 Gallons in Well: \_\_\_\_\_

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1105	160	~150	24000	4.78	18.1	4.96	246	17.26	-47.1	0.21	-
1115	170	~150	25500	4.78	15.8	4.96	243	17.23	-48.6	0.17	-
1125	180	~150	27000	4.78	9.73	4.96	242	17.27	-50.1	0.16	-
<u>SA ME</u> 12/16/09											

### Observations During Sampling

Well Condition: SA ME Purge Water Disposal: \_\_\_\_\_  
 Color: \_\_\_\_\_ Turbidity(qualitative): \_\_\_\_\_  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	From Lab	ARCADIS	Container Description	Preservative
<u>SA ME</u>				

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01 MW-14D  
 Date: 12/16/09 Sampled By: A. Pagnon  
 Sampling Time: 0905 Recorded By: H. Pagnon  
 Weather: 52% Sunny Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	N/A	YSI / TURBIDITY
	N/A	OFF 100307 / ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2 Screen Interval: From: ~42.3 To: 52.3 ft BTOC  
 Total Depth: 52.3 Pump Intake Setting: ~47 ft BTOC  
 Depth to Water: 3.09 Volumes to be Purged: N/A Low Flow  
 Water Column: 49.21 Total Volume Purged: 26750 mL  
 Gallons/Foot: 0.16 Pump On: 0820 Off: \_\_\_\_\_  
 Gallons in Well: 7.87

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0825	5	~150	~750	3.11	44.9	5.96	325	15.74	62.5	60.03	
0830	10	~150	~1500	3.11	22.9	5.99	292	16.46	45.8	42.35	
0835	15	~150	2250	3.11	13.8	6.01	290	16.75	41.1	36.88	
0840	20	~150	3000	3.11	6.95	6.01	289	16.86	40.2	35.08	
0845	25	~150	3750	3.11	6.74	6.01	288	16.99	38.8	29.93	
0850	30	~150	4500	3.11	4.26	6.01	288	17.03	36.9	27.31	
0855	35	~150	5250	3.11	2.36	6.00	288	17.05	35.9	24.37	
0900	40	~150	6000	3.11	Ø	5.97	287	17.10	35.7	25.08	
0905	45	~150	6750	3.11	Ø	5.99	287	17.08	35.7	23.10	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: DRUM  
 Color: CLEAR Turbidity (qualitative): CLEAR  
 Odor: SLIGHT Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<del>Nitrate</del> <del>Perchlorate</del>	<u>SHEAW ARCADIS</u>	
<u>Vols</u>	<u>1 L AMBER (2)</u>	
<u>Metal</u>	<u>40 ml VIAL (3)</u>	<u>HCl</u>
	<u>750 ml PLASTIC (1)</u>	<u>HNO3</u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01  
 Date: 12/16/09 Sampled By: A. PAGON MW-13  
 Sampling Time: 1655 Recorded By: A. PAGON  
 Weather: 50s SUNNY Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s)
Serial #:	N/A	YSI / TURBIDITY 07F100307 / ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 5 To: 15.02  
 Total Depth: 15.02 Pump Intake Setting: 2.10 ft BTOC  
 Depth to Water: 2.32 Volumes to be Purged: N/A Low Flow  
 Water Column: 13.30 Total Volume Purged: 8250 mL  
 Gallons/Foot: 0.16 Pump On: 1600 Off: 1700  
 Gallons in Well: 2.13

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (C or F)	ORP (mV)	Diss. Oxygen	Comments
1605	5	150	750	2.75	1.84	2.51	584	16.44	129.1	12.54	-
1610	10	150	1500	2.86	Ø	2.63	584	16.84	123.4	12.23	-
1615	15	150	2250	2.90	Ø	2.62	573	17.39	117.8	13.38	-
1620	20	150	3000	2.93	Ø	2.56	563	17.55	113.1	13.60	-
1625	25	150	3750	2.95	Ø	2.59	557	17.64	108.2	13.74	-
1630	30	150	4500	2.95	Ø	2.62	551	17.68	104.0	14.79	-
1635	35	150	5250	2.95	Ø	2.58	547	17.70	101.3	15.86	-
1640	40	150	6000	2.95	Ø	2.67	546	17.71	97.0	17.80	-
1645	45	150	6750	2.95	Ø	2.61	541	17.73	91.0	23.70	-
1650	50	150	7500	2.95	Ø	2.65	541	17.80	86.1	27.81	-
1655	55	150	8250	2.95	Ø	2.61	541	17.79	85.8	26.44	-
<del>Handwritten signature and date</del>											

### Observations During Sampling

Well Condition: GOOD Purge Water Disposal: DOWN  
 Color: CLEAR Turbidity (qualitative): CLEAR  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
PESTICIDES	1 L AMBER (2)	-
VOC	40 mL VIALS (3)	HCl
METALS	250 mL PLASTIC (1)	HNO <sub>3</sub>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-4  
 Date: 12-17-09 Sampled By: Ryan Kontos  
 Sampling Time: 1355 Recorded By: Ryan Kontos  
 Weather: Clear ~60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>161556 R9397 Lomette 2009/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 8 1.5 Screen Interval: From: 10 To: 15  
 Total Depth: 15 Pump Intake Setting: Middle of Screen 12.5'  
 Depth to Water: 3.27 Volumes to be Purged: Low Flow  
 Water Column: 11.73 Total Volume Purged: 1.87  
 Gallons/Foot: 0.12 Pump On: 1245 Off: 1335  
 Gallons in Well: 1.40

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1250	5	150ml	750ml	3.60	12.2	5.78	96	17.99	60.6	1.54	
1255	10			3.72	11.7	5.76	96	18.05	48.1	1.18	
1300	15			3.77	8.49	5.75	97	18.10	23.8	0.93	
1305	20			3.80	5.30	5.75	98	18.25	10.3	0.50	
1310	25			3.81	3.97	5.74	98	18.32	5.6	0.38	
1315	30			3.81	2.79	5.74	99	18.41	-1.8	0.35	
1320	35			3.82	2.58	5.74	99	18.29	-7.6	0.25	
1325	40			3.82	2.69	5.74	100	18.21	-13.0	0.27	
1330	45			3.82	2.71	5.73	100	18.14	-19.5	0.19	
1335	50			3.82	2.02	5.72	101	18.09	-21.2	0.16	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity (qualitative): <10 NTUs  
 Odor: Slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>VOC 8260</u>	<u>3 40ml CG</u>	<u>HCL</u>
<u>Metals 86010</u>	<u>1 500µ PL</u>	<u>HNO3</u>
<u>Pesticides</u>	<u>2 1L AG</u>	<u>---</u>

Boring/Casing Volumes

2" = 0.16 4" = 0.85

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01  
 Date: 12/17/09 Sampled By: A. Pagnon  
 Sampling Time: 1105 Recorded By: A. Pagnon  
 Weather: 80% SUNNY Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s)
Serial #:	N/A	VSI / TURBIDITY 07F100307 / MS-16752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic?  
 Casing Diameter: 1.5" Screen Interval: From: ~7.5 To: 17.45  
 Total Depth: 17.45 Pump Intake Setting: ~12 ft BTOC  
 Depth to Water: 2.52 Volumes to be Purged: N/A Low Flow  
 Water Column: 14.93 Total Volume Purged: ~9000 mL  
 Gallons/Foot: 0.16 Pump On: 1005 Off: 1105  
 Gallons in Well: 2.39

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ft/min)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1010	5	150	750	3.50	8.94	5.71	230	16.79	67.5	0.98	-
1015	10	150	1500	3.65	4.71	5.76	227	17.57	45.5	0.61	-
1020	15	150	2250	3.68	7.73	5.80	222	17.86	33.7	0.45	-
1025	20	150	3000	3.68	1.73	5.84	220	17.96	26.0	0.35	-
1030	25	150	3750	3.68	Ø	5.88	216	18.01	18.4	0.32	-
1035	30	150	4500	3.65	Ø	5.89	215	18.05	11.5	0.31	-
1040	35	150	5250	3.65	Ø	5.92	214	18.09	5.2	0.30	-
1045	40	150	6000	3.65	Ø	5.94	212	18.16	1.4	0.29	-
1050	45	150	6750	3.65	Ø	5.98	211	18.26	-0.8	0.27	-
1055	50	150	7500	3.65	Ø	5.99	211	18.26	-3.1	0.24	-
1100	55	150	8250	3.65	Ø	6.02	211	18.26	-7.0	0.23	-
1105	60	150	9000	3.65	Ø	5.99	211	18.24	-5.6	0.23	-
AA							12/17/09				

### Observations During Sampling

Well Condition: Good Purge Water Disposal: DRAIN  
 Color: CLEAR Turbidity (qualitative): CLEAR  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>PESTICIDES</u>	<u>STEWART ARCADIS</u>	
<u>VOCS</u>	<u>1 L AMBER (2)</u>	
<u>METALS</u>	<u>40 mL VIALS (3)</u>	<u>HCl</u>
	<u>250 mL PLASTIC (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

HAA-01

Site Location: Fort Stewart/HAAF  
 Date: 12/17/2009  
 Sampling Time: 0930  
 Weather: 50s Cloudy

Project No. GP08HAFS Well ID: COE-MW-06  
 Sampled By: A. TAGNON  
 Recorded By: A. TAGNON  
 Duplicate/QA/QC: None

### Instrument Identification

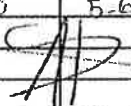
Instrument:	PID N/A	Water Quality Meter(s) YSI / TURBIDITY
Serial #:	N/A	07F100307 / NE-10752

### Purging Information

Casing Material: PVC  
 Casing Diameter: 1.5"  
 Total Depth: ~18.05  
 Depth to Water: 3.22  
 Water Column: 14.83  
 Gallons/Foot: 0.16  
 Gallons in Well: 2.37

Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Screen Interval: From: -8 To: 18.05 FT BTOC  
 Pump Intake Setting: 2.13 FT BTOC  
 Volumes to be Purged: N/A Low Flow  
 Total Volume Purged: ~8250 mL  
 Pump On: 0935 Off: 0930

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0840	5	150	750	4.25	6.67	5.06	217	15.68	182.6	1.34	-
0845	10	150	1500	4.19	Ø	5.39	198	16.22	121.0	1.01	-
0850	15	150	2250	4.14	Ø	5.52	188	16.53	54.7	0.93	-
0855	20	150	3000	4.22	Ø	5.55	187	16.70	42.5	0.73	-
0900	25	150	3750	4.22	Ø	5.59	188	16.82	28.0	0.79	-
0905	30	150	4500	4.22	Ø	5.59	188	16.76	19.5	0.62	-
0910	35	150	5250	4.22	Ø	5.60	188	16.11	15.6	0.68	-
0915	40	150	6000	4.22	Ø	5.60	190	16.32	16.4	0.55	-
0920	45	150	6750	4.22	Ø	5.60	192	16.30	15.4	0.46	-
0925	50	150	7500	4.22	Ø	5.60	194	16.26	10.3	0.55	-
0930	55	150	8250	4.22	Ø	5.60	194	16.24	11.1	0.57	-
 12/17/2009											

### Observations During Sampling

Well Condition: Good  
 Color: Clear  
 Odor: None

Purge Water Disposal: Drain  
 Turbidity(qualitative): White Particles  
 Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>PESTICIDES</u>	<u>SHEALY ARCADIS</u>	
<u>VOCs</u>	<u>1 L AMBER (2)</u>	<u>-</u>
<u>METALS</u>	<u>40 ml VIALS (3)</u>	<u>HCl</u>
	<u>250 ml PLASTIC (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes

2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAAF1-MW-10  
 Date: 12-17-09 Sampled By: Ryan Kontas  
 Sampling Time: 1650 Recorded By: Ryan Kontas  
 Weather: Clear ~55° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YSI 556/R9397 Lannette R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 2 To: 12  
 Total Depth: 12.0 Pump Intake Setting: Middle of Screen 7'  
 Depth to Water: 4.41 Volumes to be Purged: Low Flow  
 Water Column: 7.59 Total Volume Purged: 1.68  
 Gallons/Foot: 0.16 Pump On: 1545 Off: 1630  
 Gallons in Well: 1.21

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1550	5	150ml	750ml	4.50	30.0	5.23	256	17.75	178.8	0.106	
1555	10			4.50	25.5	5.13	254	17.65	196.1	0.51	
1600	15			4.50	18.6	5.11	253	17.31	161.3	0.45	
1605	20			4.50	14.9	5.10	252	17.19	144.1	0.49	
1610	25			4.50	15.8	5.09	250	17.04	135.2	0.38	
1615	30			4.50	12.6	5.08	249	16.96	129.8	0.31	
1620	35			4.50	9.90	5.08	249	16.93	127.1	0.30	
1625	39:40			4.50	8.04	5.07	249	16.91	125.9	0.29	
1630	45			4.50	8.88	5.07	248	16.89	124.7	0.27	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity (qualitative): <10 NTUs  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
VOC 8260	3 40ml	HCL
Metals 6010	1 500ml PL	HNO3
Pesticides	2 1L AB	

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01 MW-18  
 Date: 12/17/09 Sampled By: A. Pagnon  
 Sampling Time: 1220 Recorded By: A. Pagnon  
 Weather: 50% Sunny Duplicate/QA/QC: None


### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s) YSI / TURBIDITY
Serial #:	N/A	OFF100307 / ME-16752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 25.1 To: 15.1  
 Total Depth: ~15.10 Pump Intake Setting: ~10 ft BTCL  
 Depth to Water: 2.78 Volumes to be Purged: N/A Low Flow  
 Water Column: 12.32 Total Volume Purged: ~6000 mL  
 Gallons/Foot: 0.16 Pump On: 1140 Off: 1220  
 Gallons in Well: 1.97

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. <sup>oxy</sup> Oxygen	Comments	
1145	5	150	750	2.95	47.5	5.34	276	17.29	109.2	0.46	-	
1150	10	150	1500	2.95	34.7	5.26	282	17.58	113.1	0.63	-	
1155	15	150	2250	2.95	17.9	5.18	291	17.53	104.4	0.36	-	
1200	20	150	3000	2.95	14.0	5.15	299	17.47	103.7	0.65	-	
1205	25	150	3750	2.95	11.3	5.13	299	17.48	103.6	0.59	-	
1210	30	150	4500	2.95	11.1	5.15	301	17.46	102.4	0.34	-	
1215	35	150	5250	2.95	8.25	5.13	301	17.49	101.8	0.28	-	
1220	40	150	6000	2.95	7.31	5.10	305	17.49	102.4	0.26	-	
												
							12/17/09					

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Draw  
 Color: Cloudy (White) Turbidity (qualitative): White Cloudy  
 Odor: Slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>PESTICIDES</u>	<u>SHEALY ARCADIS</u>	
<u>NOCs</u>	<u>1 L AMBER (2)</u>	
<u>Metals</u>	<u>40 mL VIALS (3)</u>	<u>HCl</u>
	<u>250 mL PLASTIC (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

**ARCADIS**  
**Groundwater Sampling Form**

Site Location: Fort Stewart/HAAF Project No: GP08HAFS Well ID: HAAF01-MW17  
 Date: 12/17/09 Sampled By: A. Pagnon  
 Sampling Time: 1330 Recorded By: A. Pagnon  
 Weather: 80s Sunny Duplicate/QA/QC: None

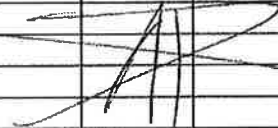
**Instrument Identification**

Instrument:	PID	Water Quality Meter(s)
	N/A	YSI / TURBIDITY
Serial #:	N/A	OTF100307 / NS-10752

**Purging Information**

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: ~5.30 To: ~15.30 Ft BTOC  
 Total Depth: 15.30 Pump Intake Setting: ~11 ft BTOC  
 Depth to Water: 3.79 Volumes to be Purged: N/A Low Flow  
 Water Column: 11.69 Total Volume Purged: ~6000 mL  
 Gallons/Foot: 0.16 Pump On: 1250 Off: 1330  
 Gallons in Well: 1.87

**Field Parameter Measurements During Purging**

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1255	5	150	750	4.05	7.33	4.67	139	17.07	163.1	1.21	-
1300	10	150	1500	4.21	2.69	4.60	137	17.23	191.5	0.89	-
1305	15	150	2250	4.23	Ø	4.56	135	17.45	202.0	0.57	-
1310	20	150	3000	4.23	Ø	4.55	135	17.50	207.1	0.44	-
1315	25	150	3750	4.23	Ø	4.52	135	17.60	215.6	0.30	-
1320	30	150	4500	4.23	Ø	4.51	136	17.57	218.2	0.27	-
1325	35	150	5250	4.23	Ø	4.50	136	17.51	222.5	0.25	-
1330	40	150	6000	4.23	Ø	4.50	137	17.49	223.5	0.28	-
											
12/17/09											

**Observations During Sampling**

Well Condition: Good Purge Water Disposal: DRUM  
 Color: WHITE / CLEAR / Yellow Turbidity (qualitative): CLOUDY / CLEAR  
 Odor: SLIGHT Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab		
<u>PESTICIDE</u>	<u>SHERLY</u>	<u>ARCADIS</u>	
<u>NDCs</u>	<u>1</u>	<u>AMBER (2)</u>	
<u>METALS</u>	<u>40 mL</u>	<u>VIALS (3)</u>	<u>HCl</u>
	<u>250 mL</u>	<u>PLASTIC (1)</u>	<u>HNO<sub>3</sub></u>

Boring/Casing Volumes  
 2" = 0.16    4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-6  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1540 Recorded By: Erica Maddox  
 Weather: Sunny, High 40's Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	VSI 554 (R11439)/2020a (R10173)

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer (Peristaltic)  
 Casing Diameter: 2" Screen Interval: From: 3.0 To: 13.0  
 Total Depth: 15.0 Pump Intake Setting: Mudscreen ~ 8'  
 Depth to Water: 8.20 Volumes to be Purged: Low Flow  
 Water Column: 9.8 Total Volume Purged: ~1.75  
 Gallons/Foot: 0.16 Pump On: 1450 Off: 1555  
 Gallons in Well: 1.57

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1455	5	180	0	5.24	21.2	6.17	132	26.52	68.9	0.35	
1500	10	180	0.25	5.24	14.4	6.06	126	19.94	85.0	0.09	
1505	15	180	0.5	5.24	10.2	6.03	126	19.71	91.7	0.10	
1510	20	180	0.75	5.24	7.7	6.04	125	19.41	96.1	0.13	
1515	25	180	1.0	5.24	6.49	6.04	125	19.46	97.4	0.13	
1520	30	180	1.25	5.24	4.94	6.04	124	19.46	98.5	0.14	
1525	35	180	1.5	5.24	2.62	6.04	124	19.38	99.9	0.19	
1530	40	180	1.75	5.24	1.98	6.04	124	19.32	100.3	0.18	

Erica Maddox 12/17/09

### Observations During Sampling

Well Condition: Good (no water in the) Purge Water Disposal: DRUM  
 Color: Clear Turbidity (qualitative): \_\_\_\_\_  
 Odor: None Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
DOCs	40 mL vial	HCL
SDOCs	1L Amber	NONE

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAAF- MW12A  
 Date: 12/17/09 Sampled By: A. PAGNON  
 Sampling Time: 1510 Recorded By: A. PAGNON  
 Weather: 60s Sunny Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID N/A	Water Quality Meter(s)
Serial #:	N/A	VSI / TURBIDITY OFFIC00307 / ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: ~42.30 To: 52.30 ft BTOC  
 Total Depth: 52.30 Pump Intake Setting: ~48 ft BTOC  
 Depth to Water: 3.18 Volumes to be Purged: N/A Low Flow  
 Water Column: 49.12 Total Volume Purged: 110500 mL  
 Gallons/Foot: 0.16 Pump On: 1350 Off: 1510  
 Gallons in Well: 7.06

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1355	5	150	750	3.21	10.80	6.67	335	18.02	36.2	1.02	
1400	10	150	1500	3.23	8.06	6.80	343	18.24	17.2	0.47	
1405	15	150	2250	3.23	Ø	6.87	345	18.29	-2.3	0.39	
1410	20	150	3000	3.23	Ø	6.92	389	18.33	-43.4	0.44	
1415	25	150	3750	3.23	Ø	6.92	411	18.30	-57.6	0.29	
1420	30	150	4500	3.23	Ø	6.94	421	18.05	-84.3	0.25	
1425	35	150	5250	3.23	Ø	6.95	422	17.89	-97.1	0.25	
1430	40	150	6000	3.23	Ø	6.96	422	17.86	-102.6	0.26	
1435	45	150	6750	3.23	Ø	6.97	421	17.72	-83.8	0.22	
1440	50	150	7500	3.23	Ø	6.98	423	17.25	-107.5	0.34	
1455	55	150	8250	3.23	Ø	6.98	422	17.71	-86.5	0.24	
1500	60	150	9000	3.23	Ø	6.98	422	18.06	-72.1	0.18	
1505	65	150	9750	3.23	Ø	7.00	422	18.14	-63.9	0.20	
1510	70	150	10500	3.23	Ø	7.00	422	18.20	-70.2	0.22	
12/17/09											

PAUSE PUMPING  
BATTERIES DIED

### Observations During Sampling

Well Condition: Good Purge Water Disposal: DRAIN  
 Color: CLEAR Turbidity(qualitative): CLEAR  
 Odor: SLIGHT Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab		
PESTICIDE	SHEALY	ARCADIS	
	1 L	AMBER (2)	-
NIXES	40 mL	VIALS (3)	HCl
METALS	250 mL	PLASTIC (1)	HNO <sub>3</sub>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No: GP08HAFS Well ID: HAAD1-MW-15  
 Date: 12-17-09 Sampled By: Ryan Kontos  
 Sampling Time: 1225 Recorded By: Ryan Kontos  
 Weather: Clear ~ 60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YSI 550/R9397 Lantette 2020/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 9.5 To: 14.5  
 Total Depth: 14.5 Pump Intake Setting: Middle of screen 9.5'  
 Depth to Water: 8.51 Volumes to be Purged: Low Flow  
 Water Column: 5.99 Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: 0.16 Pump On: 1105 Off: 1205  
 Gallons in Well: 0.95

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1110	5	150ml	750ml	8.74	15.6	5.10	141	18.25	154.5	0.91	
1115	10			8.82	15.7	5.08	140	18.56	145.2	0.66	
1120	15			8.89	15.0	5.06	139	18.87	137.4	0.51	
1125	20			8.89	16.0	5.08	140	18.68	115.4	0.21	
1130	25			8.89	17.7	5.10	141	18.51	106.1	0.27	
1135	30			8.89	16.9	5.12	141	18.68	99.2	0.22	
1140	35			8.89	17.2	5.13	142	18.84	91.5	0.29	
1145	40			8.89	17.8	5.14	142	18.99	85.1	0.35	
1150	45			8.89	12.6	5.16	142	19.03	73.9	0.30	
1155	50			8.89	9.11	5.18	142	19.16	66.1	0.31	
1200	55			8.89	8.54	5.19	143	19.19	63.5	0.21	
1205	60			8.89	8.39	5.20	143	9.24	62.0	0.24	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity (qualitative): <10 NTU  
 Odor: slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab	ARCADIS	
<u>VOC 8210</u>	<u>3</u>	<u>40ml CL</u>	<u>HCL</u>
<u>Metals 6010</u>	<u>1</u>	<u>500cc PL</u>	<u>HNO3</u>
<u>Pesticides</u>	<u>2</u>	<u>1L AG</u>	<u>---</u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01-MW-16  
 Date: 12-17-09 Sampled By: Ryan Kontas  
 Sampling Time: 0923 Recorded By: Ryan Kontas  
 Weather: Clear ~ 40° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>HSI 550 R9397 Lamotte 2020/R 915-1</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 9 To: 19  
 Total Depth: 19.0 Pump Intake Setting: Middle of screen 14'  
 Depth to Water: 13.90 Volumes to be Purged: Low Flow  
 Water Column: 5.1 Total Volume Purged: ~1.5 gal  
 Gallons/Foot: 0.16 Pump On: 0810 Off: 0850  
 Gallons in Well: 0.81

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0815	5	150ml	750ml	14.02	1.67	4.72	142	14.62	318.0	1.02	
0820	10			14.03	1.89	4.78	134	14.83	322.0	0.80	
0825	15			14.03	1.54	4.80	124	15.17	334.1	0.69	
0830	20			14.03	1.25	4.83	120	15.73	319.2	0.57	
0835	25			14.03	1.44	4.90	117	16.04	305.4	0.53	
0840	30			14.03	1.60	4.99	116	16.04	273.0	0.39	
0845	35			14.03	1.38	5.03	115	16.10	264.1	0.35	
0850	40			14.03	1.30	5.09	115	16.11	260.3	0.31	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): 610 NTU\*  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
VOC 8260	2 40ml CG	HCL
SVOC 8270	2 1L AG	
Metals 6010	1 500cc PL	HNO3
Pesticides	2 1L AG	

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-01-mw-17  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1150 Recorded By: Erica Maddox  
 Weather: Sunny, Mid 40s Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI 556(R11439)/2020e (R10173)

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4 To: 14.5  
 Total Depth: 14.5 Pump Intake Setting: Mid Screen  
 Depth to Water: 6.87 Volumes to be Purged: Low Flow  
 Water Column: 7.63 Total Volume Purged: 6.2 gal  
 Gallons/Foot: 0.16 Pump On: 0950 Off: 1155  
 Gallons in Well: 1.22

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0955	5	160	0.8	6.70	75.7	4.10	124	17.04	234.9	1.83	
1000	10	160	0.8	6.70	75.7	4.07	124	17.02	242.8	1.55	
1005	15	160	0.6	6.70	75.7	4.87	121	17.09	243.4	1.46	
1015	25	160	0.9	6.70	75.7	4.85	121	18.81	223.0	1.33	
1020	35	160	1.2	6.70	75.7	4.85	121	18.93	203.3	1.25	
1030	45	160	1.5	6.70	74.6	4.83	121	18.95	208.2	1.22	
1035	50	160	1.8	6.70	81.2	4.82	123	19.02	211.7	1.25	
1040	55	160	2.1	6.70	81.2	4.07	123	19.05	202.5	1.25	
1045	60	160	2.4	6.70	87.6	4.02	130	19.09	208.0	1.32	
1050	65	160	2.7	6.70	87.6	4.01	130	19.01	207.7	1.32	
1055	70	160	3.0	6.70	85.4	4.01	130	20.73	206.8	1.32	
1100	75	160	3.3	6.70	86.4	4.01	123	21.0	205.2	1.41	
1105	80	160	3.6	6.70	86.1	4.00	123	21.15	206.3	1.41	
1110	85	160	3.9	6.70	85.0	4.00	123	21.26	207.4	1.41	
1115	90	160	4.2	6.70	85.0	3.99	123	20.98	206.9	1.41	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): Orange tint w/ particles  
 Odor: NONE Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
NO3	40ml OVA vial	HCL

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

**ARCADIS**  
**Groundwater Sampling Form**

Site Location: Fort Stewart/HAAF Project No. GPO8HAFS Well ID: HAAF-01-NW-17  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1150 Recorded By: Erica Maddox  
 Weather: Sunny, Mid 40's Duplicate/QA/QC: None

**Instrument Identification**

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YS1556 (R11439)/2020e (R10173)

**Purging Information**

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4 To: 14.5  
 Total Depth: 14.5 Pump Intake Setting: Midscreen ~10  
 Depth to Water: 6.87 Volumes to be Purged: Low Flow  
 Water Column: 7.63 Total Volume Purged: 13.2 gal  
 Gallons/Foot: 0.16 Pump On: 0950 Off: 1155  
 Gallons in Well: 1.22

**Field Parameter Measurements During Purging**

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1120	95	160	4.8	6.70	85.0	3.80	123	20.07	205.4	1.42	
1125	100	160	5.1	6.70	85.0	3.79	123	20.02	205.3	1.42	
1130	105	160	5.4	6.70	85.0	3.79	123	20.06	204.8	1.43	
1135	110	160	5.7	6.70	85.0	3.79	123	20.07	204.8	1.43	
1140	115	160	6.0	6.70	85.0	3.79	123	20.08	204.9	1.43	
1145	120	160	6.2	6.70	85.0	3.79	123	20.08	204.8	1.43	
Turbidity not stable (below 10 NTU), Swell volumes removed. Well sampled.											
<i>Erica Maddox 12/17/09</i>											

**Observations During Sampling**

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity (qualitative): orange tint w/ particles  
 Odor: None Other (OVA, HNU, etc.): ---

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>UVES</u>	<u>40 ml VOA med</u>	<u>HCL</u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS Groundwater Sampling Form

Site Location: Fort Stewart/HAAF/HAA-0 Project No. GP08HAFS Well ID: F1MLW-2  
 Date: 12-16-09 Sampled By: Erica Maddox  
 Sampling Time: 1105 Recorded By: Erica Maddox  
 Weather: Sunny Low 50's Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:		YSI 590(R1430)/2010(R944)

### Purging Information

Casing Material: 1 1/2" Purge Method: (circle one) Submersible Centrifugal Bladder Bailor (Peristaltic)  
 Casing Diameter: 2" Screen Interval: From: 4.6 To: 14.6  
 Total Depth: 16.10 Pump Intake Setting: Midscreen - 9.6  
 Depth to Water: 11.98 Volumes to be Purged: Low Flow  
 Water Column: 4.12 Total Volume Purged: 5.75  
 Gallons/Foot: 0.16 Pump On: 0835 Off: 1115  
 Gallons in Well: 0.44

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0845	5	165	0.20	12.50	98	6.42	44	22.83	167	4.97	
0850	10	165	0.40	12.50	100	6.44	33	22.78	158.2	3.52	
0855	15	165	0.60	12.50	114	6.44	30	22.69	163.8	3.27	
0900	20	165	0.80	12.50	70.3	6.45	24	22.6	158.6	2.46	
0905	25	165	1.0	12.50	67.4	6.41	28	22.70	152.1	4.19	
0910	30	165	1.20	12.50	72.9	6.36	25	22.64	156.3	3.43	
0915	35	165	1.40	12.50	65.6	6.33	28	22.54	145.3	4.08	
0920	40	165	1.60	12.50	58.2	6.33	28	22.51	146.9	4.73	
0925	45	165	1.80	12.50	48.8	6.32	25	22.60	149.5	3.31	
0930	50	165	2.0	12.50	46.2	6.31	27	22.66	151.2	3.47	
0935	55	165	2.20	12.50	36.1	6.48	29	22.61	154.4	4.02	
0940	60	165	2.40	12.50	33.2	6.50	27	22.55	157.5	5.04	4.10
0945	65	165	2.60	12.50	28.5	6.47	29	22.55	161.4	5.47	4.16
0950	70	165	2.80	12.50	25.2	6.48	29	22.55	162.7	5.77	4.26
0955	75	165	3.00	12.50	21.7	6.43	27	22.69	165.2	6.43	4.23

### Observations During Sampling

Well Condition: Flow (water missing in 10) Purge Water Disposal: 716 ppm  
 Color: clear Turbidity (qualitative): slightly cloudy  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
POCS	45 mL HAA 11.23	HCL

Boring/Casing Volumes  
 2" = 0.16    4" = 0.65

**ARCADIS**  
**Groundwater Sampling Form**

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HNW-2  
 Date: 12/16/09 Sampled By: Erica Maddox  
 Sampling Time: 1105 Recorded By: Erica Maddox  
 Weather: Sunny, low 50's Duplicate/QA/QC: NONE

**Instrument Identification**

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	VSI 350 (P1439)/2000 (P1641)

**Purging Information**

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4.6 To: 14.6  
 Total Depth: 16.10 Pump Intake Setting: Midscreen = 9.6  
 Depth to Water: 11.98 Volumes to be Purged: Low Flow  
 Water Column: 4.12 Total Volume Purged: 5.75  
 Gallons/Foot: 0.16 Pump On: 0635 Off: 115  
 Gallons in Well: 0.66

**Field Parameter Measurements During Purging**

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss Oxygen	Comments
1000	80	165	3.20	12.50	18.3	5.43	27	20.87	166.8	1.07	
1005	85	165	3.40	12.50	17.9	5.45	27	20.87	166.6	3.66	
1010	90	165	3.60	12.50	17.7	5.37	27	20.96	169.9	3.74	
1015	95	165	3.80	12.30	21.1	5.41	27	21.12	168.0	3.62	
1020	100	165	4.00	12.50	20.7	5.42	27	21.28	166.5	3.30	
1025	105	165	4.20	12.30	20.2	5.45	27	21.78	165.2	3.82	
1030	110	165	4.40	12.50	27.1	5.40	27	21.31	165.3	4.15	
1035	115	165	4.60	12.50	27.1	5.42	27	21.33	165.5	3.80	
1040	120	165	4.80	12.50	26.5	5.43	28	21.36	167.7	3.84	
1045	125	165	5.00	12.50	26.5	5.42	28	21.43	169.9	3.92	
1050	130	165	5.25	12.50	26.0	5.36	28	21.56	173.4	4.00	
1055	135	165	5.50	12.50	25.0	5.32	27	21.77	176.5	3.79	
1100	140	165	5.75	12.50	31.1	5.39	27	21.77	174.7	3.83	
*Well not fully purged. Small volumes used to sample.											

**Observations During Sampling**

Well Condition: Fair (Crusty, missing well ID) Purge Water Disposal: Drum  
 Color: clear Turbidity (qualitative): slightly cloudy first  
 Odor: NONE Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCs	40 mL VOA vial	HCL

Boring/Casing Volumes  
 2" = 0.16    4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: 11A110-4  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1920 Recorded By: Erica Maddox  
 Weather: Sunny, Low 40s Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI 550 (K11439) / 2020a (K10173)

### Purging Information

Casing Material: 1 1/2" Purge Method: (circle one)  Submersible  Centrifugal  Bladder  Bailor  Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 3' To: 13'  
 Total Depth: 15.0 Pump Intake Setting: Subscreen  
 Depth to Water: 8.98 Volumes to be Purged: Low Flow  
 Water Column: 9.02 Total Volume Purged: 22.0  
 Gallons/Foot: 0.14 Pump On: 0810 Off: 0930  
 Gallons in Well: 1.44

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0835	0	150	0	6.08	8.10	7.15	154	16.92	101.6	2.72	
0840	5	150	.25	6.08	5.33	6.13	144	16.92	99.1	2.94	
0845	10	150	.5	6.08	4.99	6.19	141	16.71	104.1	2.90	
0850	15	150	.75	6.08	4.61	6.07	142	16.83	107.6	2.91	
0855	20	150	1.0	6.08	4.03	6.05	148	16.71	112.3	2.95	
0900	25	150	1.25	6.08	3.77	6.04	149	16.70	115.4	2.94	
0905	30	150	1.50	6.08	3.01	6.04	152	16.54	119.9	2.90	
0910	35	150	1.75	6.08	2.93	6.04	155	16.53	122.0	2.93	
0912	40	150	2.0	6.08	2.22	6.04	155	16.50	125.5	2.97	
								16.50	125.5		
Erica Maddox 12/17/09											

### Observations During Sampling

Well Condition: no well ID tag Purge Water Disposal: Drum  
 Color: clear Turbidity (qualitative): ---  
 Odor: None Other (OVA, HNU, etc.): ---

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>VOCs</u>	<u>ARCADIS</u>	<u>HCL</u>

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HML-9  
 Date: 12-16-09 Sampled By: Erica Maddox  
 Sampling Time: 1225 Recorded By: Erica Maddox  
 Weather: Sunny, Low 50's Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:		VSI 550 (K11439)/200204 (K9641)

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 3 To: 13  
 Total Depth: 15.5 Pump Intake Setting: midscreen ~ 8  
 Depth to Water: 6.0 Volumes to be Purged: Low Flow  
 Water Column: 9.5 Total Volume Purged: 1.75  
 Gallons/Foot: 0.16 Pump On: 1140 Off: 1245  
 Gallons in Well: 1.52

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss Oxygen	Comments
1145	5	170	0	6.21	2.13	6.06	149	19.50	172.8	2.53	
1150	10	170	.25	6.21	4.25	6.07	153	19.50	168.0	2.37	
1155	15	170	.5	6.21	6.21	6.08	162	19.30	164.9	2.39	
1200	20	170	.75	6.21	4.95	6.06	164	19.25	163.8	2.45	
1205	25	170	1.0	6.21	4.02	6.09	167	19.34	162.1	2.02	
1210	30	170	1.25	6.21	4.25	6.10	172	19.39	160.0	1.76	
1215	35	170	1.5	6.21	3.13	6.10	175	19.37	156.9	1.70	
1220	40	170	1.75	6.21	3.05	6.11	176	19.34	153.4	1.82	

### Observations During Sampling

Well Condition: Good (low flow) Purge Water Disposal: Drum  
 Color: clear Turbidity (qualitative): ---  
 Odor: NONE Other (OVA, HNU, etc.): ---

Constituents Sampled	Container Description	
	From Lab <input checked="" type="checkbox"/> ARCADIS	Preservative
VOCs	40 ml LCH Glass	HCL

Boring/Casing Volumes  
 2" = 0.16    4" = 0.65



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-07  
 Date: 12-16-09 Sampled By: Erica Maddox  
 Sampling Time: 1710 Recorded By: Erica Maddox  
 Weather: Sunny, Low 50's Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI 550 (R11430) / 2020 (R064)

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 5 To: 15  
 Total Depth: 15.0 Pump Intake Setting: Midscreen ~ 10  
 Depth to Water: 8.77 Volumes to be Purged: Low flow  
 Water Column: 6.23 Total Volume Purged: 1.5  
 Gallons/Foot: 0.14 Pump On: 16:20 Off: 17:15  
 Gallons in Well: 0.997

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
16:35	5	150	0.25	8.80	19.2	6.70	353	19.72	134.0	2.50	
16:40	10	150	0.25	8.80	15.0	6.70	353	19.67	132.4	2.13	
16:45	15	150	0.5	8.80	11.3	6.70	352	19.61	132.3	2.08	
16:50	20	150	0.75	8.80	6.9	6.69	351	19.55	130.1	1.97	
16:55	25	150	1.0	8.80	3.5	6.68	352	19.91	124.4	2.02	
17:00	30	150	1.25	8.80	2.2	6.65	352	19.84	120.6	1.95	
17:05	35	150	1.5	8.80	1.5	6.61	351	19.98	118.5	1.96	

### Observations During Sampling

Well Condition: Good (no air in) Purge Water Disposal: Drum  
 Color: clear Turbidity(qualitative): --  
 Odor: None Other (OVA, HNU, etc.): --

Constituents Sampled	Container Description	
	From Lab <input checked="" type="checkbox"/> ARCADIS	Preservative
UCLs	40 ml UCL vial	HCL

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-10  
 Date: 12-17-09 Sampled By: Ryan Kontas  
 Sampling Time: 1046 Recorded By: Ryan Kontas  
 Weather: Clear ~ 45-50° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YS1556/R9397 Lomotte 2020/R9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 2.7 To: 12.8  
 Total Depth: 12.8 Pump Intake Setting: Middle of screen ~ 8'  
 Depth to Water: 6.28 Volumes to be Purged: Low Flow  
 Water Column: 6.52 Total Volume Purged: 1.68 gal  
 Gallons/Foot: 0.16 Pump On: 0945 Off: 1030  
 Gallons in Well: 1.04

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml/min)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
0950	5	150ml	750ml	6.33	7.21	5.44	171	13.34	236.3	0.80	
0955	10			6.34	3.98	5.43	171	13.44	239.3	0.71	
1000	15			6.34	3.45	5.41	172	13.56	242.1	0.68	
1005	20			6.34	3.60	5.35	172	13.99	238.3	0.53	
1010	25			6.34	3.73	5.30	171	14.28	227.1	0.41	
1015	30			6.34	3.44	5.28	171	14.43	215.1	0.34	
1020	35			6.34	2.91	5.27	171	14.57	207.5	0.30	
1025	40			6.34	2.50	5.24	172	14.66	201.0	0.27	
1030	45			6.34	2.22	5.27	172	14.70	191.4	0.31	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: clear Turbidity (qualitative): < 10 NTUs  
 Odor: slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	From Lab	ARCADIS	Container Description	Preservative
<u>VOC 8260</u>	<u>3</u>	<u>40ml</u>	<u>CE</u>	<u>HCL</u>
<u>SUOC 8270</u>	<u>2</u>	<u>1L</u>	<u>AG</u>	

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMC0-11  
 Date: 12-16-09 Sampled By: Erica Maddox  
 Sampling Time: 1408 Recorded By: Erica Maddox  
 Weather: \_\_\_\_\_ Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	VSI 556 (R11439)/20202 (R11441)

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4.7 To: 14.8  
 Total Depth: 18.07 Pump Intake Setting: Midscreen ≈ 9  
 Depth to Water: 9.6 Volumes to be Purged: Low Flow  
 Water Column: 2.47 Total Volume Purged: 1.25  
 Gallons/Foot: 0.16 Pump On: 1330 Off: 1  
 Gallons in Well: 1.36

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1335	5	150	0	9.63	3.15	5.54	285	20.57	141.9	0.12	
1340	10	150	.25	9.63	3.58	5.47	288	20.82	157.4	0.18	
1345	15	150	.50	9.63	2.80	5.47	289	20.18	159.5	0.16	
1350	20	150	.75	9.63	2.17	5.47	290	20.72	163.9	0.14	
1355	25	150	1.0	9.63	1.99	5.45	294	20.73	168.1	0.12	
1400	30	150	1.25	9.43	1.74	5.42	296	20.72	170.3	0.11	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: \_\_\_\_\_  
 Color: Clear Turbidity(qualitative): light yellow tint  
 Odor: None Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCs	48 ml CCP vials	HCLs

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-13  
 Date: 12-17-09 Sampled By: Ryan Kontas  
 Sampling Time: 1521 Recorded By: Ryan Kontas  
 Weather: Clear ~60° Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>N/A</u>	<u>YSI 556/9397 Lemo Hc 2020/9151</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one)  Submersible  Centrifugal  Bladder  Bailor  Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 7.5 To: 17.0  
 Total Depth: 17.6 Pump Intake Setting: Middle of Screen 12.5'  
 Depth to Water: 12.26 Volumes to be Purged: Low Flow  
 Water Column: 5.34 Total Volume Purged: 1.87 gal  
 Gallons/Foot: 0.16 Pump On: 1415 Off: 1505  
 Gallons in Well: 0.85

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1420	5	180ml	750ml	12.44	23.7	5.94	265	20.88	-3.8	0.78	
1425	10			12.46	20.6	5.96	268	21.42	-0.5	0.54	
1430	15			12.46	16.7	5.95	270	21.37	-3.1	0.38	
1435	20			12.46	15.0	5.95	273	21.35	-6.6	0.35	
1440	25			12.46	14.2	5.95	271	21.34	-3.4	0.27	
1445	30			12.46	13.6	5.95	270	21.40	0.5	0.23	
1450	35			12.46	11.1	5.95	270	21.31	-2.4	0.21	
1455	40			12.46	9.56	5.95	270	21.30	0.2	0.25	
1500	45			12.46	7.24	5.95	270	21.30	0.8	0.22	
1505	50			12.46	8.69	5.95	269	21.28	0.3	0.18	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): <10 NTU  
 Odor: Slight Other (OVA, HNU, etc.): N/A

Constituents Sampled	From Lab		Container Description		Preservative
	ARCADIS				
<u>VOC</u>	<u>8260</u>	<u>3 40ml CG</u>			<u>HCL</u>
<u>SVOC</u>	<u>8270</u>	<u>2 1L AG</u>			

Boring/Casing Volumes

2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No: GP08HAFS Well ID: HAA-01  
 Date: 12/17/09 Sampled By: A. Pagnon  
 Sampling Time: 1655 Recorded By: A. Pagnon  
 Weather: 60s Sunny Duplicate/QA/QC: None

HAD TO  
SAMPLE LAST  
B/C OF  
PAINT WAR  
EXERCISE

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	N/A	YSI / TURBIDITY
	N/A	OFFIC0307 / ME-10752

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: ~3.5 To: 15.5  
 Total Depth: ~15.50 Pump Intake Setting: ~10 ft BTAC  
 Depth to Water: 3.04 Volumes to be Purged: N/A Low Flow  
 Water Column: 12.46 Total Volume Purged: ~9000 mL  
 Gallons/Foot: 0.16 Pump On: 1555 Off: 1655  
 Gallons in Well: 1.99

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (C or F)	ORP (mV)	Diss. Oxygen	Comments
1600	5	150	750	3.53	60.6	6.51	247	17.26	48.2	0.81	-
1605	10	150	1500	3.53	40.4	6.49	242	17.41	37.7	0.57	-
1610	15	150	2250	3.53	17.6	6.31	233	17.54	24.6	0.42	-
1615	20	150	3000	3.53	4.32	6.20	222	17.60	11.2	0.38	-
1620	25	150	3750	3.53	Ø	6.17	214	17.61	5.0	0.30	-
1625	30	150	4500	3.53	Ø	6.16	210	17.60	11.0	0.33	-
1630	35	150	5250	3.53	Ø	6.15	201	17.63	6.8	0.23	-
1635	40	150	6000	3.53	Ø	6.12	193	17.65	3.4	0.21	-
1640	45	150	6750	3.53	Ø	6.17	189	17.65	-2.7	0.24	-
1645	50	150	7500	3.53	Ø	6.11	180	17.66	-9.9	0.19	-
1650	55	150	8250	3.53	Ø	6.15	181	17.65	-12.1	0.20	-
1655	60	150	9000	3.53	Ø	6.15	179	17.64	-12.9	0.18	-
AP 12/17/09											

### Observations During Sampling

Well Condition: Good Purge Water Disposal: TDRM  
 Color: CLEAR / YELLOW TINT Turbidity(qualitative): SMALL WHITE PARTICLES  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description		Preservative
	From Lab		
PESTICIDES	SUREALY	ARCADIS	
VOCs	1 L. AMBER	(2)	
METALS	40 mL	VIALS (3)	HCl
	250 mL	PLASTIC (1)	HNO <sub>3</sub>

Boring/Casing Volumes

2" = 0.16 4" = 0.65

**ARCADIS**

**Groundwater Sampling Form**

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: 4MW-23  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1420 Recorded By: Erica Maddox  
 Weather: Sunny, Low 40°J Duplicate/QA/QC: NONE

**Instrument Identification**

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	YSI 556 (R11439) / 2020a (R1073)

**Purging Information**

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 5.0 To: 15.0  
 Total Depth: 15.0 Pump Intake Setting: Midscreen = 10  
 Depth to Water: 5.98 Volumes to be Purged: Low Flow  
 Water Column: 9.02 Total Volume Purged: 2.0  
 Gallons/Foot: 0.16 Pump On: 1330 Off: 1440  
 Gallons in Well: 1.44

**Field Parameter Measurements During Purging**

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1335	5	180	0	5.95	35.7	5.65	335	15.65	9.6	4.64	
1340	10	180	0.25	5.95	25.8	5.61	333	16.38	20.3	0.42	
1345	15	180	0.5	5.95	21.1	5.62	338	16.33	21.5	0.25	
1350	20	180	0.75	5.95	9.3	5.66	342	16.26	23.4	0.25	
1355	25	180	1.0	5.95	4.6	5.64	344	16.33	20.9	0.18	
1400	30	180	1.25	5.95	1.5	5.64	345	16.31	20.7	0.17	
1405	35	180	1.5	5.95	0.6	5.65	347	16.38	20.4	0.17	
1410	40	180	1.75	5.95	1.0	5.65	348	16.29	20.2	0.17	
1415	45	180	2.0	5.95	0.5	5.66	352	16.26	19.8	0.16	
<del>Change to bladder. 12/17/09</del>											

**Observations During Sampling**

Well Condition: Good Purge Water Disposal: \_\_\_\_\_  
 Color: Clear light yellow tint Turbidity (qualitative): orange particles  
 Odor: none Other (OVA, HNU, etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab	Preservative
DOCs	<input checked="" type="checkbox"/> 40 mL Vial	HCL
SUOCs	<input type="checkbox"/> 1L Amber	NONE

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA-MW-23  
 Date: 1/18/10 Sampled By: Ryan Kontos / Arcadis  
 Sampling Time: 1422 Recorded By: Ryan Kontos / Arcadis  
 Weather: Sunny ~ 65° Duplicate/QA/QC: NO

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	<u>YSI 556 / R 10404</u>	<u>Lamotte 2020 / R 87167</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bleeder  Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 12 To: 17  
 Total Depth: 17.0 Pump Intake Setting: Middle of screen ~ 14.5'  
 Depth to Water: 5.07 Volumes to be Purged: Low Flow  
 Water Column: 11.93 Total Volume Purged: ~ 2.1 gal  
 Gallons/Foot: 0.116 Pump On: 13:35 Off: 14:10  
 Gallons in Well: 1.90

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1340	5	250ml	0.3ga	5-37	11.4	5-46	366	17.23	-134.6	1.15	
1345	10		0.3	5-38	3.62	5-41	362	17.00	-132.5	1.07	
1350	15		0.3	5-38	3.11	5-37	363	16.90	-127.1	0.84	
1355	20		0.3	5-38	2.89	5-36	364	16.90	-123.7	0.65	
1400	25		0.3	5-38	3.09	5-35	365	16.87	-128.1	0.55	
1405	30		0.3	5-38	3.50	5-35	367	16.91	-126.2	0.61	
1410	35		0.3	5-38	2.92	5-35	367	16.95	-123.1	0.58	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Down  
 Color: Clear Turbidity (qualitative): < 10 NTU  
 Odor: NONE Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>VOC</u>	<u>3/40ml CG</u>	<u>HCL</u>
<u>SVOC</u>		

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-24  
 Date: 12-17-09 Sampled By: Erica Maddox  
 Sampling Time: 1315 Recorded By: Erica Maddox  
 Weather: Sunny, High 40's Duplicate/QA/QC: NONE

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:	NA	VSI 556 (R11439) / 2020e (R10173)

### Purging Information

Casing Material: PVC Purge Method: (circle one)  Submersible  Centrifugal  Bladder  Bailor  Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 7.6 To: 12.6  
 Total Depth: 12.60 Pump Intake Setting: Midscreen - 9.0  
 Depth to Water: 5.95 Volumes to be Purged: Low Flow  
 Water Column: 6.05 Total Volume Purged: 2.75  
 Gallons/Foot: 0.16 Pump On: 1215 Off: 1320  
 Gallons in Well: 0.97

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity ( $\mu$ mhos/cm)	Temp ( $^{\circ}$ C or $^{\circ}$ F)	ORP (mV)	Diss. Oxygen	Comments
1220	5	180	0	5.90	35.9	5.90	271	17.36	54.8	0.63	
1225	10	180	0.25	5.90	24.3	5.97	273	17.41	35.9	0.24	
1230	15	180	0.5	5.90	15.1	5.95	273	17.47	24.7	0.09	
1235	20	180	0.75	5.90	7.9	6.00	276	17.75	12.1	0.08	
1240	25	180	1.0	5.90	6.3	5.99	275	17.47	9.0	0.08	
1245	30	180	1.25	5.90	6.0	5.99	279	17.64	9.0	0.09	
1250	35	180	1.5	5.90	5.6	5.99	279	17.61	3.0	0.08	
1255	40	180	1.75	5.90	4.8	5.98	278	17.72	-0.2	0.06	
1300	45	180	2.0	5.90	3.0	5.98	275	17.59	-4.6	0.06	
1305	50	180	2.25	5.90	2.27	5.95	275	17.65	-4.9	0.04	
1310	55	180	2.5	5.90	2.35	5.98	277	17.63	-5.1	0.04	
1315	60	180	2.75	5.90	2.51	5.98	277	17.61	-5.2	0.04	

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: clear Turbidity (qualitative): some particles  
 Odor: NONE Other (OVA, HNU, etc.): None

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCs	40 ml Vial	Heu
SUOCs	1L Amber	None

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



## Well Inspection Log

Site Location HAA-01

Sampler(s) Name(s): A. Pagnon, E. Maddox, R. Kontonidakis

Date 12/15/2009

	Gauging Date	Water Level (ft bTOC)	Well ID visible	Concrete pad intact	Well cap intact and water-tight	Water in Vault	Well locked or bolted down	Well casing in good condition	Other Observations
COE-MW-1	12/15/09	12.56	yes	yes	yes	NO	yes	Good	
COE-MW-2		11.29	yes	yes	yes	NO	yes	Good	
COE-MW-3		11.15	yes	yes	yes	NO	yes	Good	
COE-MW-4		3.26	yes	yes	yes	NO	yes	Good	
COE-MW-5		2.60	yes	yes	yes	NO	yes	Good	
COE-MW-6		3.25	yes	yes	yes	NO	yes	Good	
COE-MW-7		3.40	yes	yes	yes	NO	yes	Good	
COE-MW-8		3.61	yes	yes	yes	NO	yes	Good	
HMW-1		13.70	NO	yes	yes	NO	yes	Fair	NO ID Label/hinge broke to well lid
HMW-2		12.02	NO	yes	yes	NO	yes	Good	NO ID Label
HMW-3		7.51	yes	yes	yes	NO	yes	Good	
HMW-4		5.61	yes	yes	yes	NO	yes	Good	
HMW-5		8.27	NO	yes	yes	NO	yes	Fair	NO ID Lab. /hinge broke on well lid
HMW-6		5.18	NO	yes	yes	NO	yes	Fair	NO ID Lab. /hinge broke on well lid
HMW-8		6.03	yes	yes	yes	NO	yes	Good	NO survey mark
HMW-9		8.72	yes	yes	yes	NO	yes	Good	NO ID/NO survey mark
HMW-10		6.44	yes	yes	yes	NO	yes	Good	
HMW-11		9.88	yes	yes	yes	NO	yes	Good	
HMW-12	↓	11.29	yes	yes	yes	NO	yes	Good	

## Well Inspection Log

Site Location HAA-01

Sampler(s) Name(s): A. Pagnon, E. Maddox, R. Kintondalaskas

Date 12/15/09

	Gauging Date	Water Level (ft bTOC)	Well ID visible	Concrete pad intact	Well cap intact and water-tight	Water in Vault	Well locked or bolted down	Well casing in good condition	Other Observations
HMW-13	12/15/09	12.8	NO	Yes	Yes	NO	Yes	Good	NO ID label
HMW-14R		11.47	Yes	Yes	Yes	NO	Yes	Good	
HMW-15		5.53	Yes	Yes	Yes	NO	Yes	Good	
HMW-16A		9.56	Yes	Yes	Yes	NO	Yes	Good	
HMW-17		7.82	Yes	Yes	Yes	NO	Yes	Good	
HMW-18		7.03	Yes	Yes	Yes	NO	Yes	Good	
HMW-19		12.19	Yes	Yes	Yes	NO	Yes	Good	
HMW-20		3.70	Yes	Yes	Yes	NO	Yes	Good	
HMW-21		2.99	Yes	Yes	Yes	NO	Yes	Good	
HMW-22		13.98	Yes	Yes	Yes	NO	Yes	Good	
HMW-23		5.30	Yes	Yes	Yes	NO	Yes	Good	
HMW-24		5.47	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-9		10.95	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-10		4.25	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-11		2.66	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-12		4.35	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-12D		3.05	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-13		2.51	Yes	Yes	Yes	NO	Yes	Good	
HAA01-MW-14		4.50	Yes	Yes	Yes	NO	Yes	Good	

Well Inspection Log  
 Site Location HAA-01  
 Sampler(s) Name(s): A. Pagnon, E. Maddox, R. Kontadalekas  
 Date 12/15/09

	Gauging Date	Water Level (ft bTOC)	Well ID visible	Concrete pad intact	Well cap intact and water-tight	Water in Vault	Well locked or bolted down	Well casing in good condition	Other Observations
HAA01-MW-14D	12/15/09	3.10	yes	yes	yes	NO	yes	Good	
HAA01-MW-15		8.81	yes	yes	yes	NO	yes	Good	
HAA01-MW-16		14.1	yes	yes	yes	NO	yes	Good	
HAA01-MW-17		5.65	yes	yes	yes	NO	yes	Good	
HAA01-MW-18	✓	8.81	yes	yes	yes	NO	yes		



## WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NAL.TM  
 Site Location: HAA-001/Fire Tng Area, HAAF  
 Rep./Field Blank No. \_\_\_\_\_  
 Weather: cloudy - 60°F

Date 2-2-09  
 Monitoring Well Number HMW-62  
 Sample Collection Time 1110  
 Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 15.0  
 Depth to water from top of casing 14.21  
 Water Column 0.79 (ft) Gallons in well 0.12  
 Evacuation Volume (λ) = \_\_\_\_\_

Casing stick-up above concrete (feet) \_\_\_\_\_  
 Screened Interval (ft bls) 4.6 -14.6  
 Casing Diameter: 2"  
 Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/l)	Cond. (µS/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1055	0.10	15.23	5.34	5.59	0.064	487	345	0.06	14.25
1100	0.10	15.64	5.43	.	0.049	29.1	332	0.06	14.29
1105	0.10	15.62	5.40	5.32	0.049	28.9	234	0.05	14.31
1110	0.10	15.60	5.40	.	0.045	.	336	0.06	14.33

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 # Amber Glass	<4°C

Remarks \_\_\_\_\_  
 \_\_\_\_\_

Sampling Personnel J CORNW



**WATER SAMPLING LOG**

Project No. GP08IIAFS.II01A.NALTM

Date \_\_\_\_\_

Site Location: IIAA-001/Fire Tng Area. IIAAF

Monitoring Well Number HMW-04

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 09:00

Weather SUNNY 52°F

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft) 150

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 949

Screened Interval (ft bls) 30-130

Water Column 5.51 (ft) Gallons in well 09

Casing Diameter: 2"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0935	0.1	15.61	6.51	3.03	0.278	9.9	97	0.08	9.53
0940	0.1	16.46	6.58	1.33	0.302	6.7	64	0.08	9.57
0945	0.1	16.51	6.59	1.34	0.303	6.2	63	0.08	9.59
0950	0.1	16.50	6.59	1.31	0.303	7.6	62	0.08	9.60

**Analyses**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 Lt Amber Glass	<4°C
- Pesticides	1 Lt Amber Glass	<4°C
- Herbicides	1 Lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. C. BILLEN





# WATER SAMPLING LOG

Project No. GP08UAFS.H01A.NALTM

Date 2-3-09

Site Location: HAA-001/Fire Tng Area, HAAF

Monitoring Well Number Hmw 05

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 0905

Weather cloudy 40° F

Sampling Method Low Flow

**Evacuation Data'**

Depth to bottom of well (ft bls) 15.0

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 4.06

Screened Interval (ft bls) 7.0-13.0

Water Column 5.94 (ft) Gallons in well 10

Casing Diameter: 2"

Evacuation Volume (x ) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0850	0.1	15.32	6.47	4.12	0.221	7.6	96	0.08	9.10
0855	0.1			4.19	0.217	7.3	126	0.08	9.12
0900	0.1	15.64	6.36		0.217	8.1	127	0.08	9.17
0905	0.1	15.62	6.37	4.21	0.216	7.9	129	0.08	9.16

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. C. Borden



### WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NALTM

Date 2-3-09

Site Location: HAA-001/Fire Tng Area, HAAF

Monitoring Well Number 4MW-09

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 0825

Weather cloudy 30°F

Sampling Method Low Flow

#### Evacuation Data:

Depth to bottom of well (ft bls) 15.0

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 1.44

Screened Interval (ft bls) 5.0-15.0

Water Column 35.6 (ft) Gallons in well 6

Casing Diameter: 2"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

#### Field Parameters:

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0810	0.1	18.43	6.37	1.01	0.276	18.2	118	0.05	11.47
0815	1	19.30	6.35	0.47	0.277	7.8	81	0.03	11.51
0820	0.1	19.24	6.35	0.48	0.277	6.2	80	0.05	11.52
0825	0.1	19.23	6.35	0.48	0.277	6.9	79	0.08	11.54

#### Analyses:

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	
- Pesticides	1 lt Amber Glass	
- Herbicides	1 lt Amber Glass	
- Metal	500 ml Plastic	<4°C/Nitric Acid

#### Remarks

\_\_\_\_\_

Sampling Personnel J. O'Brien

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### WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NALTM

Date 2-3-09

Site Location: HAA-001/Fire Tng Area, HAAF

Monitoring Well Number 4MW-10

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 10:40

Weather Snowy 50°F

Sampling Method Low Flow

#### Evacuation Data:

Depth to bottom of well (ft bls) 14.0

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 0.75

Screened Interval (ft bls) 2.7-12.8

Water Column 52.5 (ft) Gallons in well 0.6

Casing Diameter: 2"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft





### WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NALTM

Date 2-2-09

Site Location: HAA-001/Fire Tng Area, HAAF

Monitoring Well Number Hmw-13

Rep. Field Blank No. \_\_\_\_\_

Sample Collection Time 1145

Weather Cloudy 60°F

Sampling Method Low Flow

#### Evacuation Data:

Depth to bottom of well (ft bls) 18.0

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 13.71

Screened Interval (ft bls) 7.5-17.6

Water Column 4.27 (ft) Gallons in well 0.7

Casing Diameter: 2"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal gal/ft. 2"=0.16 gal/ft

#### Field Parameters:

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1130	0.1	18.14	6.09	1.24	0.325	6.8	-55	0.08	13.74
1135	0.1	19.57	6.16	0.54	0.316	7.9	-72	0.08	13.77
1140	0.1	19.60	6.16	0.53	0.316		-73	0.08	13.79
1145	0.1	19.61	6.16	0.51	0.313	7.8	-72	0.08	13.81

#### Analyses:

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 Lt Amber Glass	<4°C

Remarks Strong petroleum odor

Sampling Personnel J. C. BRIEN



### WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NALTM

Date 2-3-09

Site Location: HAA-001/Fire Tng Area, HAAF

Monitoring Well Number Hmw-23

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1200

Weather Snowy SEF

Sampling Method Low Flow

#### Evacuation Data:

Depth to bottom of well (ft bls) 15.0

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 6.6

Screened Interval (ft bls) 5.0-15.0

Water Column 6.32 (ft) Gallons in well 1.0

Casing Diameter: 2"

Casing Volume 1"=0.04 gal gal/ft. 2"=0.16 gal/ft



## WATER SAMPLING LOG

Project No. GP08HAFS.H01A.NAL.TM

Date 2-3-09

Site Location: HAA-001/Fire Tng Area. HAAF

Monitoring Well Number Hmw-24

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1245

Weather Sunny 58°F

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well: bls) 120

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 9.28

Screened Interval (ft bls) 7.0-12.0

Water Column 2.72 (ft) Gallons in well 1.6

Casing Diameter: 4"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (ml/min)	Depth to Water (ft)
1230	0.25	18.22	6.5	0.37	0.485	11.9	-13	0.2	9.27
1235	0.25	18.36	6.54	0.20	0.487	7.0	-36	0.2	9.29
1240	0.25	18.34	5.5	0.17	0.487	6.4	-37	0.2	9.28
1245	0.25	18.33	6.54	0.18	0.487	5.9	-37	0.2	9.28

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. C. B. K. W.



# WATER SAMPLING LOG

Project No. GP08HAES.H01A.NALTM

Date 3.3.09

Site Location: HAA-001 Fire Trg Area, HAAF

Monitoring Well Number HMW-11

Rep. Field Blank Yo. \_\_\_\_\_

Sample Collection Time 1330

Weather SUNNY 50°F

Sampling Method Low-Flow

**Evacuation Data.**

Depth to bottom of well (ft bls) 170

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 1270

Screened Interval (ft bls) 4.7-14.8

Water Column 2-3 (ft) Gallons in well 0.4

Casing Diameter: 2"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1315	0.1	18.57	5.65	.	0.337	16.8	113	0.08	12.14
1320	1	18.89	5.58	0.32	0.339	16.1	142	0.08	12.77
1325	0.1	18.92	5.58	0.31	0.339	16.4	144	.	12.50
1330	0.1	18.91	5.58	0.31	0.338	16.2	145	0.08	12.82

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40ml VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. CIBRYEN



### WATER SAMPLING LOG

Project No. GP0811AFS.H01A.NAI TM

Date 2-3-2009

Site Location: HAA-001/DAACCG Area, HAAF

Monitoring Well Number COE-MW-01

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1100

Weather Sunny, Warm

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 20

Casing stick-up above concrete (feet) 3.0

Depth to water from top of casing 13.54

Screened Interval (ft bls) 15-20

Water Column 6.46 (ft) Gallons in well 0.26

Casing Diameter: 1"

Evacuation Volume (x3) = 0.78

Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

**Field Parameters**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Connd. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (ml/min)	Depth to Water (ft)
1053	0.75		5.09	0.00	433	21.6	-142	200	14.98
1058	1.00	18.49	5.16	0.00	330	18.1	-167	200	15.17
JDF 2-3-09									

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40ml VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 1036

Sampling Personnel JDF



**WATER SAMPLING LOG**

Project No. GP08HAFS.H01A.NAL.TM

Date 2-3-09

Site Location: HAA-001/DAACCG Area HAAF

Monitoring Well Number COE-MW-02

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1535

Weather Sunny, warm

Sampling Method Low Flow

**Evacuation Data**

Depth to bottom of well (ft bls) 19.9

Casing stick-up above concrete (feet) 3.0

Depth to water from top of casing 13.20

Screened Interval (ft bls) 14.9-19.9

Water Column 6.70 (ft) Gallons in well 0.27

Casing Diameter: 1

Evacuation Volume (x3) = 0.80

Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1520	0.50	17.37	5.42	0.00	257	23.8	-83	200	15.57
1525	0.75	17.37	5.40	0.00	265	27.9	-94	200	15.61
1530	0.80	17.39	5.38	0.00	279	21.9	-101	200	15.73
<del>JDF 2-3-09</del>									

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B – VOCs	40mL VOA vials	<4°C/HCl
82707 – SVOCs	1 It Amber Glass	<4°C
– Pesticides	1 It Amber Glass	<4°C
– Herbicides	1 It Amber Glass	<4°C
– Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 1509, D.O. responds appropriately in open air

Sampling Personnel \_\_\_\_\_



# WATER SAMPLING LOG

Project No. GP08HAPS.H01A.NALIM

Date 2-3-2009

Site Location: HAA-001/DAACCG Area. HAAF

Monitoring Well Number COE-MW-03

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1410

Weather Sunny, warm

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft hls) 20

Casing stick-up above concrete (feet) 3.3

Depth to water from top of casing 12.86

Screened Interval (ft hls) 15-20

Water Column 7.14 (ft) Gallons in well 0.29

Casing Diameter: 1

Evacuation Volume (x3) = 0.86

Casing Volume 1"=0.04 gal gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1400	0.50	17.94	5.38	0.00	419	28.1	-78	300	18.06
1405	0.90	17.99	5.37	0.00	467	24.5	-90	240	17.82
1410	1.10	18.07	5.37	0.00	485	18.8	-98	240	17.86
JDF 2-09									

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 1350, D.O. meter responds appropriately in

open air

Sampling Personnel JDF



## WATER SAMPLING LOG

Project No. GP08HAES.HQ1A.NAL1M  
 Site Location: HAA-001/DAACCG Area HAAF  
 Rep./Field Blank No. \_\_\_\_\_  
 Weather Sunny, cold

Date 2-4-09  
 Monitoring Well Number COE-MW-04  
 Sample Collection Time 0825  
 Sampling Method Low-Flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 15  
 Depth to water from top of casing 5.63  
 Water Column 9.37 (ft) Gallons in well 6.37  
 Evacuation Volume (x3) = 1.12

Casing stick-up above concrete (feet) 3  
 Screened Interval (ft bls) 10 - 15  
 Casing Diameter: 1  
 Casing Volume 1"=0.04 gal gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/l)	Cond. (umhos/cm)	Turb (NTU)	Redox (mV)	Flow (ml/min)	Depth to Water (ft)	
0804	0.25	13.70	5.70	0.00	364	-36	28.5	200	6.59	
0812	0.60	13.74	5.63	0.00	564	-38	21.0	200	6.67	
0817	0.80	13.46	5.61	0.00	388	-45	22.5	200	6.70	
0822	1.10	13.77	5.61	0.00	281	-61		200	6.67	
0824	1.20	13.74	5.61	0.	265	-65	18.7	200	6.68	
					2-4-09					

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 0758  
 \_\_\_\_\_  
 Sampling Personnel \_\_\_\_\_



### WATER SAMPLING LOG

Project No. GP08IIAFS.H01A.NALTM

Date 2-4-09

Site Location: 11AA-001/DAACCG Area, HAAF

Monitoring Well Number COE-MW-05

Rep./Field Blank No.                     

Sample Collection Time 1005

Weather Sunny, cold

Sampling Method Low flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 15

Casing stick-up above concrete (feet) 3

Depth to water from top of casing 5.06

Screened Interval (ft bls) 10-15

Water Column 994 (ft) Gallons in a cell 0.40

Casing Diameter: 1

Evacuation Volume (x3) = 1.20

Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0927	0.40	15.61	5.66	1.42	440	726	-22	200	6.14
<del>0933</del> 0933	1.20	15.26	5.66	0.00	267	355	-57	200	6.70
0938	1.40	14.76	5.67	0.00	306	276	-76	200	6.53
0943	1.60	15.34	5.62	0.00	461	187	-82	200	6.68
0949	1.80	15.50	5.62	0.00	526	147	-84	200	6.96
<del>0954</del> 0954	2.50	14.91	5.62	0.00	881	22.5	-91	200	6.72
1004	2.75	14.66	5.63	0.00	1,020	21.8	-93	200	6.71

**Analyses**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 0919

Sampling Personnel JDF





### WATER SAMPLING LOG

Project No. GP08HAES.H01A.NALTM  
 Site Location: HAA-001/DAACCG Area. HAAF  
 Rep./Field Blank No.                       
 Weather  Sunny cold

Date 3-4-09  
 Monitoring Well Number COE-MW-06  
 Sample Collection Time 1116  
 Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 15  
 Depth to water from tap of casing 5.72  
 Water Column 9.28 (ft) Gallons in well 0.37  
 Evacuation Volume (x3) = 1.11

Casing \tick-up above concrete (feet) 3  
 Screened Interval (ft bls) 10-15  
 Casing Diameter: 1  
 Casing Volume 1"=0.04 gal/ft. 2"=0.16 gal/ft

**Field Parameters.**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/l)	Cond. (umhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
1100	0.80	14.17	5.63	0.00	261	28.2	2	200	7.11
1106	1.20	14.63	5.64	0.00	273	20.1	-13	200	7.25
1111	1.60	15.04	5.64	0.00	258	16.5	-23	200	7.41
<del>JDF 2-4-09</del>									

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 1046

Sampling Personnel JDF



**WATER SAMPLING LOG**

Project No. GP08HAFS.H01A.NALTM

Date 2-4-09

Site Location: HAA-001/DAACCG Area. HAAF

Monitoring Well Number 004-MW-07

Rep./Field Blank Nu. \_\_\_\_\_

Sample Collection Time 0900

Weather < ~ ~ 26°F

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ft bls) 15

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 6.0

Screened Interval (ft blr) 16.15

Water Column 8.9 ft Gallons in well 6.4

Casing Diameter: 1"

Evacuation Volume (x ) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0847	0.1	12.91	5.71	0.10	0.275	4.4	55	0.08	6.09
0850	0.1	12.91	5.74	0.13	0.261	4.5	4	0.08	6.11
0855	0	12.92	5.75	0.17	0.259	4.7	7	0.08	6.11
0900	0	12.94	5.75	0.16	0.257	4.5	7	0.08	6.14

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
52707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. C. Brown



**WATER SAMPLING LOG**

Project No. GP08HAES.H01A.NAL.TM

Date 2-4-09

Site Location: HAA-00L/DAACCG Area.HAAE

Monitoring Well Number C08 MW.CE

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1:00 PM

Weather SUNNY 26°F

Sampling Method Low Flow

**Evacuation Data:**

Depth to bottom of well (ti bls) 15.2

Casing stick-up above concrete (feet) \_\_\_\_\_

Depth to water from top of casing 6.36

Screened Interval (ft bls) \_\_\_\_\_

Water Column 6.64 (ft) Gallons in well 6.4

Casing Diameter: 1"

Evacuation Volume (x) = \_\_\_\_\_

Casing Volume 1"=0.04 gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
7:50	0.1	7.66	5.34	0.62	0.834	14.9	139	0.05	6.38
0755	0.1	14.10	5.32	0.02	0.870	11.5	75	0.05	6.41
0800	0.1		5.3	0.04	0.873	11.6	75	0.05	6.42
0805	0.1	14.15	5.33	0.05	0.872	11.7	74	0.05	6.44

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
826013 - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks \_\_\_\_\_

Sampling Personnel J. J. ...



**WATER SAMPLING LOG**

Project No. GP08HAFS.H01A.NAL.TM  
 Site Location: HAA-001/DAACCG Area JIAAF  
 Rep./Field Blank No. 1/3  
 Weather: cold

Date 2-3-20  
 Monitoring Well Number HMW-14R  
 Sample Collection Time 0950  
 Sampling Method Low Flow

Evacuation Data:  
 Depth to bottom of well (ft bls) 18.9  
 Depth to water from top of casing 12.78  
 Water Column 6.12 (ft) Gallons in well 0.98  
 Evacuation Volume (x 3) = 3

Casing stick-up above concrete (feet) 1.5  
 Screened Interval (ft bls) 9.2 - 18.9  
 Casing Diameter: 2  
 Casing Volume 1"=0.04 gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (mL/min)	Depth to Water (ft)
0838	1.25	19.18	4.93	1.08	3,750	19.4	57	200	13.30
— purge paused —									
0920	1.75	16.22	4.89	0.00	816	11.8	60	200	13.09
0925	2.00	17.04	4.89	0.00	989	10.7	50	200	13.10
0930	<del>2.25</del>	17.32	4.93	0.00	2,320	11.9	36	200	13.08
0935	2.23	16.82	4.99	0.00	3,010	10.9	22	200	12.90
0940	2.50	18.15	4.97	0.00	2,350	16.9	33	200	13.20
0950	3.00	19.13	4.99	0.00	3,010	13.5	18	200	13.20

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HC1
82707 - SVOCs	1 It Amber Glass	<4°C
- Pesticides	1 It Amber Glass	<4°C
- Herbicides	1 It Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 0818

Sampling Personnel JDF



**WATER SAMPLING LOG**

Project No. GP08HAFS.H01A.NALTM  
 Site Location: HAA-001/DAACCG Area. HAAF  
 Rep./Field Blank No. \_\_\_\_\_  
 Weather Sunny, cold

Date 2-4-09  
 Monitoring Well Number HMW-21  
 Sample Collection Time 1205  
 Sampling Method Low Flow

Evacuation Data.  
 Depth to bottom of well (ft bls) 11.5  
 Depth to water from top of casing 5.03  
 Water Column 6.02 (ft) Gallons in well 0.24  
 Evacuation Volume (x3) = 0.72

Casing stick-up above concrete (feet) 3  
 Screened Interval (ft bls) 2-11.5  
 Casing Diameter: 1  
 Casing Volume 1"=0.04 gal gal/ft. 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Flow (ml/min)	Depth to Water (ft)
1149	<del>0.50</del>	12.36	6.01	0.10	990	32.8	104	200	5.39
1154	0.40	13.17	6.03	0.00	1010	18.6	64	200	5.43
1159	0.70	13.16	6.03	0.00	1,000	14.2	-8	200	5.49
1204	0.90	13.27	6.04	0.00	1,000	12.8	-10	200	5.51
JDF 2-4-09									

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative
8260B - VOCs	40mL VOA vials	<4°C/HCl
82707 - SVOCs	1 lt Amber Glass	<4°C
- Pesticides	1 lt Amber Glass	<4°C
- Herbicides	1 lt Amber Glass	<4°C
- Metal	500 ml Plastic	<4°C/Nitric Acid

Remarks Purge began 1144

Sampling Personnel JDF

Hunter Stewart  
Water Levels

Water level Collection Form				
Well ID	Date	Time	Water Level (ft bloc)	Comments
HMW-02	2-2-09	1034	14.21	
HMW-04		1016	9.49	cutting casing hinge
HMW-06		1031	9.13	cutting casing hinge
HMW-08		1014	9.06	
HMW-09		1012	11.44	
HMW-10		1018	8.75	
HMW-11		1028	12.70	
HMW-13		1010	3.71	
HMW-23		1022	8.68	unusable casing hinge
HMW-24	↓	1025	9.28	
COE-MW-01	2-2-09	1406	13.41	
COE-MW-02		1400	13.15	
COE-MW-03		1405	12.81	
COE-MW-04		1357	5.53	
COE-MW-05		1355	4.78	
COE-MW-06		1353	5.62	
COE-MW-07		1345	6.06	
COE-MW-08		1347	6.29	
HMW-14		1409	12.70	
HMW-21	↓	1351	5.02	
35-MW-2	2-4-09	1522	12.63	words not able
35-MW-3		1518	13.00	
35-MW-4		1514	11.76	
35-MW-5	2	1511	12.92	
35-MW-6		1606	13.33	
35-MW-8		1609	13.90	
35-MW-12		1519	12.58	
35-MW-30		1559	12.31	
35-MW-31		1547	12.06	
35-MW-32		1614	12.23	
35-MW-34		1608	10.72	↓
35-MW-39				well destroyed
35-MW-40	↓	1524	13.09	
MW-1	2-4-09	1310	6.20	FST-24B

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-3  
 Date: 1/25/11 Sampled By: C. Tisdale  
 Sampling Time: 1330 Recorded By: C. Tisdale  
 Weather: Cloudy, 50's Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	<del>PH</del> YSI 556	Water Quality Meter(s)
Serial #:	09J101031	Lanotte 20/20e 1589-0300

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: 2.0" Screen Interval: From: 15.0 To: 20.0  
 Total Depth: 20.0' Pump Intake Setting: 17.5  
 Depth to Water: 14.81 Volumes to be Purged: Low-flow  
 Water Column: 5.19 Total Volume Purged: 150 gal  
 Gallons/Foot: .16 Pump On: 1250 Off: 1325  
 Gallons in Well: ~85 gal

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss Oxygen	Comments
1300	10	170ml/h	.25	15.06	12.6	5.34	291	16.89	69.6	2.89	
1305	15	170ml/h	.50	15.08	8.74	5.34	296	17.66	40.2	1.65	
1310	20	170ml/h	.75	15.07	7.68	5.36	297	17.75	28.3	2.62	
1315	25	170ml/h	1.0	15.08	7.24	5.42	293	17.71	25.1	4.11	
1320	30	170ml/h	1.25	15.08	6.84	5.43	292	17.69	22.5	4.59	
1325	35	170ml/h	1.50	15.08	6.62	5.43	292	17.67	20.7	4.63	
<del>C. Tisdale - 1/25/11</del>											

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: Clear Turbidity(qualitative): 6.62  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab <u>X</u> ARCADIS	Preservative
Total + Diss. - Iron, Arsenic, Magnesium		
Nitrate, Nitrite		
Chloride, Sulfate, Sulfide		

Boring/Casing Volumes

2" = 0.16 4" = 0.65

Methane, Ethane, Ethene

TOC

Alkalinity/Acidity

Total Diss. Solids

**ARCADIS**

**Groundwater Sampling Form**

HAA-01

Site Location: Fort Stewart/HAAF  
 Date: 1/26/11  
 Sampling Time: 9:35  
 Weather: SUNNY ~60°F

Project No. GP08HAFS Well ID: COE-MW-05  
 Sampled By: S Schmid  
 Recorded By: S Schmid  
 Duplicate/QA/QC: none

**Instrument Identification**

Instrument:	PID <u>YSI 556</u>	Water Quality Meter(s)
Serial #:	<u>10C101181</u>	<u>Lamotte 2020</u> <u>5295-3504</u>

**Purging Information**

Casing Material: PVC  
 Casing Diameter: 1.5"  
 Total Depth: 17.2  
 Depth to Water: 8.62  
 Water Column: 8.58  
 Gallons/Foot: 0.09  
 Gallons in Well: 0.77

Purge Method: (circle one) Submersible Centrifugal Bladder Baller Peristaltic  
 Screen Interval: From: 12.2 To: 17.2  
 Pump Intake Setting: ~14 ft below  
 Volumes to be Purged: low flow / low vol  
 Total Volume Purged: 2.5 gal  
 Pump On: 8:35 Off: 9:25

**Field Parameter Measurements During Purging**

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
8:40	5	105	525	9.53	94.3	5.28	287	16.17	171.7	1.29	tubing up top of water column for 3rd purge
8:45	10	200	1525	9.60	76.7	5.29	268	16.24	153.0	0.95	
8:50	15	200	2525	9.70	65.3	5.28	255	16.50	50.7	0.80	
8:55	20	200	3525	9.90	60.7	5.28	250	16.55	-10.7	0.60	
9:00	25	200	4525	9.97	51.3	5.28	242	16.56	-21.5	0.56	
9:05	30	200	5525	10.01	21.9	5.29	238	16.62	39.9	0.46	
9:10	35	200	6525	10.06	10.40	5.29	232	16.72	-49.7	0.45	
9:15	40	200	7525	10.08	8.57	5.29	232	16.77	-57.7	0.42	
9:20	45	200	8525	10.08	4.39	5.29	231	16.68	-58.3	0.38	
9:25	50	200	9525	10.09	3.01	5.29	231	16.72	-58.9	0.33	

**Observations During Sampling**

Well Condition: good  
 Color: none  
 Odor: light

Purge Water Disposal: IDW drum  
 Turbidity(qualitative): clear w/ yellow specks (m=1 day/100 King)  
 Other (OVA, HNU, etc.): NA

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCs	<u>X</u> ARCADIS 3-40ml VOA	HCl
M&E	2-40ml VOA	BAK
N+N	500ml plastic	H2SO4
Sulfide	"	NaOH/Zn

**Boring/Casing Volumes**

2" = 0.16 4" = 0.65

Total Diss metals  
 Sulfate, Cl, Alk  
 TDS  
 TOC  
 Acidity

"  
 "  
 "  
 256 ml plastic  
 "

HNO3 / none  
 none  
 "  
 H2SO4  
 none



# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01 COE-MW-7  
 Date: 1/26/11 Sampled By: Sheryl Schmid  
 Sampling Time: 1310 Recorded By: Sheryl Schmid  
 Weather: cloudy ~ 55°F Duplicate/QA/QC: none

### Instrument Identification

Instrument:	<u>YS1556</u> PID	Water Quality Meter(s)
Serial #:	<u>10C101181</u>	<u>Lamotte 2020</u> <u>5295-3504</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 1.25" Screen Interval: From: 12.58 To: 17.58  
 Total Depth: 17.58 Pump Intake Setting: 15.8 ft + 6 to c  
 Depth to Water: 9.00 Volumes to be Purged: low flow → 3W  
 Water Column: 8.68 Total Volume Purged: 2.4 gal  
 Gallons/Foot: ~0.09 Pump On: 1220 Off: 1300  
 Gallons in Well: 0.17

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1226	5	80	400	9.82	186	5.14	296	14.83	23.7	2.21	more pump
1230	10	250	1650	10.39	122	5.16	265	16.26	264	0.52	intake to top of water column, pump method 3W
1235	15	250	2900	10.40	19.8	5.17	250	16.39	250	0.42	
1240	20	250	4150	10.48	55.7	5.19	240	16.51	-10.4	0.37	
1245	25	250	5400	10.49	13.4	5.20	238	16.70	-89.9	0.32	
1250	30	250	6650	10.50	9.43	5.20	234	16.49	-94.3	0.30	
1255	35	250	7900	10.50	2.31	5.21	230	16.61	-97.4	0.30	
1300	40	250	9150	10.50	3.16	5.21	228	16.52	-101.6	0.29	

### Observations During Sampling

Well Condition: good Purge Water Disposal: 10W drum  
 Color: none Turbidity (qualitative): clear  
 Odor: none Other (OVA, HNU, etc.): NA

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCS	<u>X</u> ARCADIS	HCl
MEE	<u>3.40 ml UOA</u>	BAR
N+N Sulfide	<u>2. " "</u>	H <sub>2</sub> SO <sub>4</sub>
	<u>500 ml plastic</u>	NaOH/Zn
	<u>" "</u>	

Boring/Casing Volumes

2" = 0.16 4" = 0.65

Total Metals " HNO<sub>3</sub>  
 Diss " none  
 sulfate, Cl, Alk " "  
 TDS " "

Low Flow GW Sample.xls - 12/7/2009

TOC 250 ml plastic H<sub>2</sub>SO<sub>4</sub>  
 Acidity " none

# ARCADIS

## Groundwater Sampling Form

HAA 01

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: COE-MW-8  
 Date: 1/26/11 Sampled By: Sueyl Schmid  
 Sampling Time: 1200 Recorded By: Sueyl Schmid  
 Weather: cloudy ~ 60°F Duplicate/QA/QC: none

### Instrument Identification

Instrument:	PID YSI 556	Water Quality Meter(s) La Motte 2020
Serial #:	10C101181	5295-3504

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Pristallite  
 Casing Diameter: 1.25" Screen Interval: From: 12.85 To: 17.85  
 Total Depth: 17.85 Pump Intake Setting: 15.5 ft btoe  
 Depth to Water: 10.81 Volumes to be Purged: 10W + 10W → 3WU = 1.9 gal  
 Water Column: 7.04 Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: 0.9 Pump On: 1115 Off: 1150  
 Gallons in Well: 0.63

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm of $\text{H}_2\text{O}$ )	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity ( $\mu\text{mhos/cm}$ )	Temp ( $^{\circ}\text{C}$ or $^{\circ}\text{F}$ )	ORP (mV)	Diss. Oxygen	Comments
1120	5	90	450	11.94	64.6	4.79	1056	15.53	120.3	1.51	change purge method to 3WU - move intake to top of water column
1125	10	330	2100	11.99	50.9	4.88	1050	16.33	70.7	0.76	
1130	15	330	3250	12.03	42.4	4.90	1088	16.68	55.1	0.48	
1135	20	330	5400	12.05	20.1	4.99	1027	17.04	-8.0	0.32	
1140	25	330	7050	12.09	10.13	5.00	1024	17.01	-12.9	0.30	
1145	30	330	8700	12.12	4.26	5.00	1012	16.98	-20.0	0.29	
1150	35	330	10350	12.13	2.24	5.01	1008	16.90	-26.9	0.28	

### Observations During Sampling

Well Condition: good Purge Water Disposal: Flow drum  
 Color: none Turbidity (qualitative): foggy  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): NA

Constituents Sampled	From Lab	ARCADIS	Container Description	Preservative
VOCS	3-	40 ml VOA		HCl
MEG	2-	"		BAK
N+N		500 ml plastic		H <sub>2</sub> SO <sub>4</sub>
Sulfide		"		NaOH/ZN

Boring/Casing Volumes

2" = 0.16 4" = 0.65

Total Metals " "  
 Diss " " "  
 sulfate, Cl, Alk " "  
 TDS " "

Low Flow GW Sample.xls - 12/7/2009

TOC  
 Acidity

250 ml plastic  
 "

H<sub>2</sub>SO<sub>4</sub>  
 none

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01-MW-10  
 Date: 1/25/11 Sampled By: C. Tisdale  
 Sampling Time: 12:00 Recorded By: C. Tisdale  
 Weather: Cloudy, Lt Rain Duplicate/QA/QC: N/A

### Instrument Identification

Instrument:	<del>PIB</del> YSI 556	Water Quality Meter(s)
Serial #:	09J101031	LaMotte 20/20e 1589-0300

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2.0" Screen Interval: From: 2.0 To: 12.0  
 Total Depth: 12.0' Pump Intake Setting: 10.0  
 Depth to Water: 8.02 Volumes to be Purged: Low - flow  
 Water Column: 3.98' Total Volume Purged: 1.75 gal  
 Gallons/Foot: .16 Pump On: 1120 Off: 1205  
 Gallons in Well: ~.75 gal

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (umhos/cm)	Temp (°C or °F)	ORP (mV)	Diss Oxygen	Comments
1130	10	130ml/min	.25	8.26	11.4	4.08	364	15.63	366.4	6.93	
1135	15	130ml/min	.75	8.26	10.3	4.37	342	16.34	376.2	4.71	
1140	20	130ml/min	1.50	8.27	9.12	4.37	339	16.48	377.5	4.33	
1145	25	130ml/min	.75	8.27	8.36	4.37	338	16.26	373.3	4.03	
1150	30	130ml/min	1.0	8.26	7.26	4.37	333	16.02	373.1	4.22	
1155	35	130ml/min	1.25	8.28	6.73	4.41	338	16.72	357.0	3.11	
1200	40	130ml/min	1.50	8.28	6.41	4.41	338	16.75	356.0	3.03	
1205	45	130ml/min	1.75	8.28	6.09	4.41	338	16.70	355.0	2.95	

*C. Tisdale - 1/25/11*

### Observations During Sampling

Well Condition: Good Purge Water Disposal: Drum  
 Color: clear Turbidity(qualitative): 6.09  
 Odor: None Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab <u>X</u> ARCADIS	Preservative
Total + Diss. - Iron, Arsenic, Manganese		
Nitrate, Nitrite		
Chloride, Sulfate, Sulfide		

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65

Methane, Ethane, Ethene  
 TOC  
 Alkalinity/Acidity  
 Total Dissolved Solids

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01-mw 15  
 Date: 1/23/11 Sampled By: Sheryl Schmid  
 Sampling Time: 1520 Recorded By: Sheryl Schmid  
 Weather: heavily rain ~50 F Duplicate/QA/QC: None

### Instrument Identification

Instrument:	PID YSI 556	Water Quality Meter(s)
Serial #:	10C101181	Lamotte 2020

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 4.5 To: 14.5  
 Total Depth: 14.5 Pump Intake Setting: 13.5  
 Depth to Water: 12.28 Volumes to be Purged: low volume low flow  
 Water Column: 2.22 Total Volume Purged: 1.8 gal  
 Gallons/Foot: 0.16 Pump On: 1420 Off: 1512  
 Gallons in Well: 0.355

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1425	5	140	700	12.38	35.3	5.44	162	16.03	-36.4	2.54	
1430	10	140	1400	12.43	28.7	5.43	166	16.07	-94.1	0.89	
1435	15	140	2100	12.45	25.9	5.41	169	16.62	-116.5	0.69	
1440	20	140	2800	12.45	11.6	5.40	171	16.76	-120.0	0.71	
1445	25	140	3500	12.45	9.56	5.37	172	16.57	-127.3	0.80	
1450	30	140	4200	12.46	8.22	5.39	173	16.63	-124.3	0.82	
1455	35	140	4900	12.46	7.93	5.37	172	16.55	-124.7	0.88	
1500	40	140	5600	12.46	4.87	5.37	172	16.44	-124.5	0.90	
1505	45	140	6300	12.46	5.12	5.37	170	16.23	-121.3	0.93	
1510	50	140	7000	12.46	4.93	5.36	169	16.25	-127.2	0.94	

### Observations During Sampling

Well Condition: good Purge Water Disposal: TOW drum  
 Color: none Turbidity(qualitative): clear  
 Odor: 1. gwa Other (OVA, HNU, etc.): N/A

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCS	<u>X</u> ARCADIS 3 40ml vial	HCl
MEE	2 "	BAK
N+N	500 ml plastic	H <sub>2</sub> SO <sub>4</sub>
Sulfide	"	NaOH/IZN

### Boring/Casing Volumes

2" = 0.16 4" = 0.65

Total Metals: " HNO<sub>3</sub>  
 Diss Metals: " none  
 Sulfate, Cl, Alk: "  
 TDS: "

Low Flow GW Sample.xls - 12/7/2009

TOC: 250 ml plastic H<sub>2</sub>SO<sub>4</sub>  
 Acidity: " none

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-9  
 Date: 1/25/11 Sampled By: Sheryl Schmid  
 Sampling Time: 1145 Recorded By: Sheryl Schmid  
 Weather: 16 rain ~ 50°F Duplicate/QA/QC: none

### Instrument Identification

Instrument:	<u>YSI 556</u> <sup>PID</sup>	Water Quality Meter(s)
Serial #:	<u>10C101181</u>	<u>Lamotte 2020</u>

### Purging Information

Casing Material: DC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 5 To: 15  
 Total Depth: 17.5 tagged Pump Intake Setting: 14 initial - move to top of water column  
 Depth to Water: 13.12 Volumes to be Purged: low flow → 300 for 300  
 Water Column: 4.38 Total Volume Purged: 1.7 gal - dry  
 Gallons/Foot: 0.12 Pump On: 10:40 Off: 11:37  
 Gallons in Well: 0.7

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ft <sup>3</sup> /min)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1045	5	111	555	13.25	45.3	5.98	619	17.10	-66.1	1.04	
1050	10	111	1110	13.47	20.8	6.01	600	17.19	-68.0	0.85	
1055	15	111	1665	13.95	18.7	6.03	584	17.23	-70.2	0.73	
1100	20	111	2220	14.51	13.5	6.03	579	17.25	-71.1	0.71	switch to 300
1105	25	170	3050	14.95	22.0	6.02	573	17.29	-85.5	0.63	
1110	30	170	3900	15.57	18.9	6.04	560	18.06	-97.1	0.53	
1115	35	170	4750	16.91	25.8	6.07	554	18.78	-106.6	0.40	
1120	40	170	5600	17.20	22.4	6.04	507	18.85	-108.8	0.36	dry-off to recharge
1135	45	170	6450	16.95	20.5	6.05	473	18.90	-107.8	0.44	on 170, dry 11:37 let recharge before sampling

### Observations During Sampling

Well Condition: no well id, w/ mark Purge Water Disposal: EDW drum  
 Color: none Turbidity (qualitative): clear  
 Odor: none Other (OVA, HNU, etc.): NA

Constituents Sampled	Container Description	
	From Lab	Preservative
<u>VOCs</u>	<u>ARCADIS</u>	<u>HCl</u>
<u>sulfide</u>	<u>40 ml VOA</u>	<u>NaOH 12N</u>
<u>NH<sub>4</sub></u>	<u>500 ml plastic</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
<u>Total metals</u>	<u>500 ml plastic</u>	<u>HNO<sub>3</sub></u>

### Boring/Casing Volumes

2" = 0.16 4" = 0.65

<u>MEE</u>	<u>40 ml VOA</u>	<u>BAK</u>
<u>Diss metals</u>	<u>500 ml plastic</u>	<u>none</u>
<u>Sulfate, Cl, Alk</u>	<u>500 ml plastic</u>	<u>none</u>
<u>TOC</u>	<u>250 ml plastic</u>	<u>H<sub>2</sub>SO<sub>4</sub></u>
<u>Acidity</u>	<u>250 ml plastic</u>	<u>none</u>
<u>TDS</u>	<u>500 ml plastic</u>	<u>none</u>

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HMW-13  
 Date: 11/25/11 Sampled By: Sheryl Schmidt  
 Sampling Time: 13:33 Recorded By: Sheryl Schmidt  
 Weather: 21.0in - 50°F Duplicate/QA/QC: none

### Instrument Identification

Instrument:	PID US1556	Water Quality Meter(s) Lamotte 2020
Serial #:	100101181	

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor **Peristaltic**  
 Casing Diameter: 2.11 Screen Interval: From: 7.5 To: 17.6  
 Total Depth: 17.6 Pump Intake Setting: 16 (+6 to 0)  
 Depth to Water: 14.51 Volumes to be Purged: low flow low vol  
 Water Column: 3.09 Total Volume Purged: 2.5 gal  
 Gallons/Foot: 0.110 Pump On: 12:50 Off: 1:34<sup>PM</sup>  
 Gallons in Well: 0.49

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
12:53	5	170	450	14.63	4.52	5.92	320	18.09	-87.3	0.65	
13:00	10	170	1100	14.70	2.68	5.92	319	17.98	-90.0	0.66	
13:05	15	170	2550	14.73	3.77	5.91	318	17.95	-89.3	0.55	
13:10	20	170	3400	14.74	3.02	5.92	317	18.02	-89.4	0.51	
13:15	25	170	4250	14.74	2.14	5.91	317	18.11	-102.8	0.46	
13:20	30	170	5100	14.75	2.97	5.91	317	18.11	-94.6	0.47	
13:25	35	170	5950	14.75	3.04	5.91	318	18.28	-93.2	0.45	
13:30	40	170	6400	14.75	1.88	5.91	319	18.47	-104.5	0.41	
13:35	45	170	7650	14.75	1.92	5.91	319	18.49	-102.5	0.36	
13:40	50	170	8500	14.75	2.76	5.91	320	18.50	-106.1	0.35	
13:45	55	170	9350	14.75	2.04	5.91	320	18.52	-100.2	0.35	

### Observations During Sampling

Well Condition: no id Purge Water Disposal: JAWCUM  
 Color: none Turbidity(qualitative): clear  
 Odor: \_\_\_\_\_ Other (OVA, HNU, etc.): NA

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCS	<input checked="" type="checkbox"/> ARCADIS 3 - 40 ml VOA	HCl
Metals	500 ml plastic	H <sub>2</sub> SO <sub>4</sub>
sulfide	500 ml plastic	NaOH / 2N
Total Metals	"	HNO <sub>3</sub>

### Boring/Casing Volumes

2" = 0.16 4" = 0.65  
 Diss Metals 500 ml plastic none  
 M&E 2 - 40 ml VOA BAK  
 Sulfate, Cl, Alk 500 ml plastic none  
 TOC 250 ml plastic H<sub>2</sub>SO<sub>4</sub>  
 Low Flow GW Sample.xls - 12/17/2009  
 Analyte 250 ml plastic none  
 TDS 500 ml plastic none

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: HAA01 HMW-21  
 Date: 7/26/11 Sampled By: Sheryl Schmid  
 Sampling Time: 1100 Recorded By: Sheryl Schmid  
 Weather: cloudy ~60°F Duplicate/QA/QC: none

### Instrument Identification

Instrument:	PID <u>U51556</u>	Water Quality Meter(s) <u>Lamotte 2020</u>
Serial #:	<u>10C101181</u>	<u>5295.3504</u>

### Purging Information

Casing Material: PVC Purge Method: (circle one) Submersible Centrifugal Bladder Bailor Peristaltic  
 Casing Diameter: 2" Screen Interval: From: 6.62 To: 15.12  
 Total Depth: 15.12 Pump Intake Setting: -11 ft 640 c  
 Depth to Water: 8.18 Volumes to be Purged: low flow → 30w = 3.33  
 Water Column: 6.94 Total Volume Purged: 3.4 gal  
 Gallons/Foot: 0.16 Pump On: 955 Off: 1050  
 Gallons in Well: 1.1'

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or (mi))	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	ORP (mV)	Diss. Oxygen	Comments
1000	5	80	500	8.57	14.6	5.33	166	15.39	41.0	1.06	off for ~1 min
1005	10	250	1750	8.72	12.2	5.34	167	15.65	27.5	0.91	max intake to top of well
1010	15	250	3000	8.84	36.8	5.33	167	16.04	8.0	0.63	column for 7w purge
1015	20	250	4250	8.93	24.2	5.33	168	16.33	-23.7	0.54	
1020	25	250	5500	9.01	20.1	5.33	169	16.39	-34.3	0.48	
1025	30	250	6750	9.04	17.9	5.33	169	16.44	-45.4	0.44	
1030	35	250	8000	9.15	15.4	5.33	170	16.48	-52.7	0.38	
1035	40	250	9250	9.20	14.7	5.33	170	16.50	-59.4	0.37	
1040	45	250	10500	9.20	10.12	5.34	170	16.52	-60.9	0.36	
1045	50	250	11750	9.20	8.34	5.34	169	16.48	-65.7	0.36	
1050	55	250	13000	9.21	5.79	5.34	169	16.46	-71.4	0.32	

### Observations During Sampling

Well Condition: good Purge Water Disposal: TDW down  
 Color: none Turbidity (qualitative): clear w/ pollen/moldy yellow specks  
 Odor: none Other (OVA, HNU, etc.): NA

Constituents Sampled	Container Description	
	From Lab	Preservative
VOCs	<u>X</u> ARCADIS	<u>HCl</u>
met	<u>3-40ml vial</u>	<u>BAK</u>
N+N	<u>200ml plastic</u>	<u>H2SO4</u>
Sulfide	<u>"</u>	<u>NaOH/Zn</u>

### Boring/Casing Volumes

2" = 0.16 4" = 0.65

Total metals " " HNO3  
 Diss " " none  
 sulfate, Cl, Alk " "  
 TDS " "  
 TOC 250 ml plastic H2SO4  
 Acidity " none



# WATER SAMPLING LOG

Project No. GOBARS. HOIC Date 1/30/12  
 Site Location: Hunter Army Airfield Monitoring Well Number HA01-MW-12  
 Rep./Field Blank No. \_\_\_\_\_ Sample Collection Time 1340  
 Weather Sunny, 60's Sampling Method Low Flow  
 Evacuation Data:  
 Depth to bottom of well (ft bls) 15.2 Casing stick-up above concrete (feet) 2'  
 Depth to water from top of casing 12.2 Screened Interval (ft bls) \_\_\_\_\_  
 Water Column 3 (ft) Gallons in well 0.48 Casing Diameter: 2"  
 Evacuation Volume (x 3) = 1.44 Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

### Field Parameters:

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Depth to Water (ft)
1328	0	19.12	5.00	1.26	2.529	114	93.6	—
1330	0.25	18.71	4.67	0.78	0.442	22.4	114.0	—
1332	0.50	18.68	4.85	0.42	0.424	13.4	100.3	—
1334	.75	18.71	5.05	0.53	0.391	<del>79.36</del> 77.5	77.5	—
1336	1.00	18.98	5.11	<del>4.55</del> 0.49	0.372	6.19	68.6	—
1338	1.25	19.35	5.13	0.49	0.371	5.38	68.3	—
V.P. 1/30/12								

### Analyses:

Analytical Parameter	Sample Bottles	Preservative

Remarks \_\_\_\_\_

Sampling Personnel Calvin Paouncic





# WATER SAMPLING LOG

Project No. GPOBARS HOIC

Date 1-30-12

Site Location: Hunter Army Airfield

Monitoring Well Number HAW1-MW-14

Rep./Field Blank No. \_\_\_\_\_

Sample Collection Time 1440

Weather Sunny, 60, 3

Sampling Method \_\_\_\_\_

Evacuation Data:

Depth to bottom of well (ft bls) 14.5

Casing stick-up above concrete (feet) 2'

Depth to water from top of casing 13.2

Screened Interval (ft bls) \_\_\_\_\_

Water Column 1.3 (ft) Gallons in well 0.288

Casing Diameter: 2"

Evacuation Volume (x 3) = 1.6 0.624

Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

**Field Parameters:**

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Depth to Water (ft)
1422	1.5	19.83	4.51	2.97	0.254	—	124.5	—
1427	1.0	19.46	3.67	7.04	0.225	—	126.4	—
		DRY	0	1.0	gallon			

**Analyses:**

Analytical Parameter	Sample Bottles	Preservative

Remarks \_\_\_\_\_

Sampling Personnel Valyn Paoline



# WATER SAMPLING LOG

Project No. GPOCHAES, HOIC Date 2-16-12  
 Site Location: HUNTER ARMY AIRFIELD Monitoring Well Number H01-MW-70  
 Rep./Field Blank No. \_\_\_\_\_ Sample Collection Time \_\_\_\_\_  
 Weather Sunny, Low 70's Humid Sampling Method Low Flow  
 Evacuation Data: \_\_\_\_\_  
 Depth to bottom of well (ft bls) 60.0' Casing stick-up above concrete (feet) 3'  
 Depth to water from top of casing 6.81 Screened Interval (ft bls) 50-60'  
 Water Column 53.2 (ft) Gallons in well 8.51 Casing Diameter: 2" inner casing  
 Evacuation Volume (x 3) = 25.54 Casing Volume 1"=0.04 gal gal/ft, 2"=0.16 gal/ft

### Field Parameters:

Time	Gallons Purged	Temp (°C)	pH (SU)	DO (mg/L)	Cond. (µmhos/cm)	Turb (NTU)	Redox (mV)	Depth to Water (ft)
1530	0.25	23.08	8.15	5.74	619	-	27.5	—
1535	0.25	22.57	8.79	2.31	627	-	57.6	—
1540	<del>0.25</del>	22.10	8.41	2.09	<del>627</del>	-	-10.9	—
1545	<del>0.25</del>	21.98	8.23	1.70	549	-	-40.8	—
1550	0.55	21.57	8.19	1.08	537	-	-50.1	—
1555	0.75	21.96	8.20	1.70	538	-	-31.2	—

### Analyses:

Analytical Parameter	Sample Bottles	Preservative

Remarks DO NOT HAVE TURBIDIMETER

Sampling Personnel Valyn Paouncic

Appendix D

Historic Remedial Action Summaries

### Summary of Source Removal Activities – Former FTA

Omega Environmental Services with subcontractor Geosciences, Inc., conducted soil remediation activities at the FTA located at Hunter Army Airfield from November 1997 to March 1998. The soil remediation activities included the decontamination and removal of the simulated aircraft structure, aboveground storage tanks, fuel transmission lines, concrete pad, and sump pit structure. Soils, free-phase product, and wastewater were removed from the area and transported to off-site disposal facilities. The horizontal limits of the excavation are shown on Figure 3 (page B-13) and the depth of the excavation ranged from 5 to approximately 8 feet below ground surface. The remediation generated 9,430 tons of contaminated soils, 233 tons of demolished concrete debris, and 81,906 gallons of wastewater. A total of 27 confirmation soil samples were collected from the side walls and floor of the excavation and analyzed for RCRA metals; benzene, toluene, ethylbenzene, xylenes (BTEX); organochlorine pesticides, polychlorinated biphenyls (PCBs) and total petroleum hydrocarbons (TPH). Contaminated soils were excavated to a depth and lateral extent where the constituent concentrations were less than the HSRA Notification Concentrations. The confirmation soil samples indicated that constituents were still present in the soils beneath the excavation. *Soil Remedial Action Report*, dated December 1998 presents the soil remediation activities in detail. Maps of the excavation and confirmation soil sampling locations along with a summary of the laboratory analytical data of the confirmation samples is provided in the following appendix.

**Table 1: Results of Confirmatory Soil Sampling Conducted at HAA Fire Training Area (HAA-01)**

Sample ID: Media Sample Type:	Screening Limits		EW-E6-a Soil grab	EW-E6-b Soil grab	EB-E6 Soil grab	EW-E7-a Soil grab	EB-E7 Soil grab	EW-E8-a Soil grab	EW-E8-b Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels							
Collection Date: Sample Depth in Feet: Units	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.02		0.13(J)	0.029	BDL	1.2	0.19(J)	0.013(J)	BDL
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02		0.25	0.025	0.005	0.5	0.5	0.025	0.005
Benzene Detection Limit			8	0.41	BDL	47	7.7	0.031	BDL
Ethylbenzene	20		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	14.4		20	0.13	BDL	150	8.2	0.1	BDL
Xylenes	20		1500	11	BDL	4300	920	BDL	BDL
TPH	*								
<b>RCRA METALS</b>									
Barium	500		12	12	14	15	10	11	13
Cadmium	39		1.3	1.2	BDL	BDL	BDL	BDL	BDL
Chromium	1200		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	300		15	22	BDL	6.2	BDL	BDL	BDL
<b>PAHs</b>									
1-Methylnaphthalene	**		7.8	BDL	BDL	21	6.9	BDL	BDL
2-Methylnaphthalene	**		11	BDL	BDL	31	9.6	BDL	BDL
Naphthalene	100		4.9	BDL	BDL	17	3.9	BDL	BDL
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDE	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>TCLP METALS (mg/L)</b>									
Barium	100		BDL	1	BDL	BDL	BDL	BDL	BDL

**Table 1 Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA ~U)**

Sample ID: Media	Screening Limits		EB-E8 Soil grab	EW-F5 Soil grab	EB-F5 Soil grab	EB-F5-X Soil grab	EB-F6 Soil grab	EB-F7 Soil grab	EB-F8 Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels							
Sample Type:	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Collection Date:			02/26/98	02/26/98	02/26/98	02/26/98	02/26/98	02/26/98	02/26/98
Sample Depth in Feet:			5.8	3.07	6.64	6.64	8.32	7.7	6.04
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02		0.12(J)	0.013(J)	0.014(J)	0.14(J)	0.17(U)	1.4	1.4(J)
Benzene Detection Limit			0.25	0.025	0.025	0.25	0.5	0.5	2.5
Ethylbenzene	20		3.3	BDL	BDL	BDL	0.57	20	18
Toluene	14.4		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	20		9.5	BDL	0.064	4.6	22	11	62
TPH	*		2000	BDL	62	35	820	3100	1100
<b>RCRA METALS</b>									
Barium	500		11	10	11	11	11	10	13
Cadmium	39		0.6	0.9	BDL	BDL	BDL	0.9	BDL
Chromium	1200		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	300		15	18	BDL	5.5	BDL	23	7.2
<b>PAHs</b>									
1-Methylnaphthalene	**		13	BDL	0.48	BDL	5	15	5.5
2-Methylnaphthalene	**		5.8	BDL	BDL	BDL	6.9	25	BDL
Naphthalene	100		BDL	BDL	BDL	BDL	2.5	14	BDL
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDE	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>TCLP METALS (mg/L)</b>									
Barium	100		1.1	1.2	1	1.1	BDL	BDL	BDL



**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-01)**

Sample ID: Media Sample Type:	Screening Limits		EW-G5-a Soil grab	EW-G5-b Soil grab	EB-G5 Soil grab	EB-G6 Soil grab	EB-G7 Soil grab	EB-G8 Soil grab	EB-G8-X Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels							
Collection Date:	mg/L		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Depth in Feet:	mg/L		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Units	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02	0.0028(J)	0.0078	BDL	BDL	0.4(J)	BDL	0.47(J)	0.68
Benzene Detection Limit		0.005	0.005	0.025	0.025	0.5	1.3	1.3	0.5
Ethylbenzene	20	0.011	0.021	BDL	BDL	6.7	1.3	10	6
Toluene	14.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	20	0.021	BDL	BDL	BDL	12	39	4.8	1.8
TPH	*	BDL	16	12	12	620	1700	2100	2100
<b>RCRA METALS</b>									
Barium	500	9.5	10	8.1	8.1	9.7	11	13	13
Cadmium	39	BDL	1	0.6	0.6	0.6	BDL	BDL	BDL
Chromium	1200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	300	BDL	16	BDL	BDL	15	12	BDL	BDL
<b>PAHS</b>									
1-Methylnaphthalene	**	BDL	BDL	BDL	BDL	6.2	10	10	7.6
2-Methylnaphthalene	**	BDL	BDL	BDL	BDL	9.2	15	9.5	3.6
Naphthalene	100	BDL	BDL	BDL	BDL	4.8	7.4	BDL	BDL
Phenanthrene	110	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDE	0.66	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>TCLP METALS (mg/L)</b>									
Barium	100	1	1.1	BDL	BDL	1.1	BDL	1.1	BDL

**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAF A-01)**

Sample ID: Media	Screening Limits		EB-H5 Soil grab	EB-H6 Soil grab	EB-H7 Soil grab	EB-H8 Soil grab	EB-I5 Soil grab	EB-I5-X Soil grab	EB-I6 Soil grab	
	HSRA Threshold Levels	TCCLP Hazardous Levels								
Sample Type:	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Collection Date:			02/26/98	02/26/98	02/26/98	02/26/98	02/26/98	02/26/98	02/26/98	
Sample Depth in Feet:			5.43	5.67	6.15	6.04	5.26	5.26	5.87	
Units	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
<b>VOCs/PETROLEUM HYDROCARBONS</b>										
Benzene Result	0.02		1.1(J)	0.96(J)	0.43(J)	BDL	BDL	BDL	BDL	
Benzene Detection Limit			2.5	2.5	0.5	2.5	0.005	0.005	2.5	
Ethylbenzene	20		19	12	9	9	BDL	BDL	BDL	
Toluene	14.4		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Xylenes	20		25	16	9.3	38	BDL	BDL	29	
TPH	*		1900	1600	1200	990	BDL	BDL	6500	
<b>RCRA METALS</b>										
Barium	500		6.5	10	14	15	6.8	6.8	11	
Cadmium	39		0.9	BDL	BDL	1	BDL	0.9	BDL	
Chromium	1200		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Lead	300		16	BDL	BDL	20	BDL	13	BDL	
<b>PAHs</b>										
1-Methylnaphthalene	**		8.6	8.3	6.4	5.5	BDL	BDL	30	
2-Methylnaphthalene	**		12	11	8.7	7.5	BDL	BDL	39	
Naphthalene	100		8.4	4.5	5.5	4.5	BDL	BDL	14	
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
<b>PCBs/PESTICIDES</b>										
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Dieldrin	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
4,4-DDD	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
4,4-DDE	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL	
<b>TCCLP METALS (mg/L)</b>										
Barium		100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	



**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-01)**

Sample ID: Media Sample Type:	Screening Limits		EB-17 Soil grab	EB-18 Soil grab	EW-H4 Soil grab	EW-14-a Soil grab	EW-14-b Soil grab	EB-L8 Soil grab	EW-L8-b Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels							
Collection Date:	02/26/98		02/26/98	03/03/98	03/03/98	03/03/98	03/03/98	03/03/98	03/03/98
Sample Depth in Feet:	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Units	mg/L		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02		0.56(J)	BDL	BDL	BDL	BDL	BDL	2.9
Benzene Detection Limit			2.5	2.5	0.01	1	0.005	2.5	1.3
Ethylbenzene	20		13	5.1	BDL	BDL	BDL	11	23
Toluene	14.4		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	20		34	BDL	BDL	BDL	BDL	51	100
TPH	*		2200	840	BDL	1504	BDL	4000	13,000
<b>RCRA METALS</b>									
Barium	500		8.1	9.4	7.8	7.1	9.2	10	12
Cadmium	39		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	1200		BDL	BDL	BDL	BDL	9.4	BDL	BDL
Lead	300		BDL	BDL	5.6	8.9	5.1	BDL	11
<b>PAHS</b>									
1-Methylnaphthalene	**		11	5.2	BDL	7.7	BDL	11	40
2-Methylnaphthalene	**		15	7.2	BDL	11	BDL	16	50
Naphthalene	100		10	4.4	BDL	8.4	BDL	9.5	BDL
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	0.081
Dieldrin	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66		BDL	BDL	0.0076	0.0043	0.0085	BDL	BDL
4,4-DDE	0.66		BDL	BDL	0.0075	0.0032	0.0064	BDL	BDL
<b>TCLP METALS (mg/L)</b>									
Barium	100		BDL	BDL	BDL	BDL	BDL	BDL	BDL

**Table 1 Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-1)**

Sample ID: Media	Sample Type:	Screening Limits		EW-L8-a	EB-L7	EW-L7	EB-L6	EW-L6	EW-L6-X	EB-L5
		HSRA Threshold Levels	TCLP Hazardous Levels							
Collection Date:	Sample Depth in Feet:	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>										
Benzene Result		0.02		BDL	5	0.0059	2.5	BDL	BDL	1.2
Benzene Detection Limit				0.005	1.3	0.005	1.3	0.005	0.005	0.25
Ethylbenzene	20			BDL	37	BDL	23	BDL	BDL	9.4
Toluene	14.4			BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	20			BDL	29	BDL	2.3	BDL	BDL	0.96
TPH	*			1400	8900	BDL	2800	BDL	BDL	12,000
<b>RCRA METALS</b>										
Barium	500			14	13	9.4	11	10	13	9.9
Cadmium	39			BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	1200			BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	300			BDL	16	BDL	BDL	BDL	BDL	9.7
<b>PAHs</b>										
1-Methylnaphthalene	**			BDL	15	BDL	7.2	BDL	BDL	35
2-Methylnaphthalene	**			BDL	21	BDL	11	BDL	BDL	47
Naphthalene	100			BDL	14	BDL	7.3	BDL	BDL	36
Phenanthrene	110			BDL	BDL	BDL	0.55	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>										
PCB-1254	1.55			BDL	0.026	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66			BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66			BDL	BDL	BDL	BDL	BDL	BDL	0.015
4,4-DDE	0.66			BDL	BDL	BDL	BDL	BDL	BDL	0.024
<b>TCLP METALS (mg/L)</b>										
Barium	100			BDL	BDL	BDL	BDL	BDL	BDL	1.1

**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-01)**

Sample ID: Media Sample Type:	Screening Limits		EW-LS-a Soil grab	EW-L4 Soil grab	EB-K8 Soil grab	EB-K7 Soil grab	EB-K6 Soil grab	EB-K5 Soil grab	
	HSRA Threshold Levels	TCLP Hazardous Levels							
Collection Date: Sample Depth in Feet: Units	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
	0.02		0.06(J)	0.45	0.1(J)	1.4	6.9	1.3	0.089(J)
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02		0.25	0.25	0.25	0.25	0.25	0.25	0.25
Benzene Detection Limit	20		BDL	1.5	BDL	12	47	13	BDL
Ethylbenzene	14.4		BDL	BDL	BDL	BDL	32	0.37	BDL
Toluene	20		BDL	BDL	BDL	44	230	13	BDL
Xylenes	*		25	2800	11,000	1800	8000	2100	1400
TPH									
<b>RCRA METALS</b>									
Barium	500		11	12	8.9	11	18	14	11
Cadmium	39		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	1200		BDL	BDL	BDL	BDL	BDL	BDL	5.8
Lead	300		BDL	16	10	BDL	7.8	BDL	11
<b>PAHS</b>									
1-Methylnaphthalene	**		BDL	15	8.2	6.9	20	10	BDL
2-Methylnaphthalene	**		BDL	BDL	BDL	5.4	26	BDL	BDL
Naphthalene	100		BDL	BDL	BDL	BDL	8.2	BDL	11
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66		0.01	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66		BDL	0.0062	0.012	BDL	BDL	BDL	0.0085
4,4-DDE	0.66		BDL	0.0095	0.012	BDL	BDL	BDL	0.019
<b>TCLP METALS (mg/L)</b>									
Barium		100	BDL	BDL	BDL	BDL	BDL	BDL	BDL

**Table 1 Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-1)**

Sample ID: Media	Screening Limits		EB-K4 Soil grab	EW-K4 Soil grab	EW-K4-X Soil grab	EB-H4 Soil grab	EB-14 Soil grab	EB-J8 Soil grab	EB-J7 Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels							
Sample Type:	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Collection Date:			03/03/98	03/03/98	03/03/98	03/03/98	03/03/98	03/03/98	03/03/98
Sample Depth in Feet:			5.68	2.5	2.5	5.5	6.18	7.32	8.33
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>									
Benzene Result	0.02		0.93	BDL	BDL	BDL	BDL	1.3	3.4
Benzene Detection Limit			0.5	0.025	0.01	0.005	0.005	1.3	1.3
Ethylbenzene	20		13	BDL	BDL	BDL	BDL	13	26
Toluene	14.4		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	20		BDL	BDL	BDL	BDL	BDL	BDL	1.4
TPH	*		3700	290	69	19	BDL	1600	4400
<b>RCRA METALS</b>									
Barium	500		15	8.1	15	7.8	7.2	21	13
Cadmium	39		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	1200		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	300		49	16	53	BDL	BDL	BDL	6.4
<b>PAHs</b>									
1-Methylnaphthalene	**		26	BDL	BDL	BDL	BDL	2.4	9.5
2-Methylnaphthalene	**		22	BDL	BDL	BDL	BDL	0.56	8.1
Naphthalene	100		11	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	110		BDL	BDL	BDL	BDL	BDL	0.4	BDL
<b>PCBs/PESTICIDES</b>									
PCB-1254	1.55		BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dieldrin	0.66		BDL	BDL	BDL	BDL	BDL	BDL	BDL
4,4-DDD	0.66		BDL	0.0035	0.0042	BDL	BDL	BDL	BDL
4,4-DDE	0.66		0.0045	BDL	BDL	BDL	BDL	BDL	BDL
<b>TCLP METALS (mg/L)</b>									
Barium	100		BDL	BDL	BDL	BDL	BDL	BDL	BDL

**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-01)**

Sample ID: Media Sample Type:	Screening Limits		EB-J6 Soil grab	EB-J5 Soil grab	EB-J4 Soil grab	EV-J4 Soil grab	EB-E7-S-QA Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels					
Collection Date:	mg/L		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Depth in Feet:	mg/L		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Units	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>VOCs/PETROLEUM HYDROCARBONS</b>							
Benzene Result	0.02		3.9	0.016	0.01	BDL	NA
Benzene Detection Limit			1.3	0.005	0.005	0.005	NA
Ethylbenzene	20		32	BDL	BDL	BDL	NA
Toluene	14.4		BDL	BDL	BDL	BDL	NA
Xylenes	20		28	BDL	BDL	BDL	NA
TPH	*		7200	36	13	10	2590
<b>RCRA METALS</b>							
Barium	500		13	7.9	10	9.4	NA
Cadmium	39		BDL	BDL	BDL	BDL	NA
Chromium	1200		BDL	BDL	BDL	BDL	NA
Lead	300		6.3	5.8	10	BDL	NA
<b>PAHS</b>							
1-Methylnaphthalene	**		25	BDL	BDL	BDL	NA
2-Methylnaphthalene	**		27	BDL	BDL	BDL	NA
Naphthalene	100		11	BDL	BDL	BDL	NA
Phenanthrene	110		BDL	BDL	BDL	BDL	NA
<b>PCBs/PESTICIDES</b>							
PCB-1254	1.55		BDL	BDL	BDL	BDL	NA
Dieldrin	0.66		BDL	BDL	BDL	BDL	NA
4,4-DDD	0.66		BDL	0.009	0.0063	0.011	NA
4,4-DDE	0.66		BDL	0.015	BDL	0.0043	NA
<b>TCLP METALS (mg/L)</b>							
Barium		100	BDL	BDL	BDL	BDL	NA

**Table 1: Results of Confirmatory Soil Sampling Conducted at HAAF Fire Training Area (HAA-01)**

Sample ID: Media	Screening Limits		EB-J6-S-QA Soil grab
	HSRA Threshold Levels	TCLP Hazardous Levels	
Sample Type:			
Collection Date:			03/03/98
Sample Depth in Feet:			7.89
Units	mg/kg	mg/L	mg/kg
<b><u>VOCs/PETROLEUM HYDROCARBONS</u></b>			
Benzene Result	0.02		NA
Benzene Detection Limit			NA
Ethylbenzene	20		NA
Toluene	14.4		NA
Xylenes	20		NA
TPH	*		10,700
<b><u>RCRA METALS</u></b>			
Barium	500		NA
Cadmium	39		NA
Chromium	1200		NA
Lead	300		NA
<b><u>PAHs</u></b>			
1-Methylnaphthalene	**		NA
2-Methylnaphthalene	**		NA
Naphthalene	100		NA
Phenanthrene	110		NA
<b><u>PCBs/PESTICIDES</u></b>			
PCB-1254	1.55		NA
Dieldrin	0.66		NA
4,4-DDD	0.66		NA
4,4-DDE	0.66		NA
<b><u>TCLP METALS (mg/L)</u></b>			
Barium		100	NA

Footnotes:

BDL -- Below Detection Limit  
VOC -- Volatile Organic Compound  
RCRA -- Resource Conservation and Recovery Act  
PAH -- Polynuclear Aromatic Hydrocarbon  
PCB -- Polychlorinated Biphenyl  
HSRA -- Hazardous Site Response Act  
TCLP -- Toxicity Characteristic Leaching Procedure, 40 CFR sec. 260  
NA -- Not Analyzed

"J" flagged benzene values that have been reported for this project were calculated for benzene hits below the reporting limit. When benzene was present, this value was multiplied by the appropriate correction factor, taking into account the weight of the sample analyzed and the dilution factor.

HSRA Thresholds correspond to levels presented in "Regulated Substances and Soil Concentrations that Trigger Notification," Appendix I of Georgia's Rules for Hazardous Site Response, Chapter 391-3-19. Results exceeding HSRA Thresholds are present in bold and italicized print in Table 1.

TCLP Hazardous Levels correspond to the maximum regulatory level for concentrations of contaminants using the TCLP Method presented in 40 CFR sec. 261.24.

\*HSRA does not list a specific regulatory limit or threshold for TPH. However, the Georgia Environmental Protection Division (EPD) sometimes requires analytical testing of groundwater if TPH in soil is not vertically delineated to BDL above the groundwater table. Also, EPD considers a TPH result greater than 10,000 mg/kg as indicative of free product.

\*\*HSRA does not list specific regulatory limits for these constituents. However, releases of these constituents may be regulated by HSRA or EPD on a case-by-case basis under broader authorities of Georgia's Rules and Regulations for Water Quality Control, Chapter 391-3-6, or other EPD Programs.

The confirmatory soil samples presented in Table 1 were submitted to the primary lab in six shipments (approximately 10 to 15 samples per shipping cooler). Each of the six shipping coolers contained one trip blank and one Quality Control (QC) sample. The trip blank laboratory reports were all BDL. The QC samples were designated with an "X" after the respective duplicate/split sample identification (i.e., EB-F5 and EB-F5-X). Other duplicate/split samples were submitted as Quality Assurance (QA) samples to the U.S. Army Corps of Engineers laboratory. The QA samples were designated with a "QA" after the respective duplicate/split sample identification (i.e., EB-E7 and EB-E7-S-QA).





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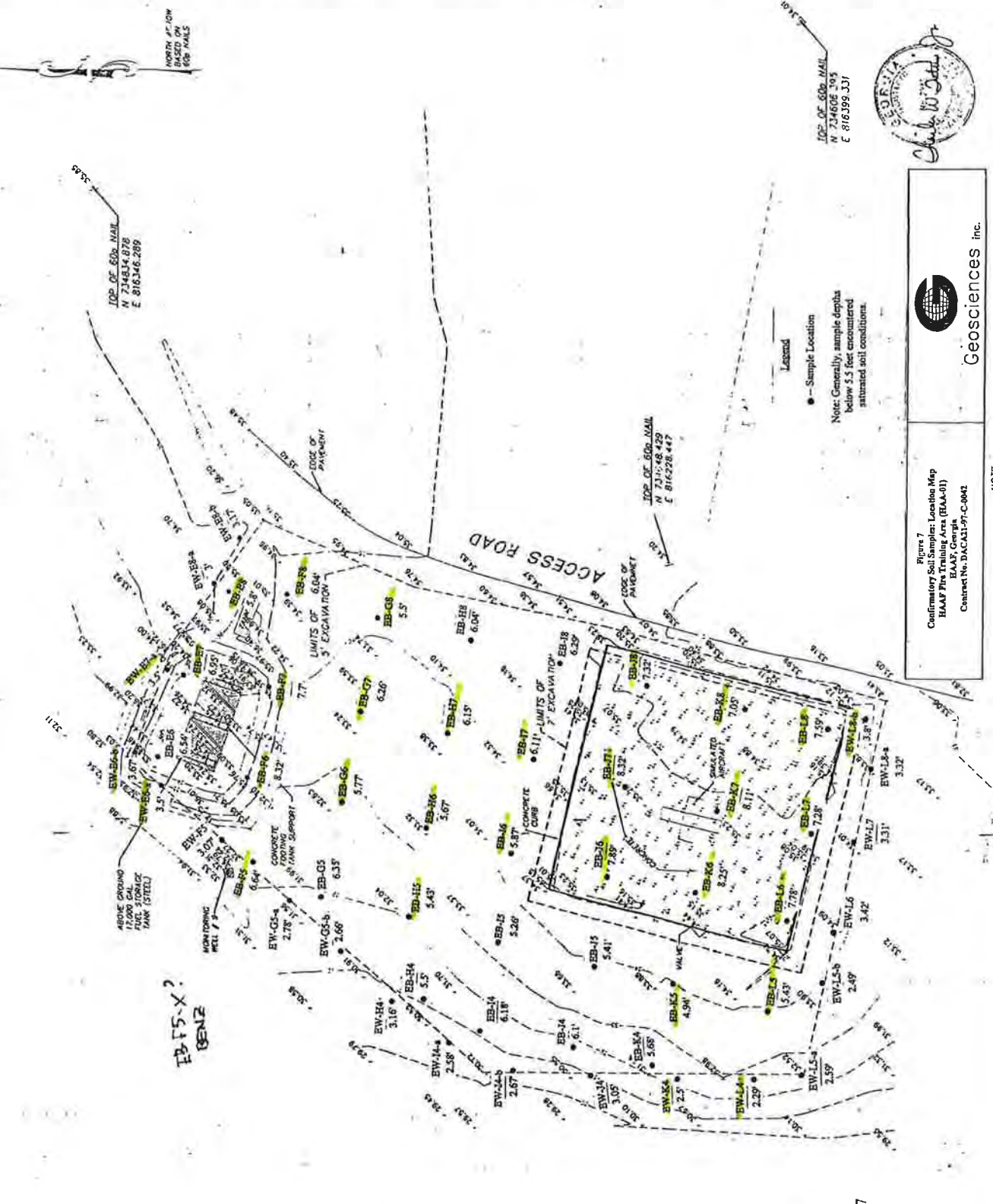
TOPOGRAPHIC SURVEY OF FIRE TRAINING AREA,  
 HUNTER ARMY AIRFIELD,  
 4th G.M. DISTRICT, SAVANNAH,  
 CHATHAM COUNTY, GEORGIA,  
 PREPARED FOR:  
 OMEGA ENVIRONMENTAL SERVICES, INC.

PROJECT NUMBER	DATE

DESIGN: TLC  
 GRAPHIC: TLC  
 REVIEW: CWT  
 DATE: 11/25/97  
 SCALE: 1" = 20'  
 PROJECT: 97423.01

SHEET: 1 OF 1

72/4



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Figure 7  
 Confirmatory Soil Samples Location Map  
 HAAF Fire Training Area (EIA-01)  
 HAAF, Georgia  
 Contract No. DAC43197-C-0042

NOTE:  
 UNDERGROUND FEATURES AND UTILITIES  
 EXIST BUT ARE NOT SHOWN.



1" = 20'  
 0 10 20 30 40 50 60 70 80 90 100

EB-55 X-55  
 BENZ

MW-7





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TOPOGRAPHIC SURVEY OF FIRE TRAINING AREA,  
 HUNTER ARMY AIRFIELD,  
 4TH G.M. DISTRICT, SAVANNAH,  
 CHATHAM COUNTY, GEORGIA  
 PREPARED FOR:  
 OMEGA ENVIRONMENTAL SERVICES, INC.

DESIGN:	TLC
GRAPHICS:	TLC
REVISION:	CWT
DATE:	11/25/97
SCALE:	1" = 20'
PROJECT:	97425.01

FIGURE NO. 4  
 SHEET 1 OF 1

22 4 88

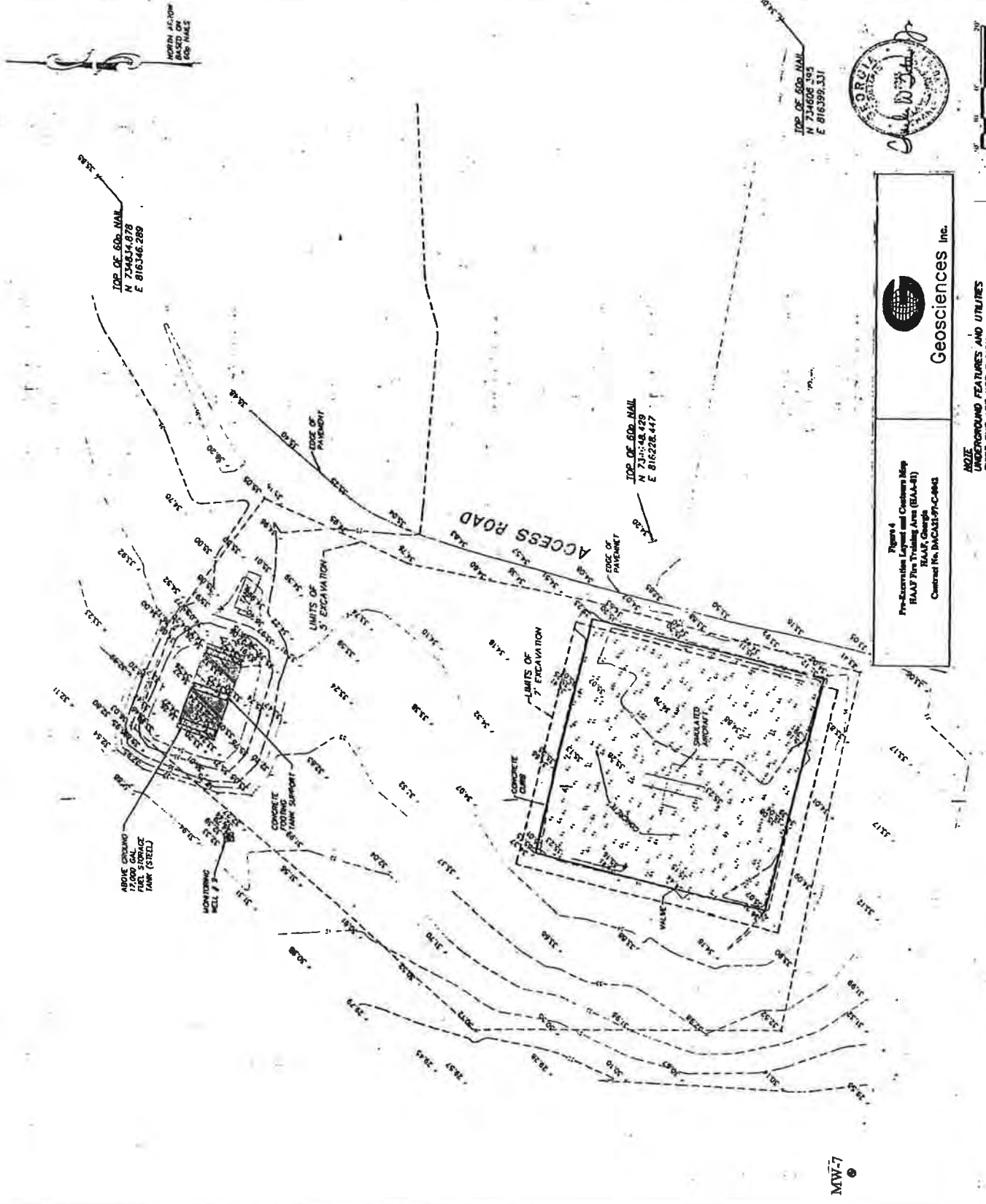


Figure 4  
 Pre-Excavation Layout and Contours Map  
 RAJ Fire Training Area (RAJ-41)  
 Contract No. H4028597-C-003



Geosciences Inc.

NOTE  
 UNDERGROUND FEATURES AND UTILITIES  
 EXIST BUT ARE NOT SHOWN.



TOP OF 600' NAIL  
 N 734606.345  
 E 816399.331

TOP OF 600' NAIL  
 N 731148.429  
 E 816228.447

TOP OF 600' NAIL  
 N 744314.973  
 E 816346.289

MW-7



EMC ENGINEERING SERVICES, INC.  
 Post Office Box 6101  
 Savannah, Georgia 31412  
 Phone (912) 231-6533  
 Fax (912) 231-6930

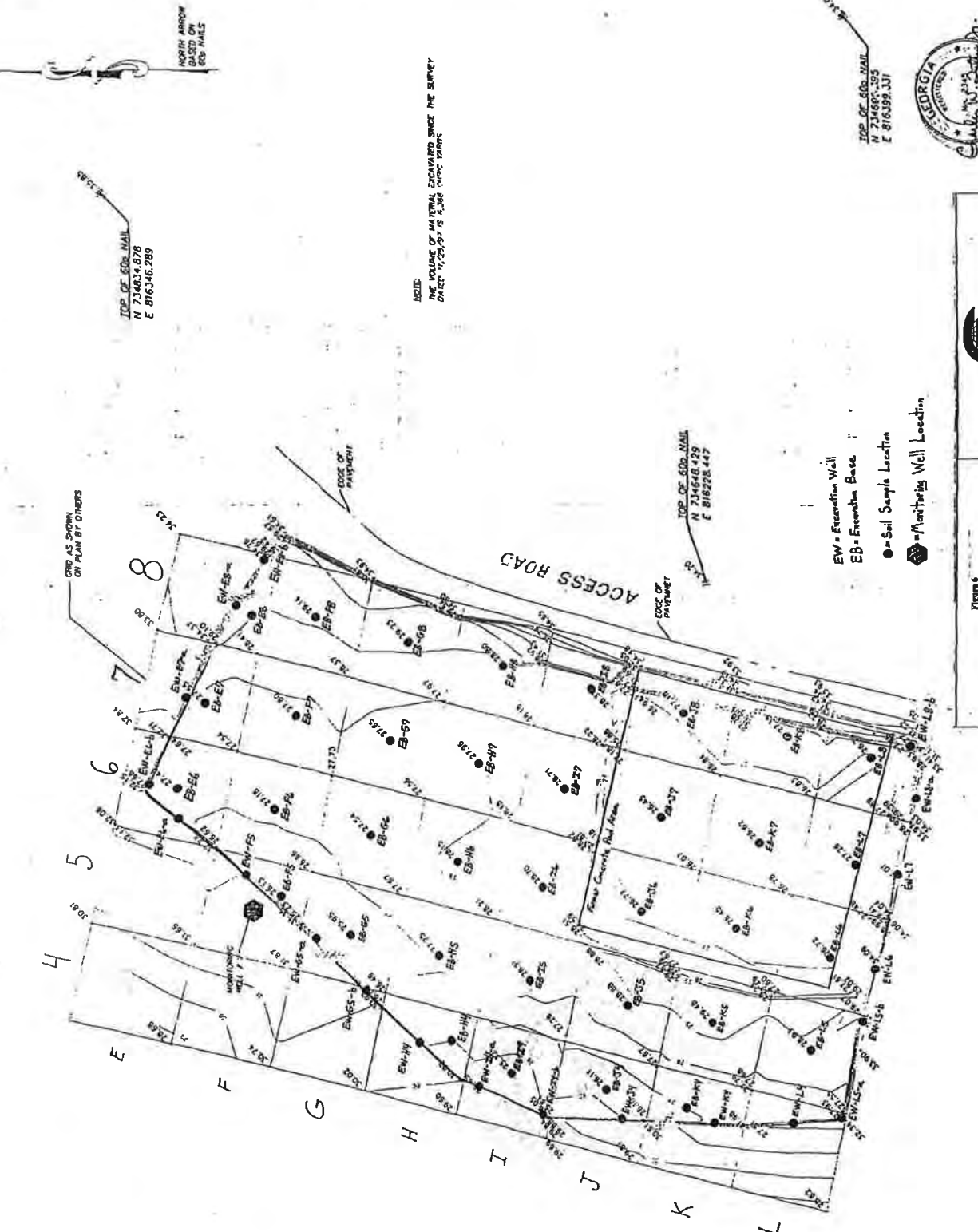
TOPOGRAPHIC SURVEY OF FIRE TRAINING AREA,  
 HUNTER ARMY AIRFIELD,  
 4th G.M. DISTRICT, SAVANNAH,  
 CHATHAM COUNTY GEORGIA  
 PREPARED FOR:  
 OMEGA ENVIRONMENTAL SERVICES, INC.

NUMBER	DATE

DESIGN:	AMS
GRAPHICS:	AMS
REVIEW:	CWT
DATE:	03-02-98
SCALE:	1" = 20'
PROJECT:	874-93-01

SHEET	1	OF	1
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2 2 3 4



NOTE:  
 THE VOLUME OF MATERIAL EXCAVATED SINCE THE SURVEY  
 DATED 11/29/97 IS 4,386 CUBIC YARDS

TOP OF 600 MAIL  
 N 7146314.878  
 E 8163466.289

TOP OF 600 MAIL  
 N 7146418.429  
 E 816228.447

EW = Excavation Well  
 EB = Excavation Base  
 ● = Soil Sample Location  
 ⊗ = Monitoring Well Location

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Figure 6  
 Confirmatory Soil Sampler Location Map  
 HUNTER FIRE Training Area (BMA-01)  
 Hunter Army Airfield  
 Contract No. DACW28-97-C-0042

MW-7

DATE: 03-02-98  
 SCALE: 1" = 20'  
 PROJECT: 874-93-01



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Post Office Box 6101  
Savannah Georgia 31415  
Phone (912) 232-8535  
Fax (912) 232-2820

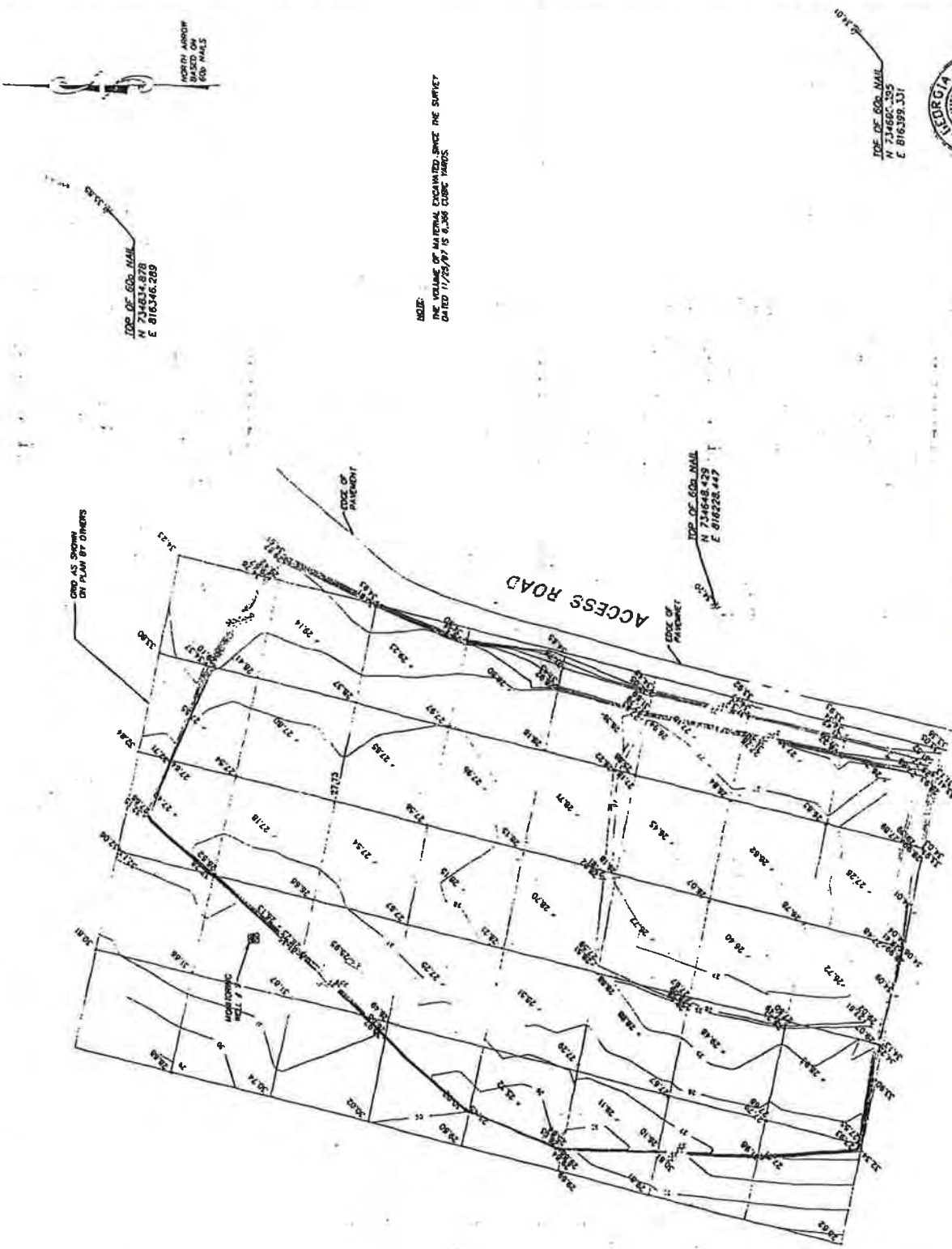
**TOPOGRAPHIC SURVEY OF FIRE TRAINING AREA,  
HUNTER ARMY AIRFIELD,  
4th G.M. DISTRICT, SAVANNAH,  
CHATHAM COUNTY GEORGIA,  
PREPARED FOR:  
OMEGA ENVIRONMENTAL SERVICES, INC.**

NO.	DESCRIPTION	DATE

DESIGN	JMS
GRAPHICS	JMS
REVIEW	CWT
DATE	03-02-86
SCALE	1" = 20'
PROJECT	87423.01

SHEET	1	OF	1
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2.2 4/4 5-17



TOP OF 600-MAIL  
N 734648.429  
E 816226.447

NOTE:  
THE VOLUME OF MATERIAL EXCAVATED SINCE THE SURVEY  
DATED 11/25/87 IS 8,306 CUBIC YARDS.

TOP OF 600-MAIL  
N 734648.429  
E 816226.447

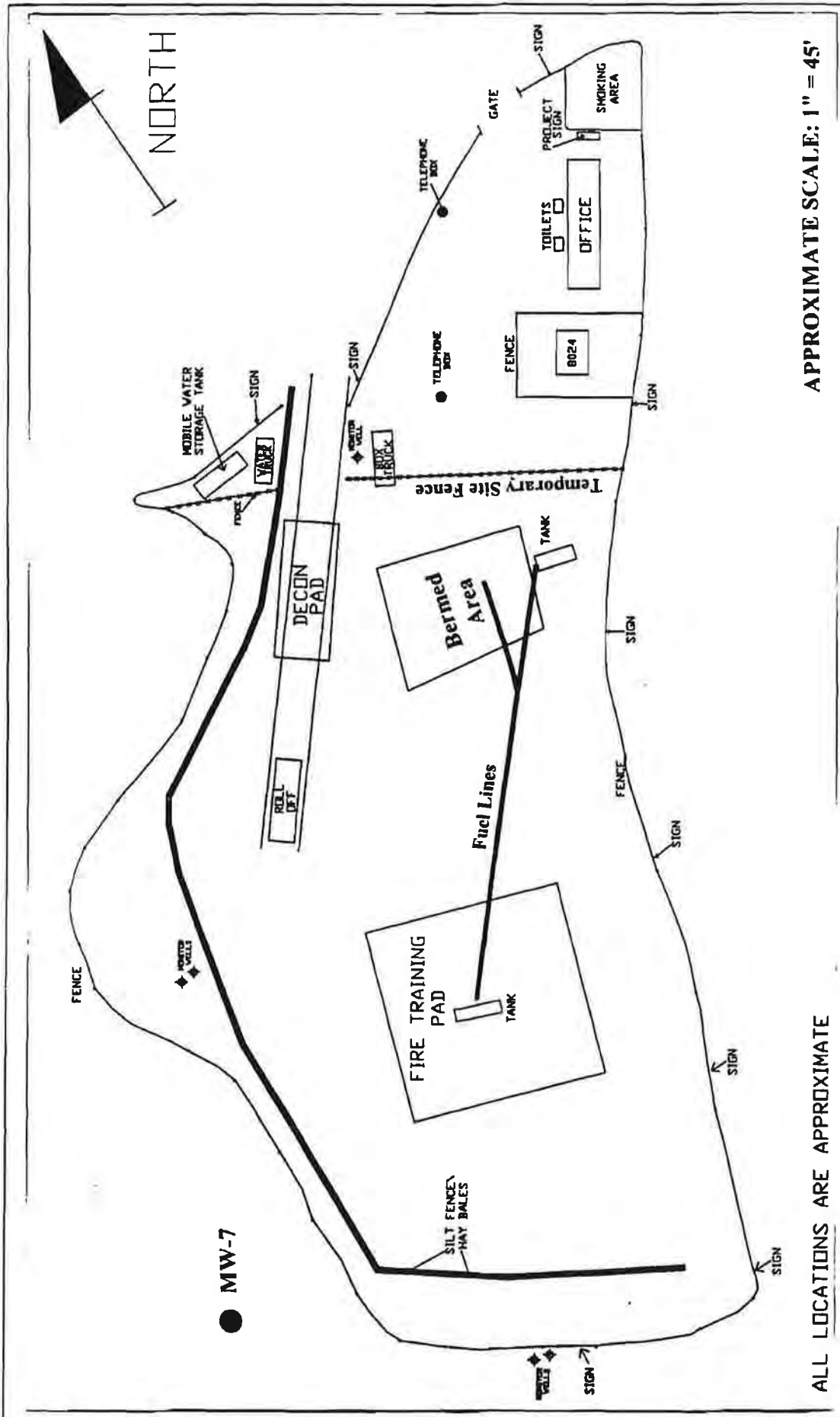


GRAPHIC SCALE: 1" = 20'

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Figure 5  
Post-Excavation Layout and Contour Map  
BAAF Fire Training Area (BAA-41)  
BAAF, Georgia  
Contract No. DMCA0197-C-0462

MW-7



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**Figure 3**  
**Site Map (Prior to Soil RA being conducted)**  
**HAAF Fire Training Area (HAA-01)**  
**HAAF, Georgia**  
**Contract No. DACA21-97-C-0042**

## Appendix E

UBC Background Concentration  
Summary



during storage in laboratory refrigerators. Because trichlorofluoromethane was only detected in soil samples by ESE in 1992, and is not indicative of fire training activities, possible contamination of samples during storage is likely. The presence of these compounds detected in samples is believed to be laboratory artifact or indicative of the concrete/asphalt construction debris fill materials present at the Site. Therefore, the focus of the 1999/2000 CSR assessment activities was the complete delineation of arsenic, barium, lead, VOCs and PAHs in groundwater, and VOCs, PAHs, barium, chromium, organochlorine pesticides, and PCBs in soils. As required by the Georgia EPD January 2001 comments, the 2001 CSR assessment activities for soils included the delineation of the previously detected acetone, methylene chloride, and phthalates along with VOCs, SVOCs, barium, and chromium. The 2001 CSR assessment activities for ground water were focused on VOCs.

Concentrations of regulated substances detected in surface and subsurface soil samples collected during the CSR assessment activities conducted in 1999 to 2001 are summarized in Tables 4.3 and 4.4. Concentrations of regulated substances detected in groundwater samples collected during the CSR activities and previous investigations are summarized in Tables 4.5. Figures 4.8A, 4.8B, 4.8C, 4.9A, 4.9B, 4.9C, 4.10, and 4.11 present the distribution and extent of site-specific regulated substances detected in surface and subsurface soil. Figure 4.12 presents the distribution and extent of site-specific regulated substances detected in groundwater.

#### **4.3.1 Background Concentrations**

##### **Soil**

During the course of the investigation of the former FTA, 63 soil samples were obtained and analyzed for RCRA metals (arsenic, barium, cadmium, lead, mercury, nickel, selenium and silver). Since there was no known release of metals at the Site, it could not be determined which, if any, of the samples were representative of a release, and which were representative of background conditions. Therefore, a statistical evaluation which initially considered all of the available soil metals data was performed.

The soils data was first evaluated for identification of statistical outliers. The Grubbs Outlier test referenced in USEPA Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities, dated April 1989 and ASTM E178-75 was used to determine the outliers. Normally, outlier data points are left in the data set and are statistically evaluated with the other data points. To be conservative in the evaluation of the metals in soil at the HAAF former FTA site, the outliers were removed from the data set prior to the statistical analysis. If a data point was an outlier for one metal, it was removed from all of the

February 2002

Revised Final Compliance Status Report  
Former HAAF Fire Training Area  
HSI Number 10395

metals data sets. Six samples which displayed statistical outliers for any metal were removed from the data sets for all metals. The outliers removed from the data set are listed below.

BH-10 (0-1 ft)	Barium concentration outlier
BH-11 (0-1 ft)	Arsenic and Lead concentration outliers
BH-13	Arsenic, Lead, and Mercury concentration outliers
BH-13 (0-1 ft)	Lead concentration outlier
FTASB-11 (SB-11) (0.5-1)	Barium concentration outlier
HMW-13 (8-10 ft)	Chromium concentration outlier

Sample locations BH-10, BH-11, BH-13, and SB-11 are located within the area where fuels were used in fire training exercises which is considered to be a source area.

A statistical evaluation was then performed on the remaining data after the outliers had been removed. Statistical methods were selected based on the distribution of the data and the number of non-detects. The data were evaluated for normality using the Filliben, Shapiro-Francia, and Shapiro-Wilk tests. Log-normal data sets (arsenic, barium, chromium, lead, and selenium) were logarithmically transformed. Upper background concentrations (UBCs) were then selected on the transformed data using the mean plus 1.645 standard deviations. A non-parametric analysis was then performed on the remaining data sets that did not normalize by log transform (cadmium, mercury, and silver) and were assigned a UBC equal to the maximum observed value. In the case of mercury, the maximum observed value (0.40 mg/kg in sample BH-12) exceeded the UBC for arsenic, lead, selenium, and silver. Therefore, the next highest maximum observed value (0.39 mg/kg in sample BH-13) was selected as the mercury UBC. The statistical evaluation yielded UBCs for each of the eight metals analyzed and are listed below. The statistical plots and statistical calculations used to select UBCs for each of the eight metals are included in Appendix H.

<u>Metal</u>	<u>UBC (mg/kg)</u>	<u>Statistical Method</u>	<u>HSRA Table 2, Appendix III Values</u>
Arsenic	2.6	Log-normal data Mean + 1.645 std. Dev	20
Barium	28	Log-normal data Mean + 1.645 std. Dev	1000
Cadmium	2.6	Non-Parametric, Max observed value	2
Chromium	7.7	Log-normal data Mean + 1.645 std. Dev	100
Lead	53	Log-normal data Mean + 1.645 std. Dev	75
Mercury	0.39	Non-Parametric, Max observed value	0.5
Selenium	1.9	Log-normal data Mean + 1.645 std. Dev	2
Silver	2.6	Non-Parametric, Max observed value	2

As indicated above, the UBC for arsenic, barium, chromium, lead, mercury, and selenium are below the HSRA Table 2, Appendix III values (which are based on GAEPD's estimate of statewide background). The UBCs were then used to evaluate where metals concentrations exceeded background and if the extent of metals could be delineated using the existing data. The results of the evaluation indicated that most of the exceedences of the background concentration (i.e., UBCs) were within the excavated area and areas immediately adjacent to the excavated area. The evaluation also indicated that the extent of the metals in soils was not completely delineated to the north and west of the excavated area. Additional delineation for chromium was conducted to the north of HMW-13 and to the west of HMW-11, for barium to the west of SB-13 (Figure 4.11).

### Groundwater

Background groundwater samples from off-site locations were not collected during the 1999/2000 CSR assessment activities. However, review of previous groundwater analytical data collected during 1995 indicated that VOCs, PAHs, and metals (except barium) were not detected in groundwater samples



February 2002

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Former HAAF Fire Training Area  
HSI Number 10395

collected from wells HMW-1 (deep) and HMW-2 (shallow). Barium was detected at 0.042 mg/L in well HMW-1 and 0.095 mg/L in well HMW-2 during the 1995 sampling event; however, it should be noted that sampling was performed using a Teflon<sup>®</sup> bailer and not low-flow sampling devices. Since these wells were located hydraulically upgradient from the former FTA, wells HMW-1 and HMW-2 are considered representative of background conditions for groundwater at the Site.

#### 4.3.2 Surface Soil Sampling and Analyses

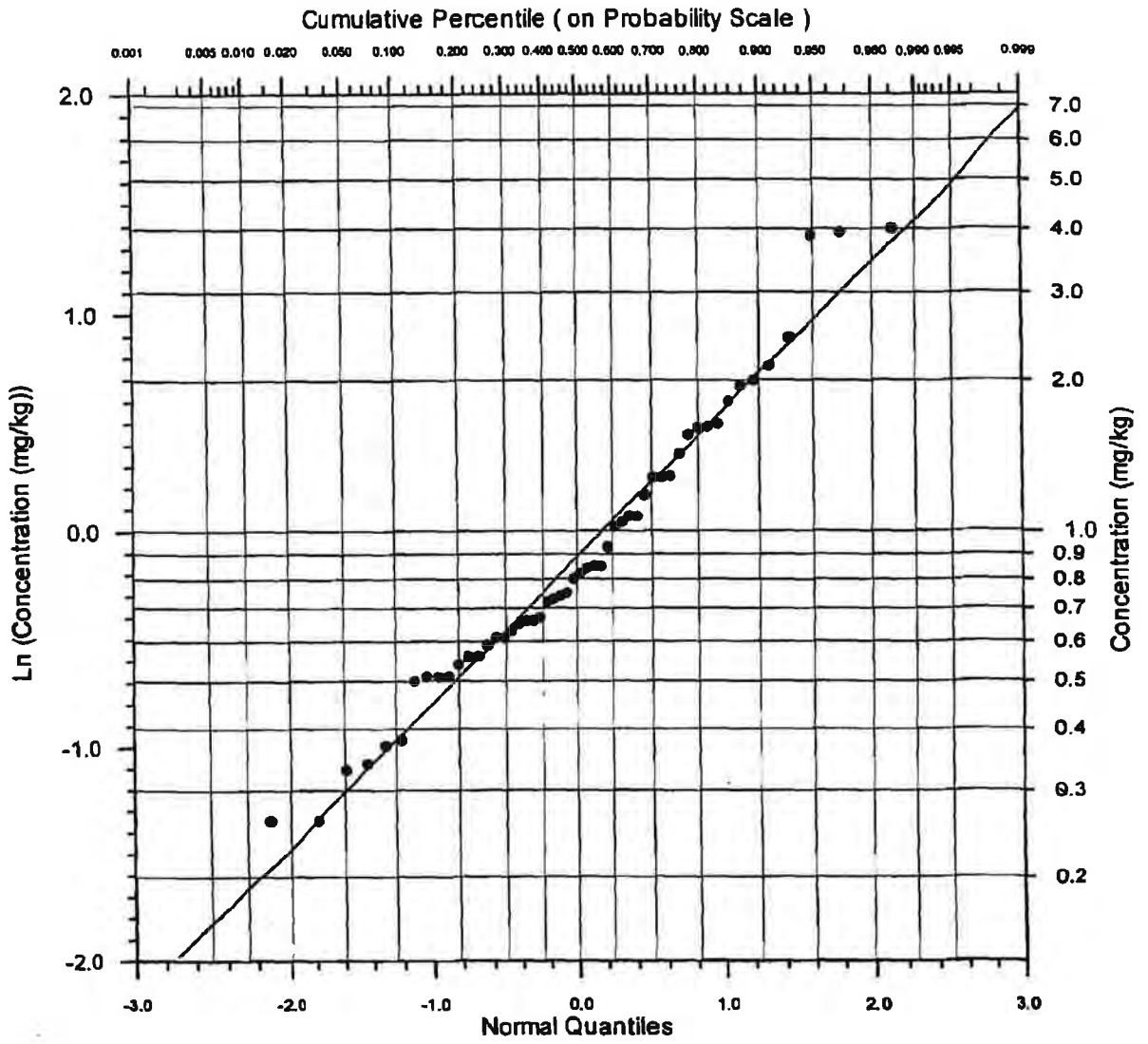
A summary of the laboratory analyses of surface soil samples collected during previous investigations is provided in Appendix A. The laboratory analytical reports for the surface soil samples collected during the CSR assessment activities are provided in Appendix F. A summary of HSRA-regulated substances detected in surface soil samples collected during the CSR assessment is provided in Table 4.3. The following text summarizes the results from both the previous investigations and the CSR assessment. Please refer to Section 4.3 for an explanation of the potential sources of these substances.

Laboratory analyses of the surface soil samples indicated the presence of four VOCs (acetone, tetrachloroethene, toluene, and trichlorofluoromethane) at concentrations greater than their respective practical quantitation limits (PQLs). The number of detections, the maximum concentrations detected, and the location in which the maximum concentration was detected for site-specific VOC regulated substances in surface soil samples are presented below:

Constituent	No. of Detections	Maximum Concentration Detected (mg/kg)	Location
Acetone	8	0.17	HMW-16
Tetrachloroethene	1	0.0061	SB-18
Toluene	1	0.021	SB-06
Trichlorofluoromethane	3	0.014	PSB-1

Laboratory analyses of the surface soil samples also indicated the presence of 17 SVOCs reported at concentrations greater than their respective PQLs. Included are the following regulated substances: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-Ethylhexyl)phthalate, chrysene,

**STATISTICAL DATA AND STATISTICAL PLOTS**



**LEGEND:**

● Arsenic (mg/kg)

LN(Data) Passed the Shapiro-Francia Normality Test indicating the Data are Lognormal. Probability Plot is Detects-Only. 7.9% ND. NDs/2 were included in UBC calculation.

Upper Background Concentration: 2.6 mg/kg  
Based on LN(Data) mean + 1.645 Standard Deviations  
LN (Data) Mean: -0.2018 SD: 0.7012

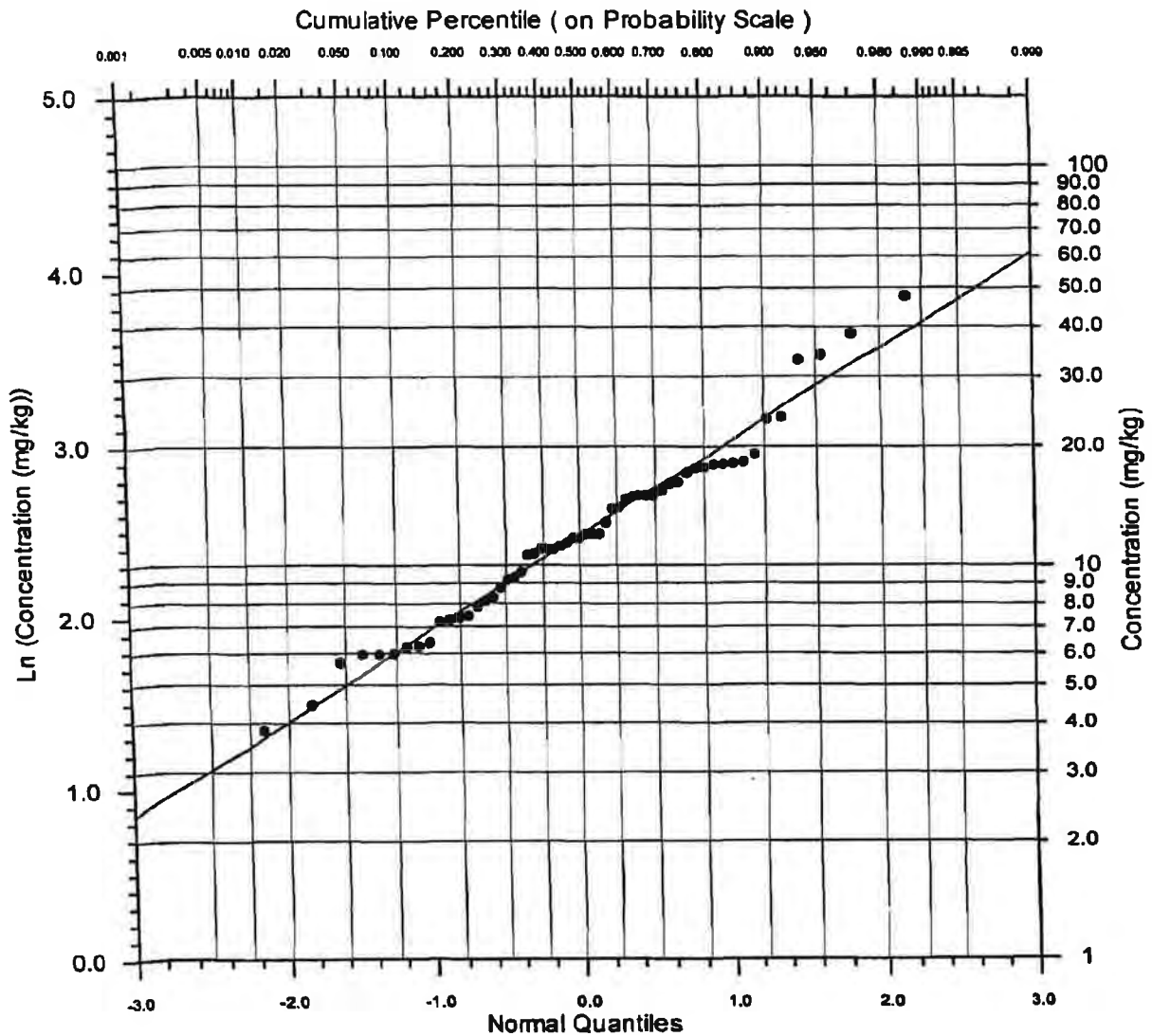
Total 63 samples, of which 57 data points were used for UBC and 52 for Probability Plot. Two data points, BH-11(13.90) and BH-13(11.98), are statistical outliers By ASTM Designation E178-75, 1975. 5% significance level. Four data points, BH-10 (5.99), BH-13 (7.75), FTASB-11 (0.86), and HMW-13 (0.6), are rejected due to being outliers in other metals data sets.

**Distribution of Background Arsenic  
in Soils at Hunter Army Airfield**

ARSENIC												
Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic	Rejected	All Data Mean Std. Error Median Mode Std. Dev. Variance Kurtosis Skewness Range Minimum Maximum Sum Count Crit. Val.	Data (-Outliers +ND/2)	LN (Data)	LN Data Mean Std. Error Median Mode Std. Dev. Variance Kurtosis Skewness Range Minimum Maximum Sum Count	LN data	Test Statistic for LN data	Txx for outlier	
BH-10	0 - 1	3.88	1.773			2.000	0.693147	1.790091			2.08367308	
BH-10	7.5-8.5	2.00	0.148		Mean	3.880	0.693147	0.693147			0.8039484	
BH-11	0 - 1	13.90	4.998	Outlier	Std. Error	4.000	1.366294	2.631889			3.06573663	
BH-11	7.5-8.5	3.88	0.914		Median	0.980	-0.0202	0.092678			1.57705804	
BH-12	0 - 1	4.00	0.963		Mode	3.940	1.371181	1.366294		Column 1	1.61259257	
BH-12	6.5-7.5	<	0.132		0.51	0.240	-1.42712	-1.34707		Mean	0.004025	
BH-13	11.98	1.96	4.214	Outlier	2.4546	0.260	-1.34707	0.701217		Standard E	0.107994	
BH-13	0 - 1	1.96	2.490	Rejected	6.025063	0.270	-1.30933	0.491705		Median	-0.19845	
BH-13	6.0-7.5	3.94	0.936		14.44536	0.650	-0.43078	-0.20525		Mode	-0.67334	
HSB-1	8 - 10	0.48	0.471		3.664717	0.850	-0.16252	0.292822		Standard D	0.857172	
HSB-2	3 - 5	<	0.455		13.64	0.275	-1.29098	2.813411		Sample Va	0.734744	
HSB-3	6 - 8	<	0.447		0.26	1.020	0.019803	-1.42712		Kurtosis	1.436998	
HSB-4	2 - 4	0.65	0.402		13.9	0.630	-0.46204	1.386294		Skewness	1.174989	
HSB-5	5 - 8	0.85	0.321		103.13	1.280	0.24686	-11.5034		Range	3.978902	
HSB-6	8-10	<	0.443		63	2.440	0.891988	57		Minimum	-1.34707	
HS-1	0 - 1	1.02	0.251		3.044	0.510	-0.67334			Maximum	2.631889	
HS-2	3 - 4	0.63	0.410		0.340	-1.07881				Sum	0.253558	
HS-3	0 - 1	1.28	0.145		0.330	-1.10866				Count	63	
HS-4	3 - 4	2.44	0.327		0.540	-0.61619						
HS-10	0 - 1	0.51	0.459		0.590	-0.52763						
HS-11	3.5 - 4	0.34	0.528		0.610	-0.4943						
HS-12	0 - 1	0.33	0.532		0.560	-0.57982						
HS-13	3.5 - 4	0.54	0.447		0.500	-0.69315						
HS-14	5.5 - 6.5	0.59	0.427		0.930	-0.07257						
HS-18	0 - 1	0.61	0.418		0.370	-0.99425						
HS-19	3.5 - 4	0.56	0.439		1.610	0.476234						
HS-7	0 - 1	0.5	0.463		1.180	0.165514						
HS-8	3 - 4	0.93	0.288		0.850	-0.16252						
HS-9	7.5 - 8.5	0.37	0.516		0.820	-0.19845						
HS-15	0 - 1	1.61	0.011		0.560	-0.57982						
HS-16	3 - 4	1.18	0.186		0.660	-0.41552						
HS-17	8 - 7	0.85	0.321		1.820	0.598837						
FTASB-04	0.5 - 1.0	0.62	0.333		1.070	0.067659						
FTASB-06	0.5 - 1.0	0.66	0.439		1.560	0.444686						
FTASB-09	0.5 - 1.0	0.66	0.398		1.280	0.24686						
FTASB-10	0.5 - 1.0	1.82	0.075		1.950	0.667829						
FTASB-11	0.5 - 1.0	0.82	0.317	Rejected	1.430	0.357674						
FTASB-12	0.5 - 1.0	1.07	0.231		2.140	0.760606						
FRASB-13	0.5 - 2.5	1.56	0.031		1.640	0.494696						
FTASB-14	0.5 - 2.5	1.28	0.145		0.510	-0.67334						
FTASB-15	0.5 - 2.5	1.95	0.128		0.660	-0.41552						
FTASB-16	0.5 - 2.5	1.43	0.084		0.740	-0.30111						
FTASB-17	0.5 - 2.5	2.14	0.205		1.070	0.067659						
HMVV-10	0.0 - 2.0	1.64	0.001		0.670	-0.40048						

ARSENIC									
Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic	Data (-Outliers +ND/2)	LN (Data)	LN data	Test Statistic for LN data	Txx for outlier	
HMW-12	1.5 - 3.0	0.51	0.459	0.380	-0.96758	-0.67334		0.79023765	
FTASB-04	9.0 - 10.5	0.66 J	0.398	0.800	-0.22314	-0.41552		0.48944727	
FTASB-06	8.5 - 10.5	0.74 J	0.365	1.620	0.482426	-0.30111		0.35597307	
FTASB-09	6.0 - 7.0	1.07 J	0.231	0.730	-0.31471	0.067659		0.07423664	
FTASB-10	9.1 - 10.4	0.67 J	0.394	0.610	-0.4943	-0.40048		0.47190368	
FTASB-11	9.5 - 10.0	0.38 J	0.512	1.290	0.254642	-0.96758		1.13350534	
FTASB-12	8.0 - 10.0	0.8 J	0.341	0.260	-1.34707	-0.22314		0.26502104	
FTASB-13	2.5 - 4.5	1.62 J	0.007	0.260	-1.34707	0.482426		0.55811557	
FTASB-14	4.5 - 6.5	0.73 J	0.370	0.840	-0.17435	-0.31471		0.37184579	
FTASB-15	4.5 - 6.5	0.81 JQ	0.418	0.750	-0.28768	-0.4943		0.58135516	
FTASB-16	6.5 - 8.1	1.29 JQ	0.141	0.510	-0.67334	0.254642		0.29237671	
FTASB-17	4.5 - 6.5	0.26 JQ	0.561	1.040	0.039221	-1.34707		1.57622815	
HMW-10	2.0 - 4.0	0.26 JQ	0.561	0.720	-0.3285	-1.34707		1.57622815	
HMW-11	2.0 - 4.0	0.84 JQ	0.325			-0.17435		0.20810112	
HMW-11	6.0 - 8.0	0.75 JQ	0.361			-0.28768		0.34031342	
HMW-12	1.5 - 3.0	0.51 JQ	0.459			-0.67334		0.79023765	
HMW-12	4.5 - 6.0	1.04 JQ	0.243			0.039221		0.04106018	
HMW-13	2.0 - 4.0	0.72 JQ	0.374			-0.3285		0.38793745	
HMW-13	8.0 - 10.0	0.8 JQ	0.422 Rejected			-0.51083		0.60063869	

4-6



**LEGEND:**

● Barium (mg/kg)

LN(Data) Passed Shapiro-Francia Test of Normality Indicating the Data are Lognormal.  
Probability Plot is Detects-Only. 0% ND.

Upper Background Concentration: 28.3 mg/kg  
Based on Ln (Data) mean + 1.645 Standard Deviations.  
LN (Data) Mean: 2.4788 SD: 0.5257

Total 63 samples, of which 57 data points were used for UBC and Probability Plot.  
Two data points, BH-10(64.4) and FTASB-11(69), are statistical outliers  
By ASTM Designation E178-75, 1975.  
5% significance level.

Four data points, BH-11 (33.50), BH-13 (27.10), BH-13 (19.80), and HMW-13 (27),  
are rejected due to being outliers in other metals data sets.

**Distribution of Background Barium  
in Soils at Hunter Army Airfield**

**BARIUM**

Sample ID	Sample Depth (feet)	Concentration (mg/kg)
BH-10	0 - 1	64.4
BH-10	7.5-8.5	9.19
BH-11	0 - 1	33.3
BH-11	7.5-8.5	18.10
BH-12	0 - 1	7.19
BH-12	6.5-7.5	8.12
BH-13	0 - 1	27.11
BH-13	6.0-7.5	8.28
HSB-1	8 - 10	3.83
HSB-2	3 - 5	5.97
HSB-3	6 - 8	6.21
HSB-4	2 - 4	4.44
HSB-5	5 - 8	15.40
HSB-6	8-10	11.20
HS-1	0 - 1	11.40
HS-2	3 - 4	12.80
HS-3	0 - 1	14.90
HS-4	3 - 4	23.40
HS-10	0 - 1	18.30
HS-11	3.5 - 4	13.90
HS-12	0 - 1	9.60
HS-13	3.5 - 4	14.70
HS-14	5.5 - 6.5	17.70
HS-18	0 - 1	16.20
HS-19	3.5 - 4	19.10
HS-7	0 - 1	23.70
HS-8	3 - 5	15.00
HS-9	7.5 - 8.5	17.10
HS-15	0 - 1	47.60
HS-16	3 - 4	38.40

Outlier Test Statistic	All Data $\bar{x}$ /DLs	Data (-Outliers +ND/2)	LN (Data)	LN Data
3.807	16.27095	9.19	2.218116	2.478789
0.560	1.592632	18.1	2.895912	0.069626
1.363	12	8.12	2.09433	2.459589
0.145	15	8.28	2.113843	2.70805
0.645	15	3.83	1.342865	0.525668
0.857	12.64112	5.97	1.786747	0.204707
0.278	159.798	6.21	1.826161	0.30929
0.632	7.129523	4.44	1.490654	0.30929
0.984	2.473057	15.4	2.734368	1.342865
0.815	65.17	11.2	2.415914	2.519868
0.796	3.83	11.4	2.433613	1.342865
0.936	69	12.8	2.549445	3.862833
0.069	1025.07	14.9	2.701361	141.2909
0.401	63	23.4	3.152736	Count
0.385	3.044	18.3	2.906901	Crit. Val.
0.275		13.9	2.631889	57
0.108		9.6	2.261763	
0.564		14.7	2.687847	
0.161		17.7	2.873565	
0.188		16.2	2.785011	
0.528		19.1	2.949688	
0.124		23.7	3.165475	
0.113		15	2.70805	
0.006		17.1	2.838078	
0.224		47.6	3.862833	
0.588		38.4	3.648057	
0.101		17.6	2.867889	
0.066		11	2.397895	
2.478		7.45	2.008214	
1.751		11	2.397895	

LN data	LN (Data)	LN Data	Txx for outlier
4.165114	9.19	2.218116	2.575636
2.218116	18.1	2.895912	0.595731
3.511545	8.12	1.972691	1.511071
2.895912	8.28	2.113843	0.508296
1.972691	3.83	1.342865	0.995492
2.09433	5.97	1.786747	0.79736
3.299534	6.21	1.826161	2.583853
2.985682	4.44	1.490654	Standard E
2.113843	15.4	2.734368	0.077348
1.342865	11.2	2.415914	2.484907
1.786747	11.4	2.433613	0.654518
1.826161	12.8	2.549445	2.70805
1.490654	14.9	2.701361	0.765576
1.90654	23.4	3.152736	0.61393
2.734368	18.3	2.906901	2.021384
2.415914	13.9	2.631889	0.37691
2.549445	9.6	2.261763	0.341383
2.701361	14.7	2.687847	1.234167
3.152736	17.7	2.873565	0.541552
2.906901	16.2	2.785011	1.780657
2.631889	19.1	2.949688	2.891242
2.261763	23.7	3.165475	0.245165
2.687847	15	2.70805	0.273548
2.873565	17.1	2.838078	4.234107
2.785011	47.6	3.862833	162.7828
2.949688	38.4	3.648057	0.191403
3.165475	17.6	2.867889	0.926624
2.70805	11	2.397895	0.526196
2.839078	7.45	2.008214	0.078242
3.862833	11	2.397895	0.524637
3.648057	11	2.397895	0.169391
1.733429	11	2.397895	0.471896



**BARIUM**

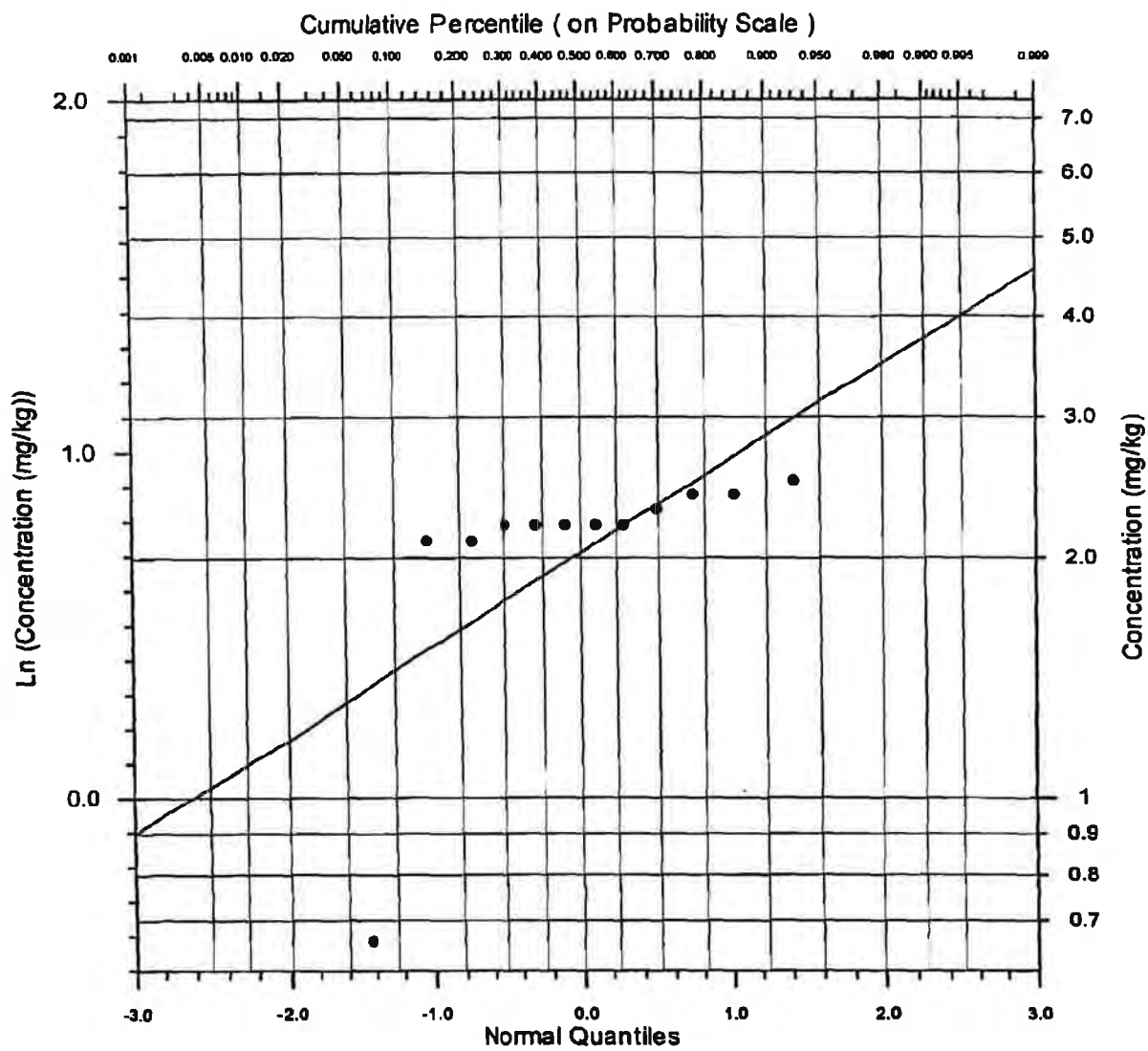
Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HS-17	6 - 7	17.60	0.105
FTASB-04	0.5 - 1.0	11	0.417
FTASB-06	0.5 - 1.0	7.45	0.698
FTASB-09	0.5 - 1.0	11	0.417
FTASB-10	0.5 - 1.0	34	1.402
FTASB-11	0.5 - 1.0	68	4.171
FTASB-12	0.5 - 1.0	9.3	0.551
FRASB-13	0.5 - 2.5	12	0.338
FTASB-14	0.5 - 2.5	12	0.338
FTASB-15	0.5 - 2.5	18	0.137
FTASB-16	0.5 - 2.5	11	0.417
FTASB-17	0.5 - 2.5	18	0.137
HMMV-10	0.0 - 2.0	16	0.021
HMMV-12	1.5 - 3.0	5.96	0.816
FTASB-04	9.0 - 10.5	12	0.338
FTASB-06	8.5 - 10.5	11.7 J	0.362
FTASB-09	6.0 - 7.0	15	0.101
FTASB-10	9.1 - 10.4	14	0.180
FTASB-11	9.5 - 10.0	10.6 J	0.449
FTASB-12	8.0 - 10.0	15	0.101
FTASB-13	2.5 - 4.5	33	1.323
FTASB-14	4.5 - 6.5	8.77 J	0.593
FTASB-15	4.5 - 6.5	7.27 JQ	0.712
FTASB-16	6.5 - 8.1	10.7 J	0.441
FTASB-17	4.5 - 6.5	6.38 JQ	0.782
HMMV-10	2.0 - 4.0	6.25 JQ	0.793
HMMV-11	2.0 - 4.0	11.7 J	0.362
HMMV-11	6.0 - 8.0	7.37 JQ	0.704
HMMV-12	1.5 - 3.0	5.96 JQ	0.816
HMMV-12	4.5 - 6.0	5.68 JQ	0.838
HMMV-13	2.0 - 4.0	7.85 JQ	0.666
HMMV-13	8.0 - 10.0	27	0.849 Rejected

Data (-Outliers +ND/2)

LN data  
 34 3.526361  
 9.3 2.230014  
 12 2.484907  
 12 2.484907  
 18 2.890372  
 11 2.397895  
 18 2.890372  
 16 2.772589  
 5.96 1.78507  
 12 2.484907  
 11.7 2.459589  
 15 2.70805  
 14 2.639057  
 10.6 2.360854  
 15 2.70805  
 33 3.496508  
 8.77 2.171337  
 7.27 1.983756  
 10.7 2.370244  
 6.38 1.853168  
 6.25 1.832581  
 11.7 2.459589  
 7.37 1.997418  
 5.96 1.78507  
 5.68 1.736951  
 7.85 2.060514

Txx for outlier  
 0.462667  
 0.302898  
 0.93763  
 0.302898  
 1.535203  
 2.68015  
 0.576351  
 0.161169  
 0.161169  
 0.49272  
 0.302898  
 0.49272  
 0.307421  
 1.301098  
 0.161169  
 0.202408  
 0.202298  
 0.089919  
 0.363233  
 0.202298  
 1.486577  
 0.671928  
 0.977468  
 0.347936  
 1.190177  
 1.223709  
 0.202408  
 0.955216  
 1.301098  
 1.379477  
 0.852442  
 1.159714





**LEGEND:**

- Cadmium (mg/kg)

Due to high percentage of non-detects the data can not be validly normalized.  
 Probability Plot is Detects-Only. 79% NDs.

Upper Background Concentration: 2.6 mg/kg  
 Based on non-parametric analysis, UBC is set equal to the maximum observed value.  
 5% Significance Level and 98% expected coverage.

Total of 63 samples, of which 57 data points were used for UBC and 12 for Probability Plot.  
 No Data Points are determined to be statistical outliers.  
 By ASTM Designation E178-75, 1975.  
 5% significance level.  
 Six data points, BH-10 (<1.98), BH-11 (1.99), BH-13 (0.02), BH-13 (3.87), FTASB-11 (2.2),  
 and HMW-13 (<2.3), are rejected due to being outliers in other metals data sets.

**Distribution of Background Cadmium  
 in Soils at Hunter Army Airfield**

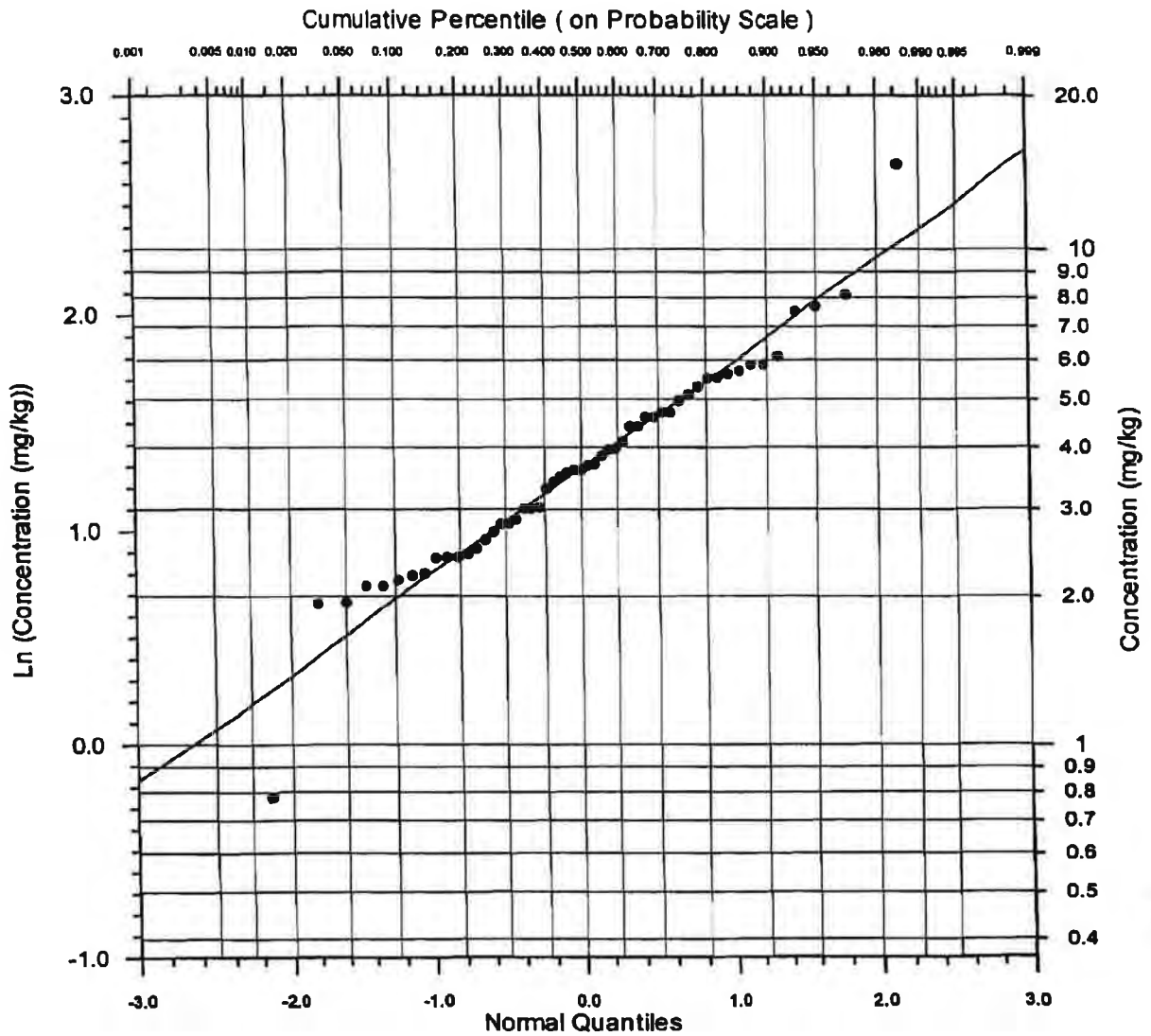
**CADMIUM**

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
BH-10	0 - 1	< 1.98	0.415
BH-10	7.5-8.5	< 1.98	0.415
BH-11	0 - 1	< 1.99	0.425
BH-11	7.5-8.5	< 1.98	0.415
BH-12	0 - 1	< 1.98	0.415
BH-12	6.5-7.5	< 1.98	0.415
BH-13		0.02	1.675
BH-13	0 - 1	3.87	2.430
BH-13	6.0-7.5	< 1.98	0.415
HSB-1	8 - 10	< 0.37	1.302
HSB-2	3 - 5	< 0.40	1.270
HSB-3	6 - 8	< 0.42	1.249
HSB-4	2 - 4	< 0.41	1.259
HSB-5	5 - 8	< 0.45	1.217
HSB-6	8-10	< 0.42	1.249
HS-1	0 - 1	< 0.52	1.142
HS-2	3 - 4	< 0.57	1.089
HS-3	0 - 1	< 0.54	1.121
HS-4	3 - 4	< 0.55	1.110
HS-10	0 - 1	< 0.51	1.153
HS-11	3.5 - 4	< 0.54	1.121
HS-12	0 - 1	< 0.51	1.153
HS-13	3.5 - 4	< 0.54	1.121
HS-14	5.5 - 6.5	< 0.54	1.121
HS-18	0 - 1	< 0.50	1.163
HS-19	3.5 - 4	< 0.55	1.110
HS-7	0 - 1	< 0.54	1.121
HS-8	3 - 5	< 0.54	1.121
HS-9	7.5 - 8.5	< 0.53	1.131
HS-15	0 - 1	< 0.51	1.153
HS-16	3 - 4	< 0.52	1.142

	Column 1
Mean	1.591111
Standard E	0.118161
Median	1.99
Mode	2.4
Standard C	0.937875
Sample Va	0.87961
Kurtosis	-1.34677
Skewness	-0.17072
Range	3.85
Minimum	0.02
Maximum	3.87
Sum	100.24
Count	63
Crit. Val.	3.044

CADMIUM

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HS-17	6 - 7	< 0.54	1.121
FTASB-04	0.5 - 1.0	2.2	0.649
FTASB-06	0.5 - 1.0	2.1	0.543
FTASB-09	0.5 - 1.0	2.5	0.969
FTASB-10	0.5 - 1.0	0.66	0.993
FTASB-11	0.5 - 1.0	2.2	0.649
FTASB-12	0.5 - 1.0	2.4	0.862
FRASB-13	0.5 - 2.5	2.2	0.649
FTASB-14	0.5 - 2.5	2.2	0.649
FTASB-15	0.5 - 2.5	2.2	0.649
FTASB-16	0.5 - 2.5	2.1	0.543
FTASB-17	0.5 - 2.5	2.2	0.649
HMW-10	0.0 - 2.0	2.3	0.756
HMW-12	1.5 - 3.0	2.4	0.862
FTASB-04	9.0 - 10.5	2.4	0.862
FTASB-06	8.5 - 10.5	2.6	1.076
FTASB-09	6.0 - 7.0	2.3	0.756
FTASB-10	9.1 - 10.4	2.4	0.862
FTASB-11	9.5 - 10.0	2.4	0.862
FTASB-12	8.0 - 10.0	2.5	0.969
FTASB-13	2.5 - 4.5	2.6	1.076
FTASB-14	4.5 - 6.5	2.3	0.756
FTASB-15	4.5 - 6.5	2.3	0.756
FTASB-16	6.5 - 8.1	2.4	0.862
FTASB-17	4.5 - 6.5	2.2	0.649
HMW-10	2.0 - 4.0	2.4	0.862
HMW-11	2.0 - 4.0	2.4	0.862
HMW-11	6.0 - 8.0	2.6	1.076
HMW-12	1.5 - 3.0	2.4	0.862
HMW-12	4.5 - 6.0	2.4	0.862
HMW-13	2.0 - 4.0	2.4	0.862
HMW-13	8.0 - 10.0	2.3	0.756



**LEGEND:**

- Chromium (mg/kg)

LN(Data) Passed the Coefficient of Skewness Test of Normality Indicating the Data are Lognormal. Probability Plot is Detects-Only. 7.0% ND. NDs/2 were included in UBC calculation.

Upper Background Concentration: 7.7 mg/kg  
 Based on LN(Data) mean + 1.645 Standard Deviations  
 LN (Data) Mean: 1.2527 SD: 0.4792

Total 63 samples, of which 57 data points were used for UBC and 53 for Probability Plot.  
 One data point, HMW-13 (31.7), is a statistical outlier.  
 By ASTM Designation E178-75, 1975.  
 5% significance level.

Five data points, BH-10 (12.80), BH-11 (4.16), BH-13 (2.84), BH-13 (9.10) and FTASB-11 (4.8), are rejected due to being outliers in other metals data sets.

**Distribution of Background Chromium  
 in Soils at Hunter Army Airfield**

CHROMIUM

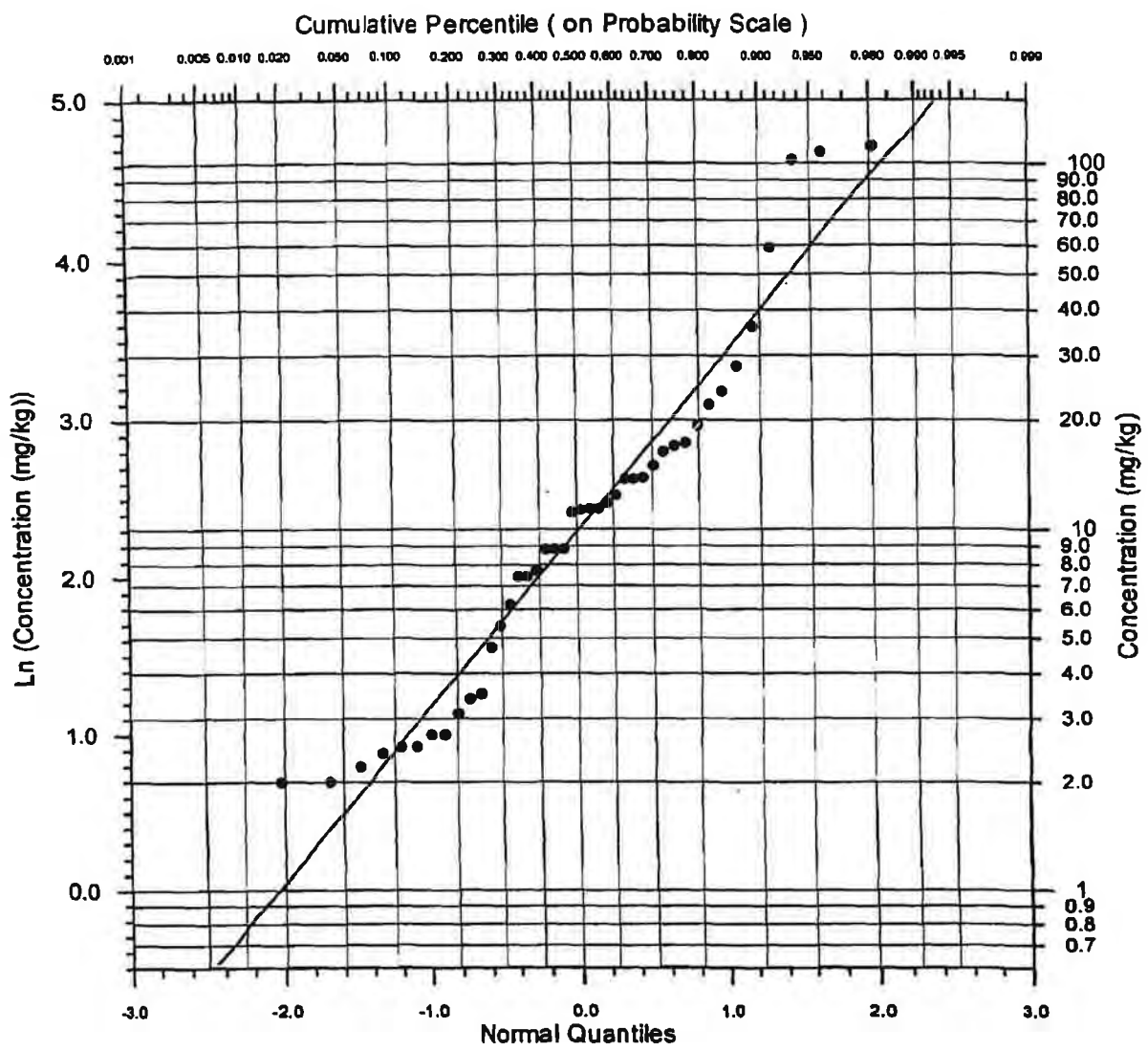
Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic	Outlier Test	All Data $\bar{x}$ / DLS	Data (-Outliers +ND/2)	LN (Data)	LN (Data)	LN Data	Txx for outlier
BH-10	0-1	2.98	1.928	Rejected	4.729524	1.98	0.683097	1.376244	2.549445	2.142766
BH-10	7.5-8.5	<	0.184		3.96	3.96	1.376244	1.376244	1.376244	0.007909
BH-11	0-1	3.96	0.136	Rejected	0.527314	2.595	0.953587	1.425515	0.097567	0.007909
BH-11	7.5-8.5	3.96	0.184		3.96	1.98	0.683097	1.376244	1.376244	0.007909
BH-12	0-1	5.19	0.110		0.527314	1.98	0.683097	1.666948	1.646734	0.500115
BH-12	6.5-7.5	<	0.184		3.96	0.78	-0.24846	1.376244	1.376244	0.007909
BH-13	0-1	2.81	1.044	Rejected	4.185428	3.49	1.24902	1.043804	1.043804	0.069236
BH-13	6.0-7.5	<	0.184		17.5178	3.85	1.348073	1.376244	1.376244	1.521942
HSB-1	8-10	0.78	0.944		28.39077	5.87	1.769855	1.376244	1.376244	0.007909
HSB-2	3-5	3.49	0.210		4.767239	1.93	0.65752	0.548546	0.548546	2.948543
HSB-3	6-8	3.85	0.272		30.92	2.39	0.871293	0.302	0.302	0.221994
HSB-4	2-4	5.87	0.272		0.78	5.61	1.724551	3.390369	3.390369	0.043353
HSB-5	5-8	1.93	0.669		31.7	2.81	1.033184	0.789955	0.789955	0.724156
HSB-6	8-10	2.39	0.559		287.96	5.88	1.771557	3.704778	3.704778	1.299943
HS-1	0-1	5.81	0.210		63	5.51	1.708595	0.65752	0.65752	0.810842
HS-2	3-4	2.81	0.459		3.044	3.55	1.266948	1.724551	1.724551	0.641717
HS-3	0-1	5.88	0.275		3.02	2.16	0.770108	3.456317	3.456317	0.616351
HS-4	3-4	5.51	0.185		2.44	3.02	1.105257	1.771557	1.771557	0.727254
HS-10	0-1	3.55	0.282		0.891988	2.44	0.891988	1.706565	1.706565	0.608988
HS-11	3.5-4	2.16	0.614		4.185428	2.22	0.797507	1.266948	1.266948	0.190976
HS-12	0-1	3.02	0.408		1.302913	3.68	1.302913	0.770108	0.770108	1.095067
HS-13	3.5-4	2.44	0.547		1.381262	3.98	1.381262	1.105257	1.105257	0.485202
HS-14	5.5-6.5	2.22	0.600		1.60342	4.97	1.60342	0.891988	0.891988	0.873266
HS-18	0-1	3.68	0.251		2.8	2.8	1.028619	0.797507	0.797507	1.04521
HS-19	3.5-4	3.98	0.179		1.94	1.94	0.662688	1.302913	1.302913	0.125531
HS-7	0-1	4.97	0.057		5.29	5.29	1.665818	1.381262	1.381262	0.017076
HS-8	3-5	2.80	0.461		6.1	6.1	1.808289	1.60342	1.60342	0.421297
HS-9	7.5-8.5	1.94	0.666		2.86	2.86	1.050822	1.029619	1.029619	0.622839
HS-15	0-1	5.29	0.134		3	3	1.098612	0.662688	0.662688	1.290538
HS-16	3-4	6.10	0.327		5.1	5.1	1.629241	1.685818	1.685818	0.534843
					2.4	2.4	0.875469	1.808289	1.808289	0.794094

CHROMIUM

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HS-17	6 - 7	2.86	0.447
FTASB-04	0.5 - 1.0	3.0	0.413
FTASB-06	0.5 - 1.0	5.10	0.089
FTASB-09	0.5 - 1.0	2.4	0.557
FTASB-10	0.5 - 1.0	14.7	2.382
FTASB-11	0.5 - 1.0	4.8	0.017 Rejected
FTASB-12	0.5 - 1.0	4.6	0.031
FRASB-13	0.5 - 2.5	5.7	0.232
FTASB-14	0.5 - 2.5	4.4	0.079
FTASB-15	0.5 - 2.5	4.1	0.150
FTASB-16	0.5 - 2.5	3.4	0.318
FTASB-17	0.5 - 2.5	4.7	0.007
HMMW-10	0.0 - 2.0	7.7	0.710
HMMW-12	1.5 - 3.0	3.6	0.270
FTASB-04	9.0 - 10.5	2.4 J	0.557
FTASB-06	8.5 - 10.5	2.2 J	0.604
FTASB-08	6.0 - 7.0	5.5	0.184
FTASB-10	9.1 - 10.4	2.1 J	0.628
FTASB-11	9.5 - 10.0	2.7 J	0.485
FTASB-12	8.0 - 10.0	2.5 J	0.533
FTASB-13	2.5 - 4.5	4.4 J	0.079
FTASB-14	4.5 - 6.5	4.7	0.007
FTASB-15	4.5 - 6.5	2.6 JQ	0.509
FTASB-16	6.5 - 8.1	3.7 JQ	0.246
FTASB-17	4.5 - 6.5	2.1 JQ	0.628
HMMW-10	2.0 - 4.0	3.3 JQ	0.342
HMMW-11	2.0 - 4.0	8.1	0.805
HMMW-11	6.0 - 8.0	7.5	0.662
HMMW-12	1.5 - 3.0	3.6 JQ	0.270
HMMW-12	4.5 - 6.0	4.6 J	0.031
HMMW-13	2.0 - 4.0	3.0 JQ	0.413
HMMW-13	8.0 - 10.0	31.7	6.444 Outlier

Outlier Test Statistic	Data (-Outliers +ND/2)	LN (Data)
14.7	2.67847	1.050822
4.6	1.526056	1.098612
5.7	1.740466	1.629241
4.4	1.481605	0.875469
4.1	1.410987	2.687847
3.4	1.223775	1.568616
4.7	1.547563	1.528056
7.7	2.04122	0.670679
3.6	1.280934	0.198632
2.4	0.875469	0.07113
2.2	0.788457	1.223775
5.5	1.704748	0.269536
2.1	0.741937	0.319655
2.7	0.993252	1.217956
2.5	0.916281	0.165526
4.4	1.481605	0.903344
4.7	1.547563	1.061678
2.6	0.955511	0.605683
3.7	1.308333	1.14633
2.1	0.741937	0.689016
3.3	1.193922	0.829061
8.1	2.091864	0.198632
7.5	2.014903	0.319655
3.6	1.280934	0.757692
4.6	1.526056	0.115668
3	1.088612	0.741937
		1.14633
		0.323859
		1.310112
		1.170067
		0.165526
		0.28052
		0.497293
		3.792986

Txx for outlier



**LEGEND:**

• **Lead (mg/kg)**

LN (Data) Passed The Coefficient of Skewness Test of Normality Indicating the data are lognormal. Probability Plot is Detects-Only. 25% ND. Aitchison's Adjustment used for UBC calculation.

Upper Background Concentration: 53 mg/kg  
Based on LN (Data) Adjusted Mean + 1.645 Adjusted Standard Deviations.  
LN (Data) Adjusted Mean: 1.7158 SD: 1.3668

Total of 62 samples, of which 56 data points were used for UBC and 42 for Probability Plot. Three Data Points, BH-11 (1163.00), BH-13 (1179.00) and BH-13 (1185.00), are statistical outliers. By ASTM Designation E178-75, 1975. 5% significance level. Three data points, BH-10 (645.00), FTASB-11 (15.0), and HWM-13 (3.2), are rejected due to being outliers in other metals data sets.

**Distribution of Background Lead  
in Soils at Hunter Army Airfield**

LEAD

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
BH-10	0 - 1		2.148 Rejected
BH-10	7.5-8.5	35.9	0.174
BH-11	0 - 1	1163.00	4.124 Outlier
BH-11	7.5-8.5	NRQ	
BH-12	0 - 1	102	0.078
BH-12	6.5-7.5	19.30	0.238
BH-13	0 - 1	1178.00	4.185 Outlier
BH-13	6.0-7.5	1185.00	4.208 Outlier
HSB-1	8 - 10	13.80	0.259
HSB-2	3 - 5	5.26	0.291
HSB-2	6 - 8	5.71	0.290
HSB-3	2 - 4	5.97	0.289
HSB-4	5 - 8	5.81	0.289
HSB-5	8 - 10	7.40	0.283
HSB-6	0 - 1	5.97	0.289
HS-1	0 - 1	28.00	0.205
HS-2	3 - 4	7.62	0.282
HS-3	0 - 1	17.30	0.245
HS-4	3 - 4	8.82	0.278
HS-10	0 - 1	7.39	0.283
HS-11	3.5 - 4	7.28	0.284
HS-12	0 - 1	6.90	0.285
HS-13	3.5 - 4	7.29	0.284
HS-14	5.5 - 6.5	7.27	0.284
HS-18	0 - 1	6.70	0.286
HS-19	3.5 - 4	7.31	0.284
HS-7	0 - 1	23.90	0.220
HS-8	3 - 5	8.83	0.278
HS-9	7.5 - 8.5	7.16	0.284
HS-15	0 - 1	13.80	0.259
HS-16	3 - 4	107.00	0.097

All Data ~ /DLs	Defects- only Data	LN (Defects- only data)	LN Defects-only Data
Mean	81.65452	35.9	3.580737
Std. Error	33.30281	102	4.624973
Median	7.66	19.3	2.960105
Mode	13.8	7.4	2.624669
Std. Dev.	262.2266	28	3.332205
Variance	68762.79	8.82	2.177022
Kurtosis	13.69489	7.39	2.000128
Skewness	3.839575	23.9	3.173878
Range	1183	8.83	2.179155
Minimum	2	13.8	2.624669
Maximum	1185	107	4.672829
Sum	5062.58	2.7	0.993252
Count	62	15	2.70805
Crit. Val.	3.037	4.7	1.547563
		111	4.70963
		11.4	2.433613
		7.7	2.04122
		11.4	2.433613
		13.9	2.631889
		3.4	1.223775
		12.4	2.517696
		17	2.833213
		2.5	0.916291
		3.5	1.252763
		2.4	0.875469
		59	4.077537
		11.1	2.406945
		6.2	1.824549
		11.3	2.424803

LN data	Test Statistic for LN data	Txx for outlier
6.46925	2.960105 Mean	2.675076
3.580737	7.072422 Standard E	0.735288
7.058758	7.07498 Median	3.070961
	2.624669 Mode	1.669364
4.624973	1.660131 Standard C	1.436547
2.960105 Mean	2.485829	0.318501
7.072422 Standard E	0.189114	3.080137
7.07498 Median	2.035998	3.083546
2.624669 Mode	2.624669	0.093238
1.660131 Standard C	1.489087	0.554499
1.742219 Sample Va	2.217381	0.499373
1.786747 Kurtosis	3.196304	0.46947
1.759581 Skewness	1.750325	0.487714
2.00148 Range	6.384351	0.325266
1.786747 Minimum	0.693147	0.46947
3.332205 Maximum	7.077498	0.568385
2.030776 Sum	154.1214	0.305582
2.850707 Count	62	0.245034
2.177022		0.20738
2.000128		0.326174
1.985131		0.336245
1.931521		0.372246
1.986504		0.335323
1.983756		0.337168
1.902108		0.391999
1.988243		0.333483
3.173878		0.462061
2.178155		0.206619
1.96851		0.347407
2.624669		0.093238
4.672829		1.468685



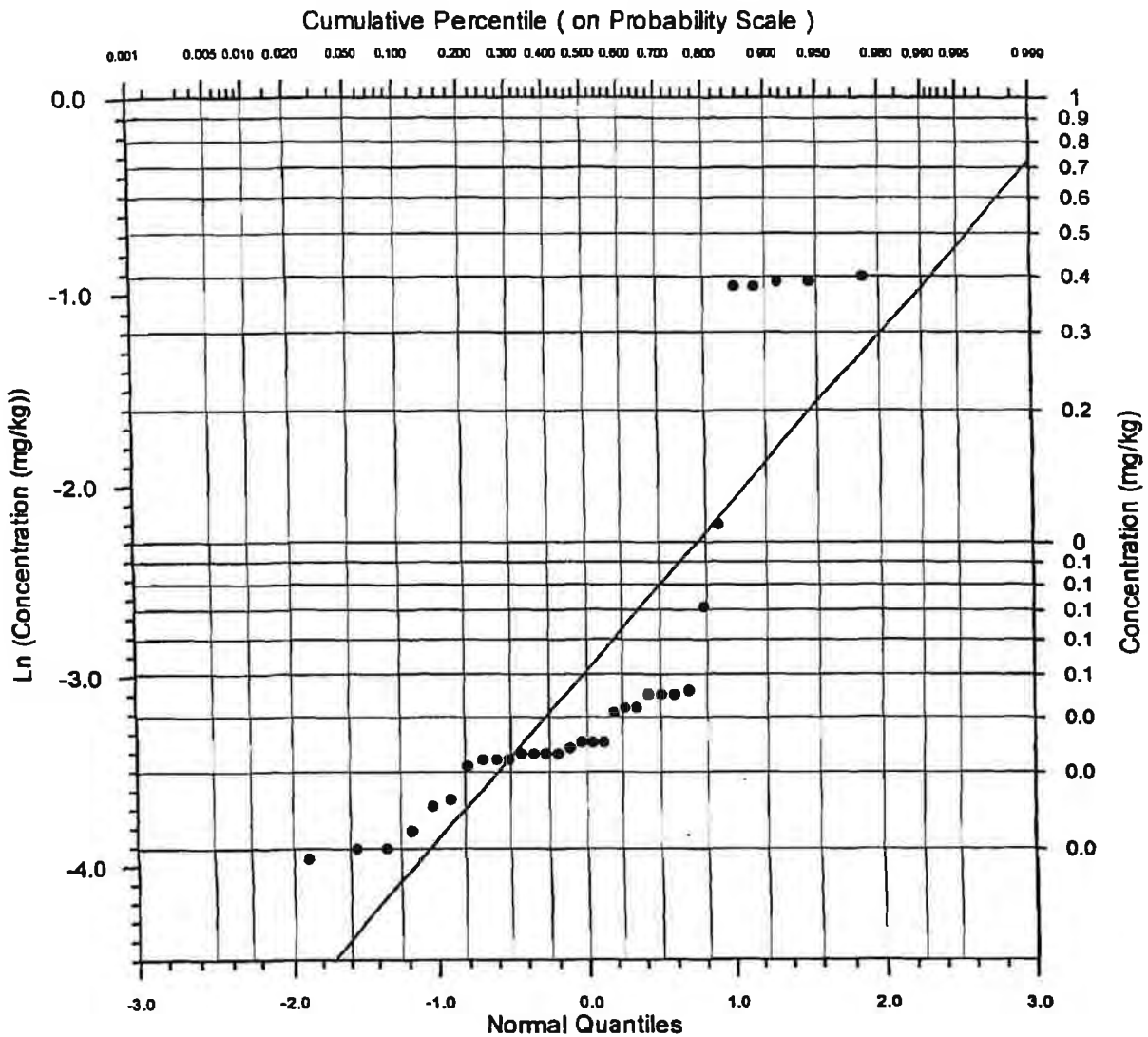
LEAD

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HS-17	6 - 7	< 7.19	0.284
FTASB-04	0.5 - 1.0	2.7	0.301
FTASB-06	0.5 - 1.0	15	0.254
FTASB-09	0.5 - 1.0	4.7	0.293
FTASB-10	0.5 - 1.0	111	0.112
FTASB-11	0.5 - 1.0	18	0.254 Rejected
FTASB-12	0.5 - 1.0	11.4	0.268
FTASB-13	0.5 - 2.5	7.7	0.282
FTASB-14	0.5 - 2.5	11.4	0.268
FTASB-15	0.5 - 2.5	13.9	0.258
FTASB-16	0.5 - 2.5	3.4	0.298
FTASB-17	0.5 - 2.5	12.4	0.264
HMMW-10	0.0 - 2.0	17	0.247
HMMW-12	1.5 - 3.0	2.5	0.302
FTASB-04	9.0 - 10.5	3.5	0.298
FTASB-06	8.5 - 10.5	2.4	0.302
FTASB-09	6.0 - 7.0	59	0.086
FTASB-10	9.1 - 10.4	11.1	0.269
FTASB-11	9.5 - 10.0	6.2	0.268
FTASB-12	8.0 - 10.0	11.3	0.268
FTASB-13	2.5 - 4.5	22	0.227
FTASB-14	4.5 - 6.5	8.8	0.278
FTASB-15	4.5 - 6.5	5.4	0.291
FTASB-16	6.5 - 8.1	3.1	0.300
FTASB-17	4.5 - 6.5	2	0.304
HMMW-10	2.0 - 4.0	11.8	0.266
HMMW-11	2.0 - 4.0	2.7	0.301
HMMW-11	6.0 - 8.0	2.2	0.303
HMMW-12	1.5 - 3.0	2.5	0.302
HMMW-12	4.5 - 6.0	2	0.304
HMMW-13	2.0 - 4.0	16.4	0.249
HMMW-13	8.0 - 10.0	3.2	0.289 Rejected

LN data	Test Statistic for LN data	Txx for outlier
1.972891	22 3.091042	0.344599
0.993252	8.8 2.174752	1.002344
2.70805	5.4 1.663999	0.149233
1.547563	3.1 1.131402	0.630095
4.70953	2 0.693147	1.493332
2.70805	11.8 2.4681	0.149233
2.433613	2.7 0.993252	0.035065
2.04122	2.2 0.788457	0.298578
2.433613	2.5 0.916291	0.035065
2.631809	2 0.693147	0.096087
1.223775	16.4 2.797281	0.647535
2.517696		0.021401
2.833213		0.233287
0.916291		1.054027
1.252763		0.828068
0.875469		1.081441
4.077537		1.068915
2.406945		0.052975
1.824549		0.444084
2.424803		0.040982
3.091042		0.408433
2.174752		0.208905
1.686399		0.536859
1.131402		0.909568
0.693147		1.203879
2.4681		0.011906
0.993252		1.002344
0.708457		1.139874
0.916291		1.054027
0.693147		1.203879
2.797281		0.209157
1.163151		0.868247

AITCHISON'S ADJUSTMENT FOR NONDETECTS  
 Mean (Detect-Only) 2.288  
 Std. Dev. (Detect-Only) 1.080  
 Total no. of samples 56  
 Number of NDs 14  
 Adjusted Mean 1.716 mg/kg log-transformed  
 Adjusted Std. Dev. 1.367 mg/kg log-transformed

ubc 3.964201  
 exp ubc 52.67815



**LEGEND:**

• Mercury (mg/kg)

The Data Failed all Tests of Normality.  
Probability Plot is Detects-Only. 44% NDs.

Upper Background Concentration: 0.39 mg/kg  
The maximum observed value, 0.40mg/kg, was not used for the UBC, as it was from a sample location that exceeded the UBC for another parameter. Based on non-parametric analysis, the UBC was set equal to the next highest value detected.  
5% Significance Level and 98% Expected Coverage.

Total of 63 samples, of which 57 data points were used for UBC and 32 for Probability Plot.  
One Data Point, BH-13 (0.79), is a statistical outlier.  
By ASTM Designation E178-75, 1975.  
5% Significance Level.  
Five data points, BH-10 (0.40), BH-11 (0.38), BH-13 (0.38), FTASB-11 (0.034), and HWM-13 (0.03), are rejected due to being outliers in other metals data sets.

**Distribution of Background Mercury  
in Soils at Hunter Army Airfield**

MERCURY

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic	All Data w /DLs
BH-10	0 - 1	0.43	1.986 Rejected	Mean 0.119063
BH-10	7.5-8.5	0.39	1.915	Std. Error 0.017824
BH-11	0 - 1	0.38	1.844 Rejected	Median 0.09
BH-11	7.5-8.5	0.40	1.844	Mode 0.1
BH-12	0 - 1	0.38	1.844	Std. Dev. 0.141471
BH-12	6.5-7.5	0.38	1.844	Variance 0.020014
BH-13	0 - 1	0.79	4.743 Outlier	Kurtosis 7.759826
BH-13	6.0-7.5	0.39	1.844 Rejected	Skewness 2.565037
HSB-1	8 - 10	0.10	0.135	Range 0.771
HSB-2	3 - 5	0.11	0.064	Minimum 0.019
HSB-3	6 - 8	0.11	0.064	Maximum 0.79
HSB-4	2 - 4	0.11	0.064	Sum 7.501
HSB-5	5 - 8	0.12	0.007	Crit. Val. 3.044
HSB-6	8 - 10	0.12	0.007	
HS-1	0 - 1	0.09	0.205	
HS-2	3 - 4	0.10	0.135	
HS-3	0 - 1	0.10	0.135	
HS-4	3 - 4	0.10	0.135	
HS-10	0 - 1	0.09	0.205	
HS-11	3.5 - 4	0.10	0.135	
HS-12	0 - 1	0.09	0.205	
HS-13	3.5 - 4	0.09	0.205	
HS-14	5.5 - 6.5	0.10	0.135	
HS-18	0 - 1	0.09	0.205	
HS-19	3.5 - 4	0.10	0.135	
HS-7	0 - 1	0.10	0.135	
HS-8	3 - 5	0.10	0.135	
HS-9	7.5 - 8.5	0.09	0.205	
HS-15	0 - 1	0.09	0.205	
HS-16	3 - 4	0.09	0.205	
HS-17	6 - 7	0.09	0.205	
FTASB-04	0.5 - 1.0	0.02	0.700	
FTASB-06	0.5 - 1.0	0.035	0.594	
FTASB-08	0.5 - 1.0	0.025	0.665	
FTASB-10	0.5 - 1.0	0.042	0.545	
FTASB-11	0.5 - 1.0	0.042	0.601 Rejected	
FTASB-12	0.5 - 1.0	0.042	0.545	
FRASB-13	0.5 - 2.5	0.045	0.524	
FTASB-14	0.5 - 2.5	0.032	0.615	
FTASB-15	0.5 - 2.5	0.026	0.658	
FTASB-16	0.5 - 2.5	0.019	0.707	
FTASB-17	0.5 - 2.5	0.045	0.524	
HMW-10	0.0 - 2.0	0.046	0.516	

Test Statistic for LN data

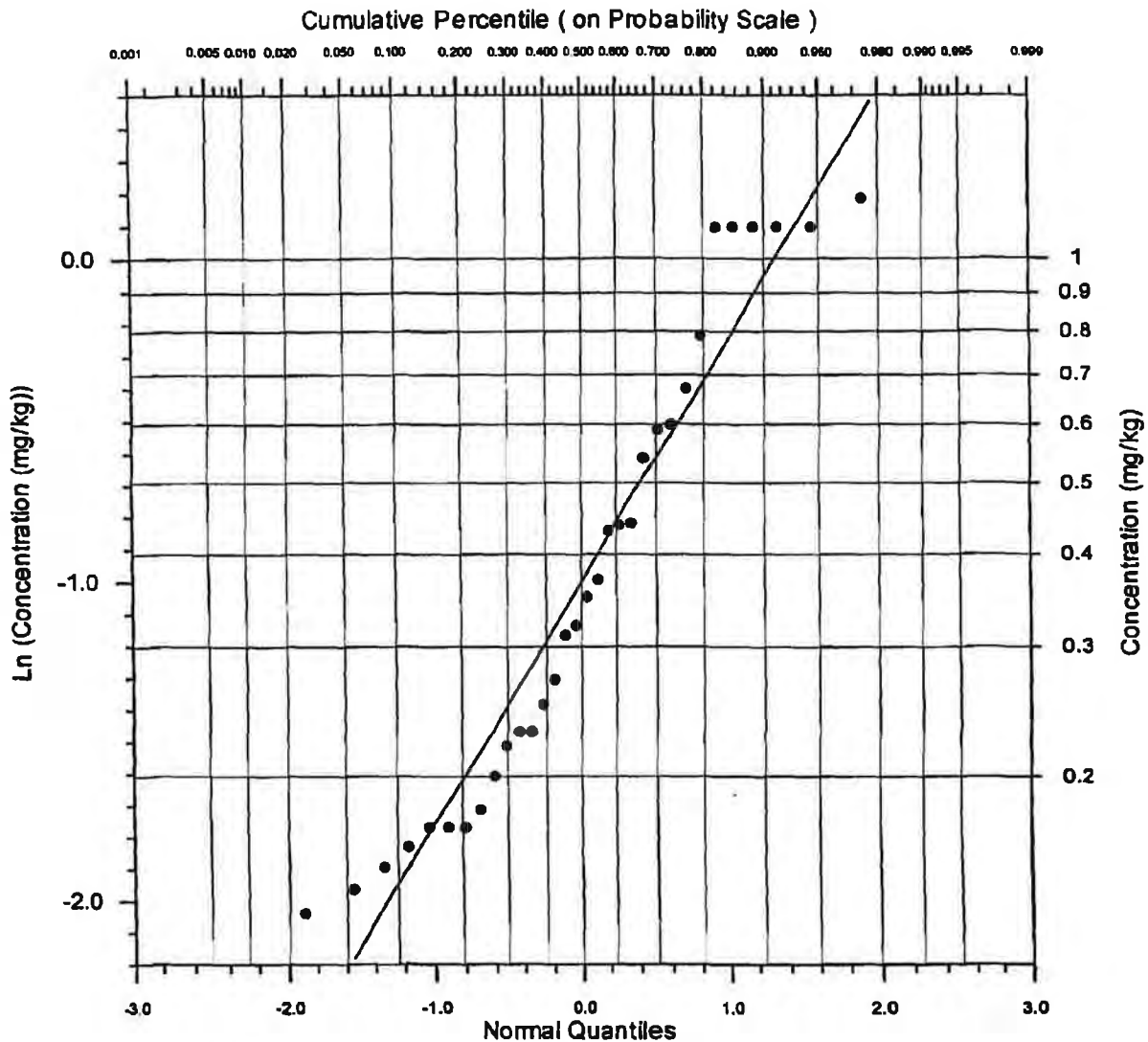
LN data	Txx for outlier
-0.916291	1.847174
-0.941609	1.819113
-0.967584	1.790323
-0.967584	1.790323
-0.916291	1.847174
-0.967584	1.790323
-0.235722	2.601478
-0.967584	1.790323
-0.941609	1.819113
-2.302585	0.310683
-2.207275	0.416319
-2.207275	0.416319
-2.207275	0.416319
-2.207275	0.416319
-2.120264	0.512758
-2.407946	0.193907
-2.302585	0.310683
-2.302585	0.310683
-2.302585	0.310683
-2.407946	0.193907
-2.407946	0.193907
-2.407946	0.193907
-3.912023	1.473128
-3.352407	0.852881
-3.686879	1.225808
-3.170086	0.650806
-3.381395	0.885009
-3.170086	0.650806
-3.101093	0.574338
-3.442019	0.952202
-3.649659	1.182338
-3.963316	1.529979
-3.101093	0.574338
-3.079114	0.549978

MERCURY

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HMW-12	1.5 - 3.0	0.035	0.594
FTASB-04	9.0 - 10.5	0.022 J	0.666
FTASB-06	8.5 - 10.5	< 0.13	0.077
FTASB-09	6.0 - 7.0	0.033 J	0.608
FTASB-10	9.1 - 10.4	0.033 J	0.608
FTASB-11	9.5 - 10.0	< 0.12	0.007
FTASB-12	8.0 - 10.0	0.02 J	0.700
FTASB-13	2.5 - 4.5	0.071 JQ	0.340
FTASB-14	4.5 - 6.5	0.041 JQ	0.552
FTASB-15	4.5 - 6.5	0.045	0.524
FTASB-16	6.5 - 8.1	0.031	0.622
FTASB-17	4.5 - 6.5	0.11	0.064
HMW-10	2.0 - 4.0	0.033	0.608
HMW-11	2.0 - 4.0	0.034	0.601
HMW-11	6.0 - 8.0	0.032	0.615
HMW-12	1.5 - 3.0	0.035	0.594
HMW-12	4.5 - 6.0	0.032	0.615
HMW-13	2.0 - 4.0	0.033	0.608
HMW-13	8.0 - 10.0	0.033	0.630 Rejected

Test Statistic for LN data

LN data	Txx for outlier
-3.352407	0.852881
-3.816713	1.367491
-2.040221	0.601473
-3.411248	0.918097
-3.411248	0.918097
-2.120264	0.512758
-3.912023	1.473128
-2.645075	0.068814
-3.194183	0.677514
-3.101093	0.574338
-3.473768	0.987391
-2.207275	0.416319
-3.411248	0.918097
-3.381395	0.885009
-3.442019	0.952202
-3.352407	0.852881
-3.442019	0.952202
-3.411248	0.918097
-3.506558	1.023733



**LEGEND:**

● Selenium (mg/kg)

LN(Data) Passed The Filliben Test of Normality Indicating the Data are Lognormal.  
 Probability Plot is Detects-Only. 44% NDs. Aitchison's Adjustment used for UBC calculation.

Upper Background Concentration: 1.9 mg/kg  
 LN(Data) Adjusted mean + 1.645 Adjusted Standard Deviations.  
 LN(Data) Adjusted Mean: -0.561 SD: 0.735.

Total of 63 samples, of which 57 data points were used for UBC and 32 for Probability Plot.  
 No Data Points are statistical outliers.  
 By ASTM Designation E178-75, 1975.  
 5% Significance Level.  
 Six data points, BH-10 (<0.20), BH-11 (<0.20), BH-13 (0.22), BH-13(0.33), FTASB-11 (0.28),  
 and HWM-13 (0.23), are rejected due to being outliers in other metals data sets.

**Distribution of Background Selenium  
 in Soils at Hunter Army Airfield**

**SELENIUM**

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
BH-10	0 - 1	< 0.20	0.676
BH-10	7.5-8.5	< 0.20	0.676
BH-11	0 - 1	< 0.20	0.676
BH-11	7.5-8.5	< 0.20	0.676
BH-12	0 - 1	0.79	1.486
BH-12	6.5-7.5	0.60	0.789
BH-13	0 - 1	0.22	0.603
BH-13	6.0-7.5	0.33	0.200
HSB-1	8 - 10	0.42	0.676
HSB-2	3 - 5	0.45	0.240
HSB-3	6 - 8	0.47	0.313
HSB-4	2 - 4	0.48	0.276
HSB-5	5 - 8	0.67	1.046
HSB-6	8 - 10	0.47	0.313
HS-1	0 - 1	0.27	0.420
HS-2	3 - 4	0.29	0.347
HS-3	0 - 1	0.28	0.383
HS-4	3 - 4	0.29	0.347
HS-10	0 - 1	0.26	0.456
HS-11	3.5 - 4	0.28	0.383
HS-12	0 - 1	0.27	0.420
HS-13	3.5 - 4	0.28	0.383
HS-14	5.5 - 6.5	0.28	0.383
HS-18	0 - 1	0.26	0.456
HS-19	3.5 - 4	0.28	0.383
HS-7	0 - 1	0.28	0.383
HS-8	3 - 5	0.28	0.383
HS-9	7.5 - 8.5	0.27	0.420
HS-15	0 - 1	0.27	0.420
HS-16	3 - 4	0.26	0.456
HS-17	6 - 7	0.28	0.383
FTASB-04	0.5 - 1.0	0.35	0.127
FTASB-06	0.5 - 1.0	0.438	0.196
FTASB-09	0.5 - 1.0	0.59	0.753
FTASB-10	0.5 - 1.0	0.32	0.237
FTASB-11	0.5 - 1.0	0.28	0.383
FTASB-12	0.5 - 1.0	0.27	0.420
FTASB-13	0.5 - 2.5	0.17	0.786
FTASB-14	0.5 - 2.5	1.1	2.622
FTASB-15	0.5 - 2.5	1.1	2.622
FTASB-16	0.5 - 2.5	1.1	2.622
FTASB-17	0.5 - 2.5	1.1	2.622

LN Data	LN Data	Test Statistic for LN data	Txx for outlier
0.790	-0.235722	LN Detects-only Data	0.857429
0.600	-0.510826		0.857429
0.670	-0.400478	Mean	0.857429
0.350	-1.049822	Std. Error	0.857429
0.438	-0.825536	Median	1.608772
0.590	-0.527633	Mode	1.114885
0.320	-1.139434	Std. Dev.	0.686321
0.270	-1.309333	Variance	0.041602
0.170	-1.771957	Kurtosis	0.857429
1.100	0.09531	Skewness	0.474555
1.100	0.09531	Range	0.599416
1.100	0.09531	Minimum	0.261177
1.100	0.09531	Maximum	0.637874
0.200	-1.609438	Sum	2.22542
0.230	-1.469676	Count	32
0.170	-1.771957	Minimum	-2.040221
0.150	-1.89712	Maximum	0.182322
0.430	-0.84397	Sum	-1.237874
0.140	-0.966113	Count	-1.272966
0.130	-2.040221	Minimum	-1.237874
0.180	-1.714798	Maximum	-1.347074
0.310	-1.171183	Sum	-1.272966
0.170	-1.771957	Count	-1.309333
0.160	-1.832581	Minimum	-1.272966
1.200	0.182322	Maximum	-1.272966
1.100	0.09531	Sum	-1.347074
0.220	-1.514128	Count	-1.272966
0.250	-1.386284	Minimum	-1.272966
0.370	-0.994252	Maximum	-1.272966
0.230	-1.469676	Sum	-1.309333
0.340	-0.616186	Count	-1.347074
0.440	-0.820981	Minimum	-1.272966
		Maximum	-1.049822
		Sum	-0.527633
		Count	-1.139434
		Minimum	-1.272966
		Maximum	-1.309333
		Sum	-1.771957
		Count	0.09531
		Minimum	0.09531
		Maximum	0.09531
		Sum	0.09531
		Count	0.09531

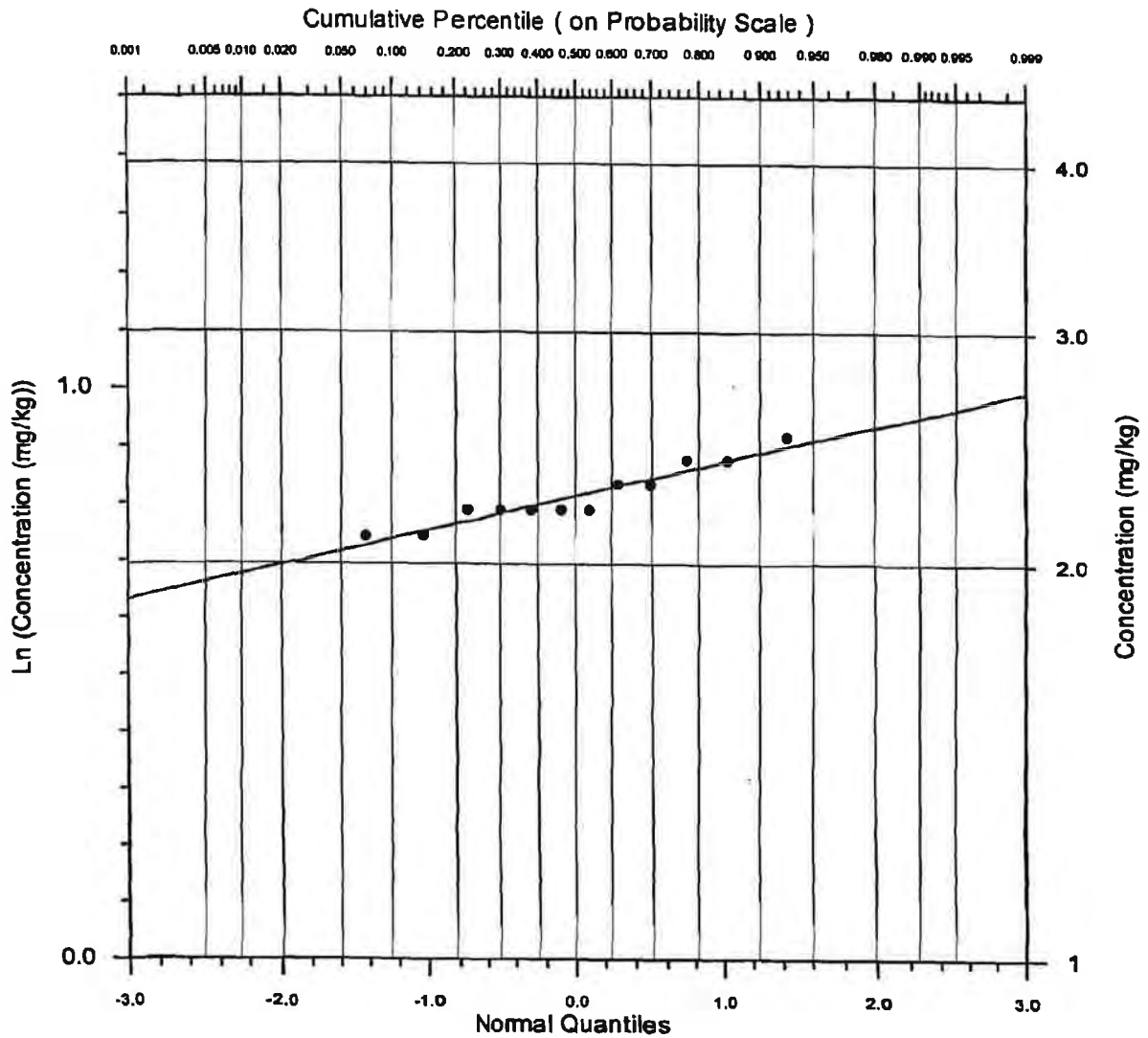
**AITCHISON'S ADJUSTMENT FOR NONDETECTS**  
 Mean (Detect-Only) -1.000  
 Std. Dev. (Detect-Only) 0.723  
 Total no. of samples 57  
 Number of NDs 25  
 Adjusted Mean -0.561 mg/kg log-transformed  
 Adjusted Std. Dev. 0.735 mg/kg log-transformed

SELENIUM

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HMW-10	0.0 - 2.0	0.2	0.676
HMW-12	1.5 - 3.0	0.23	0.566
FTASB-04	9.0 - 10.5	0.17 J	0.766
FTASB-06	8.5 - 10.5	0.15 J	0.860
FTASB-09	6.0 - 7.0	0.43 J	0.166
FTASB-10	9.1 - 10.4	0.14 J	0.896
FTASB-11	9.5 - 10.0	0.13 J	0.933
FTASB-12	8.0 - 10.0	0.18 J	0.750
FTASB-13	2.5 - 4.5	0.31 JQ	0.273
FTASB-14	4.5 - 6.5	0.17	0.786
FTASB-15	4.5 - 6.5	0.16	0.823
FTASB-16	6.5 - 8.1	1.2	2.988
FTASB-17	4.5 - 6.5	1.1	2.622
HMW-10	2.0 - 4.0	0.22	0.603
HMW-11	2.0 - 4.0	0.25	0.493
HMW-11	6.0 - 8.0	0.37	0.053
HMW-12	1.5 - 3.0	0.23	0.566
HMW-12	4.5 - 6.0	0.54	0.570
HMW-13	2.0 - 4.0	0.44	0.203
HMW-13	8.0 - 10.0	0.23	0.566

H-24

Outlier	ubc	exp ubc	Detects- only Data	LN (Detects- only data)	LN data	Test Statistic for LN data	Txx for outlier
			0.6477564		-1.609438		0.857429
			1.9112479		-1.469676		0.606518
					-1.771957		1.149196
					-1.89712		1.373898
					-0.84397		0.516798
					-1.966113		1.49776
					-2.040221		1.630804
					-1.714796		1.046581
					-1.171183		0.07064
					-1.771957		1.149196
					-1.832581		1.258034
					0.182322		2.359277
					0.09531		2.203067
					-1.514128		0.686321
					-1.386294		0.456824
					-0.994252		0.247
					-1.469676		0.606518
					-0.616186		0.925734
					-0.820981		0.556071
					-1.469676		0.606518



**LEGEND:**

- Silver (mg/kg)

Due to high percentage of non-detects the data can not be validly normalized.  
Probability Plot is Detects-Only. 79% NDs.

Upper Background Concentration: 2.6 mg/kg  
Based on non-parametric analysis, UBC is set equal to the maximum observed value.  
5% Significance Level and 98% expected coverage.

Total of 63 samples, of which 57 data points were used for UBC and 12 for Probability Plot.  
One Data Point, BH-13 (<7.98), is determined to be a statistical outlier.  
By ASTM Designation E178-75, 1975.  
5% significance level.

Five data points, BH-10 (<3.99), BH-11 (<3.99), BH-13 (<3.99), FTASB-11 (2.2),  
and HMW-13 (<2.3), are rejected due to being outliers in other metals data sets.

**Distribution of Background Silver  
in Soils at Hunter Army Airfield**



SILVER

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
BH-10	0-1	<	1.468595
BH-10	7.5-8.5	<	1.468595
BH-11	0-1	<	1.468595
BH-11	7.5-8.5	<	1.468595
BH-12	0-1	<	1.468595
BH-12	6.5-7.5	<	1.468595
BH-13	<	7.98	4.51297
BH-13	0-1	<	1.468595
BH-13	6.0-7.5	<	1.468595
HSB-1	8-10	<	1.17978
HSB-2	3-5	<	1.079828
HSB-3	6-8	<	1.066938
HSB-4	2-4	<	1.072198
HSB-5	5-8	<	1.018788
HSB-6	8-10	<	1.066938
HS-1	0-1	<	0.980638
HS-2	3-4	<	0.919598
HS-3	0-1	<	0.957748
HS-4	3-4	<	0.942488
HS-10	0-1	<	0.988268
HS-11	3.5-4	<	0.950118
HS-12	0-1	<	0.988268
HS-12	0-1	<	0.950118
HS-13	3.5-4	<	0.950118
HS-14	5.5-6.5	<	0.950118
HS-18	0-1	<	1.003528
HS-19	3.5-4	<	0.950118
HS-7	0-1	<	0.957748
HS-8	3-5	<	0.965378
HS-9	7.5-8.5	<	0.965378
HS-15	0-1	<	0.965898
HS-16	3-4	<	0.980638
HS-17	6-7	<	0.957748
FTASB-04	0.5-1.0	2.2	1.02823
FTASB-06	0.5-1.0	2.1	0.026523
FTASB-09	0.5-1.0	2.5	0.331724
FTASB-10	0.5-1.0	2.3	0.179124
FTASB-11	0.5-1.0	2.2	1.02823
FTASB-12	0.5-1.0	2.4	0.255424
FRASB-13	0.5-2.5	2.2	1.02823
FTASB-14	0.5-2.5	2.2	1.02823
FTASB-15	0.5-2.5	2.2	1.02823
FTASB-16	0.5-2.5	2.1	0.026523
FTASB-17	0.5-2.5	2.2	1.02823
HMV-10	0.0-2.0	2.3	0.179124

Test Statistic for LN

data

LN data

1.383791
1.383791
1.383791
1.383791
1.383791
1.383791
2.076938
1.383791
1.383791
-0.510826
-0.430783
-0.385662
-0.415515
-0.314711
-0.385662
-0.248461
-0.150823
-0.210721
-0.186333
-0.261365
-0.198451
-0.261365
-0.198451
-0.198451
-0.287682
-0.198451
-0.210721
-0.223144
-0.223144
-0.274437
-0.248461
-0.210721
0.788457
0.741937
0.916291
0.832909
0.788457
0.675469
0.788457
0.788457
0.741937
0.788457
0.832909

Txx for outlier

1.311066
1.311066
1.311066
1.311066
1.311066
1.311066
2.372545
1.311066
1.311066
1.590329
1.467753
1.398656
1.444372
1.290001
1.398656
1.188548
1.039025
1.130753
1.0934
1.208308
1.111962
1.208308
1.111962
1.111962
1.24861
1.111962
1.130753
1.149776
1.228326
1.188548
1.130753
0.399379
0.328138
0.595141
0.467451
0.399379
0.532627
0.399379
0.399379
0.328138
0.399379
0.467451

All Data " /DLs
Mean 2.065238
Std. Error 0.165122
Median 2.2
Mode 2.4
Std. Dev. 1.310614
Variance 1.717709
Kurtosis 5.285285
Skewness 1.585052
Range 7.38
Minimum 0.6
Maximum 7.98
Sum 130.11
Count 63
Crit. Val. 3.044

SILVER

Sample ID	Sample Depth (feet)	Concentration (mg/kg)	Outlier Test Statistic
HMW-12	1.5 - 3.0	2.4	0.255424
FTASB-04	9.0 - 10.5	<	0.255424
FTASB-06	8.5 - 10.5	<	0.408024
FTASB-09	6.0 - 7.0	<	0.179124
FTASB-10	8.1 - 10.4	<	0.255424
FTASB-11	9.5 - 10.0	<	0.255424
FTASB-12	8.0 - 10.0	<	0.331724
FTASB-13	2.5 - 4.5	<	0.408024
FTASB-14	4.5 - 6.5	<	0.179124
FTASB-15	4.5 - 6.5	<	0.179124
FTASB-16	6.5 - 8.1	<	0.255424
FTASB-17	4.5 - 6.5	<	0.102823
HMW-10	2.0 - 4.0	<	0.255424
HMW-11	2.0 - 4.0	<	0.255424
HMW-11	6.0 - 8.0	<	0.408024
HMW-12	1.5 - 3.0	<	0.255424
HMW-12	4.5 - 6.0	<	0.255424
HMW-13	2.0 - 4.0	<	0.255424
HMW-13	8.0 - 10.0	<	0.179124

LN data

Test Statistic for LN data

Txx for outlier

0.875469	0.532627
0.875469	0.532627
0.955511	0.655203
0.832909	0.467451
0.875469	0.532627
0.875469	0.532627
0.916291	0.595141
0.955511	0.655203
0.832909	0.467451
0.832909	0.467451
0.875469	0.532627
0.788457	0.399379
0.875469	0.532627
0.875469	0.532627
0.955511	0.655203
0.875469	0.532627
0.875469	0.532627
0.875469	0.532627
0.832909	0.467451

H-27

**Georgia Department of Natural Resources** 170

205 Butler Street, SE, Suite 1462, Atlanta, Georgia 30334  
Lonice C. Barrett, Commissioner  
Environmental Protection Division  
Harold F. Reheis, Director  
404/657-8600

May 8, 2001

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Col. Gregory V. Stanley  
Department of the Army  
1550 Cochran Drive  
Fort Stewart, GA 31314

Re: Response to 3/19/01 Meeting Letter  
Hunter Army Airfield  
HSI #10105

Dear Col. Stanley:

The Georgia Environmental Protection Division (EPD) has received your compliance status report (CSR) response letter dated March 5, 2001 and your April 16, 2001 correspondence following up on our March 19, 2001 meeting regarding the above referenced site. EPD was asked to address issues raised during our meeting pertaining to calculated background concentrations, the methodology used to calculate the background concentrations, and future sampling locations:

1. **Background Concentrations** - The proposed background concentrations presented on page 5 of CSR response are acceptable to EPD. It should be noted that although Table 2 of Appendix III should not be used for determining site-specific background concentrations, it is useful for comparative purposes in that most background concentrations will be below those levels.
2. **Statistical Calculations** - The statistical methods described can be used for determining background concentrations; however, they do not necessarily apply to all sites due to variations in site-specific data. The method used to determine multiple outliers in a dataset should be stated in the revised CSR and included in an appendix along with the other statistical methods used in the CSR.
3. **Proposed Sampling Locations** - The sample locations shown in Figure 1 of the CSR response surrounding SB-30 appear sufficient to delineate the site with the following exceptions. Two more sample locations (in addition to SB-45) are needed to delineate the southern boundary near SB-35. One location is needed to the west of SB-45 and south of SB-36. The other location to be added is to the east of SB-45 across Lightning Road. The purpose of proposed sampling locations SB-47 and SB-48 is unclear and needs to be explained before EPD can comment on them.

Hunter Army Airfield Site, HSI #10105  
Response to CSR Comments and March 19, 2001 Meeting Comments  
May 8, 2001  
Page 2

For specific answers to questions concerning risk assessment calculations and ecological evaluations, you may contact Michelle Burgess or Ahmet Bulbakaya at (404) 656-7802. Please contact David Brownlee of the Hazardous Site Response Program at (404) 657-8600 if you have questions regarding this letter.

Sincerely,

Jane Hendricks  
Unit Coordinator  
Hazardous Sites Response Program

c: Melanie Little

File: Site #10105

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## Appendix F

### Vertical Boring Profile Summary

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-1 DVP-1-15 15 08/06/02 (µg/L)	DVP-1 DVP-1-20 20 08/06/02 (µg/L)	DVP-1 DVP-1-25 25 08/06/02 (µg/L)	DVP-1 DVP-1-30 30 08/06/02 (µg/L)	DVP-1 DVP-1-35 35 08/06/02 (µg/L)	DVP-1 DVP-1-40 40 08/06/02 (µg/L)	DVP-1 DVP-1-45 45 08/06/02 (µg/L)	DVP-1 DVP-1-50 50 08/06/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	5.3 J	8.5 J	11 J	50 U	5.7 J	9.3 J	4.5 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	1.4 J	1.4 J	1.2 J	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	1.5 J	5 U	5 U	5 U	1.5 J	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID:		DVP-2	DVP-2	DVP-2	DVP-2	DVP-2	DVP-2	DVP-2	DVP-2
Sample ID:		DVP-2-15	DVP-2-20	DVP-2-25	DVP-2-30	DVP-2-35	DVP-2-40	DVP-2-45	DVP-2-50
Sample Depth (ft BGS):		15	20	25	30	35	40	45	50
Sample Date:	MCL	08/06/02	08/06/02	08/06/02	08/06/02	08/06/02	08/06/02	08/06/02	08/08/02
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	17 J	6.6 J	9.9 J	7.2 J	50 U	50 U	22 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	1.5 J	5 U	1.2 J	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	1.8 J	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-3 DVP-3-15 08/07/02 (µg/L)	DVP-3 DVP-3-20 08/07/02 (µg/L)	DVP-3 DVP-3-25 08/07/02 (µg/L)	DVP-3 DVP-3-30 08/07/02 (µg/L)	DVP-3 DVP-3-35 08/07/02 (µg/L)	DVP-3 DVP-3-40 08/07/02 (µg/L)	DVP-3 DVP-3-45 08/07/02 (µg/L)	DVP-3 DVP-3-50 08/07/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	8.3 J	50 U	7.2 J	5.5 J	9 J	4.5 J	50 U	50 U
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- J Indicates that the value for the compound is an estimated value.



**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-4 DVP-4-15 15 08/07/02 (µg/L)	DVP-4 DVP-4-20 20 08/07/02 (µg/L)	DVP-4 DVP-4-25 25 08/07/02 (µg/L)	DVP-4 DVP-4-30 30 08/07/02 (µg/L)	DVP-4 DVP-4-35 35 08/07/02 (µg/L)	DVP-4 DVP-4-40 40 08/07/02 (µg/L)	DVP-4 DVP-4-45 45 08/07/02 (µg/L)	DVP-4 DVP-4-50 50 08/07/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	11 J	50 U	21 J	12 J	50 U	50 U	19 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	0.83 J	5 U	5 U	0.78 J	1.5 J	1.3 J	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-5 DVP-5-15 15 08/08/02 (µg/L)	DVP-5 DVP-5-20 20 08/08/02 (µg/L)	DVP-5 DVP-5-25 25 08/08/02 (µg/L)	DVP-5 DVP-5-30 30 08/08/02 (µg/L)	DVP-5 DVP-5-35 35 08/08/02 (µg/L)	DVP-5 DVP-5-40 40 08/08/02 (µg/L)	DVP-5 DVP-5-45 45 08/08/02 (µg/L)	DVP-5 DVP-5-50 50 08/08/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	33 J	17 J	12 J	11 J	5.5 J	24 J	20 J	5 J
Benzene	5	7.7	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	2.4 J	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	900	42	1.9 J	1.6 J	5 U	11	28	3.3 J
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	7.4	1.7 J	5 U	5 U	5 U	5 U	0.77 J	5 U
trans-1,2-Dichloroethene	100	52	1.3 J	5 U	5 U	5 U	5 U	1.4 J	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	9	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	4.7 J	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

**Bold** values exceed the maximum contaminant level (MCL).

BGS Below ground surface.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-6 DVP-6-15 08/08/02 (µg/L)	DVP-6 DVP-6-20 08/08/02 (µg/L)	DVP-6 DVP-6-25 08/08/02 (µg/L)	DVP-6 DVP-6-30 08/08/02 (µg/L)	DVP-6 DVP-6-35 08/08/02 (µg/L)	DVP-6 DVP-6-40 08/08/02 (µg/L)	DVP-6 DVP-6-45 08/08/02 (µg/L)	DVP-6 DVP-6-50 08/08/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	14 J	12 J	18 J	7.3 J	5.2 J	5.1 J	50 U	50 U
Benzene	5	5 U	4 J	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U	0.88 J
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	<b>180</b>	<b>310</b>	50	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	6.4	5 J	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	<b>2.9</b>	<b>3.4 J</b>	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

**Bold** values exceed the maximum contaminant level (MCL).

BGS Below ground surface.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-7 DVP-7-10 10 08/12/02 (µg/L)	DVP-7 DVP-7-15 15 08/12/02 (µg/L)	DVP-7 DVP-7-20 20 08/12/02 (µg/L)	DVP-7 DVP-7-25 25 08/12/02 (µg/L)	DVP-7 DVP-7-30 30 08/12/02 (µg/L)	DVP-7 DVP-7-35 35 08/12/02 (µg/L)	DVP-7 DVP-7-40 40 08/12/02 (µg/L)	DVP-7 DVP-1-45 45 08/12/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	16 J	15 J	50 U	5.4 J	50 U	4.9 J	5.8 J	11 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
p-Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID:		DVP-8	DVP-8	DVP-8	DVP-8	DVP-8	DVP-8	DVP-8	DVP-8
Sample ID:		DVP-8-10	DVP-8-15	DVP-8-20	DVP-8-25	DVP-8-30	DVP-8-35	DVP-8-40	DVP-8-45
Sample Depth (ft BGS):		10	15	20	25	30	35	40	45
Sample Date:	MCL	08/08/02	08/08/02	08/08/02	08/08/02	08/08/02	08/08/02	08/08/02	08/08/02
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	<b>9.2</b>	6.4	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	10 J	8.3 J	50 U	50 U	8.4 J	50 U	5.4 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	<b>4,500</b>	<b>2,800</b>	15	1.3 J	5 U	13	2.3 J	3.1 J
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	6.7	10	6.7
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	1.6 J	1.1 J	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	11	8	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	<b>10</b>	<b>4.3</b>	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

**Bold** values exceed the maximum contaminant level (MCL).

BGS Below ground surface.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-9 DVP-9-10 10 08/09/02 (µg/L)	DVP-9 DVP-9-15 15 08/09/02 (µg/L)	DVP-9 DVP-9-20 20 08/09/02 (µg/L)	DVP-9 DVP-9-25 25 08/09/02 (µg/L)	DVP-9 DVP-9-30 30 08/09/02 (µg/L)	DVP-9 DVP-9-35 35 08/09/02 (µg/L)	DVP-9 DVP-9-40 40 08/09/02 (µg/L)	DVP-9 DVP-9-45 45 08/09/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	7.6 J	7 J	5.5 J	5.9 J	18 J	50 U	50 U	50 U
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	0.86 J	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
p-Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-10 DVP-10-10 10 08/12/02 (µg/L)	DVP-10 DVP-10-15 15 08/12/02 (µg/L)	DVP-10 DVP-10-20 20 08/12/02 (µg/L)	DVP-10 DVP-10-25 25 08/12/02 (µg/L)	DVP-10 DVP-10-30 30 08/12/02 (µg/L)	DVP-10 DVP-10-35 35 08/12/02 (µg/L)	DVP-10 DVP-10-40 40 08/12/02 (µg/L)	DVP-10 DVP-10-45 45 08/12/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	11 J	5.2 J	5.6 J	10 J	7.1 J	17 J	8.3 J
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DPV-11 DVP-11-10 10 08/13/02 (µg/L)	DPV-11 DVP-11-15 15 08/13/02 (µg/L)	DPV-11 DVP-11-20 20 08/13/02 (µg/L)	DPV-11 DVP-11-25 25 08/13/02 (µg/L)	DPV-11 DVP-11-30 30 08/13/02 (µg/L)	DPV-11 DVP-11-35 35 08/13/02 (µg/L)	DPV-11 DVP-11-40 40 08/13/02 (µg/L)	DPV-11 DVP-11-45 45 08/13/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	10 J	15 J	50 U	50 U	4.4 J	2.4 J	50 U	50 U
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	4.1 J	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.



**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-12 DVP-12-10 10 08/13/02 (µg/L)	DVP-12 DVP-12-15 15 08/13/02 (µg/L)	DVP-12 DVP-12-20 20 08/13/02 (µg/L)	DVP-12 DVP-12-25 25 08/13/02 (µg/L)	DVP-12 DVP-12-30 30 08/14/02 (µg/L)	DVP-12 DVP-12-35 35 08/14/02 (µg/L)	DVP-12 DVP-12-40 40 08/14/02 (µg/L)	DVP-12 DVP-12-45 45 08/14/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Chlorotoluene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	—	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Acetone	—	50 U	3,2 J	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl-tert-butyl-ether	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Acetate	—	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Xylenes, Total	10,000	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID:		DVP-13	DVP-13	DVP-13	DVP-13	DVP-13	DVP-13	DVP-13	DVP-13
Sample ID:		DVP-13-10	DVP-13-15	DVP-13-20	DVP-13-25	DVP-13-30	DVP-13-35	DVP-13-40	DVP-13-45
Sample Depth (ft BGS):		10	15	20	25	30	35	40	45
Sample Date:	MCL	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
1,1,1,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1,1-Trichloroethane	200	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1,2,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1,2-Trichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1-Dichloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1-Dichloroethene	7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,1-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2,3-Trichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2,3-Trichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2,4-Trichlorobenzene	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2,4-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2-Dichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,2-Dichloropropane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,3,5-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,3-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,3-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
1,4-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
2,2-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
2-Butanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
2-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
2-Hexanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
4-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
4-Methyl-2-pentanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Acetone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Benzene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Bromobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Bromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Bromodichloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Bromoform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Bromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Carbon Disulfide	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Carbon Tetrachloride	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Chlorobenzene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Chloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Chloroform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Chloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
cis-1,2-Dichloroethene	70	1.83 J	1.15 J	2 U	2 U	2 U	2 U	2 U	50 U
cis-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Dibromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Dibromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Dichlorodifluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Ethylbenzene	700	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Hexachlorobutadiene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Isopropylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Methylene Chloride	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Methyl-tert-butyl-ether	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
m-Xylene and p-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Naphthalene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
n-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
n-Propylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
o-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
sec-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Styrene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
tert-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Tetrachloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Toluene	1,000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
trans-1,2-Dichloroethene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
trans-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Trichloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Trichlorofluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Vinyl Acetate	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	50 U

NOTES:

BGS Below ground surface.  
MCL Maximum contaminant level.

Data Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-14 DVP-14-10 10 12/12/02 (µg/L)	DVP-14 DVP-14-15 15 12/12/02 (µg/L)	DVP-14 DVP-14-20 20 12/12/02 (µg/L)	DVP-14 DVP-14-25 25 12/12/02 (µg/L)	DVP-14 DVP-14-30 30 12/12/02 (µg/L)	DVP-14 DVP-14-35 35 12/12/02 (µg/L)	DVP-14 DVP-14-40 40 12/12/02 (µg/L)	DVP-14 DVP-14-45 45 12/12/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	200	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,4-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3,5-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromoform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon Disulfide	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon Tetrachloride	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	700	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Isopropylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-tert-butyl-ether	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
m-Xylene and p-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Naphthalene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
n-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
n-Propylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
sec-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Styrene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
tert-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	1,000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl Acetate	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the  
DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-15 DVP-15-10 12/12/02 (µg/L)	DVP-15 DVP-15-15 12/12/02 (µg/L)	DVP-15 DVP-15-20 12/12/02 (µg/L)	DVP-15 DVP-15-25 12/12/02 (µg/L)	DVP-15 DVP-15-30 12/12/02 (µg/L)	DVP-15 DVP-15-35 12/12/02 (µg/L)	DVP-15 DVP-15-40 12/12/02 (µg/L)	DVP-15 DVP-15-45 12/12/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	200	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,4-Trichlorobenzene	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,4-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3,5-Trimethylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Methyl-2-pentanone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromobenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromoform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon Disulfide	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon Tetrachloride	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	70	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromomethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	700	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Isopropylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-tert-butyl-ether	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
m-Xylene and p-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Naphthalene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
n-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
n-Propylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
sec-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Styrene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
tert-Butylbenzene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Tetrachloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	1,000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	100	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl Acetate	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl Chloride	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

NOTES:

BGS Below ground surface.  
MCL Maximum contaminant level.

Data Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID: Sample ID: Sample Depth (ft BGS): Sample Date: Units:	MCL (µg/L)	DVP-16 DVP-16-10 10 12/11/02 (µg/L)	DVP-16 DVP-16-15 15 12/11/02 (µg/L)	DVP-16 DVP-16-20 20 12/11/02 (µg/L)	DVP-16 DVP-16-25 25 12/11/02 (µg/L)	DVP-16 DVP-16-30 30 12/11/02 (µg/L)	DVP-16 DVP-16-35 35 12/11/02 (µg/L)	DVP-16 DVP-16-40 40 12/12/02 (µg/L)	DVP-16 DVP-16-45 45 12/12/02 (µg/L)
1,1,1,2-Tetrachloroethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1,1-Trichloroethane	200	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1,2,2-Tetrachloroethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1,2-Trichloroethane	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1-Dichloroethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1-Dichloroethene	7	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,1-Dichloropropene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2,3-Trichlorobenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2,3-Trichloropropane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2,4-Trichlorobenzene	70	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2,4-Trimethylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2-Dichlorobenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2-Dichloroethane	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,2-Dichloropropane	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,3,5-Trimethylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,3-Dichlorobenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,3-Dichloropropane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
1,4-Dichlorobenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
2,2-Dichloropropane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
2-Butanone	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
2-Chlorotoluene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
2-Hexanone	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
4-Chlorotoluene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
4-Methyl-2-pentanone	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Acetone	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Benzene	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Bromobenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Bromochloromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Bromodichloromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Bromoform	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Bromomethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Carbon Disulfide	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Carbon Tetrachloride	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Chlorobenzene	100	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Chloroethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Chloroform	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Chloromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
cis-1,2-Dichloroethene	70	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
cis-1,3-Dichloropropene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Dibromochloromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Dibromomethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Dichlorodifluoromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Ethylbenzene	700	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Hexachlorobutadiene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Isopropylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Methylene Chloride	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Methyl-tert-butyl-ether	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
m-Xylene and p-Xylene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Naphthalene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
n-Butylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
n-Propylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
o-Xylene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
sec-Butylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Styrene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
tert-Butylbenzene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Tetrachloroethene	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Toluene	1,000	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
trans-1,2-Dichloroethene	100	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
trans-1,3-Dichloropropene	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Trichloroethene	5	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Trichlorofluoromethane	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Vinyl Acetate	—	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U
Vinyl Chloride	2	10 U	10 U	10 U	2 U	2 U	10 U	2 U	2 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound is an estimated value.

**Table 7. Groundwater Analytical Results – 2002 Vertical Profile Sampling at the DAACG Chlorinated Solvents Area (continued)**

Station ID:		DVP-17	DVP-17	DVP-17	DVP-17	DVP-17	DVP-17	DVP-17	DVP-17
Sample ID:		DVP-17-10	DVP-17-15	DVP-17-20	DVP-17-25	DVP-17-30	DVP-17-35	DVP-17-40	DVP-17-45
Sample Depth (ft BGS):		10	15	20	25	30	35	40	45
Sample Date:	MCL	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02	12/11/02
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
1,1,1,2-Tetrachloroethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1,1-Trichloroethane	200	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1,2,2-Tetrachloroethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1,2-Trichloroethane	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1-Dichloroethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1-Dichloroethene	7	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,1-Dichloropropene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2,3-Trichlorobenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2,3-Trichloropropane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2,4-Trichlorobenzene	70	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2,4-Trimethylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2-Dichlorobenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2-Dichloroethane	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,2-Dichloropropane	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,3,5-Trimethylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,3-Dichlorobenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,3-Dichloropropane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
1,4-Dichlorobenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
2,2-Dichloropropane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
2-Butanone	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
2-Chlorotoluene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
2-Hexanone	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
4-Chlorotoluene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
4-Methyl-2-pentanone	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Acetone	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Benzene	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Bromobenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Bromochloromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Bromodichloromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Bromoform	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Bromomethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Carbon Disulfide	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Carbon Tetrachloride	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Chlorobenzene	100	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Chloroethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Chloroform	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Chloromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
cis-1,2-Dichloroethene	70	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
cis-1,3-Dichloropropene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Dibromochloromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Dibromomethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Dichlorodifluoromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Ethylbenzene	700	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Hexachlorobutadiene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Isopropylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Methylene Chloride	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Methyl-tert-butyl-ether	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
m-Xylene and p-Xylene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Naphthalene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
n-Butylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
n-Propylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
o-Xylene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
sec-Butylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Styrene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
tert-Butylbenzene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Tetrachloroethene	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Toluene	1,000	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
trans-1,2-Dichloroethene	100	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
trans-1,3-Dichloropropene	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Trichloroethene	5	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Trichlorofluoromethane	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Vinyl Acetate	—	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U
Vinyl Chloride	2	2 U	2 U	10 U	10 U	10 U	2 U	2 U	10 U

NOTES:

BGS Below ground surface.

MCL Maximum contaminant level.

Data Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- J Indicates that the value for the compound is an estimated value.

## Appendix G

Laboratory Analytical Reports

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165 • www.saviabs.com

LOG NO: S9-14993  
Received: 29 JUL 99  
Reported: 11 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 133290811  
Page 1

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-1	HMW-14-1	07-28-99/09:30
14993-2	HMW-14-2	07-28-99/09:40
14993-3	HMW-15-1	07-28-99/11:15
14993-4	HMW-15-2	07-28-99/11:30
14993-5	HMW-17-1	07-28-99/13:45

PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5
Volatile Organic Compounds (8260)					
Acetone, ug/kg dw	<57	95	75	170	<60
Acetonitrile, ug/kg dw	<230	<240	<280	<250	<240
Acrolein (Propenal), ug/kg dw	<110	<120	<140	<120	<120
Acrylonitrile, ug/kg dw	<110	<120	<140	<120	<120
Benzene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Bromodichloromethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Bromoform, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Bromomethane (Methyl Bromide), ug/kg dw	<11	<12	<14	<12	<12
2-Butanone (Methyl ethyl ketone), ug/kg dw	<29	<30	<35	<31	<30
Carbon disulfide, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Carbon Tetrachloride, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Chlorobenzene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Chloroethane, ug/kg dw	<11	<12	<14	<12	<12
Chloroform, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Chloromethane (Methyl Chloride), ug/kg dw	<11	<12	<14	<12	<12

*Law*  
2/10/00



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REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5	
Chloroprene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
3-Chloropropene (Allylchloride), ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
Dibromochloromethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
1,2-Dibromo-3-chloropropane , ug/kg dw	<11	<12	<14	<12	<12	
1,2-Dibromoethane (EDB) , ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
Dibromomethane (Methylene bromide), ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
trans-1,4-Dichloro-2-butene , ug/kg dw	<11	<12	<14	<12	<12	
Dichlorodifluoromethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
1,1-Dichloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
1,2-Dichloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
1,1-Dichloroethene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
trans-1,2-Dichloroethene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
1,2-Dichloropropane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
cis-1,3-Dichloropropene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	
trans-1,3-Dichloropropene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0	

*gaw*  
 2/10/00

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REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-1	HMW-14-1	07-28-99/09:30
14993-2	HMW-14-2	07-28-99/09:40
14993-3	HMW-15-1	07-28-99/11:15
14993-4	HMW-15-2	07-28-99/11:30
14993-5	HMW-17-1	07-28-99/13:45

PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5
Ethylbenzene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Ethyl methacrylate, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
2-Hexanone, ug/kg dw	<29	<30	<35	<31	<30
Iodomethane (Methyl iodide), ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Isobutanol (Isobutyl alcohol), ug/kg dw	<230	<240	<280	<250	<240
Methacrylonitrile, ug/kg dw	<110	<120	<140	<120	<120
Methylene chloride (Dichloromethane), ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Methyl methacrylate, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
4-Methyl-2-pentanone (MIBK), ug/kg dw	<29	<30	<35	<31	<30
Pentachloroethane, ug/kg dw	<29	<30	<35	<31	<30
Propionitrile, ug/kg dw	<110	<120	<140	<120	<120
Styrene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
1,1,1,2-Tetrachloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0

*gaw*  
 2/10/00

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 Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-1	HMW-14-1	07-28-99/09:30
14993-2	HMW-14-2	07-28-99/09:40
14993-3	HMW-15-1	07-28-99/11:15
14993-4	HMW-15-2	07-28-99/11:30
14993-5	HMW-17-1	07-28-99/13:45

PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5
Tetrachloroethene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Toluene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
1,1,1-Trichloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
1,1,2-Trichloroethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Trichloroethene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Trichlorofluoromethane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
1,2,3-Trichloropropane, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Vinyl acetate, ug/kg dw	<11	<12	<14	<12	<12
Vinyl chloride, ug/kg dw	<11	<12	<14	<12	<12
Xylenes (total), ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
2-Chlorotoluene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
cis-1,2-Dichloroethene, ug/kg dw	<5.7	<6.0	<7.0	<6.2	<6.0
Surrogate - Toluene-d8	100 %	100 %	91 %	97 %	102 %
Surrogate - 4-Bromofluorobenzene	74 %	82 %	97 %	87 %	73 %
Surrogate - Dibromofluoromethane	102 %	102 %	104 %	103 %	103 %
Dilution Factor	1.0	1.0	1.0	1.0	1.0
Analysis Date	08.03.99	08.03.99	08.03.99	08.03.99	08.03.99
Batch ID	1H0803	1H0803	1H0803	1H0803	1H0803

*gan*  
 2/10/00

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Code: 133290811

Page 5

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-1	HMW-14-1	07-28-99/09:30
14993-2	HMW-14-2	07-28-99/09:40
14993-3	HMW-15-1	07-28-99/11:15
14993-4	HMW-15-2	07-28-99/11:30
14993-5	HMW-17-1	07-28-99/13:45

PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5
<b>Acids and Base Neutrals (8270-APP9)</b>					
Acenaphthene, ug/kg dw	<360	<360	<380	<360	<360
Acenaphthylene, ug/kg dw	<360	470	<380	<360	<360
Acetophenone, ug/kg dw	<360	<360	<380	<360	<360
2-Acetylaminofluorene, ug/kg dw	<360	<360	<380	<360	<360
4-Aminobiphenyl, ug/kg dw	<360	<360	<380	<360	<360
Aniline, ug/kg dw	<360	<360	<380	<360	<360
Anthracene, ug/kg dw	<360	<360	<380	<360	<360
Aramite (total), ug/kg dw	<360	<360	<380	<360	<360
Benzo(a)anthracene, ug/kg dw	<360	1800	<380	<360	<360
Benzo(b)fluoranthene, ug/kg dw	<360	1600	<380	<360	<360
Benzo(k)fluoranthene, ug/kg dw	<360	2000	<380	<360	<360
Benzo(g,h,i)perylene, ug/kg dw	<360	1200	<380	<360	<360
Benzo(a)pyrene, ug/kg dw	<360	1900	<380	<360	<360
Benzyl alcohol, ug/kg dw	<360	<360	<380	<360	<360
bis(2-Chloroethoxy)methane, ug/kg dw	<360	<360	<380	<360	<360
bis(2-Chloroethyl)ether, ug/kg dw	<360	<360	<380	<360	<360
2,2'-Oxybis(1-chloropropane ) [bis(2-Chloroisopropyl)ethe r], ug/kg dw	<360	<360	<380	<360	<360

*(Signature)*  
2/10/00

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Dr. Larry Stewart  
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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED					
14993-1	HMW-14-1	07-28-99/09:30					
14993-2	HMW-14-2	07-28-99/09:40					
14993-3	HMW-15-1	07-28-99/11:15					
14993-4	HMW-15-2	07-28-99/11:30					
14993-5	HMW-17-1	07-28-99/13:45					
PARAMETER			14993-1	14993-2	14993-3	14993-4	14993-5
bis(2-Ethylhexyl)phthalate, ug/kg dw			<360	<360	<380	<360	<360
4-Bromophenylphenyl ether, ug/kg dw			<360	<360	<380	<360	<360
Butylbenzylphthalate, ug/kg dw			<360	<360	<380	<360	<360
4-Chloroaniline (p-Chloroaniline), ug/kg dw			<720	<730	<760	<720	<720
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw			<360	<360	<380	<360	<360
2-Chloronaphthalene, ug/kg dw			<360	<360	<380	<360	<360
2-Chlorophenol, ug/kg dw			<360	<360	<380	<360	<360
4-Chlorophenylphenyl ether, ug/kg dw			<360	<360	<380	<360	<360
Chrysene, ug/kg dw			<360	1900	<380	<360	<360
Cresol, m & p, ug/kg dw			<360	<360	<380	<360	<360
Cresol (ortho), ug/kg dw			<360	<360	<380	<360	<360
Diallate (total), ug/kg dw			<360	<360	<380	<360	<360
Dibenzo(a,h)anthracene, ug/kg dw			<360	430	<380	<360	<360

*gaw*  
2/10/00

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Page 7

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER		14993-1	14993-2	14993-3	14993-4	14993-5
Dibenzofuran, ug/kg dw		<360	<360	<380	<360	<360
Di-n-butylphthalate, ug/kg dw		<360	<360	<380	<360	<360
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw		<360	<360	<380	<360	<360
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw		<360	<360	<380	<360	<360
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw		<360	<360	<380	<360	<360
3,3'-Dichlorobenzidine, ug/kg dw		<720	<730	<760	<720	<720
2,4-Dichlorophenol, ug/kg dw		<360	<360	<380	<360	<360
2,6-Dichlorophenol, ug/kg dw		<360	<360	<380	<360	<360
Diethylphthalate, ug/kg dw		<360	<360	<380	<360	<360
p-(Dimethylamino)azobenzene , ug/kg dw		<360	<360	<380	<360	<360
7,12-Dimethylbenz(a)anthracene, ug/kg dw		<360	<360	<380	<360	<360

*gaw*  
 2/10/00

LOG NO: S9-14993  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5	
3,3'-Dimethylbenzidine, ug/kg dw	<1900	<1900	<2000	<1900	<1800	
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<73000	<74000	<77000	<73000	<72000	
2,4-Dimethylphenol, ug/kg dw	<360	<360	<380	<360	<360	
Dimethylphthalate, ug/kg dw	<360	<360	<380	<360	<360	
m-Dinitrobenzene , ug/kg dw	<360	<360	<380	<360	<360	
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<1900	<1900	<2000	<1900	<1800	
2,4-Dinitrophenol, ug/kg dw	<1900	<1900	<2000	<1900	<1800	
2,4-Dinitrotoluene, ug/kg dw	<360	<360	<380	<360	<360	
2,6-Dinitrotoluene, ug/kg dw	<360	<360	<380	<360	<360	
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<360	<360	<380	<360	<360	
Di-n-octylphthalate, ug/kg dw	<360	<360	<380	<360	<360	
1,4-Dioxane, ug/kg dw	<360	<360	<380	<360	<360	
Ethyl methanesulfonate, ug/kg dw	<360	<360	<380	<360	<360	
Fluoranthene, ug/kg dw	<360	2400	<380	<360	<360	

*gaw*  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 9

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-1	HMW-14-1	07-28-99/09:30
14993-2	HMW-14-2	07-28-99/09:40
14993-3	HMW-15-1	07-28-99/11:15
14993-4	HMW-15-2	07-28-99/11:30
14993-5	HMW-17-1	07-28-99/13:45

PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5
Fluorene, ug/kg dw	<360	<360	<380	<360	<360
Hexachlorobenzene, ug/kg dw	<360	<360	<380	<360	<360
Hexachlorobutadiene, ug/kg dw	<360	<360	<380	<360	<360
Hexachlorocyclopentadiene, ug/kg dw	<360	<360	<380	<360	<360
Hexachloroethane, ug/kg dw	<360	<360	<380	<360	<360
Hexachlorophene, ug/kg dw	<190000	<190000	<200000	<190000	<180000
Hexachloropropene, ug/kg dw	<360	<360	<380	<360	<360
Indeno(1,2,3-cd)pyrene, ug/kg dw	<360	1200	<380	<360	<360
Isophorone, ug/kg dw	<360	<360	<380	<360	<360
Isosafrole, ug/kg dw	<360	<360	<380	<360	<360
Methapyrilene, ug/kg dw	<73000	<74000	<77000	<73000	<72000
3-Methylcholanthrene, ug/kg dw	<360	<360	<380	<360	<360
Methyl methanesulfonate, ug/kg dw	<360	<360	<380	<360	<360
2-Methylnaphthalene, ug/kg dw	<360	<360	<380	<360	<360
Naphthalene, ug/kg dw	<360	<360	<380	<360	<360
1,4-Naphthoquinone, ug/kg dw	<360	<360	<380	<360	<360
1-Naphthylamine, ug/kg dw	<360	<360	<380	<360	<360
2-Naphthylamine, ug/kg dw	<360	<360	<380	<360	<360

*gaw*  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

REPORT OF RESULTS

Page 10

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER		14993-1	14993-2	14993-3	14993-4	14993-5
2-Nitroaniline (o-Nitroaniline), ug/kg dw		<1900	<1900	<2000	<1900	<1800
3-Nitroaniline (m-Nitroaniline), ug/kg dw		<1900	<1900	<2000	<1900	<1800
4-Nitroaniline (p-Nitroaniline), ug/kg dw		<1900	<1900	<2000	<1900	<1800
Nitrobenzene, ug/kg dw		<360	<360	<380	<360	<360
2-Nitrophenol (o-Nitrophenol), ug/kg dw		<360	<360	<380	<360	<360
4-Nitrophenol (p-Nitrophenol), ug/kg dw		<1900	<1900	<2000	<1900	<1800
4-Nitroquinoline 1-oxide, ug/kg dw		<3600	<3600	<3800	<3600	<3600
N-Nitrosodi-n-butylamine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosodiethylamine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosodimethylamine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw		<360	<360	<380	<360	<360
n-Nitrosodi-n-propylamine, ug/kg dw		<360	<360	<380	<360	<360

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 11

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER		14993-1	14993-2	14993-3	14993-4	14993-5
N-Nitrosomethylethylamine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosomorpholine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosopiperidine, ug/kg dw		<360	<360	<380	<360	<360
N-Nitrosopyrrolidine, ug/kg dw		<360	<360	<380	<360	<360
5-Nitro-o-toluidine, ug/kg dw		<360	<360	<380	<360	<360
Pentachlorobenzene, ug/kg dw		<360	<360	<380	<360	<360
Pentachloronitrobenzene, ug/kg dw		<360	<360	<380	<360	<360
Pentachlorophenol, ug/kg dw		<1900	<1900	<2000	<1900	<1800
Phenacetin, ug/kg dw		<360	<360	<380	<360	<360
Phenanthrene, ug/kg dw		<360	<360	<380	<360	<360
Phenol, ug/kg dw		<360	<360	<380	<360	<360
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw		<1900	<1900	<2000	<1900	<1800
2-Picoline, ug/kg dw		<360	<360	<380	<360	<360
Pronamide, ug/kg dw		<360	<360	<380	<360	<360
Pyrene, ug/kg dw		<360	2000	<380	<360	<360
Pyridine, ug/kg dw		<360	<360	<380	<360	<360

*gaw*  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5	
Safrole, ug/kg dw	<360	<360	<380	<360	<360	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<360	<360	<380	<360	<360	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<360	<360	<380	<360	<360	
o-Toluidine, ug/kg dw	<360	<360	<380	<360	<360	
1,2,4-Trichlorobenzene, ug/kg dw	<360	<360	<380	<360	<360	
2,4,5-Trichlorophenol, ug/kg dw	<360	<360	<380	<360	<360	
2,4,6-Trichlorophenol, ug/kg dw	<360	<360	<380	<360	<360	
O,O,O-Triethyl phosphorothioate, ug/kg dw	<360	<360	<380	<360	<360	
1,3,5-Trinitrobenzene, ug/kg dw	<360	<360	<380	<360	<360	
Benzidine, ug/kg dw	<3000	<3000	<3100	<3000	<2900	
Benzoic acid, ug/kg dw	<1900	<1900	<2000	<1900	<1800	
Dimethoate, ug/kg dw	<360	<360	<380	<360	<360	
p-Benzoquinone, ug/kg dw	<360	<360	<380	<360	<360	
Surrogate - Phenol d5	64 %	43 %	39 %	56 %	47 %	
Surrogate - 2-Fluorophenol	69 %	49 %	45 %	61 %	56 %	
Surrogate - 2,4,6-Tribromophenol	61 %	43 %	42 %	58 %	53 %	

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 2/10/00

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LOG NO: S9-14993  
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112 Town Park Drive  
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Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 133290811  
Page 13

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14993-1	HMW-14-1	07-28-99/09:30				
14993-2	HMW-14-2	07-28-99/09:40				
14993-3	HMW-15-1	07-28-99/11:15				
14993-4	HMW-15-2	07-28-99/11:30				
14993-5	HMW-17-1	07-28-99/13:45				
PARAMETER	14993-1	14993-2	14993-3	14993-4	14993-5	
Surrogate - Nitrobenzene - d5	52 %	40 %	33 %	52 %	42 %	
Surrogate - 2-Fluorobiphenyl	67 %	50 %	44 %	61 %	51 %	
Surrogate - Terphenyl - d14	67 %	46 %	42 %	56 %	56 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Prep Date	07.30.99	07.30.99	07.28.99	07.28.99	07.28.99	
Analysis Date	08.02.99	08.02.99	08.02.99	08.02.99	08.02.99	
Batch ID	0730A	0730A	0728B	0728B	0728B	
Percent Solids	91	90	87	91	92	

*gaw*  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

Page 14

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
Volatile Organic Compounds (8260)		
Acetone, ug/kg dw		95
Acetonitrile, ug/kg dw		<250
Acrolein (Propenal), ug/kg dw		<130
Acrylonitrile, ug/kg dw		<130
Benzene, ug/kg dw		<6.3
Bromodichloromethane, ug/kg dw		<6.3
Bromoform, ug/kg dw		<6.3
Bromomethane (Methyl Bromide), ug/kg dw		<13
2-Butanone (Methyl ethyl ketone), ug/kg dw		<32
Carbon disulfide, ug/kg dw		<6.3
Carbon Tetrachloride, ug/kg dw		<6.3
Chlorobenzene, ug/kg dw		<6.3
Chloroethane, ug/kg dw		<13
Chloroform, ug/kg dw		<6.3
Chloromethane (Methyl Chloride), ug/kg dw		<13
Chloroprene, ug/kg dw		<6.3
3-Chloropropene (Allylchloride), ug/kg dw		<6.3
Dibromochloromethane, ug/kg dw		<6.3
1,2-Dibromo-3-chloropropane, ug/kg dw		<13
1,2-Dibromoethane (EDB) , ug/kg dw		<6.3
Dibromomethane (Methylene bromide), ug/kg dw		<6.3
trans-1,4-Dichloro-2-butene, ug/kg dw		<13

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Project: HAAF FTA  
Sampled By: Client  
Code: 133290811  
Page 15

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
Dichlorodifluoromethane, ug/kg dw	<6.3	
1,1-Dichloroethane, ug/kg dw	<6.3	
1,2-Dichloroethane, ug/kg dw	<6.3	
1,1-Dichloroethene, ug/kg dw	<6.3	
trans-1,2-Dichloroethene, ug/kg dw	<6.3	
1,2-Dichloropropane, ug/kg dw	<6.3	
cis-1,3-Dichloropropene, ug/kg dw	<6.3	
trans-1,3-Dichloropropene, ug/kg dw	<6.3	
Ethylbenzene, ug/kg dw	<6.3	
Ethyl methacrylate, ug/kg dw	<6.3	
2-Hexanone, ug/kg dw	<32	
Iodomethane (Methyl iodide), ug/kg dw	<6.3	
Isobutanol (Isobutyl alcohol), ug/kg dw	<250	
Methacrylonitrile, ug/kg dw	<130	
Methylene chloride (Dichloromethane), ug/kg dw	<6.3	
Methyl methacrylate, ug/kg dw	<6.3	
4-Methyl-2-pentanone (MIBK), ug/kg dw	<32	
Pentachloroethane, ug/kg dw	<32	
Propionitrile, ug/kg dw	<130	
Styrene, ug/kg dw	<6.3	
1,1,1,2-Tetrachloroethane, ug/kg dw	<6.3	
1,1,2,2-Tetrachloroethane, ug/kg dw	<6.3	
Tetrachloroethene, ug/kg dw	<6.3	

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2/10/00

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 16

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
Toluene, ug/kg dw		<6.3
1,1,1-Trichloroethane, ug/kg dw		<6.3
1,1,2-Trichloroethane, ug/kg dw		<6.3
Trichloroethene, ug/kg dw		<6.3
Trichlorofluoromethane, ug/kg dw		<6.3
1,2,3-Trichloropropane, ug/kg dw		<6.3
Vinyl acetate, ug/kg dw		<13
Vinyl chloride, ug/kg dw		<13
Xylenes (total), ug/kg dw		<6.3
2-Chlorotoluene, ug/kg dw		<6.3
cis-1,2-Dichloroethene, ug/kg dw		<6.3
Surrogate - Toluene-d8		97 %
Surrogate - 4-Bromofluorobenzene		75 %
Surrogate - Dibromofluoromethane		105 %
Dilution Factor		1.0
Analysis Date		08.03.99
Batch ID		1H0803

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 2/10/00

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 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

REPORT OF RESULTS

Page 17

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
Acids and Base Neutrals (8270-APP9)		
Acenaphthene, ug/kg dw		<370
Acenaphthylene, ug/kg dw		<370
Acetophenone, ug/kg dw		<370
2-Acetylaminofluorene, ug/kg dw		<370
4-Aminobiphenyl, ug/kg dw		<370
Aniline, ug/kg dw		<370
Anthracene, ug/kg dw		<370
Aramite (total), ug/kg dw		<370
Benzo(a)anthracene, ug/kg dw		<370
Benzo(b)fluoranthene, ug/kg dw		<370
Benzo(k)fluoranthene, ug/kg dw		<370
Benzo(g,h,i)perylene, ug/kg dw		<370
Benzo(a)pyrene, ug/kg dw		<370
Benzyl alcohol, ug/kg dw		<370
bis(2-Chloroethoxy)methane, ug/kg dw		<370
bis(2-Chloroethyl)ether, ug/kg dw		<370
2,2'-Oxybis(1-chloropropane) [bis(2-Chloroisopropy 1)ether], ug/kg dw		<370
bis(2-Ethylhexyl)phthalate, ug/kg dw		<370
4-Bromophenylphenyl ether, ug/kg dw		<370
Butylbenzylphthalate, ug/kg dw		<370
4-Chloroaniline (p-Chloroaniline), ug/kg dw		<740

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

Page 18

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<370	
2-Chloronaphthalene, ug/kg dw	<370	
2-Chlorophenol, ug/kg dw	<370	
4-Chlorophenylphenyl ether, ug/kg dw	<370	
Chrysene, ug/kg dw	<370	
Cresol, m & p, ug/kg dw	<370	
Cresol (ortho), ug/kg dw	<370	
Diallate (total), ug/kg dw	<370	
Dibenzo(a,h)anthracene, ug/kg dw	<370	
Dibenzofuran, ug/kg dw	<370	
Di-n-butylphthalate, ug/kg dw	<370	
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw	<370	
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw	<370	
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw	<370	
3,3'-Dichlorobenzidine, ug/kg dw	<740	
2,4-Dichlorophenol, ug/kg dw	<370	
2,6-Dichlorophenol, ug/kg dw	<370	
Diethylphthalate, ug/kg dw	<370	
p-(Dimethylamino)azobenzene, ug/kg dw	<370	
7,12-Dimethylbenz(a)anthracene, ug/kg dw	<370	
3,3'-Dimethylbenzidine, ug/kg dw	<1900	
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<76000	
2,4-Dimethylphenol, ug/kg dw	<370	

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 Sampled By: Client  
 Code: 133290811  
 Page 19

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
Dimethylphthalate, ug/kg dw	<370	
m-Dinitrobenzene , ug/kg dw	<370	
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<1900	
2,4-Dinitrophenol, ug/kg dw	<1900	
2,4-Dinitrotoluene, ug/kg dw	<370	
2,6-Dinitrotoluene, ug/kg dw	<370	
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<370	
Di-n-octylphthalate, ug/kg dw	<370	
1,4-Dioxane, ug/kg dw	<370	
Ethyl methanesulfonate, ug/kg dw	<370	
Fluoranthene, ug/kg dw	<370	
Fluorene, ug/kg dw	<370	
Hexachlorobenzene, ug/kg dw	<370	
Hexachlorobutadiene, ug/kg dw	<370	
Hexachlorocyclopentadiene, ug/kg dw	<370	
Hexachloroethane, ug/kg dw	<370	
Hexachlorophene, ug/kg dw	<190000	
Hexachloropropene, ug/kg dw	<370	
Indeno(1,2,3-cd)pyrene, ug/kg dw	<370	
Isophorone, ug/kg dw	<370	
Isosafrole, ug/kg dw	<370	
Methapyrilene, ug/kg dw	<76000	

*Law*  
 2/10/00

LOG NO: S9-14993  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811

REPORT OF RESULTS

Page 20

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
3-Methylcholanthrene, ug/kg dw	<370	
Methyl methanesulfonate, ug/kg dw	<370	
2-Methylnaphthalene, ug/kg dw	<370	
Naphthalene, ug/kg dw	<370	
1,4-Naphthoquinone, ug/kg dw	<370	
1-Naphthylamine, ug/kg dw	<370	
2-Naphthylamine, ug/kg dw	<370	
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<1900	
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<1900	
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<1900	
Nitrobenzene, ug/kg dw	<370	
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<370	
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<1900	
4-Nitroquinoline 1-oxide, ug/kg dw	<3700	
N-Nitrosodi-n-butylamine, ug/kg dw	<370	
N-Nitrosodiethylamine, ug/kg dw	<370	
N-Nitrosodimethylamine, ug/kg dw	<370	
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw	<370	
n-Nitrosodi-n-propylamine, ug/kg dw	<370	
N-Nitrosomethylethylamine, ug/kg dw	<370	
N-Nitrosomorpholine, ug/kg dw	<370	
N-Nitrosopiperidine, ug/kg dw	<370	
N-Nitrosopyrrolidine, ug/kg dw	<370	

*gaw*  
 2/10/00

LOG NO: S9-14993  
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Dr. Larry Stewart  
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 112 Town Park Drive  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 21

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER	14993-6	
5-Nitro-o-toluidine, ug/kg dw		<370
Pentachlorobenzene, ug/kg dw		<370
Pentachloronitrobenzene, ug/kg dw		<370
Pentachlorophenol, ug/kg dw		<1900
Phenacetin, ug/kg dw		<370
Phenanthrene, ug/kg dw		<370
Phenol, ug/kg dw		<370
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw		<1900
2-Picoline, ug/kg dw		<370
Pronamide, ug/kg dw		<370
Pyrene, ug/kg dw		<370
Pyridine, ug/kg dw		<370
Safrole, ug/kg dw		<370
1,2,4,5-Tetrachlorobenzene, ug/kg dw		<370
2,3,4,6-Tetrachlorophenol, ug/kg dw		<370
o-Toluidine, ug/kg dw		<370
1,2,4-Trichlorobenzene, ug/kg dw		<370
2,4,5-Trichlorophenol, ug/kg dw		<370
2,4,6-Trichlorophenol, ug/kg dw		<370
O,O,O-Triethyl phosphorothioate, ug/kg dw		<370
1,3,5-Trinitrobenzene, ug/kg dw		<370
Benzidine, ug/kg dw		<3000
Benzoic acid, ug/kg dw		<1900

*gaw*  
 2/10/00

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LOG NO: S9-14993  
 Received: 29 JUL 99  
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Dr. Larry Stewart  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 133290811  
 Page 22

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14993-6	HMW-17-2	07-28-99/13:55
PARAMETER		14993-6
Dimethoate, ug/kg dw		<370
p-Benzoquinone, ug/kg dw		<370
Surrogate - Phenol d5		68 %
Surrogate - 2-Fluorophenol		76 %
Surrogate - 2,4,6-Tribromophenol		68 %
Surrogate - Nitrobenzene - d5		58 %
Surrogate - 2-Fluorobiphenyl		68 %
Surrogate - Terphenyl - d14		74 %
Dilution Factor		1.0
Prep Date		07.28.99
Analysis Date		08.02.99
Batch ID		0728B
Percent Solids		88

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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- 2846 Industrial Plaza Drive, Tallahassee, FL 32301
- 414 SW 12th Avenue, Deerfield Beach, FL 33442
- 900 Lakeside Drive, Mobile, AL 36693
- 6712 Benjamin Road, Suite 100, Tampa, FL 33634
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- Phone: (912) 354-7858 Fax: (912) 352-0165
- Phone: (904) 878-3994 Fax: (904) 878-9504
- Phone: (954) 421-7400 Fax: (954) 421-2584
- Phone: (334) 666-6633 Fax: (334) 666-6696
- Phone: (813) 885-7427 Fax: (813) 885-7049
- Phone: (504) 764-1100 Fax: (504) 725-1163

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE <b>HAAF FTA</b>		PROJECT NO.	PO NUMBER	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
PROJECT LOC. (State) <b>GA</b>	SAMPLER(S) NAME <b>PAT KELLEY</b>	PHONE <b>770 421-3311</b>	FAX <b>770 421-3486</b>	AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (oil, solvent, etc.) <b>8260 ENVOIRE</b> <b>8260 2oz GLASS</b> <b>8270</b>	NAME NAME NAME	<input checked="" type="checkbox"/> STANDARD REPORT DELIVERY  <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) Date Due	
CLIENT NAME <b>LAW</b>	CLIENT PROJECT MANAGER <b>12001-9-3411</b>	CLIENT ADDRESS (CITY, STATE, ZIP) <b>112 TOWN PARK DR., KENNESAW, GA 30144</b>					

SAMPLE		SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED							REMARKS
DATE	TIME										
7/28/99	9:30		HMW-14-1	+	3	1	1				
7/28/99	9:40		HMW-14-2	+	3	1	1				
7/28/99	11:15		HMW-15-1	X	3	1	1				
7/28/99	11:30		HMW-15-2	+	3	1	1				
7/28/99			HMW-17-1	X	3	1	1				
7/28/99			HMW-17-2	+	3	1	1				

} analyze per Larry Stewart 7/29/99

RELINQUISHED BY: (SIGNATURE) <i>S. Campbell</i>	DATE 7/28/99	TIME 18:05	RELINQUISHED BY: (SIGNATURE) <i>Pat Kelley</i>	DATE 7/28/99	TIME 18:05	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

<b>LABORATORY USE ONLY</b>							
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>S. Campbell</i>	DATE 7/28/99	TIME 18:05	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO. <b>5914993</b>	LABORATORY REMARKS:	

F-196

ORIGINAL

LOG NO: S9-14816  
 Received: 21 JUL 99  
 Reported: 23 JUL 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 110490723

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
14816-1	HMW-16C	07-21-99/14:45
14816-2	HMW-16B	07-21-99/15:00
14816-3	HMW-16A	07-21-99/15:15
14816-4	HMW-17	07-21-99/15:30
14816-5	HMW-14	07-21-99/15:40

PARAMETER	14816-1	14816-2	14816-3	14816-4	14816-5
Halogenated and Aromatic Volatiles (8021)					
Benzene, ug/l	<1.0	22	<1.0	<1.0	<1.0
Ethylbenzene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
o-Xylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
m&p-Xylene, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate - a,a,a-Trifluorotoluene	120 %	100 %	117 %	100 %	100 %
Dilution Factor	1.0	1.0	1.0	1.0	1.0
Analysis Date	07.22.99	07.22.99	07.22.99	07.22.99	07.22.99
Batch ID	1D0722	1D0722	1D0722	1D0722	1D0722

*gaw*  
 2/10/00

LOG NO: S9-14816  
 Received: 21 JUL 99  
 Reported: 23 JUL 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 110490723  
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	
14816-6	HMW-15	07-21-99/15:50	
14816-7	Duplicate	07-21-99/00:00	
PARAMETER		14816-6	14816-7
Halogenated and Aromatic Volatiles (8021)			
Benzene, ug/l		<1.0	<1.0
Ethylbenzene, ug/l		<1.0	<1.0
Toluene, ug/l		<1.0	<1.0
o-Xylene, ug/l		<1.0	<1.0
m&p-Xylene, ug/l		<1.0	<1.0
Surrogate - a,a,a-Trifluorotoluene		97 %	97 %
Dilution Factor		1.0	1.0
Analysis Date		07.22.99	07.22.99
Batch ID		1D0722	1D0722

*gaw*  
 2/10/00



LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-1	HMW-16-1	07-29-99/09:30
15018-2	HMW-16-2	07-29-99/09:45
PARAMETER	15018-1	15018-2
Volatile Organic Compounds (8260)		
Acetone, ug/kg dw	170	<65
Acetonitrile, ug/kg dw	<250	<260
Acrolein (Propenal), ug/kg dw	<120	<130
Acrylonitrile, ug/kg dw	<120	<130
Benzene, ug/kg dw	<6.2	<6.5
Bromodichloromethane, ug/kg dw	<6.2	<6.5
Bromoform, ug/kg dw	<6.2	<6.5
Bromomethane (Methyl Bromide), ug/kg dw	<12	<13
2-Butanone (Methyl ethyl ketone), ug/kg dw	<31	<33
Carbon disulfide, ug/kg dw	<6.2	<6.5
Carbon Tetrachloride, ug/kg dw	<6.2	<6.5
Chlorobenzene, ug/kg dw	<6.2	<6.5
Chloroethane, ug/kg dw	<12	<13
Chloroform, ug/kg dw	<6.2	<6.5
Chloromethane (Methyl Chloride), ug/kg dw	<12	<13
Chloroprene, ug/kg dw	<6.2	<6.5
3-Chloropropene (Allylchloride), ug/kg dw	<6.2	<6.5
Dibromochloromethane, ug/kg dw	<6.2	<6.5
1,2-Dibromo-3-chloropropane, ug/kg dw	<12	<13
1,2-Dibromoethane (EDB) , ug/kg dw	<6.2	<6.5
Dibromomethane (Methylene bromide), ug/kg dw	<6.2	<6.5

*gaw*  
 2/10/00

LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-1	HMW-16-1	07-29-99/09:30
15018-2	HMW-16-2	07-29-99/09:45
PARAMETER	15018-1	15018-2
trans-1,4-Dichloro-2-butene, ug/kg dw	<12	<13
Dichlorodifluoromethane, ug/kg dw	<6.2	<6.5
1,1-Dichloroethane, ug/kg dw	<6.2	<6.5
1,2-Dichloroethane, ug/kg dw	<6.2	<6.5
1,1-Dichloroethene, ug/kg dw	<6.2	<6.5
trans-1,2-Dichloroethene, ug/kg dw	<6.2	<6.5
1,2-Dichloropropane, ug/kg dw	<6.2	<6.5
cis-1,3-Dichloropropene, ug/kg dw	<6.2	<6.5
trans-1,3-Dichloropropene, ug/kg dw	<6.2	<6.5
Ethylbenzene, ug/kg dw	<6.2	<6.5
Ethyl methacrylate, ug/kg dw	<6.2	<6.5
2-Hexanone, ug/kg dw	<31	<33
Iodomethane (Methyl iodide), ug/kg dw	<6.2	<6.5
Isobutanol (Isobutyl alcohol), ug/kg dw	<250	<260
Methacrylonitrile, ug/kg dw	<120	<130
Methylene chloride (Dichloromethane), ug/kg dw	<6.2	<6.5
Methyl methacrylate, ug/kg dw	<6.2	<6.5
4-Methyl-2-pentanone (MIBK), ug/kg dw	<31	<33
Pentachloroethane, ug/kg dw	<31	<33
Propionitrile, ug/kg dw	<120	<130
Styrene, ug/kg dw	<6.2	<6.5
1,1,1,2-Tetrachloroethane, ug/kg dw	<6.2	<6.5

*gaw*  
 2/10/00

LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
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Contract No.: 12001-9-3411  
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 Sampled By: Client  
 Code: 134290811  
 Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
15018-1	HMW-16-1	07-29-99/09:30	
15018-2	HMW-16-2	07-29-99/09:45	
PARAMETER		15018-1	15018-2
1,1,2,2-Tetrachloroethane, ug/kg dw		<6.2	<6.5
Tetrachloroethene, ug/kg dw		<6.2	<6.5
Toluene, ug/kg dw		<6.2	<6.5
1,1,1-Trichloroethane, ug/kg dw		<6.2	<6.5
1,1,2-Trichloroethane, ug/kg dw		<6.2	<6.5
Trichloroethene, ug/kg dw		<6.2	<6.5
Trichlorofluoromethane, ug/kg dw		<6.2	<6.5
1,2,3-Trichloropropane, ug/kg dw		<6.2	<6.5
Vinyl acetate, ug/kg dw		<12	<13
Vinyl chloride, ug/kg dw		<12	<13
Xylenes (total), ug/kg dw		<6.2	<6.5
2-Chlorotoluene, ug/kg dw		<6.2	<6.5
cis-1,2-Dichloroethene, ug/kg dw		<6.2	<6.5
Surrogate - Toluene-d8		94 %	98 %
Surrogate - 4-Bromofluorobenzene		90 %	83 %
Surrogate - Dibromofluoromethane		105 %	108 %
Dilution Factor		1.0	1.0
Analysis Date		08.03.99	08.03.99
Batch ID		1H0803	1H0803

*gaw*  
 2/10/00

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LOG NO: S9-15018  
Received: 29 JUL 99  
Reported: 11 AUG 99

Dr. Larry Stewart  
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112 Town Park Drive  
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Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 134290811  
Page 4

### REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
15018-1	HMW-16-1	07-29-99/09:30	
15018-2	HMW-16-2	07-29-99/09:45	
PARAMETER		15018-1	15018-2
<b>Acids and Base Neutrals (8270-APP9)</b>			
Acenaphthene, ug/kg dw		<3500	<790
Acenaphthylene, ug/kg dw		3600	1500
Acetophenone, ug/kg dw		<3500	<790
2-Acetylaminofluorene, ug/kg dw		<3500	<790
4-Aminobiphenyl, ug/kg dw		<3500	<790
Aniline, ug/kg dw		<3500	<790
Anthracene, ug/kg dw		7500	2200
Aramite (total), ug/kg dw		<3500	<790
Benzo(a)anthracene, ug/kg dw		34000	13000
Benzo(b)fluoranthene, ug/kg dw		28000	9100
Benzo(k)fluoranthene, ug/kg dw		27000	13000
Benzo(g,h,i)perylene, ug/kg dw		14000	5700
Benzo(a)pyrene, ug/kg dw		26000	10000
Benzyl alcohol, ug/kg dw		<3500	<790
bis(2-Chloroethoxy)methane, ug/kg dw		<3500	<790
bis(2-Chloroethyl)ether, ug/kg dw		<3500	<790
2,2'-Oxybis(1-chloropropane) [bis(2-Chloroisopropyl)ether], ug/kg dw		<3500	<790
bis(2-Ethylhexyl)phthalate, ug/kg dw		<3500	<790
4-Bromophenylphenyl ether, ug/kg dw		<3500	<790
Butylbenzylphthalate, ug/kg dw		<3500	<790

*gaw*  
2/10/00

LOG NO: S9-15018  
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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-1	HMW-16-1	07-29-99/09:30
15018-2	HMW-16-2	07-29-99/09:45
PARAMETER	15018-1	15018-2
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<7000	<1600
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<3500	<790
2-Chloronaphthalene, ug/kg dw	<3500	<790
2-Chlorophenol, ug/kg dw	<3500	<790
4-Chlorophenylphenyl ether, ug/kg dw	<3500	<790
Chrysene, ug/kg dw	33000	12000
Cresol, m & p, ug/kg dw	<3500	<790
Cresol (ortho), ug/kg dw	<3500	<790
Diallate (total), ug/kg dw	<3500	<790
Dibenzo(a,h)anthracene, ug/kg dw	<3500	860
Dibenzofuran, ug/kg dw	<3500	<790
Di-n-butylphthalate, ug/kg dw	<3500	<790
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw	<3500	<790
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw	<3500	<790
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw	<3500	<790
3,3'-Dichlorobenzidine, ug/kg dw	<7000	<1600
2,4-Dichlorophenol, ug/kg dw	<3500	<790
2,6-Dichlorophenol, ug/kg dw	<3500	<790
Diethylphthalate, ug/kg dw	<3500	<790
p-(Dimethylamino)azobenzene, ug/kg dw	<3500	<790
7,12-Dimethylbenz(a)anthracene, ug/kg dw	<3500	<790
3,3'-Dimethylbenzidine, ug/kg dw	<18000	<4000

*gaw*  
 2/10/00

LOG NO: S9-15018  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-1	HMW-16-1	07-29-99/09:30
15018-2	HMW-16-2	07-29-99/09:45
PARAMETER	15018-1	15018-2
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<710000	<160000
2,4-Dimethylphenol, ug/kg dw	<3500	<790
Dimethylphthalate, ug/kg dw	<3500	<790
m-Dinitrobenzene , ug/kg dw	<3500	<790
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<18000	<4000
2,4-Dinitrophenol, ug/kg dw	<18000	<4000
2,4-Dinitrotoluene, ug/kg dw	<3500	<790
2,6-Dinitrotoluene, ug/kg dw	<3500	<790
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<3500	<790
Di-n-octylphthalate, ug/kg dw	<3500	<790
1,4-Dioxane, ug/kg dw	<3500	<790
Ethyl methanesulfonate, ug/kg dw	<3500	<790
Fluoranthene, ug/kg dw	72000	24000
Fluorene, ug/kg dw	<3500	<790
Hexachlorobenzene, ug/kg dw	<3500	<790
Hexachlorobutadiene, ug/kg dw	<3500	<790
Hexachlorocyclopentadiene, ug/kg dw	<3500	<790
Hexachloroethane, ug/kg dw	<3500	<790
Hexachlorophene, ug/kg dw	<1800000	<400000
Hexachloropropene, ug/kg dw	<3500	<790
Indeno(1,2,3-cd)pyrene, ug/kg dw	16000	6400

*gaw*  
 2/10/00

LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 7

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
15018-1	HMW-16-1	07-29-99/09:30	
15018-2	HMW-16-2	07-29-99/09:45	
PARAMETER		15018-1	15018-2
Isophorone, ug/kg dw		<3500	<790
Isosafrole, ug/kg dw		<3500	<790
Methapyrilene, ug/kg dw		<710000	<160000
3-Methylcholanthrene, ug/kg dw		<3500	<790
Methyl methanesulfonate, ug/kg dw		<3500	<790
2-Methylnaphthalene, ug/kg dw		<3500	<790
Naphthalene, ug/kg dw		<3500	<790
1,4-Naphthoquinone, ug/kg dw		<3500	<790
1-Naphthylamine, ug/kg dw		<3500	<790
2-Naphthylamine, ug/kg dw		<3500	<790
2-Nitroaniline (o-Nitroaniline), ug/kg dw		<18000	<4000
3-Nitroaniline (m-Nitroaniline), ug/kg dw		<18000	<4000
4-Nitroaniline (p-Nitroaniline), ug/kg dw		<18000	<4000
Nitrobenzene, ug/kg dw		<3500	<790
2-Nitrophenol (o-Nitrophenol), ug/kg dw		<3500	<790
4-Nitrophenol (p-Nitrophenol), ug/kg dw		<18000	<4000
4-Nitroquinoline 1-oxide, ug/kg dw		<35000	<7900
N-Nitrosodi-n-butylamine, ug/kg dw		<3500	<790
N-Nitrosodiethylamine, ug/kg dw		<3500	<790
N-Nitrosodimethylamine, ug/kg dw		<3500	<790
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw		<3500	<790
n-Nitrosodi-n-propylamine, ug/kg dw		<3500	<790

*Jaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S9-15018  
Received: 29 JUL 99  
Reported: 11 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 134290811

### REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-1	HMW-16-1	07-29-99/09:30
15018-2	HMW-16-2	07-29-99/09:45

PARAMETER	15018-1	15018-2
N-Nitrosomethylethylamine, ug/kg dw	<3500	<790
N-Nitrosomorpholine, ug/kg dw	<3500	<790
N-Nitrosopiperidine, ug/kg dw	<3500	<790
N-Nitrosopyrrolidine, ug/kg dw	<3500	<790
5-Nitro-o-toluidine, ug/kg dw	<3500	<790
Pentachlorobenzene, ug/kg dw	<3500	<790
Pentachloronitrobenzene, ug/kg dw	<3500	<790
Pentachlorophenol, ug/kg dw	<18000	<4000
Phenacetin, ug/kg dw	<3500	<790
Phenanthrene, ug/kg dw	32000	10000
Phenol, ug/kg dw	<3500	<790
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<18000	<4000
2-Picoline, ug/kg dw	<3500	<790
Pronamide, ug/kg dw	<3500	<790
Pyrene, ug/kg dw	49000	17000
Pyridine, ug/kg dw	<3500	<790
Safrole, ug/kg dw	<3500	<790
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<3500	<790
2,3,4,6-Tetrachlorophenol, ug/kg dw	<3500	<790
o-Toluidine, ug/kg dw	<3500	<790
1,2,4-Trichlorobenzene, ug/kg dw	<3500	<790
2,4,5-Trichlorophenol, ug/kg dw	<3500	<790

*gaw*  
2/10/00



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Dr. Larry Stewart  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 9

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
15018-1	HMW-16-1	07-29-99/09:30	
15018-2	HMW-16-2	07-29-99/09:45	
PARAMETER		15018-1	15018-2
2,4,6-Trichlorophenol, ug/kg dw		<3500	<790
O,O,O-Triethyl phosphorothioate, ug/kg dw		<3500	<790
1,3,5-Trinitrobenzene, ug/kg dw		<3500	<790
Benzidine, ug/kg dw		<28000	<6400
Benzoic acid, ug/kg dw		<18000	<4000
Dimethoate, ug/kg dw		<3500	<790
p-Benzoquinone, ug/kg dw		<3500	<790
Surrogate - Phenol d5		0 %D	68 %
Surrogate - 2-Fluorophenol		0 %D	75 %
Surrogate - 2,4,6-Tribromophenol		0 %D	62 %
Surrogate - Nitrobenzene - d5		0 %D	60 %
Surrogate - 2-Fluorobiphenyl		0 %D	75 %
Surrogate - Terphenyl - d14		0 %D	70 %
Dilution Factor		10.0	2.0
Prep Date		07.30.99	07.30.99
Analysis Date		08.03.99	08.03.99
Batch ID		0730A	0730A
Percent Solids		94	83

*gaw*  
 2/10/00

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 Kennesaw, GA 30144

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 Sampled By: Client  
 Code: 134290811

REPORT OF RESULTS

Page 10

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-3	SB-24-1	07-29-99/11:15
15018-4	SB-24-2	07-29-99/11:20
15018-5	SB-23-1	07-29-99/11:25
15018-6	SB-23-2	07-29-99/11:30

PARAMETER	15018-3	15018-4	15018-5	15018-6
Volatile Organic Compounds (8260)				
Acetone, ug/kg dw	160	140	<64	110
Acetonitrile, ug/kg dw	<440	<350	<260	<300
Acrolein (Propenal), ug/kg dw	<220	<170	<130	<150
Acrylonitrile, ug/kg dw	<220	<170	<130	<150
Benzene, ug/kg dw	<11	<8.7	<6.4	<7.5
Bromodichloromethane, ug/kg dw	<11	<8.7	<6.4	<7.5
Bromoform, ug/kg dw	<11	<8.7	<6.4	<7.5
Bromomethane (Methyl Bromide), ug/kg dw	<22	<17	<13	<15
2-Butanone (Methyl ethyl ketone), ug/kg dw	<56	<43	<32	<38
Carbon disulfide, ug/kg dw	<11	<8.7	<6.4	<7.5
Carbon Tetrachloride, ug/kg dw	<11	<8.7	<6.4	<7.5
Chlorobenzene, ug/kg dw	<11	<8.7	<6.4	<7.5
Chloroethane, ug/kg dw	<22	<17	<13	<15
Chloroform, ug/kg dw	<11	<8.7	<6.4	<7.5
Chloromethane (Methyl Chloride), ug/kg dw	<22	<17	<13	<15
Chloroprene, ug/kg dw	<11	<8.7	<6.4	<7.5
3-Chloropropene (Allylchloride), ug/kg dw	<11	<8.7	<6.4	<7.5
Dibromochloromethane, ug/kg dw	<11	<8.7	<6.4	<7.5
1,2-Dibromo-3-chloropropane, ug/kg dw	<22	<17	<13	<15

*gaw*  
 2/10/00

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 11

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER		15018-3	15018-4	15018-5	15018-6
1,2-Dibromoethane (EDB) , ug/kg dw		<11	<8.7	<6.4	<7.5
Dibromomethane (Methylene bromide), ug/kg dw		<11	<8.7	<6.4	<7.5
trans-1,4-Dichloro-2-butene, ug/kg dw		<22	<17	<13	<15
Dichlorodifluoromethane, ug/kg dw		<11	<8.7	<6.4	<7.5
1,1-Dichloroethane, ug/kg dw		<11	<8.7	<6.4	<7.5
1,2-Dichloroethane, ug/kg dw		<11	<8.7	<6.4	<7.5
1,1-Dichloroethene, ug/kg dw		<11	<8.7	<6.4	<7.5
trans-1,2-Dichloroethene, ug/kg dw		<11	<8.7	<6.4	<7.5
1,2-Dichloropropane, ug/kg dw		<11	<8.7	<6.4	<7.5
cis-1,3-Dichloropropene, ug/kg dw		<11	<8.7	<6.4	<7.5
trans-1,3-Dichloropropene, ug/kg dw		<11	<8.7	<6.4	<7.5
Ethylbenzene, ug/kg dw		<11	<8.7	<6.4	<7.5
Ethyl methacrylate, ug/kg dw		<11	<8.7	<6.4	<7.5
2-Hexanone, ug/kg dw		<56	<43	<32	<38
Iodomethane (Methyl iodide), ug/kg dw		<11	<8.7	<6.4	<7.5
Isobutanol (Isobutyl alcohol), ug/kg dw		<440	<350	<260	<300
Methacrylonitrile, ug/kg dw		<220	<170	<130	<150
Methylene chloride (Dichloromethane), ug/kg dw		<11	<8.7	<6.4	<7.5
Methyl methacrylate, ug/kg dw		<11	<8.7	<6.4	<7.5
4-Methyl-2-pentanone (MIBK), ug/kg dw		<56	<43	<32	<38

*gaw*  
 2/10/00

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Dr. Larry Stewart  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811

REPORT OF RESULTS

Page 12

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
Pentachloroethane, ug/kg dw	<56	<43	<32	<38	
Propionitrile, ug/kg dw	<220	<170	<130	<150	
Styrene, ug/kg dw	<11	<8.7	<6.4	<7.5	
1,1,1,2-Tetrachloroethane, ug/kg dw	<11	<8.7	<6.4	<7.5	
1,1,2,2-Tetrachloroethane, ug/kg dw	<11	<8.7	<6.4	<7.5	
Tetrachloroethene, ug/kg dw	<11	<8.7	<6.4	<7.5	
Toluene, ug/kg dw	<11	<8.7	<6.4	20	
1,1,1-Trichloroethane, ug/kg dw	<11	<8.7	<6.4	<7.5	
1,1,2-Trichloroethane, ug/kg dw	<11	<8.7	<6.4	<7.5	
Trichloroethene, ug/kg dw	<11	<8.7	<6.4	<7.5	
Trichlorofluoromethane, ug/kg dw	<11	<8.7	<6.4	<7.5	
1,2,3-Trichloropropane, ug/kg dw	<11	<8.7	<6.4	<7.5	
Vinyl acetate, ug/kg dw	<22	<17	<13	<15	
Vinyl chloride, ug/kg dw	<22	<17	<13	<15	
Xylenes (total), ug/kg dw	<11	<8.7	<6.4	<7.5	
2-Chlorotoluene, ug/kg dw	<11	<8.7	<6.4	<7.5	
cis-1,2-Dichloroethene, ug/kg dw	<11	<8.7	<6.4	<7.5	
Surrogate - Toluene-d8	100 %	93 %	97 %	91 %	
Surrogate - 4-Bromofluorobenzene	87 %	91 %	84 %	100 %	
Surrogate - Dibromofluoromethane	109 %	101 %	109 %	104 %	
Dilution Factor	1.0	1.0	1.0	1.0	
Analysis Date	08.04.99	08.04.99	08.04.99	08.04.99	
Batch ID	1H0803	1H0803	1H0803	1H0803	

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S9-15018  
Received: 29 JUL 99  
Reported: 11 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 134290811  
Page 13

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-3	SB-24-1	07-29-99/11:15
15018-4	SB-24-2	07-29-99/11:20
15018-5	SB-23-1	07-29-99/11:25
15018-6	SB-23-2	07-29-99/11:30

PARAMETER	15018-3	15018-4	15018-5	15018-6
<b>Acids and Base Neutrals (8270-APP9)</b>				
Acenaphthene, ug/kg dw	<480	<410	<360	<410
Acenaphthylene, ug/kg dw	<480	<410	<360	<410
Acetophenone, ug/kg dw	<480	<410	<360	<410
2-Acetylaminofluorene, ug/kg dw	<480	<410	<360	<410
4-Aminobiphenyl, ug/kg dw	<480	<410	<360	<410
Aniline, ug/kg dw	<480	<410	<360	<410
Anthracene, ug/kg dw	<480	<410	<360	<410
Aramite (total), ug/kg dw	<480	<410	<360	<410
Benzo(a)anthracene, ug/kg dw	<480	<410	510	<410
Benzo(b)fluoranthene, ug/kg dw	<480	<410	740	<410
Benzo(k)fluoranthene, ug/kg dw	<480	<410	630	<410
Benzo(g,h,i)perylene, ug/kg dw	<480	<410	560	<410
Benzo(a)pyrene, ug/kg dw	<480	<410	750	<410
Benzyl alcohol, ug/kg dw	<480	<410	<360	<410
bis(2-Chloroethoxy)methane, ug/kg dw	<480	<410	<360	<410
bis(2-Chloroethyl)ether, ug/kg dw	<480	<410	<360	<410
2,2'-Oxybis(1-chloropropane) [bis(2-Chloroisopropyl)ether], ug/kg dw	<480	<410	<360	<410

*gaw*  
2/10/00

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 Sampled By: Client  
 Code: 134290811  
 Page 14

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
bis(2-Ethylhexyl)phthalate, ug/kg dw	<480	<410	<360	<410	
4-Bromophenylphenyl ether, ug/kg dw	<480	<410	<360	<410	
Butylbenzylphthalate, ug/kg dw	<480	<410	<360	<410	
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<970	<820	<730	<810	
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<480	<410	<360	<410	
2-Chloronaphthalene, ug/kg dw	<480	<410	<360	<410	
2-Chlorophenol, ug/kg dw	<480	<410	<360	<410	
4-Chlorophenylphenyl ether, ug/kg dw	<480	<410	<360	<410	
Chrysene, ug/kg dw	<480	<410	560	<410	
Cresol, m & p, ug/kg dw	<480	<410	<360	<410	
Cresol (ortho), ug/kg dw	<480	<410	<360	<410	
Diallate (total), ug/kg dw	<480	<410	<360	<410	
Dibenzo(a,h)anthracene, ug/kg dw	<480	<410	<360	<410	
Dibenzofuran, ug/kg dw	<480	<410	<360	<410	
Di-n-butylphthalate, ug/kg dw	<480	<410	<360	<410	
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw	<480	<410	<360	<410	
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw	<480	<410	<360	<410	

*gaw*  
 2/10/00

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 Project: HAAF FTA  
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 Code: 134290811  
 Page 15

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER		15018-3	15018-4	15018-5	15018-6
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw		<480	<410	<360	<410
3,3'-Dichlorobenzidine, ug/kg dw		<970	<820	<730	<810
2,4-Dichlorophenol, ug/kg dw		<480	<410	<360	<410
2,6-Dichlorophenol, ug/kg dw		<480	<410	<360	<410
Diethylphthalate, ug/kg dw		<480	<410	<360	<410
p- (Dimethylamino)azobenzene, ug/kg dw		<480	<410	<360	<410
7,12-Dimethylbenz(a)anthracene, ug/kg dw		<480	<410	<360	<410
3,3'-Dimethylbenzidine, ug/kg dw		<2500	<2100	<1900	<2100
alpha, alpha-Dimethylphenethylamine, ug/kg dw		<98000	<83000	<74000	<82000
2,4-Dimethylphenol, ug/kg dw		<480	<410	<360	<410
Dimethylphthalate, ug/kg dw		<480	<410	<360	<410
m-Dinitrobenzene , ug/kg dw		<480	<410	<360	<410
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw		<2500	<2100	<1900	<2100
2,4-Dinitrophenol, ug/kg dw		<2500	<2100	<1900	<2100
2,4-Dinitrotoluene, ug/kg dw		<480	<410	<360	<410
2,6-Dinitrotoluene, ug/kg dw		<480	<410	<360	<410
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw		<480	<410	<360	<410

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2/10/00

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 Page 16

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
Di-n-octylphthalate, ug/kg dw	<480	<410	<360	<410	
1,4-Dioxane, ug/kg dw	<480	<410	<360	<410	
Ethyl methanesulfonate, ug/kg dw	<480	<410	<360	<410	
Fluoranthene, ug/kg dw	<480	<410	520	<410	
Fluorene, ug/kg dw	<480	<410	<360	<410	
Hexachlorobenzene, ug/kg dw	<480	<410	<360	<410	
Hexachlorobutadiene, ug/kg dw	<480	<410	<360	<410	
Hexachlorocyclopentadiene, ug/kg dw	<480	<410	<360	<410	
Hexachloroethane, ug/kg dw	<480	<410	<360	<410	
Hexachlorophene, ug/kg dw	<250000	<210000	<190000	<210000	
Hexachloropropene, ug/kg dw	<480	<410	<360	<410	
Indeno(1,2,3-cd)pyrene, ug/kg dw	<480	<410	520	<410	
Isophorone, ug/kg dw	<480	<410	<360	<410	
Isosafrole, ug/kg dw	<480	<410	<360	<410	
Methapyrilene, ug/kg dw	<98000	<83000	<74000	<82000	
3-Methylcholanthrene, ug/kg dw	<480	<410	<360	<410	
Methyl methanesulfonate, ug/kg dw	<480	<410	<360	<410	
2-Methylnaphthalene, ug/kg dw	<480	<410	<360	<410	
Naphthalene, ug/kg dw	<480	<410	<360	<410	
1,4-Naphthoquinone, ug/kg dw	<480	<410	<360	<410	

*Law*  
 2/10/00



LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 17

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
1-Naphthylamine, ug/kg dw	<480	<410	<360	<410	
2-Naphthylamine, ug/kg dw	<480	<410	<360	<410	
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<2500	<2100	<1900	<2100	
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<2500	<2100	<1900	<2100	
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<2500	<2100	<1900	<2100	
Nitrobenzene, ug/kg dw	<480	<410	<360	<410	
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<480	<410	<360	<410	
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<2500	<2100	<1900	<2100	
4-Nitroquinoline 1-oxide, ug/kg dw	<4800	<4100	<3600	<4100	
N-Nitrosodi-n-butylamine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosodiethylamine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosodimethylamine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw	<480	<410	<360	<410	
n-Nitrosodi-n-propylamine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosomethylethylamine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosomorpholine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosopiperidine, ug/kg dw	<480	<410	<360	<410	
N-Nitrosopyrrolidine, ug/kg dw	<480	<410	<360	<410	
5-Nitro-o-toluidine, ug/kg dw	<480	<410	<360	<410	

*gaw*  
 2/10/00

LOG NO: S9-15018  
 Received: 29 JUL 99  
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Dr. Larry Stewart  
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 112 Town Park Drive  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 18

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
Pentachlorobenzene, ug/kg dw	<480	<410	<360	<410	
Pentachloronitrobenzene, ug/kg dw	<480	<410	<360	<410	
Pentachlorophenol, ug/kg dw	<2500	<2100	<1900	<2100	
Phenacetin, ug/kg dw	<480	<410	<360	<410	
Phenanthrene, ug/kg dw	<480	<410	<360	<410	
Phenol, ug/kg dw	<480	<410	<360	<410	
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<2500	<2100	<1900	<2100	
2-Picoline, ug/kg dw	<480	<410	<360	<410	
Pronamide, ug/kg dw	<480	<410	<360	<410	
Pyrene, ug/kg dw	<480	<410	530	<410	
Pyridine, ug/kg dw	<480	<410	<360	<410	
Safrole, ug/kg dw	<480	<410	<360	<410	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<480	<410	<360	<410	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<480	<410	<360	<410	
o-Toluidine, ug/kg dw	<480	<410	<360	<410	
1,2,4-Trichlorobenzene, ug/kg dw	<480	<410	<360	<410	
2,4,5-Trichlorophenol, ug/kg dw	<480	<410	<360	<410	
2,4,6-Trichlorophenol, ug/kg dw	<480	<410	<360	<410	
O,O,O-Triethyl phosphorothioate, ug/kg dw	<480	<410	<360	<410	

*Law*  
 2/10/00

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
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REPORT OF RESULTS

Page 19

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
1,3,5-Trinitrobenzene, ug/kg dw	<480	<410	<360	<410	
Benzidine, ug/kg dw	<4000	<3400	<3000	<3300	
Benzoic acid, ug/kg dw	<2500	<2100	<1900	<2100	
Dimethoate, ug/kg dw	<480	<410	<360	<410	
p-Benzoquinone, ug/kg dw	<480	<410	<360	<410	
Surrogate - Phenol d5	65 %	55 %	46 %	58 %	
Surrogate - 2-Fluorophenol	69 %	62 %	51 %	63 %	
Surrogate - 2,4,6-Tribromophenol	73 %	55 %	46 %	61 %	
Surrogate - Nitrobenzene - d5	58 %	52 %	46 %	55 %	
Surrogate - 2-Fluorobiphenyl	71 %	57 %	52 %	60 %	
Surrogate - Terphenyl - d14	71 %	52 %	48 %	65 %	
Dilution Factor	1.0	1.0	1.0	1.0	
Prep Date	07.30.99	07.30.99	07.30.99	07.30.99	
Analysis Date	08.02.99	08.02.99	08.02.99	08.03.99	
Batch ID	0730A	0730A	0730A	0730A	

*gaw*  
 2/11/00

LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811

REPORT OF RESULTS

Page 20

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER		15018-3	15018-4	15018-5	15018-6
TCL Pesticides (8081)					
alpha-BHC, ug/kg dw		<2.5	<2.1	<3.8	<2.1
beta-BHC, ug/kg dw		<2.5	<2.1	<3.8	<2.1
delta-BHC, ug/kg dw		<2.5	<2.1	<3.8	<2.1
gamma-BHC (Lindane), ug/kg dw		<2.5	<2.1	<3.8	<2.1
Heptachlor, ug/kg dw		<2.5	<2.1	<3.8	<2.1
Aldrin, ug/kg dw		<2.5	<2.1	<3.8	<2.1
Heptachlor epoxide, ug/kg dw		<2.5	<2.1	<3.8	<2.1
Endosulfan I, ug/kg dw		<2.5	<2.1	<3.8	<2.1
Dieldrin, ug/kg dw		<4.8	<4.1	<7.3	<4.1
4,4'-DDE, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Endrin, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Endrin aldehyde, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Endosulfan II, ug/kg dw		<4.8	<4.1	<7.3	<4.1
4,4'-DDD, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Endosulfan sulfate, ug/kg dw		<4.8	<4.1	<7.3	<4.1
4,4'-DDT, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Endrin ketone, ug/kg dw		<4.8	<4.1	<7.3	<4.1
Methoxychlor, ug/kg dw		<25	<21	<38	<21
alpha-Chlordane, ug/kg dw		<2.5	<2.1	<3.8	<2.1

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165 • www.savlabs.com

LOG NO: S9-15018  
Received: 29 JUL 99  
Reported: 11 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 134290811  
Page 21

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
15018-3	SB-24-1	07-29-99/11:15			
15018-4	SB-24-2	07-29-99/11:20			
15018-5	SB-23-1	07-29-99/11:25			
15018-6	SB-23-2	07-29-99/11:30			
PARAMETER	15018-3	15018-4	15018-5	15018-6	
gamma-Chlordane, ug/kg dw	<2.5	<2.1	<3.8	<2.1	
Toxaphene, ug/kg dw	<250	<210	<380	<210	
Surrogate - DCB	58 %	61 %	84 %	46 %	
Surrogate - 2,4,5,6-Tetrachloro-m-xylene (TCMX)	51 %	59 %	57 %	36 %	
Dilution Factor	1.0	1.0	2.0	1.0	
Prep Date	07.30.99	07.30.99	07.30.99	07.30.99	
Analysis Date	08.03.99	08.03.99	08.05.99	08.03.99	
Batch ID	0730P	0730P	0730P	0730P	
PCB's (8082)					
Aroclor-1016, ug/kg dw	<48	<41	<73	<41	
Aroclor-1221, ug/kg dw	<98	<83	<150	<82	
Aroclor-1232, ug/kg dw	<48	<41	<73	<41	
Aroclor-1242, ug/kg dw	<48	<41	<73	<41	
Aroclor-1248, ug/kg dw	<48	<41	<73	<41	
Aroclor-1254, ug/kg dw	<48	<41	<73	<41	
Aroclor-1260, ug/kg dw	<48	<41	<73	<41	
Surrogate - TCX	51 %	59 %	57 %	36 %	
Dilution Factor	1.0	1.0	2.0	1.0	
Prep Date	07.30.99	07.30.99	07.30.99	07.30.99	
Analysis Date	08.03.99	08.03.99	08.05.99	08.03.99	
Batch ID	0730P	0730P	0730P	0730P	

*gaw*  
2/10/00

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LOG NO: S9-15018  
 Received: 29 JUL 99  
 Reported: 11 AUG 99

Dr. Larry Stewart  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 134290811  
 Page 22

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
15018-3	SB-24-1	07-29-99/11:15
15018-4	SB-24-2	07-29-99/11:20
15018-5	SB-23-1	07-29-99/11:25
15018-6	SB-23-2	07-29-99/11:30

PARAMETER	15018-3	15018-4	15018-5	15018-6
Percent Solids	68	80	90	81

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue, Savannah, GA 31404  
 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
 414 SW 12th Avenue, Deerfield Beach, FL 33442  
 900 Lakeside Drive, Mobile, AL 36693  
 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
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Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (954) 421-7400 Fax: (954) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE <b>HAAF FTA</b>		PROJECT NO. 17021-9-5411	PO NUMBER	MATRIX TYPE	REQUIRED ANALYSES	PAGE	OF
PROJECT LOC. (State) <b>GA</b>	SAMPLER(S) NAME <b>PATRICK KELLEY</b>	PHONE 770 421 3311	FAX 770 421 3486	AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (oil, solvent, etc)	8260 ENCLAVE 8260 CLASS 5270 8041 8082	<input type="checkbox"/> STANDARD REPORT DELIVERY <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) Date Due	
CLIENT NAME <b>LAW</b>	CLIENT PROJECT MANAGER <b>LARRY STEWART</b>						
CLIENT ADDRESS (CITY, STATE, ZIP) <b>112 TOWNPARK DR., KENNEDAW, GA 30144</b>							

SAMPLE		SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED							REMARKS
DATE	TIME										
7/27/99	9:30		HMW-16-1	X	3	1	1				
7/29/99	9:45		HMW-16-2	X	3	1	1				
7/29/99	11:15		SB-24-1	X	3	1	1	↔	1		
7/29/99	11:26		SB-24-2	X	3	1	1	↔	1		
7/29/99	11:25		SB-23-1	X	3	1	1	↔	1		
7/29/99	11:30		SB-23-2	X	3	1	1	↔	1		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			<i>Patrick Kelley</i>	7/29/99	12:58			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY						
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SL LOG NO.	LABORATORY REMARKS:
<i>[Signature]</i>	7/29/99	12:58	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		59-15018	L.W.

ORIGINAL

F-220

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
Volatile Organic Compounds (8260)					
Acetone, ug/kg dw	<56	<58	<67	<61	<64
Acetonitrile, ug/kg dw	<220	<230	<270	<240	<260
Acrolein (Propenal), ug/kg dw	<110	<120	<130	<120	<130
Acrylonitrile, ug/kg dw	<110	<120	<130	<120	<130
Benzene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Bromodichloromethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Bromoform, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Bromomethane (Methyl Bromide), ug/kg dw	<11	<12	<13	<12	<13
2-Butanone (Methyl ethyl ketone), ug/kg dw	<28	<29	<33	<30	<32
Carbon disulfide, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Carbon Tetrachloride, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Chlorobenzene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Chloroethane, ug/kg dw	<11	<12	<13	<12	<13
Chloroform, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Chloromethane (Methyl Chloride), ug/kg dw	<11	<12	<13	<12	<13

*gaw*  
 2/10/00



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Dr. Larry Stewart  
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REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
Chloroprene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
3-Chloropropene (Allylchloride), ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Dibromochloromethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,2-Dibromo-3-chloropropane , ug/kg dw	<11	<12	<13	<12	<13
1,2-Dibromoethane (EDB) , ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Dibromomethane (Methylene bromide), ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
trans-1,4-Dichloro-2-butene , ug/kg dw	<11	<12	<13	<12	<13
Dichlorodifluoromethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,1-Dichloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,2-Dichloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,1-Dichloroethene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
trans-1,2-Dichloroethene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,2-Dichloropropane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
cis-1,3-Dichloropropene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
trans-1,3-Dichloropropene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4

*gaw*  
2/10/00

LOG NO: S9-14862  
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Dr. Larry Stewart  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
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REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
Ethylbenzene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Ethyl methacrylate, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
2-Hexanone, ug/kg dw	<28	<29	<33	<30	<32
Iodomethane (Methyl iodide), ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Isobutanol (Isobutyl alcohol), ug/kg dw	<220	<230	<270	<240	<260
Methacrylonitrile, ug/kg dw	<110	<120	<130	<120	<130
Methylene chloride (Dichloromethane), ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
Methyl methacrylate, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
4-Methyl-2-pentanone (MIBK), ug/kg dw	<28	<29	<33	<30	<32
Pentachloroethane, ug/kg dw	<28	<29	<33	<30	<32
Propionitrile, ug/kg dw	<110	<120	<130	<120	<130
Styrene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,1,1,2-Tetrachloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4

*gaw*  
2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5	
Tetrachloroethene, ug/kg dw	6.1	<5.8	<6.7	<6.1	<6.4	
Toluene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
1,1,1-Trichloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
1,1,2-Trichloroethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
Trichloroethene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
Trichlorofluoromethane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
1,2,3-Trichloropropane, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
Vinyl acetate, ug/kg dw	<11	<12	<13	<12	<13	
Vinyl chloride, ug/kg dw	<11	<12	<13	<12	<13	
Xylenes (total), ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
cis-1,2-Dichloroethene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
2-Chlorotoluene, ug/kg dw	<5.6	<5.8	<6.7	<6.1	<6.4	
2-Chloroethylvinyl Ether, ug/kg dw	<56	<58	<67	<61	<64	
Surrogate - Toluene-d8	107 %	102 %	106 %	108 %	103 %	
Surrogate - 4-Bromofluorobenzene	95 %	88 %	91 %	85 %	102 %	
Surrogate - Dibromofluoromethane	105 %	100 %	94 %	92 %	97 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Analysis Date	07.27.99	07.27.99	07.23.99	07.23.99	07.23.99	
Batch ID	1H0727	1H0727	2H0723	2H0723	2H0723	

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S9-14862  
Received: 22 JUL 99  
Reported: 04 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 15349084

## REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
14862-1	SB-18-1	07-22-99/08:00			
14862-2	SB-18-2	07-22-99/08:20			
14862-3	SB-28-1	07-22-99/08:50			
14862-4	SB-28-2	07-22-99/09:00			
14862-5	SB-29-1	07-22-99/09:15			
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
<b>Acids and Base Neutrals (8270-APP9)</b>					
Acenaphthene, ug/kg dw	<340	<360	<370	<380	<360
Acenaphthylene, ug/kg dw	<340	<360	<370	<380	<360
Acetophenone, ug/kg dw	<340	<360	<370	<380	<360
2-Acetylaminofluorene, ug/kg dw	<340	<360	<370	<380	<360
4-Aminobiphenyl, ug/kg dw	<340	<360	<370	<380	<360
Aniline, ug/kg dw	<340	<360	<370	<380	<360
Anthracene, ug/kg dw	<340	<360	<370	<380	<360
Aramite (total), ug/kg dw	<340	<360	<370	<380	<360
Benzo(a)anthracene, ug/kg dw	<340	<360	<370	<380	<360
Benzo(b)fluoranthene, ug/kg dw	<340	<360	<370	<380	<360
Benzo(k)fluoranthene, ug/kg dw	<340	<360	<370	<380	<360
Benzo(g,h,i)perylene, ug/kg dw	<340	<360	<370	<380	<360
Benzo(a)pyrene, ug/kg dw	<340	<360	<370	<380	<360
Benzyl alcohol, ug/kg dw	<340	<360	<370	<380	<360
bis(2-Chloroethoxy)methane, ug/kg dw	<340	<360	<370	<380	<360
bis(2-Chloroethyl)ether, ug/kg dw	<340	<360	<370	<380	<360
2,2'-Oxybis(1-chloropropane ) [bis(2-Chloroisopropyl)ethe r], ug/kg dw	<340	<360	<370	<380	<360

*gaw*  
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REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5	
bis(2-Ethylhexyl)phthalate, ug/kg dw	<340	<360	<370	<380	<360	
4-Bromophenylphenyl ether, ug/kg dw	6.9J	<360	<370	<380	<360	
Butylbenzylphthalate, ug/kg dw	<340	<360	<370	<380	<360	
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<690	<730	<740	<760	<730	
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<340	<360	<370	<380	<360	
2-Chloronaphthalene, ug/kg dw	<340	<360	<370	<380	<360	
2-Chlorophenol, ug/kg dw	<340	<360	<370	<380	<360	
4-Chlorophenylphenyl ether, ug/kg dw	<340	<360	<370	<380	<360	
Chrysene, ug/kg dw	<340	<360	<370	<380	<360	
Cresol, m & p, ug/kg dw	<340	<360	<370	<380	<360	
Cresol (ortho), ug/kg dw	<340	<360	<370	<380	<360	
Diallate (total), ug/kg dw	<340	<360	<370	<380	<360	
Dibenzo(a,h)anthracene, ug/kg dw	<340	<360	<370	<380	<360	

*Law*  
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Page 7

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER		14862-1	14862-2	14862-3	14862-4	14862-5
Dibenzofuran, ug/kg dw		<340	<360	<370	<380	<360
Di-n-butylphthalate, ug/kg dw		<340	<360	<370	<380	<360
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw		<340	<360	<370	<380	<360
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw		<340	<360	<370	<380	<360
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw		<340	<360	<370	<380	<360
3,3'-Dichlorobenzidine, ug/kg dw		<690	<730	<740	<760	<730
2,4-Dichlorophenol, ug/kg dw		<340	<360	<370	<380	<360
2,6-Dichlorophenol, ug/kg dw		<340	<360	<370	<380	<360
Diethylphthalate, ug/kg dw		<340	<360	<370	<380	<360
p- (Dimethylamino) azobenzene , ug/kg dw		<340	<360	<370	<380	<360
7,12-Dimethylbenz (a) anthracene, ug/kg dw		<340	<360	<370	<380	<360

*gaw*  
 2/10/00

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Page 8

### REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
3,3'-Dimethylbenzidine, ug/kg dw	<1800	<1900	<1900	<1900	<1900
alpha, alpha-Dimethylphenethylamine, ug/kg dw	<70000	<74000	<75000	<77000	<74000
2,4-Dimethylphenol, ug/kg dw	<340	<360	<370	<380	<360
Dimethylphthalate, ug/kg dw	<340	<360	<370	<380	<360
m-Dinitrobenzene , ug/kg dw	<340	<360	<370	<380	<360
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<1800	<1900	<1900	<1900	<1900
2,4-Dinitrophenol, ug/kg dw	<1800	<1900	<1900	<1900	<1900
2,4-Dinitrotoluene, ug/kg dw	<340	<360	<370	<380	<360
2,6-Dinitrotoluene, ug/kg dw	<340	<360	<370	<380	<360
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<340	<360	<370	<380	<360
Di-n-octylphthalate, ug/kg dw	<340	<360	<370	<380	<360
1,4-Dioxane, ug/kg dw	<340	<360	<370	<380	<360
Ethyl methanesulfonate, ug/kg dw	<340	<360	<370	<380	<360
Fluoranthene, ug/kg dw	<340	<360	<370	<380	<360

*gaw*  
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REPORT OF RESULTS

Page 9

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5	
Fluorene, ug/kg dw	<340	<360	<370	<380	<360	
Hexachlorobenzene, ug/kg dw	<340	<360	<370	<380	<360	
Hexachlorobutadiene, ug/kg dw	<340	<360	<370	<380	<360	
Hexachlorocyclopentadiene, ug/kg dw	<340	<360	<370	<380	<360	
Hexachloroethane, ug/kg dw	<340	<360	<370	<380	<360	
Hexachlorophene, ug/kg dw	<180000	<190000	<190000	<190000	<190000	
Hexachloropropene, ug/kg dw	<340	<360	<370	<380	<360	
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<360	<370	<380	<360	
Isophorone, ug/kg dw	<340	<360	<370	<380	<360	
Isosafrole, ug/kg dw	<340	<360	<370	<380	<360	
Methapyrilene, ug/kg dw	<70000	<74000	<75000	<77000	<74000	
3-Methylcholanthrene, ug/kg dw	<340	<360	<370	<380	<360	
Methyl methanesulfonate, ug/kg dw	<340	<360	<370	<380	<360	
2-Methylnaphthalene, ug/kg dw	<340	<360	<370	<380	<360	
Naphthalene, ug/kg dw	<340	<360	<370	<380	<360	
1,4-Naphthoquinone, ug/kg dw	<340	<360	<370	<380	<360	
1-Naphthylamine, ug/kg dw	<340	<360	<370	<380	<360	
2-Naphthylamine, ug/kg dw	<340	<360	<370	<380	<360	

*gaw*  
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Page 10

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<1800	<1900	<1900	<1900	<1900
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<1800	<1900	<1900	<1900	<1900
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<1800	<1900	<1900	<1900	<1900
Nitrobenzene, ug/kg dw	<340	<360	<370	<380	<360
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<340	<360	<370	<380	<360
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<1800	<1900	<1900	<1900	<1900
4-Nitroquinoline 1-oxide, ug/kg dw	<3400	<3600	<3700	<3800	<3600
N-Nitrosodi-n-butylamine, ug/kg dw	<340	<360	<370	<380	<360
N-Nitrosodiethylamine, ug/kg dw	<340	<360	<370	<380	<360
N-Nitrosodimethylamine, ug/kg dw	<340	<360	<370	<380	<360
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw	<340	<360	<370	<380	<360
n-Nitrosodi-n-propylamine, ug/kg dw	<340	<360	<370	<380	<360

*gaw*  
2/10/00

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Page 11

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5	
N-Nitrosomethylethylamine, ug/kg dw	<340	<360	<370	<380	<360	
N-Nitrosomorpholine, ug/kg dw	<340	<360	<370	<380	<360	
N-Nitrosopiperidine, ug/kg dw	<340	<360	<370	<380	<360	
N-Nitrosopyrrolidine, ug/kg dw	<340	<360	<370	<380	<360	
5-Nitro-o-toluidine, ug/kg dw	<340	<360	<370	<380	<360	
Pentachlorobenzene, ug/kg dw	<340	<360	<370	<380	<360	
Pentachloronitrobenzene, ug/kg dw	<340	<360	<370	<380	<360	
Pentachlorophenol, ug/kg dw	<1800	<1900	<1900	<1900	<1900	
Phenacetin, ug/kg dw	<340	<360	<370	<380	<360	
Phenanthrene, ug/kg dw	<340	<360	<370	<380	<360	
Phenol, ug/kg dw	<340	<360	<370	<380	<360	
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<1800	<1900	<1900	<1900	<1900	
2-Picoline, ug/kg dw	<340	<360	<370	<380	<360	
Pronamide, ug/kg dw	<340	<360	<370	<380	<360	
Pyrene, ug/kg dw	<340	<360	<370	<380	<360	
Pyridine, ug/kg dw	<340	<360	<370	<380	<360	

*gaw*  
2/10/00

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Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-1	SB-18-1	07-22-99/08:00
14862-2	SB-18-2	07-22-99/08:20
14862-3	SB-28-1	07-22-99/08:50
14862-4	SB-28-2	07-22-99/09:00
14862-5	SB-29-1	07-22-99/09:15

PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5
Safrole, ug/kg dw	<340	<360	<370	<380	<360
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<340	<360	<370	<380	<360
2,3,4,6-Tetrachlorophenol, ug/kg dw	<340	<360	<370	<380	<360
o-Toluidine, ug/kg dw	<340	<360	<370	<380	<360
1,2,4-Trichlorobenzene, ug/kg dw	<340	<360	<370	<380	<360
2,4,5-Trichlorophenol, ug/kg dw	<340	<360	<370	<380	<360
2,4,6-Trichlorophenol, ug/kg dw	<340	<360	<370	<380	<360
O,O,O-Triethyl phosphorothioate, ug/kg dw	<340	<360	<370	<380	<360
1,3,5-Trinitrobenzene, ug/kg dw	<340	<360	<370	<380	<360
Benzidine, ug/kg dw	<2800	<3000	<3000	<3100	<3000
Benzoic acid, ug/kg dw	<1800	<1900	<1900	<1900	<1900
Dimethoate, ug/kg dw	<340	<360	<370	<380	<360
p-Benzoquinone, ug/kg dw	<340	<360	<370	<380	<360
Surrogate - Phenol d5	46 %	46 %	38 %	42 %	46 %
Surrogate - 2-Fluorophenol	51 %	51 %	40 %	50 %	54 %
Surrogate - 2,4,6-Tribromophenol	57 %	59 %	51 %	58 %	65 %

*Law*  
2/10/00

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Page 13

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-1	SB-18-1	07-22-99/08:00				
14862-2	SB-18-2	07-22-99/08:20				
14862-3	SB-28-1	07-22-99/08:50				
14862-4	SB-28-2	07-22-99/09:00				
14862-5	SB-29-1	07-22-99/09:15				
PARAMETER	14862-1	14862-2	14862-3	14862-4	14862-5	
Surrogate - Nitrobenzene - d5	45 %	44 %	30 %	34 %	43 %	
Surrogate - 2-Fluorobiphenyl	52 %	47 %	41 %	44 %	56 %	
Surrogate - Terphenyl - d14	47 %	47 %	43 %	45 %	52 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Prep Date	07.26.99	07.26.99	07.26.99	07.26.99	07.26.99	
Analysis Date	07.28.99	07.28.99	07.28.99	07.28.99	07.28.99	
Batch ID	0726E	0726E	0726E	0726E	0726E	
Percent Solids	95	90	89	87	90	

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 2/10/00

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REPORT OF RESULTS

Page 14

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
Volatile Organic Compounds (8260)					
Acetone, ug/kg dw	<62	<64	<64	<62	<62
Acetonitrile, ug/kg dw	<250	<260	<260	<250	<250
Acrolein (Propenal), ug/kg dw	<120	<130	<130	<120	<120
Acrylonitrile, ug/kg dw	<120	<130	<130	<120	<120
Benzene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Bromodichloromethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Bromoform, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Bromomethane (Methyl Bromide), ug/kg dw	<12	<13	<13	<12	<12
2-Butanone (Methyl ethyl ketone), ug/kg dw	<31	<32	<32	<31	<31
Carbon disulfide, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Carbon Tetrachloride, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Chlorobenzene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Chloroethane, ug/kg dw	<12	<13	<13	<12	<12
Chloroform, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Chloromethane (Methyl Chloride), ug/kg dw	<12	<13	<13	<12	<12

*gaw*  
 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 15

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
Chloroprene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
3-Chloropropene (Allylchloride), ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Dibromochloromethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,2-Dibromo-3-chloropropane , ug/kg dw	<12	<13	<13	<12	<12
1,2-Dibromoethane (EDB) , ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Dibromomethane (Methylene bromide), ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
trans-1,4-Dichloro-2-butene , ug/kg dw	<12	<13	<13	<12	<12
Dichlorodifluoromethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,1-Dichloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,2-Dichloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,1-Dichloroethene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
trans-1,2-Dichloroethene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,2-Dichloropropane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
cis-1,3-Dichloropropene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
trans-1,3-Dichloropropene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2

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 2/10/00

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LOG NO: S9-14862  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 16

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
Ethylbenzene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Ethyl methacrylate, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
2-Hexanone, ug/kg dw	<31	<32	<32	<31	<31
Iodomethane (Methyl iodide), ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Isobutanol (Isobutyl alcohol), ug/kg dw	<250	<260	<260	<250	<250
Methacrylonitrile, ug/kg dw	<120	<130	<130	<120	<120
Methylene chloride (Dichloromethane), ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
Methyl methacrylate, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
4-Methyl-2-pentanone (MIBK), ug/kg dw	<31	<32	<32	<31	<31
Pentachloroethane, ug/kg dw	<31	<32	<32	<31	<31
Propionitrile, ug/kg dw	<120	<130	<130	<120	<120
Styrene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,1,1,2-Tetrachloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2
1,1,2,2-Tetrachloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2

*Law*  
 2/10/00

LOG NO: S5-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 17

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-6	SB-29-2	07-22-99/09:25				
14862-7	SB-19-1	07-22-99/09:30				
14862-8	SB-19-2	07-22-99/09:40				
14862-9	SB-20-1	07-22-99/09:50				
14862-10	SB-20-2	07-22-99/09:55				
PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10	
Tetrachloroethene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
Toluene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
1,1,1-Trichloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
1,1,2-Trichloroethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
Trichloroethene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
Trichlorofluoromethane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
1,2,3-Trichloropropane, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
Vinyl acetate, ug/kg dw	<12	<13	<13	<12	<12	
Vinyl chloride, ug/kg dw	<12	<13	<13	<12	<12	
Xylenes (total), ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
cis-1,2-Dichloroethene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
2-Chlorotoluene, ug/kg dw	<6.2	<6.4	<6.4	<6.2	<6.2	
2-Chloroethylvinyl Ether, ug/kg dw	<62	<64	<64	<62	<62	
Surrogate - Toluene-d8	113 %	106 %	112 %	97 %	100 %	
Surrogate - 4-Bromofluorobenzene	90 %	94 %	91 %	106 %	89 %	
Surrogate - Dibromofluoromethane	92 %	95 %	94 %	103 %	102 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Analysis Date	07.24.99	07.24.99	07.24.99	07.27.99	07.27.99	
Batch ID	2H0723	2H0723	2H0723	1H0727	1H0727	

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LOG NO: S9-14862  
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Dr. Larry Stewart  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 18

REPORT OF RESULTS

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14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
<b>Acids and Base Neutrals (8270-APP9)</b>					
Acenaphthene, ug/kg dw	<370	<370	<370	<360	<350
Acenaphthylene, ug/kg dw	<370	<370	<370	<360	<350
Acetophenone, ug/kg dw	<370	<370	<370	<360	<350
2-Acetylaminofluorene, ug/kg dw	<370	<370	<370	<360	<350
4-Aminobiphenyl, ug/kg dw	<370	<370	<370	<360	<350
Aniline, ug/kg dw	<370	<370	<370	<360	<350
Anthracene, ug/kg dw	<370	<370	<370	<360	<350
Aramite (total), ug/kg dw	<370	<370	<370	<360	<350
Benzo(a)anthracene, ug/kg dw	<370	<370	<370	<360	<350
Benzo(b)fluoranthene, ug/kg dw	<370	<370	<370	<360	<350
Benzo(k)fluoranthene, ug/kg dw	<370	<370	<370	<360	<350
Benzo(g,h,i)perylene, ug/kg dw	<370	<370	<370	<360	<350
Benzo(a)pyrene, ug/kg dw	<370	<370	<370	<360	<350
Benzyl alcohol, ug/kg dw	<370	<370	<370	<360	<350
bis(2-Chloroethoxy)methane, ug/kg dw	<370	<370	<370	<360	<350
bis(2-Chloroethyl)ether, ug/kg dw	<370	<370	<370	<360	<350
2,2'-Oxybis(1-chloropropane ) [bis(2-Chloroisopropyl)ethe r], ug/kg dw	<370	<370	<370	<360	<350

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 Sampled By: Client  
 Code: 15349084  
 Page 19

REPORT OF RESULTS

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14862-6	SB-29-2	07-22-99/09:25
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14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
bis(2-Ethylhexyl)phthalate, ug/kg dw	<370	<370	<370	<360	<350
4-Bromophenylphenyl ether, ug/kg dw	<370	<370	<370	<360	<350
Butylbenzylphthalate, ug/kg dw	<370	<370	<370	<360	<350
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<740	<730	<740	<710	<700
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<370	<370	<370	<360	<350
2-Chloronaphthalene, ug/kg dw	<370	<370	<370	<360	<350
2-Chlorophenol, ug/kg dw	<370	<370	<370	<360	<350
4-Chlorophenylphenyl ether, ug/kg dw	<370	<370	<370	<360	<350
Chrysene, ug/kg dw	<370	<370	<370	<360	<350
Cresol, m & p, ug/kg dw	<370	<370	<370	<360	<350
Cresol (ortho), ug/kg dw	<370	<370	<370	<360	<350
Diallate (total), ug/kg dw	<370	<370	<370	<360	<350
Dibenzo(a,h)anthracene, ug/kg dw	<370	<370	<370	<360	<350

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 20

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-6	SB-29-2	07-22-99/09:25				
14862-7	SB-19-1	07-22-99/09:30				
14862-8	SB-19-2	07-22-99/09:40				
14862-9	SB-20-1	07-22-99/09:50				
14862-10	SB-20-2	07-22-99/09:55				
PARAMETER		14862-6	14862-7	14862-8	14862-9	14862-10
Dibenzofuran, ug/kg dw		<370	<370	<370	<360	<350
Di-n-butylphthalate, ug/kg dw		<370	<370	<370	<360	<350
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw		<370	<370	<370	<360	<350
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw		<370	<370	<370	<360	<350
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw		<370	<370	<370	<360	<350
3,3'-Dichlorobenzidine, ug/kg dw		<740	<730	<740	<710	<700
2,4-Dichlorophenol, ug/kg dw		<370	<370	<370	<360	<350
2,6-Dichlorophenol, ug/kg dw		<370	<370	<370	<360	<350
Diethylphthalate, ug/kg dw		<370	<370	<370	<360	<350
p-(Dimethylamino)azobenzene , ug/kg dw		<370	<370	<370	<360	<350
7,12-Dimethylbenz(a)anthracene, ug/kg dw		<370	<370	<370	<360	<350

*gaw*  
 2/10/00

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LOG NO: S9-14862  
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Reported: 04 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
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Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 15349084

## REPORT OF RESULTS

Page 21

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
3,3'-Dimethylbenzidine, ug/kg dw	<1900	<1900	<1900	<1800	<1800
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<76000	<74000	<76000	<72000	<71000
2,4-Dimethylphenol, ug/kg dw	<370	<370	<370	<360	<350
Dimethylphthalate, ug/kg dw	<370	<370	<370	<360	<350
m-Dinitrobenzene , ug/kg dw	<370	<370	<370	<360	<350
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<1900	<1900	<1900	<1800	<1800
2,4-Dinitrophenol, ug/kg dw	<1900	<1900	<1900	<1800	<1800
2,4-Dinitrotoluene, ug/kg dw	<370	<370	<370	<360	<350
2,6-Dinitrotoluene, ug/kg dw	<370	<370	<370	<360	<350
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<370	<370	<370	<360	<350
Di-n-octylphthalate, ug/kg dw	<370	<370	<370	<360	<350
1,4-Dioxane, ug/kg dw	<370	<370	<370	<360	<350
Ethyl methanesulfonate, ug/kg dw	<370	<370	<370	<360	<350
Fluoranthene, ug/kg dw	<370	<370	<370	<360	<350

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2/10/00

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 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 22

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
Fluorene, ug/kg dw	<370	<370	<370	<360	<350
Hexachlorobenzene, ug/kg dw	<370	<370	<370	<360	<350
Hexachlorobutadiene, ug/kg dw	<370	<370	<370	<360	<350
Hexachlorocyclopentadiene, ug/kg dw	<370	<370	<370	<360	<350
Hexachloroethane, ug/kg dw	<370	<370	<370	<360	<350
Hexachlorophene, ug/kg dw	<190000	<190000	<190000	<180000	<180000
Hexachloropropene, ug/kg dw	<370	<370	<370	<360	<350
Indeno(1,2,3-cd)pyrene, ug/kg dw	<370	<370	<370	<360	<350
Isophorone, ug/kg dw	<370	<370	<370	<360	<350
Isosafrole, ug/kg dw	<370	<370	<370	<360	<350
Methapyrilene, ug/kg dw	<76000	<74000	<76000	<72000	<71000
3-Methylcholanthrene, ug/kg dw	<370	<370	<370	<360	<350
Methyl methanesulfonate, ug/kg dw	<370	<370	<370	<360	<350
2-Methylnaphthalene, ug/kg dw	<370	<370	<370	<360	<350
Naphthalene, ug/kg dw	<370	<370	<370	<360	<350
1,4-Naphthoquinone, ug/kg dw	<370	<370	<370	<360	<350
1-Naphthylamine, ug/kg dw	<370	<370	<370	<360	<350
2-Naphthylamine, ug/kg dw	<370	<370	<370	<360	<350

*gaw*  
2/10/00

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Project: HAAF FTA  
Sampled By: Client  
Code: 15349084

## REPORT OF RESULTS

Page 23

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-6	SB-29-2	07-22-99/09:25
14862-7	SB-19-1	07-22-99/09:30
14862-8	SB-19-2	07-22-99/09:40
14862-9	SB-20-1	07-22-99/09:50
14862-10	SB-20-2	07-22-99/09:55

PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<1900	<1900	<1900	<1800	<1800
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<1900	<1900	<1900	<1800	<1800
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<1900	<1900	<1900	<1800	<1800
Nitrobenzene, ug/kg dw	<370	<370	<370	<360	<350
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<370	<370	<370	<360	<350
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<1900	<1900	<1900	<1800	<1800
4-Nitroquinoline 1-oxide, ug/kg dw	<3700	<3700	<3700	<3600	<3500
N-Nitrosodi-n-butylamine, ug/kg dw	<370	<370	<370	<360	<350
N-Nitrosodiethylamine, ug/kg dw	<370	<370	<370	<360	<350
N-Nitrosodimethylamine, ug/kg dw	<370	<370	<370	<360	<350
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw	<370	<370	<370	<360	<350
n-Nitrosodi-n-propylamine, ug/kg dw	<370	<370	<370	<360	<350

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2/10/00

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 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 24

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-6	SB-29-2	07-22-99/09:25				
14862-7	SB-19-1	07-22-99/09:30				
14862-8	SB-19-2	07-22-99/09:40				
14862-9	SB-20-1	07-22-99/09:50				
14862-10	SB-20-2	07-22-99/09:55				
PARAMETER		14862-6	14862-7	14862-8	14862-9	14862-10
N-Nitrosomethylethylamine, ug/kg dw		<370	<370	<370	<360	<350
N-Nitrosomorpholine, ug/kg dw		<370	<370	<370	<360	<350
N-Nitrosopiperidine, ug/kg dw		<370	<370	<370	<360	<350
N-Nitrosopyrrolidine, ug/kg dw		<370	<370	<370	<360	<350
5-Nitro-o-toluidine, ug/kg dw		<370	<370	<370	<360	<350
Pentachlorobenzene, ug/kg dw		<370	<370	<370	<360	<350
Pentachloronitrobenzene, ug/kg dw		<370	<370	<370	<360	<350
Pentachlorophenol, ug/kg dw		<1900	<1900	<1900	<1800	<1800
Phenacetin, ug/kg dw		<370	<370	<370	<360	<350
Phenanthrene, ug/kg dw		<370	<370	<370	<360	<350
Phenol, ug/kg dw		<370	<370	<370	<360	<350
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw		<1900	<1900	<1900	<1800	<1800
2-Picoline, ug/kg dw		<370	<370	<370	<360	<350
Pronamide, ug/kg dw		<370	<370	<370	<360	<350
Pyrene, ug/kg dw		<370	<370	<370	<360	<350
Pyridine, ug/kg dw		<370	<370	<370	<360	<350

*gaw*  
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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 25

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-6	SB-29-2	07-22-99/09:25				
14862-7	SB-19-1	07-22-99/09:30				
14862-8	SB-19-2	07-22-99/09:40				
14862-9	SB-20-1	07-22-99/09:50				
14862-10	SB-20-2	07-22-99/09:55				
PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10	
Safrole, ug/kg dw	<370	<370	<370	<360	<350	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<370	<370	<370	<360	<350	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<370	<370	<370	<360	<350	
o-Toluidine, ug/kg dw	<370	<370	<370	<360	<350	
1,2,4-Trichlorobenzene, ug/kg dw	<370	<370	<370	<360	<350	
2,4,5-Trichlorophenol, ug/kg dw	<370	<370	<370	<360	<350	
2,4,6-Trichlorophenol, ug/kg dw	<370	<370	<370	<360	<350	
O,O,O-Triethyl phosphorothioate, ug/kg dw	<370	<370	<370	<360	<350	
1,3,5-Trinitrobenzene, ug/kg dw	<370	<370	<370	<360	<350	
Benzidine, ug/kg dw	<3000	<3000	<3000	<2900	<2900	
Benzoic acid, ug/kg dw	<1900	<1900	<1900	<1800	<1800	
Dimethoate, ug/kg dw	<370	<370	<370	<360	<350	
p-Benzoquinone, ug/kg dw	<370	<370	<370	<360	<350	
Surrogate - Phenol d5	42 %	30 %	47 %	47 %	54 %	
Surrogate - 2-Fluorophenol	47 %	35 %	55 %	58 %	66 %	
Surrogate - 2,4,6-Tribromophenol	50 %	43 %	60 %	64 %	77 %	

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 26

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-6	SB-29-2	07-22-99/09:25				
14862-7	SB-19-1	07-22-99/09:30				
14862-8	SB-19-2	07-22-99/09:40				
14862-9	SB-20-1	07-22-99/09:50				
14862-10	SB-20-2	07-22-99/09:55				
PARAMETER	14862-6	14862-7	14862-8	14862-9	14862-10	
Surrogate - Nitrobenzene - d5	36 %	28 %	42 %	44 %	44 %	
Surrogate - 2-Fluorobiphenyl	47 %	37 %	53 %	61 %	61 %	
Surrogate - Terphenyl - d14	48 %	42 %	49 %	61 %	67 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Prep Date	07.26.99	07.26.99	07.26.99	07.26.99	07.26.99	
Analysis Date	07.28.99	07.28.99	07.28.99	07.28.99	07.28.99	
Batch ID	0726E	0726E	0726E	0726E	0726E	
Percent Solids	88	90	88	92	94	

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 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 27

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
Volatile Organic Compounds (8260)					
Acetone, ug/kg dw	<64	<67	<65	<56	79
Acetonitrile, ug/kg dw	<260	<270	<260	<220	<280
Acrolein (Propenal), ug/kg dw	<130	<130	<130	<110	<140
Acrylonitrile, ug/kg dw	<130	<130	<130	<110	<140
Benzene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Bromodichloromethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Bromoform, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Bromomethane (Methyl Bromide), ug/kg dw	<13	<13	<13	<11	<14
2-Butanone (Methyl ethyl ketone), ug/kg dw	<32	<33	<32	<28	<35
Carbon disulfide, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Carbon Tetrachloride, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Chlorobenzene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Chloroethane, ug/kg dw	<13	<13	<13	<11	<14
Chloroform, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Chloromethane (Methyl Chloride), ug/kg dw	<13	<13	<13	<11	<14

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 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 28

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
Chloroprene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
3-Chloropropene (Allylchloride), ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Dibromochloromethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,2-Dibromo-3-chloropropane , ug/kg dw	<13	<13	<13	<11	<14
1,2-Dibromoethane (EDB) , ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Dibromomethane (Methylene bromide), ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
trans-1,4-Dichloro-2-butene , ug/kg dw	<13	<13	<13	<11	<14
Dichlorodifluoromethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,1-Dichloroethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,2-Dichloroethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,1-Dichloroethene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
trans-1,2-Dichloroethene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,2-Dichloropropane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
cis-1,3-Dichloropropene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
trans-1,3-Dichloropropene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 29

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-11	SB-21-1	07-22-99/10:05				
14862-12	SB-21-2	07-22-99/10:05				
14862-13	SB-27-1	07-22-99/10:20				
14862-14	SB-27-2	07-22-99/10:25				
14862-15	SB-26-1	07-22-99/10:35				
PARAMETER		14862-11	14862-12	14862-13	14862-14	14862-15
Ethylbenzene, ug/kg dw		<6.4	<6.7	<6.5	20	<6.9
Ethyl methacrylate, ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
2-Hexanone, ug/kg dw		<32	<33	34	<28	38
Iodomethane (Methyl iodide), ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
Isobutanol (Isobutyl alcohol), ug/kg dw		<260	<270	<260	<220	<280
Methacrylonitrile, ug/kg dw		<130	<130	<130	<110	<140
Methylene chloride (Dichloromethane), ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
Methyl methacrylate, ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
4-Methyl-2-pentanone (MIBK), ug/kg dw		<32	<33	<32	<28	<35
Pentachloroethane, ug/kg dw		<32	<33	<32	<28	<35
Propionitrile, ug/kg dw		<130	<130	<130	<110	<140
Styrene, ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
1,1,1,2-Tetrachloroethane, ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9
1,1,2,2-Tetrachloroethane, ug/kg dw		<6.4	<6.7	<6.5	<5.6	<6.9

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 30

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
Tetrachloroethene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Toluene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,1,1-Trichloroethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,1,2-Trichloroethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Trichloroethene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Trichlorofluoromethane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
1,2,3-Trichloropropane, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
Vinyl acetate, ug/kg dw	<13	<13	<13	<11	<14
Vinyl chloride, ug/kg dw	<13	<13	<13	<11	<14
Xylenes (total), ug/kg dw	<6.4	<6.7	<6.5	28	<6.9
cis-1,2-Dichloroethene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
2-Chlorotoluene, ug/kg dw	<6.4	<6.7	<6.5	<5.6	<6.9
2-Chloroethylvinyl Ether, ug/kg dw	<64	<67	<65	<56	<69
Surrogate - Toluene-d8	97 %	98 %	89 %	98 %	97 %
Surrogate - 4-Bromofluorobenzene	102 %	109 %	94 %	100 %	113 %
Surrogate - Dibromofluoromethane	105 %	100 %	97 %	96 %	98 %
Dilution Factor	1.0	1.0	1.0	1.0	1.0
Analysis Date	07.27.99	07.27.99	07.28.99	07.28.99	07.28.99
Batch ID	1H0727	1H0727	1H0728	1H0728	1H0727

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 31

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
<b>Acids and Base Neutrals (8270-APP9)</b>					
Acenaphthene, ug/kg dw	<340	<390	<1400	<400	<410
Acenaphthylene, ug/kg dw	<340	<390	2400	<400	830
Acetophenone, ug/kg dw	<340	<390	<1400	<400	<410
2-Acetylaminofluorene, ug/kg dw	<340	<390	<1400	<400	<410
4-Aminobiphenyl, ug/kg dw	<340	<390	<1400	<400	<410
Aniline, ug/kg dw	<340	<390	<1400	<400	<410
Anthracene, ug/kg dw	<340	<390	2800	<400	2200
Aramite (total), ug/kg dw	<340	<390	<1400	<400	<410
Benzo(a)anthracene, ug/kg dw	<340	<390	17000	<400	6800
Benzo(b)fluoranthene, ug/kg dw	<340	<390	17000	<400	5800
Benzo(k)fluoranthene, ug/kg dw	<340	<390	14000	<400	4900
Benzo(g,h,i)perylene, ug/kg dw	<340	<390	9500	<400	3000
Benzo(a)pyrene, ug/kg dw	<340	<390	16000	<400	5200
Benzyl alcohol, ug/kg dw	<340	<390	<1400	<400	<410
bis(2-Chloroethoxy)methane, ug/kg dw	<340	<390	<1400	<400	<410
bis(2-Chloroethyl)ether, ug/kg dw	<340	<390	<1400	<400	<410
2,2'-Oxybis(1-chloropropane ) [bis(2-Chloroisopropyl)ethe r], ug/kg dw	<340	<390	<1400	<400	<410

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 32

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
bis (2-Ethylhexyl)phthalate, ug/kg dw	<340	<390	<1400	<400	<410
4-Bromophenylphenyl ether, ug/kg dw	<340	<390	<1400	<400	<410
Butylbenzylphthalate, ug/kg dw	<340	<390	<1400	<400	<410
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<690	<770	<2900	<790	<820
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<340	<390	<1400	<400	<410
2-Chloronaphthalene, ug/kg dw	<340	<390	<1400	<400	<410
2-Chlorophenol, ug/kg dw	<340	<390	<1400	<400	<410
4-Chlorophenylphenyl ether, ug/kg dw	<340	<390	<1400	<400	<410
Chrysene, ug/kg dw	<340	<390	16000	<400	6400
Cresol, m & p, ug/kg dw	<340	<390	<1400	<400	<410
Cresol (ortho), ug/kg dw	<340	<390	<1400	<400	<410
Diallate (total), ug/kg dw	<340	<390	<1400	<400	<410
Dibenzo(a,h)anthracene, ug/kg dw	<340	<390	3900	<400	470

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 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 33

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-11	SB-21-1	07-22-99/10:05				
14862-12	SB-21-2	07-22-99/10:05				
14862-13	SB-27-1	07-22-99/10:20				
14862-14	SB-27-2	07-22-99/10:25				
14862-15	SB-26-1	07-22-99/10:35				
PARAMETER		14862-11	14862-12	14862-13	14862-14	14862-15
Dibenzofuran, ug/kg dw		<340	<390	<1400	<400	<410
Di-n-butylphthalate, ug/kg dw		<340	<390	<1400	<400	<410
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw		<340	<390	<1400	<400	<410
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw		<340	<390	<1400	<400	<410
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw		<340	<390	<1400	<400	<410
3,3'-Dichlorobenzidine, ug/kg dw		<690	<770	<2900	<790	<820
2,4-Dichlorophenol, ug/kg dw		<340	<390	<1400	<400	<410
2,6-Dichlorophenol, ug/kg dw		<340	<390	<1400	<400	<410
Diethylphthalate, ug/kg dw		<340	<390	<1400	<400	<410
p-(Dimethylamino)azobenzene , ug/kg dw		<340	<390	<1400	<400	<410
7,12-Dimethylbenz(a)anthracene, ug/kg dw		<340	<390	<1400	<400	<410

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 2/10/00



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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 34

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
3,3'-Dimethylbenzidine, ug/kg dw	<1800	<390	<7400	<2000	<2100
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<70000	<78000	<290000	<80000	<83000
2,4-Dimethylphenol, ug/kg dw	<340	<390	<1400	<400	<410
Dimethylphthalate, ug/kg dw	<340	<390	<1400	<400	<410
m-Dinitrobenzene , ug/kg dw	<340	<390	<1400	<400	<410
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<1800	<2000	<7400	<2000	<2100
2,4-Dinitrophenol, ug/kg dw	<1800	<2000	<7400	<2000	<2100
2,4-Dinitrotoluene, ug/kg dw	<340	<390	<1400	<400	<410
2,6-Dinitrotoluene, ug/kg dw	<340	<390	<1400	<400	<410
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<340	<390	<1400	<400	<410
Di-n-octylphthalate, ug/kg dw	<340	<390	<1400	<400	<410
1,4-Dioxane, ug/kg dw	<340	<390	<1400	<400	<410
Ethyl methanesulfonate, ug/kg dw	<340	<390	<1400	<400	<410
Fluoranthene, ug/kg dw	<340	<390	22000	430	13000

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 35

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
Fluorene, ug/kg dw	<340	<390	<1400	<400	450
Hexachlorobenzene, ug/kg dw	<340	<390	<1400	<400	<410
Hexachlorobutadiene, ug/kg dw	<340	<390	<1400	<400	<410
Hexachlorocyclopentadiene, ug/kg dw	<340	<390	<1400	<400	<410
Hexachloroethane, ug/kg dw	<340	<390	<1400	<400	<410
Hexachlorophene, ug/kg dw	<180000	<200000	<740000	<200000	<210000
Hexachloropropene, ug/kg dw	<340	<390	<1400	<400	<410
Indeno(1,2,3-cd)pyrene, ug/kg dw	<340	<390	11000	<400	3500
Isophorone, ug/kg dw	<340	<390	<1400	<400	<410
Isosafrole, ug/kg dw	<340	<390	<1400	<400	<410
Methapyrilene, ug/kg dw	<70000	<78000	<290000	<80000	<83000
3-Methylcholanthrene, ug/kg dw	<340	<390	<1400	<400	<410
Methyl methanesulfonate, ug/kg dw	<340	<390	<1400	<400	<410
2-Methylnaphthalene, ug/kg dw	<340	<390	<1400	<400	<410
Naphthalene, ug/kg dw	<340	<390	<1400	<400	<410
1,4-Naphthoquinone, ug/kg dw	<340	<390	<1400	<400	<410
1-Naphthylamine, ug/kg dw	<340	<390	<1400	<400	<410
2-Naphthylamine, ug/kg dw	<340	<390	<1400	<400	<410

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 36

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-11	SB-21-1	07-22-99/10:05
14862-12	SB-21-2	07-22-99/10:05
14862-13	SB-27-1	07-22-99/10:20
14862-14	SB-27-2	07-22-99/10:25
14862-15	SB-26-1	07-22-99/10:35

PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<1800	<2000	<7400	<2000	<2100
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<1800	<2000	<7400	<2000	<2100
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<1800	<2000	<7400	<2000	<2100
Nitrobenzene, ug/kg dw	<340	<390	<1400	<400	<410
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<340	<390	<1400	<400	<410
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<1800	<2000	<7400	<2000	<2100
4-Nitroquinoline 1-oxide, ug/kg dw	<3400	<3900	<14000	<4000	<4100
N-Nitrosodi-n-butylamine, ug/kg dw	<340	<390	<1400	<400	<410
N-Nitrosodiethylamine, ug/kg dw	<340	<390	<1400	<400	<410
N-Nitrosodimethylamine, ug/kg dw	<340	<390	<1400	<400	<410
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw	<340	<390	<1400	<400	<410
n-Nitrosodi-n-propylamine, ug/kg dw	<340	<390	<1400	<400	<410

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 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 37

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-11	SB-21-1	07-22-99/10:05				
14862-12	SB-21-2	07-22-99/10:05				
14862-13	SB-27-1	07-22-99/10:20				
14862-14	SB-27-2	07-22-99/10:25				
14862-15	SB-26-1	07-22-99/10:35				
PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15	
N-Nitrosomethylethylamine, ug/kg dw	<340	<390	<1400	<400	<410	
N-Nitrosomorpholine, ug/kg dw	<340	<390	<1400	<400	<410	
N-Nitrosopiperidine, ug/kg dw	<340	<390	<1400	<400	<410	
N-Nitrosopyrrolidine, ug/kg dw	<340	<390	<1400	<400	<410	
5-Nitro-o-toluidine, ug/kg dw	<340	<390	<1400	<400	<410	
Pentachlorobenzene, ug/kg dw	<340	<390	<1400	<400	<410	
Pentachloronitrobenzene, ug/kg dw	<340	<390	<1400	<400	<410	
Pentachlorophenol, ug/kg dw	<1800	<2000	<7400	<2000	<2100	
Phenacetin, ug/kg dw	<340	<390	<1400	<400	<410	
Phenanthrene, ug/kg dw	<340	<390	7100	<400	7300	
Phenol, ug/kg dw	<340	<390	<1400	<400	<410	
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<1800	<2000	<7400	<2000	<2100	
2-Picoline, ug/kg dw	<340	<390	<1400	<400	<410	
Pronamide, ug/kg dw	<340	<390	<1400	<400	<410	
Pyrene, ug/kg dw	<340	<390	18000	410	8700	
Pyridine, ug/kg dw	<340	<390	<1400	<400	<410	

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526

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 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 38

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-11	SB-21-1	07-22-99/10:05				
14862-12	SB-21-2	07-22-99/10:05				
14862-13	SB-27-1	07-22-99/10:20				
14862-14	SB-27-2	07-22-99/10:25				
14862-15	SB-26-1	07-22-99/10:35				
PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15	
Safrole, ug/kg dw	<340	<390	<1400	<400	<410	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<340	<390	<1400	<400	<410	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<340	<390	<1400	<400	<410	
o-Toluidine, ug/kg dw	<340	<390	<1400	<400	<410	
1,2,4-Trichlorobenzene, ug/kg dw	<340	<390	<1400	<400	<410	
2,4,5-Trichlorophenol, ug/kg dw	<340	<390	<1400	<400	<410	
2,4,6-Trichlorophenol, ug/kg dw	<340	<390	<1400	<400	<410	
O,O,O-Triethyl phosphorothioate, ug/kg dw	<340	<390	<1400	<400	<410	
1,3,5-Trinitrobenzene, ug/kg dw	<340	<390	<1400	<400	<410	
Benzidine, ug/kg dw	<2800	<3200	<12000	<3200	<3400	
Benzoic acid, ug/kg dw	<1800	<2000	<7400	<2000	<2100	
Dimethoate, ug/kg dw	<340	<390	<1400	<400	<410	
p-Benzoquinone, ug/kg dw	<340	<390	<1400	<400	<410	
Surrogate - Phenol d5	57 %	44 %	53 %	50 %	44 %	
Surrogate - 2-Fluorophenol	66 %	46 %	58 %	55 %	51 %	
Surrogate - 2,4,6-Tribromophenol	77 %	49 %	42 %	68 %	61 %	

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 39

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-11	SB-21-1	07-22-99/10:05				
14862-12	SB-21-2	07-22-99/10:05				
14862-13	SB-27-1	07-22-99/10:20				
14862-14	SB-27-2	07-22-99/10:25				
14862-15	SB-26-1	07-22-99/10:35				
PARAMETER	14862-11	14862-12	14862-13	14862-14	14862-15	
Surrogate - Nitrobenzene - d5	52 %	30 %	44 %	42 %	37 %	
Surrogate - 2-Fluorobiphenyl	70 %	48 %	52 %	55 %	46 %	
Surrogate - Terphenyl - d14	70 %	48 %	50 %	48 %	43 %	
Dilution Factor	1.0	1.0	4.0	1.0	1.0	
Prep Date	07.26.99	07.26.99	07.26.99	07.26.99	07.26.99	
Analysis Date	07.28.99	07.31.99	07.31.99	07.31.99	07.31.99	
Batch ID	0726E	0726E	0726E	0726E	0726E	
Percent Solids	95	85	92	83	80	

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 40

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Volatile Organic Compounds (8260)					
Acetone, ug/kg dw	<65	<56	<60	<66	<54
Acetonitrile, ug/kg dw	<260	<220	<240	<260	<220
Acrolein (Propenal), ug/kg dw	<130	<110	<120	<130	<110
Acrylonitrile, ug/kg dw	<130	<110	<120	<130	<110
Benzene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Bromodichloromethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Bromoform, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Bromomethane (Methyl Bromide), ug/kg dw	<13	<11	<12	<13	<11
2-Butanone (Methyl ethyl ketone), ug/kg dw	<32	<28	<30	<33	<27
Carbon disulfide, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Carbon Tetrachloride, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Chlorobenzene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Chloroethane, ug/kg dw	<13	<11	<12	<13	<11
Chloroform, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Chloromethane (Methyl Chloride), ug/kg dw	<13	<11	<12	<13	<11

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 41

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Chloroprene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
3-Chloropropene (Allylchloride), ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Dibromochloromethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,2-Dibromo-3-chloropropane , ug/kg dw	<13	<11	<12	<13	<11
1,2-Dibromoethane (EDB) , ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Dibromomethane (Methylene bromide), ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
trans-1,4-Dichloro-2-butene , ug/kg dw	<13	<11	<12	<13	<11
Dichlorodifluoromethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1-Dichloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,2-Dichloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1-Dichloroethene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
trans-1,2-Dichloroethene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,2-Dichloropropane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
cis-1,3-Dichloropropene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
trans-1,3-Dichloropropene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4

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LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 42

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Ethylbenzene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Ethyl methacrylate, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
2-Hexanone, ug/kg dw	<32	<28	<30	<33	<27
Iodomethane (Methyl iodide), ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Isobutanol (Isobutyl alcohol), ug/kg dw	<260	<220	<240	<260	<220
Methacrylonitrile, ug/kg dw	<130	<110	<120	<130	<110
Methylene chloride (Dichloromethane), ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Methyl methacrylate, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
4-Methyl-2-pentanone (MIBK), ug/kg dw	<32	<28	<30	<33	<27
Pentachloroethane, ug/kg dw	<32	<28	<30	<33	<27
Propionitrile, ug/kg dw	<130	<110	<120	<130	<110
Styrene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1,1,2-Tetrachloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1,2,2-Tetrachloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4

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 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 43

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Tetrachloroethene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Toluene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1,1-Trichloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,1,2-Trichloroethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Trichloroethene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Trichlorofluoromethane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
1,2,3-Trichloropropane, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
Vinyl acetate, ug/kg dw	<13	<11	<12	<13	<11
Vinyl chloride, ug/kg dw	<13	<11	<12	<13	<11
Xylenes (total), ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
cis-1,2-Dichloroethene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
2-Chlorotoluene, ug/kg dw	<6.5	<5.6	<6.0	<6.6	<5.4
2-Chloroethylvinyl Ether, ug/kg dw	<65	<56	<60	<66	<54
Surrogate - Toluene-d8	98 %	88 %	92 %	94 %	92 %
Surrogate - 4-Bromofluorobenzene	103 %	130 %	117 %	109 %	94 %
Surrogate - Dibromofluoromethane	97 %	100 %	100 %	98 %	104 %
Dilution Factor	1.0	1.0	1.0	1.0	1.0
Analysis Date	07.28.99	07.28.99	07.28.99	07.28.99	07.28.99
Batch ID	1H0728	1H0727	1H0727	1H0727	1H0727

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LOG NO: S9-14862  
 Received: 22 JUL 99  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 44

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
<b>Acids and Base Neutrals (8270-APP9)</b>					
Acenaphthene, ug/kg dw	<410	<370	<390	<400	<400
Acenaphthylene, ug/kg dw	<410	1600	<390	<400	<400
Acetophenone, ug/kg dw	<410	<370	<390	<400	<400
2-Acetylaminofluorene, ug/kg dw	<410	<370	<390	<400	<400
4-Aminobiphenyl, ug/kg dw	<410	<370	<390	<400	<400
Aniline, ug/kg dw	<410	<370	<390	<400	<400
Anthracene, ug/kg dw	<410	1500	<390	<400	<400
Aramite (total), ug/kg dw	<410	<370	<390	<400	<400
Benzo(a)anthracene, ug/kg dw	<410	7400	<390	<400	<400
Benzo(b)fluoranthene, ug/kg dw	<410	7000	<390	<400	<400
Benzo(k)fluoranthene, ug/kg dw	<410	5600	<390	<400	<400
Benzo(g,h,i)perylene, ug/kg dw	<410	3800	<390	<400	<400
Benzo(a)pyrene, ug/kg dw	<410	6200	<390	<400	<400
Benzyl alcohol, ug/kg dw	<410	<370	<390	<400	<400
bis(2-Chloroethoxy)methane, ug/kg dw	<410	<370	<390	<400	<400
bis(2-Chloroethyl)ether, ug/kg dw	<410	<370	<390	<400	<400
2,2'-Oxybis(1-chloropropane ) [bis(2-Chloroisopropyl) ethe r], ug/kg dw	<410	<370	<390	<400	<400

*gaw*  
 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 45

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-16	SB-26-2	07-22-99/10:40				
14862-17	SB-25-1	07-22-99/10:50				
14862-18	SB-25-2	07-22-99/10:55				
14862-19	SB-22-1	07-22-99/11:30				
14862-20	SB-22-2	07-22-99/11:35				
PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20	
bis(2-Ethylhexyl)phthalate, ug/kg dw	<410	<370	<390	<400	<400	
4-Bromophenylphenyl ether, ug/kg dw	<410	<370	<390	<400	<400	
Butylbenzylphthalate, ug/kg dw	<410	<370	<390	<400	<400	
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<820	<740	<790	<800	<800	
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<410	<370	<390	<400	<400	
2-Chloronaphthalene, ug/kg dw	<410	<370	<390	<400	<400	
2-Chlorophenol, ug/kg dw	<410	<370	<390	<400	<400	
4-Chlorophenylphenyl ether, ug/kg dw	<410	<370	<390	<400	<400	
Chrysene, ug/kg dw	<410	7200	<390	<400	<400	
Cresol, m & p, ug/kg dw	<410	<370	<390	<400	<400	
Cresol (ortho), ug/kg dw	<410	<370	<390	<400	<400	
Diallate (total), ug/kg dw	<410	<370	<390	<400	<400	
Dibenzo(a,h)anthracene, ug/kg dw	<410	1800	<390	<400	<400	

*gaw*  
 2/10/06

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 46

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Dibenzofuran, ug/kg dw	<410	<370	<390	<400	<400
Di-n-butylphthalate, ug/kg dw	<410	<370	<390	<400	<400
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw	<410	<370	<390	<400	<400
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw	<410	<370	<390	<400	<400
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw	<410	<370	<390	<400	<400
3,3'-Dichlorobenzidine, ug/kg dw	<820	<740	<790	<800	<800
2,4-Dichlorophenol, ug/kg dw	<410	<370	<390	<400	<400
2,6-Dichlorophenol, ug/kg dw	<410	<370	<390	<400	<400
Diethylphthalate, ug/kg dw	<410	<370	<390	<400	<400
p- (Dimethylamino) azobenzene , ug/kg dw	<410	<370	<390	<400	<400
7,12-Dimethylbenz (a) anthrac ene, ug/kg dw	<410	<370	<390	<400	<400

*gaw*  
 2/10/00

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 47

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
3,3'-Dimethylbenzidine, ug/kg dw	<2100	<1900	<2000	<2000	<2100
alpha,alpha-Dimethylphenethylamine, ug/kg dw	<83000	<75000	<80000	<81000	<82000
2,4-Dimethylphenol, ug/kg dw	<410	<370	<390	<400	<400
Dimethylphthalate, ug/kg dw	<410	<370	<390	<400	<400
m-Dinitrobenzene , ug/kg dw	<410	<370	<390	<400	<400
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw	<2100	<1900	<2000	<2000	<2100
2,4-Dinitrophenol, ug/kg dw	<2100	<1900	<2000	<2000	<2100
2,4-Dinitrotoluene, ug/kg dw	<410	<370	<390	<400	<400
2,6-Dinitrotoluene, ug/kg dw	<410	<370	<390	<400	<400
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw	<410	<370	<390	<400	<400
Di-n-octylphthalate, ug/kg dw	<410	<370	<390	<400	<400
1,4-Dioxane, ug/kg dw	<410	<370	<390	<400	<400
Ethyl methanesulfonate, ug/kg dw	<410	<370	<390	<400	<400
Fluoranthene, ug/kg dw	<410	11000	<390	<400	<400

*gaw*  
 2/10/00

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 Reported: 04 AUG 99

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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 48

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
Fluorene, ug/kg dw	<410	<370	<390	<400	<400
Hexachlorobenzene, ug/kg dw	<410	<370	<390	<400	<400
Hexachlorobutadiene, ug/kg dw	<410	<370	<390	<400	<400
Hexachlorocyclopentadiene, ug/kg dw	<410	<370	<390	<400	<400
Hexachloroethane, ug/kg dw	<410	<370	<390	<400	<400
Hexachlorophene, ug/kg dw	<210000	<190000	<200000	<200000	<210000
Hexachloropropene, ug/kg dw	<410	<370	<390	<400	<400
Indeno(1,2,3-cd)pyrene, ug/kg dw	<410	4600	<390	<400	<400
Isophorone, ug/kg dw	<410	<370	<390	<400	<400
Isosafrole, ug/kg dw	<410	<370	<390	<400	<400
Methapyrilene, ug/kg dw	<83000	<75000	<80000	<81000	<82000
3-Methylcholanthrene, ug/kg dw	<410	<370	<390	<400	<400
Methyl methanesulfonate, ug/kg dw	<410	<370	<390	<400	<400
2-Methylnaphthalene, ug/kg dw	<410	<370	<390	<400	<400
Naphthalene, ug/kg dw	<410	<370	<390	<400	<400
1,4-Naphthoquinone, ug/kg dw	<410	<370	<390	<400	<400
1-Naphthylamine, ug/kg dw	<410	<370	<390	<400	<400
2-Naphthylamine, ug/kg dw	<410	<370	<390	<400	<400

*gaw*  
 2/10/00

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 49

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<2100	<1900	<2000	<2000	<2100
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<2100	<1900	<2000	<2000	<2100
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<2100	<1900	<2000	<2000	<2100
Nitrobenzene, ug/kg dw	<410	<370	<390	<400	<400
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<410	<370	<390	<400	<400
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<2100	<1900	<2000	<2000	<2100
4-Nitroquinoline 1-oxide, ug/kg dw	<4100	<3700	<3900	<4000	<4000
N-Nitrosodi-n-butylamine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosodiethylamine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosodimethylamine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw	<410	<370	<390	<400	<400
n-Nitrosodi-n-propylamine, ug/kg dw	<410	<370	<390	<400	<400

*Law*  
 2/10/00



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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 50

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-16	SB-26-2	07-22-99/10:40
14862-17	SB-25-1	07-22-99/10:50
14862-18	SB-25-2	07-22-99/10:55
14862-19	SB-22-1	07-22-99/11:30
14862-20	SB-22-2	07-22-99/11:35

PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20
N-Nitrosomethylethylamine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosomorpholine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosopiperidine, ug/kg dw	<410	<370	<390	<400	<400
N-Nitrosopyrrolidine, ug/kg dw	<410	<370	<390	<400	<400
5-Nitro-o-toluidine, ug/kg dw	<410	<370	<390	<400	<400
Pentachlorobenzene, ug/kg dw	<410	<370	<390	<400	<400
Pentachloronitrobenzene, ug/kg dw	<410	<370	<390	<400	<400
Pentachlorophenol, ug/kg dw	<2100	<1900	<2000	<2000	<2100
Phenacetin, ug/kg dw	<410	<370	<390	<400	<400
Phenanthrene, ug/kg dw	<410	2000	<390	<400	<400
Phenol, ug/kg dw	<410	<370	<390	<400	<400
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<2100	<1900	<2000	<2000	<2100
2-Picoline, ug/kg dw	<410	<370	<390	<400	<400
Pronamide, ug/kg dw	<410	<370	<390	<400	<400
Pyrene, ug/kg dw	<410	8500	<390	<400	<400
Pyridine, ug/kg dw	<410	<370	<390	<400	<400

*gaw*  
 2/10/00

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LOG NO: S9-14862  
Received: 22 JUL 99  
Reported: 04 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 15349084  
Page 51

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-16	SB-26-2	07-22-99/10:40				
14862-17	SB-25-1	07-22-99/10:50				
14862-18	SB-25-2	07-22-99/10:55				
14862-19	SB-22-1	07-22-99/11:30				
14862-20	SB-22-2	07-22-99/11:35				
PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20	
Safrole, ug/kg dw	<410	<370	<390	<400	<400	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<410	<370	<390	<400	<400	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<410	<370	<390	<400	<400	
o-Toluidine, ug/kg dw	<410	<370	<390	<400	<400	
1,2,4-Trichlorobenzene, ug/kg dw	<410	<370	<390	<400	<400	
2,4,5-Trichlorophenol, ug/kg dw	<410	<370	<390	<400	<400	
2,4,6-Trichlorophenol, ug/kg dw	<410	<370	<390	<400	<400	
O,O,O-Triethyl phosphorothioate, ug/kg dw	<410	<370	<390	<400	<400	
1,3,5-Trinitrobenzene, ug/kg dw	<410	<370	<390	<400	<400	
Benzidine, ug/kg dw	<3400	<3000	<3200	<3300	<3300	
Benzoic acid, ug/kg dw	<2100	<1800	<1800	<2000	<2100	
Dimethoate, ug/kg dw	<410	<370	<390	<400	<400	
p-Benzoquinone, ug/kg dw	<410	<3000	<390	<400	<400	
Surrogate - Phenol d5	57 %	43 %	45 %	40 %	46 %	
Surrogate - 2-Fluorophenol	64 %	51 %	52 %	42 %	51 %	
Surrogate - 2,4,6-Tribromophenol	95 %	70 %	80 %	45 %	54 %	

*gaw*  
2/10/00

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 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 52

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862-16	SB-26-2	07-22-99/10:40				
14862-17	SB-25-1	07-22-99/10:50				
14862-18	SB-25-2	07-22-99/10:55				
14862-19	SB-22-1	07-22-99/11:30				
14862-20	SB-22-2	07-22-99/11:35				
PARAMETER	14862-16	14862-17	14862-18	14862-19	14862-20	
Surrogate - Nitrobenzene - d5	48 %	41 %	44 %	30 %	40 %	
Surrogate - 2-Fluorobiphenyl	62 %	42 %	55 %	38 %	48 %	
Surrogate - Terphenyl - d14	62 %	44 %	48 %	44 %	50 %	
Dilution Factor	1.0	1.0	1.0	1.0	1.0	
Prep Date	07.26.99	07.26.99	07.26.99	07.26.99	07.26.99	
Analysis Date	07.31.99	07.31.99	07.31.99	07.31.99	07.31.99	
Batch ID	0726E	0726E	0726E	0726E	0726E	
Percent Solids	80	89	83	82	82	

*(Signature)*  
 2/10/00

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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

Page 53

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
14862-21	Duplicate A	07-22-99	
14862-22	Duplicate B	07-22-99	
PARAMETER		14862-21	14862-22
Volatile Organic Compounds (8260)			
Acetone, ug/kg dw		<64	<53
Acetonitrile, ug/kg dw		<260	<210
Acrolein (Propenal), ug/kg dw		<130	<100
Acrylonitrile, ug/kg dw		<130	<100
Benzene, ug/kg dw		<6.4	<5.3
Bromodichloromethane, ug/kg dw		<6.4	<5.3
Bromoform, ug/kg dw		<6.4	<5.3
Bromomethane (Methyl Bromide), ug/kg dw		<13	<10
2-Butanone (Methyl ethyl ketone), ug/kg dw		<32	<26
Carbon disulfide, ug/kg dw		<6.4	<5.3
Carbon Tetrachloride, ug/kg dw		<6.4	<5.3
Chlorobenzene, ug/kg dw		<6.4	<5.3
Chloroethane, ug/kg dw		<13	<10
Chloroform, ug/kg dw		<6.4	<5.3
Chloromethane (Methyl Chloride), ug/kg dw		<13	<10
Chloroprene, ug/kg dw		<6.4	<5.3
3-Chloropropene (Allylchloride), ug/kg dw		<6.4	<5.3
Dibromochloromethane, ug/kg dw		<6.4	<5.3
1,2-Dibromo-3-chloropropane, ug/kg dw		<13	<10
1,2-Dibromoethane (EDB) , ug/kg dw		<6.4	<5.3
Dibromomethane (Methylene bromide), ug/kg dw		<6.4	<5.3

  
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Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 54

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
14862-21	Duplicate A	07-22-99	
14862-22	Duplicate B	07-22-99	
PARAMETER		14862-21	14862-22
trans-1,4-Dichloro-2-butene, ug/kg dw		<13	<10
Dichlorodifluoromethane, ug/kg dw		<6.4	<5.3
1,1-Dichloroethane, ug/kg dw		<6.4	<5.3
1,2-Dichloroethane, ug/kg dw		<6.4	<5.3
1,1-Dichloroethene, ug/kg dw		<6.4	<5.3
trans-1,2-Dichloroethene, ug/kg dw		<6.4	<5.3
1,2-Dichloropropane, ug/kg dw		<6.4	<5.3
cis-1,3-Dichloropropene, ug/kg dw		<6.4	<5.3
trans-1,3-Dichloropropene, ug/kg dw		<6.4	<5.3
Ethylbenzene, ug/kg dw		<6.4	<5.3
Ethyl methacrylate, ug/kg dw		<6.4	<5.3
2-Hexanone, ug/kg dw		<32	<26
Iodomethane (Methyl iodide), ug/kg dw		<6.4	<5.3
Isobutanol (Isobutyl alcohol), ug/kg dw		<260	<210
Methacrylonitrile, ug/kg dw		<130	<100
Methylene chloride (Dichloromethane), ug/kg dw		<6.4	<5.3
Methyl methacrylate, ug/kg dw		<6.4	<5.3
4-Methyl-2-pentanone (MIBK), ug/kg dw		<32	<26
Pentachloroethane, ug/kg dw		<32	<26
Propionitrile, ug/kg dw		<130	<100
Styrene, ug/kg dw		<6.4	<5.3
1,1,1,2-Tetrachloroethane, ug/kg dw		<6.4	<5.3

*gaw*  
 2/10/00

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 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 55

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-21	Duplicate A	07-22-99
14862-22	Duplicate B	07-22-99
PARAMETER	14862-21	14862-22
1,1,2,2-Tetrachloroethane, ug/kg dw	<6.4	<5.3
Tetrachloroethene, ug/kg dw	<6.4	<5.3
Toluene, ug/kg dw	<6.4	<5.3
1,1,1-Trichloroethane, ug/kg dw	<6.4	<5.3
1,1,2-Trichloroethane, ug/kg dw	<6.4	<5.3
Trichloroethene, ug/kg dw	<6.4	<5.3
Trichlorofluoromethane, ug/kg dw	<6.4	<5.3
1,2,3-Trichloropropane, ug/kg dw	<6.4	<5.3
Vinyl acetate, ug/kg dw	<13	<10
Vinyl chloride, ug/kg dw	<13	<10
Xylenes (total), ug/kg dw	<6.4	<5.3
cis-1,2-Dichloroethene, ug/kg dw	<6.4	<5.3
2-Chlorotoluene, ug/kg dw	<6.4	<5.3
2-Chloroethylvinyl Ether, ug/kg dw	<64	<53
Surrogate - Toluene-d8	97 %	92 %
Surrogate - 4-Bromofluorobenzene	112 %	102 %
Surrogate - Dibromofluoromethane	97 %	98 %
Dilution Factor	1.0	1.0
Analysis Date	07.28.99	07.28.99
Batch ID	1H0728	1H0727

*gaw*  
 2/10/00

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 Received: 22 JUL 99  
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 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084

REPORT OF RESULTS

Page 56

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-21	Duplicate A	07-22-99
14862-22	Duplicate B	07-22-99
PARAMETER	14862-21	14862-22
<b>Acids and Base Neutrals (8270-APP9)</b>		
Acenaphthene, ug/kg dw	<390	<350
Acenaphthylene, ug/kg dw	<390	<350
Acetophenone, ug/kg dw	<390	<350
2-Acetylaminofluorene, ug/kg dw	<390	<350
4-Aminobiphenyl, ug/kg dw	<390	<350
Aniline, ug/kg dw	<390	<350
Anthracene, ug/kg dw	<390	<350
Aramite (total), ug/kg dw	<390	<350
Benzo(a)anthracene, ug/kg dw	<390	<350
Benzo(b)fluoranthene, ug/kg dw	420	<350
Benzo(k)fluoranthene, ug/kg dw	430	<350
Benzo(g,h,i)perylene, ug/kg dw	<390	<350
Benzo(a)pyrene, ug/kg dw	410	<350
Benzyl alcohol, ug/kg dw	<390	<350
bis(2-Chloroethoxy)methane, ug/kg dw	<390	<350
bis(2-Chloroethyl)ether, ug/kg dw	<390	<350
2,2'-Oxybis(1-chloropropane) [bis(2-Chloroisopropyl)ether], ug/kg dw	<390	<350
bis(2-Ethylhexyl)phthalate, ug/kg dw	<390	<350
4-Bromophenylphenyl ether, ug/kg dw	<390	<350
Butylbenzylphthalate, ug/kg dw	<390	<350

*gaw*  
 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 57

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-21	Duplicate A	07-22-99
14862-22	Duplicate B	07-22-99
PARAMETER	14862-21	14862-22
4-Chloroaniline (p-Chloroaniline), ug/kg dw	<770	<710
4-Chloro-3-methylphenol (p-Chloro-m-cresol), ug/kg dw	<390	<350
2-Chloronaphthalene, ug/kg dw	<390	<350
2-Chlorophenol, ug/kg dw	<390	<350
4-Chlorophenylphenyl ether, ug/kg dw	<390	<350
Chrysene, ug/kg dw	590	<350
Cresol, m & p, ug/kg dw	<390	<350
Cresol (ortho), ug/kg dw	<390	<350
Diallate (total), ug/kg dw	<390	<350
Dibenzo(a,h)anthracene, ug/kg dw	<390	<350
Dibenzofuran, ug/kg dw	<390	<350
Di-n-butylphthalate, ug/kg dw	<390	<350
1,2-Dichlorobenzene (o-Dichlorobenzene), ug/kg dw	<390	<350
1,3-Dichlorobenzene (m-Dichlorobenzene), ug/kg dw	<390	<350
1,4-Dichlorobenzene (p-Dichlorobenzene), ug/kg dw	<390	<350
3,3'-Dichlorobenzidine, ug/kg dw	<770	<710
2,4-Dichlorophenol, ug/kg dw	<390	<350
2,6-Dichlorophenol, ug/kg dw	<390	<350
Diethylphthalate, ug/kg dw	<390	<350
p-(Dimethylamino)azobenzene, ug/kg dw	<390	<350
7,12-Dimethylbenz(a)anthracene, ug/kg dw	<390	<350
3,3'-Dimethylbenzidine, ug/kg dw	<2000	<1800

*gaw*  
 2/10/00



LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 58

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
14862-21	Duplicate A	07-22-99	
14862-22	Duplicate B	07-22-99	
PARAMETER		14862-21	14862-22
alpha,alpha-Dimethylphenethylamine, ug/kg dw		<78000	<72000
2,4-Dimethylphenol, ug/kg dw		<390	<350
Dimethylphthalate, ug/kg dw		<390	<350
m-Dinitrobenzene , ug/kg dw		<390	<350
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol), ug/kg dw		<2000	<1800
2,4-Dinitrophenol, ug/kg dw		<2000	<1800
2,4-Dinitrotoluene, ug/kg dw		<390	<350
2,6-Dinitrotoluene, ug/kg dw		<390	<350
Dinoseb (2-sec-Butyl-4,6-dinitrophenol), ug/kg dw		<390	<350
Di-n-octylphthalate, ug/kg dw		<390	<350
1,4-Dioxane, ug/kg dw		<390	<350
Ethyl methanesulfonate, ug/kg dw		<390	<350
Fluoranthene, ug/kg dw		1100	<350
Fluorene, ug/kg dw		<390	<350
Hexachlorobenzene, ug/kg dw		<390	<350
Hexachlorobutadiene, ug/kg dw		<390	<350
Hexachlorocyclopentadiene, ug/kg dw		<390	<350
Hexachloroethane, ug/kg dw		<390	<350
Hexachlorophene, ug/kg dw		<200000	<180000
Hexachloropropene, ug/kg dw		<390	<350
Indeno(1,2,3-cd)pyrene, ug/kg dw		<390	<350

*gaw*  
 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 59

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-21	Duplicate A	07-22-99
14862-22	Duplicate B	07-22-99
PARAMETER	14862-21	14862-22
Isophorone, ug/kg dw	<390	<350
Isosafrole, ug/kg dw	<390	<350
Methapyrilene, ug/kg dw	<78000	<72000
3-Methylcholanthrene, ug/kg dw	<390	<350
Methyl methanesulfonate, ug/kg dw	<390	<350
2-Methylnaphthalene, ug/kg dw	<390	<350
Naphthalene, ug/kg dw	<390	<350
1,4-Naphthoquinone, ug/kg dw	<390	<350
1-Naphthylamine, ug/kg dw	<390	<350
2-Naphthylamine, ug/kg dw	<390	<350
2-Nitroaniline (o-Nitroaniline), ug/kg dw	<2000	<1800
3-Nitroaniline (m-Nitroaniline), ug/kg dw	<2000	<1800
4-Nitroaniline (p-Nitroaniline), ug/kg dw	<2000	<1800
Nitrobenzene, ug/kg dw	<390	<350
2-Nitrophenol (o-Nitrophenol), ug/kg dw	<390	<350
4-Nitrophenol (p-Nitrophenol), ug/kg dw	<2000	<1800
4-Nitroquinoline 1-oxide, ug/kg dw	<3900	<3500
N-Nitrosodi-n-butylamine, ug/kg dw	<390	<350
N-Nitrosodiethylamine, ug/kg dw	<390	<350
N-Nitrosodimethylamine, ug/kg dw	<390	<350
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw	<390	<350
n-Nitrosodi-n-propylamine, ug/kg dw	<390	<350

*gaw*  
 2/10/00

LOG NO: S9-14862  
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 Reported: 04 AUG 99

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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 60

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED
14862-21	Duplicate A	07-22-99
14862-22	Duplicate B	07-22-99
PARAMETER	14862-21	14862-22
N-Nitrosomethylethylamine, ug/kg dw	<390	<350
N-Nitrosomorpholine, ug/kg dw	<390	<350
N-Nitrosopiperidine, ug/kg dw	<390	<350
N-Nitrosopyrrolidine, ug/kg dw	<390	<350
5-Nitro-o-toluidine, ug/kg dw	<390	<350
Pentachlorobenzene, ug/kg dw	<390	<350
Pentachloronitrobenzene, ug/kg dw	<390	<350
Pentachlorophenol, ug/kg dw	<2000	<1800
Phenacetin, ug/kg dw	<390	<350
Phenanthrene, ug/kg dw	690	<350
Phenol, ug/kg dw	<390	<350
1,4-Phenylenediamene (p-Phenylenediamene), ug/kg dw	<2000	<1800
2-Picoline, ug/kg dw	<390	<350
Pronamide, ug/kg dw	<390	<350
Pyrene, ug/kg dw	830	<350
Pyridine, ug/kg dw	<390	<350
Safrole, ug/kg dw	<390	<350
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<390	<350
2,3,4,6-Tetrachlorophenol, ug/kg dw	<390	<350
o-Toluidine, ug/kg dw	<390	<350
1,2,4-Trichlorobenzene, ug/kg dw	<390	<350
2,4,5-Trichlorophenol, ug/kg dw	<390	<350

*gaw*  
 2/10/00

LOG NO: S9-14862  
 Received: 22 JUL 99  
 Reported: 04 AUG 99

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 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 15349084  
 Page 61

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	
14862-21	Duplicate A	07-22-99	
14862-22	Duplicate B	07-22-99	
PARAMETER		14862-21	14862-22
2,4,6-Trichlorophenol, ug/kg dw		<390	<350
O,O,O-Triethyl phosphorothioate, ug/kg dw		<390	<350
1,3,5-Trinitrobenzene, ug/kg dw		<390	<350
Benzidine, ug/kg dw		<3200	<2900
Benzoic acid, ug/kg dw		<2000	<1800
Dimethoate, ug/kg dw		<390	<350
p-Benzoquinone, ug/kg dw		<390	<350
Surrogate - Phenol d5		54 %	44 %
Surrogate - 2-Fluorophenol		62 %	50 %
Surrogate - 2,4,6-Tribromophenol		56 %	56 %
Surrogate - Nitrobenzene - d5		44 %	40 %
Surrogate - 2-Fluorobiphenyl		55 %	48 %
Surrogate - Terphenyl - d14		55 %	47 %
Dilution Factor		1.0	1.0
Prep Date		07.26.99	07.26.99
Analysis Date		07.28.99	07.28.99
Batch ID		0726F	0726F
Percent Solids		85	93

*gaw*  
 2/10/00

LOG NO: S9-14862A  
 Received: 22 JUL 99  
 Reported: 20 AUG 99

Dr. Larry Stewart  
 Law Engineering and Environmental Services/Remediation Group  
 112 Town Park Drive  
 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 151090820

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862A-13	SB-27-1	07-22-99/10:20				
14862A-14	SB-27-2	07-22-99/10:25				
14862A-15	SB-26-1	07-22-99/10:35				
14862A-16	SB-26-2	07-22-99/10:40				
14862A-17	SB-25-1	07-22-99/10:50				
PARAMETER		14862A-13	14862A-14	14862A-15	14862A-16	14862A-17
TCL Pesticides (8081)						
alpha-BHC, ug/kg dw		<18	<2.0	<10	<2.1	<19
beta-BHC, ug/kg dw		<18	<2.0	<10	<2.1	<19
delta-BHC, ug/kg dw		<18	<2.0	<10	<2.1	<19
gamma-BHC (Lindane), ug/kg dw		<18	<2.0	<10	<2.1	<19
Heptachlor, ug/kg dw		<18	<2.0	<10	<2.1	<19
Aldrin, ug/kg dw		<18	<2.0	<10	<2.1	<19
Heptachlor epoxide, ug/kg dw		<18	<2.0	<10	<2.1	<19
Endosulfan I, ug/kg dw		<18	<2.0	<10	<2.1	<19
Dieldrin, ug/kg dw		43	<4.0	26X	<4.1	38X
4,4'-DDE, ug/kg dw		<36	<4.0	<20	<4.1	<37
Endrin, ug/kg dw		<36	<4.0	<20	<4.1	<37
Endrin aldehyde, ug/kg dw		<36	<4.0	<20	<4.1	<37
Endosulfan II, ug/kg dw		<36	<4.0	<20	<4.1	<37
4,4'-DDD, ug/kg dw		<36	<4.0	<20	<4.1	<37
Endosulfan sulfate, ug/kg dw		<36	<4.0	<20	<4.1	<37
4,4'-DDT, ug/kg dw		<36	<4.0	<20	<4.1	<37
Endrin ketone, ug/kg dw		42X	<4.0	22X	<4.1	32
Methoxychlor, ug/kg dw		<180	<20	140X	<21	<190

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S9-14862A  
Received: 22 JUL 99  
Reported: 20 AUG 99

Dr. Larry Stewart  
Law Engineering and Environmental Services/Remediation Group  
112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 151090820  
Page 2

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED				
14862A-13	SB-27-1	07-22-99/10:20				
14862A-14	SB-27-2	07-22-99/10:25				
14862A-15	SB-26-1	07-22-99/10:35				
14862A-16	SB-26-2	07-22-99/10:40				
14862A-17	SB-25-1	07-22-99/10:50				
PARAMETER		14862A-13	14862A-14	14862A-15	14862A-16	14862A-17
alpha-Chlordane, ug/kg dw		<18	<2.0	<10	<2.1	<19
gamma-Chlordane, ug/kg dw		<18	<2.0	<10	<2.1	<19
Toxaphene, ug/kg dw		<1800	<200	<1000	<210	<1900
Surrogate - DCB		0 %D	138 %	132 %	55 %	0 %D
Surrogate - 2,4,5,6-Tetrachloro-m-xylene (TCMX)		0 %D	48 %	54 %	46 %	0 %D
Dilution Factor		10.0	1.0	5.0	1.0	10.0
Prep Date		07.27.99	07.30.99	07.27.99	07.27.99	07.27.99
Analysis Date		08.11.99	08.04.99	08.06.99	07.29.99	08.17.99
Batch ID		0727N	1K0804	0727N	0727N	0727N

*gaw*  
2/10/00

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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 151090820

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED			
14862A-13	SB-27-1	07-22-99/10:20			
14862A-14	SB-27-2	07-22-99/10:25			
14862A-15	SB-26-1	07-22-99/10:35			
14862A-16	SB-26-2	07-22-99/10:40			
14862A-17	SB-25-1	07-22-99/10:50			
PARAMETER	14862A-13	14862A-14	14862A-15	14862A-16	14862A-17
PCB's (8082)					
Aroclor-1016, ug/kg dw	<360	<40	<200	<41	<370
Aroclor-1221, ug/kg dw	<720	<80	<420	<83	<750
Aroclor-1232, ug/kg dw	<360	<40	<200	<41	<370
Aroclor-1242, ug/kg dw	<360	<40	<200	<41	<370
Aroclor-1248, ug/kg dw	<360	<40	<200	<41	<370
Aroclor-1254, ug/kg dw	<360	<40	<200	<41	<370
Aroclor-1260, ug/kg dw	<360	<40	<200	<41	<370
Surrogate - TCX	0 %D	48 %	54 %	46 %	0 %D
Dilution Factor	10.0	1.0	5.0	1.0	10.0
Prep Date	07.27.99	07.30.99	07.27.99	07.27.99	07.27.99
Analysis Date	08.11.99	08.04.99	08.06.99	07.29.99	08.17.99
Batch ID	0727N	0727N	0727N	0727N	0727N
Percent Solids	92	83	80	80	89

*gaw*  
 2/10/00

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Dr. Larry Stewart  
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112 Town Park Drive  
Kennesaw, GA 30144

Contract No.: 12001-9-3411  
Project: HAAF FTA  
Sampled By: Client  
Code: 151090820  
Page 4

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
14862A-18	SB-25-2	07-22-99/10:55		
14862A-19	SB-22-1	07-22-99/11:30		
14862A-20	SB-22-2	07-22-99/11:35		
PARAMETER		14862A-18	14862A-19	14862A-20
TCL Pesticides (8081)				
alpha-BHC, ug/kg dw		<2.0	<2.0	<2.1
beta-BHC, ug/kg dw		<2.0	<2.0	<2.1
delta-BHC, ug/kg dw		<2.0	<2.0	<2.1
gamma-BHC (Lindane), ug/kg dw		<2.0	<2.0	<2.1
Heptachlor, ug/kg dw		<2.0	<2.0	<2.1
Aldrin, ug/kg dw		<2.0	<2.0	<2.1
Heptachlor epoxide, ug/kg dw		<2.0	<2.0	<2.1
Endosulfan I, ug/kg dw		<2.0	<2.0	<2.1
Dieldrin, ug/kg dw		<4.0	<4.0	<4.0
4,4'-DDE, ug/kg dw		<4.0	<4.0	<4.0
Endrin, ug/kg dw		<4.0	<4.0	<4.0
Endrin aldehyde, ug/kg dw		<4.0	<4.0	<4.0
Endosulfan II, ug/kg dw		<4.0	<4.0	<4.0
4,4'-DDD, ug/kg dw		<4.0	<4.0	<4.0
Endosulfan sulfate, ug/kg dw		<4.0	<4.0	<4.0
4,4'-DDT, ug/kg dw		<4.0	<4.0	<4.0
Endrin ketone, ug/kg dw		<4.0	<4.0	<4.0
Methoxychlor, ug/kg dw		<20	<20	<21
alpha-Chlordane, ug/kg dw		<2.0	<2.0	<2.1
gamma-Chlordane, ug/kg dw		<2.0	<2.0	<2.1

*gaw*  
2/10/00



LOG NO: S9-14862A  
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 Reported: 20 AUG 99

Dr. Larry Stewart  
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 Kennesaw, GA 30144

Contract No.: 12001-9-3411  
 Project: HAAF FTA  
 Sampled By: Client  
 Code: 151090820  
 Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED		
14862A-18	SB-25-2	07-22-99/10:55		
14862A-19	SB-22-1	07-22-99/11:30		
14862A-20	SB-22-2	07-22-99/11:35		
PARAMETER		14862A-18	14862A-19	14862A-20
Toxaphene, ug/kg dw		<200	<200	<210
Surrogate - DCB		56 %	69 %	57 %
Surrogate - 2,4,5,6-Tetrachloro-m-xylene (TCMX)		50 %	54 %	49 %
Dilution Factor		1.0	1.0	1.0
Prep Date		07.27.99	07.27.99	07.27.99
Analysis Date		07.29.99	07.29.99	07.29.99
Batch ID		0727N	0727N	0727N
PCB's (8082)				
Aroclor-1016, ug/kg dw		<40	<40	<40
Aroclor-1221, ug/kg dw		<80	<81	<81
Aroclor-1232, ug/kg dw		<40	<40	<40
Aroclor-1242, ug/kg dw		<40	<40	<40
Aroclor-1248, ug/kg dw		<40	<40	<40
Aroclor-1254, ug/kg dw		<40	<40	<40
Aroclor-1260, ug/kg dw		<40	<40	<40
Surrogate - TCX		50 %	54 %	49 %
Dilution Factor		1.0	1.0	1.0
Prep Date		07.27.99	07.27.99	07.27.99
Analysis Date		07.29.99	07.29.99	07.29.99
Batch ID		0727N	0727N	0727N
Percent Solids		83	82	82

*gaw*  
 2/10/00

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue, Savannah, GA 31404  
 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
 414 SW 12th Avenue, Deerfield Beach, FL 33442  
 900 Lakeside Drive, Mobile, AL 36693  
 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (954) 421-7400 Fax: (954) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE		PROJECT NO 1200-9-3411	PO NUMBER	MATRIX TYPE	REQUIRED ANALYSES	PAGE 1 OF 2
PROJECT LOC. (State)	SAMPLER(S) NAME Pat Kelly / Kim Booth	PHONE 235-3558	FAX 234-1749	AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (oil, solvent, etc.) 8260 8260 8270		
CLIENT NAME LAW	CLIENT PROJECT MANAGER Pat Kelly					
CLIENT ADDRESS (CITY, STATE, ZIP) Savannah, Ga. 31405						<input checked="" type="checkbox"/> STANDARD REPORT DELIVERY <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) Date Due

SAMPLE DATE	SAMPLE TIME	SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED							REMARKS		
				A	B	C	D	E	F	G			
7-22	8:00		SB-18-1	X			3	1	1				
7-22	8:20		SB-18-2	X			3	1	1				
7-22	8:30		SB-28-1	X			3	1	1				
7-22	9:00		SB-28-2	X			3	1	1				
7-22	9:15		SB-29-1				3	1	1				
7-22	9:25		SB-29-2				3	1	1				
7-22	9:30		SB-19-1				3	1	1				
7-22	9:40		SB-19-2				3	1	1				
7-22	9:50		SB-20-1				3	1	1				
7-22	9:55		SB-20-2				3	1	1				
7-22	10:05		SB-21-1				3	1	1				
7-22	10:05		SB-21-2				3	1	1				
7-22	10:20		SB-27-1				3	1	1				

RELINQUISHED BY (SIGNATURE) D. Campbell	DATE 7/20/99	TIME	RELINQUISHED BY (SIGNATURE) Kim Booth	DATE 7-22	TIME 1:15	RELINQUISHED BY (SIGNATURE)	DATE	TIME
RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME

<b>LABORATORY USE ONLY</b>							
RECEIVED FOR LABORATORY BY (SIGNATURE) J. Wafford	DATE 7/22/99	TIME 1:15	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO. 5914862	LABORATORY REMARKS:	

F-172

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

- 5102 LaRoche Avenue, Savannah, GA 31404
- 2846 Industrial Plaza Drive, Tallahassee, FL 32301
- 414 SW 12th Avenue, Deerfield Beach, FL 33442
- 900 Lakeside Drive, Mobile, AL 36693
- 6712 Benjamin Road, Suite 100, Tampa, FL 33634
- 100 Alpha Drive, Suite 110, Destrehan, LA 70047

- Phone: (912) 354-7858 Fax: (912) 352-0165
- Phone: (904) 878-3994 Fax: (904) 878-9504
- Phone: (954) 421-7400 Fax: (954) 421-2584
- Phone: (334) 666-6633 Fax: (334) 666-6696
- Phone: (813) 885-7427 Fax: (813) 885-7049
- Phone: (504) 764-1100 Fax: (504) 725-1163

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

PROJECT REFERENCE		PROJECT NO. 12000-9-3411	P.O. NUMBER	MATRIX TYPE	REQUIRED ANALYSES	PAGE 2 OF 2
PROJECT LOC. (State)	SAMPLER(S) NAME Pat Kelly/Kim Booth	PHONE 238-3888	FAX 234-1749	AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (oil, solvent, etc.) 8260 8260 Am test 8270	STANDARD REPORT DELIVERY <input checked="" type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) <input type="checkbox"/> Date Due	
CLIENT NAME LAW	CLIENT PROJECT MANAGER Pat Kelly					
CLIENT ADDRESS (CITY, STATE, ZIP) 1000 Business Center Dr., Savannah, Ga 31405 Suite 50						

SAMPLE		SL NO.	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS SUBMITTED			REMARKS
DATE	TIME						
7-22	10:25		SB-27-2	3	1	1	
7-22	10:35		SB-26-1	3	1	1	
7-22	10:40		SB-26-2	3	1	1	
			<del>SB-26-KB</del>	3	1	1	
7-22	10:50		SB-25-1	3	1	1	
7-22	10:55		SB-25-2	3	1	1	
7-22	11:30		SB-22-1	3	1	1	
7-22	11:35		SB-22-2	3	1	1	
			<del>Duplicate KB</del>				
			Duplicate	3	1	1	
			Duplicate	3	1	1	

RELINQUISHED BY: (SIGNATURE) L. Campbell	DATE 7/20/99	TIME	RELINQUISHED BY: (SIGNATURE) Kim Booth	DATE 7-22	TIME 1:15	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY							
RECEIVED FOR LABORATORY BY: (SIGNATURE) J. Swafford	DATE 7/22/99	TIME 1:15	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	CUSTODY SEAL NO.	SL LOG NO. S914862	LABORATORY REMARKS:	

ORIGINAL

955



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

January 31, 2000

## Case Narrative ASI Sample 117379

Three water samples were collected on January 20, 2000 and arrived at ASI on January 21, 2000. The sample cooler temperature was 1°C upon arrival at ASI. Samples were logged into LIMS as ASI sample 117379 for analysis of VOA, BNA, and metals.

Base/Neutrals and Acids were analyzed in batch 54993 using EPA method 8270. Recoveries for several compounds in the LC were outside of acceptance limits. All recoveries were within control limits with the exception of indeno(1,2,3)pyrene which was slightly high. All sample results for BNA were BDL. Sample 117379-2 was used for the MS/MSD and all other necessary measurement quality objectives were met.

Volatile organics were analyzed in batch 55080 using EPA method 8260. The LCSD was re-analyzed for better recoveries within a 24 hour period. All other necessary measurement quality objectives were met for VOA analysis.

Lead was analyzed in batch 54378 using GFAA EPA method 7421. Arsenic and barium were analyzed in batch 54376 using ICP EPA method 6010. All measurement quality objectives were met for metals.

A handwritten signature in black ink, appearing to read "C Brinkley".

Callie Brinkley  
Quality Assurance



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel

Report No. 117379-1

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-19-W, 01/20/2000, 14:20, received 01/21/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	56 J	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

*gaw*  
2/10/00

**Sample Description**

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-19-W, 01/20/2000, 14:20, received 01/21/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00

475



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117379-2

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-18-W, 01/20/2000, 19:36, received 01/21/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	37 J	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

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2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-18-W, 01/20/2000, 19:36, received 01/21/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **117379-3**

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-17-W, 01/19/2000, 14:17, received 01/21/2000

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Analytical Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	26 <i>J</i>	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

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2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-17-W, 01/19/2000, 14:17, received 01/21/2000

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gaw

## Analytical

Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

gaw  
2/10/00

# ASI ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
 110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201

V 7 QS

CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Law GADD</i>		PROJECT NAME <i>Hunter AAF</i>		PROJECT NUMBER <i>12001-9-3411</i>		PURCHASE ORDER NO.	
CLIENT ADDRESS AND PHONE NUMBER <i>112 Town Park Dr. Kennesaw GA 30144 (770) 421-3400</i>		ANALYSES REQUESTED		FOR LAB USE ONLY			
PROJECT MANAGER <i>Mr. David Gardner</i>				LAB # <i>117379</i>		PROJECT NO.	
REQUESTED COMPLETION DATE <i>14 Day Start-up TX</i>		SAMPLING REQUIREMENTS SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		ACK		VERIFIED	
SAMPLE ID		DATE		TIME		QUOTE #	
COM P		GRA B		SOIL		NO. OF SAMP	
SAMPLE DESCRIPTIONS		CONTAINERS		LAB ID		PG	
		<i>50309/022000</i>		<i>12001</i>		<i>2</i>	
		<i>35200/02700</i>		<i>51605</i>		<i>OF 2</i>	
		<i>14905</i>		<i>13/13A, PB</i>		REMARKS/ADDITIONAL INFORMATION	
		<i>13/13A, PB</i>					
<i>1</i>		<i>1/19/00</i>		<i>14:17</i>		<i>X</i>	
<i>HMW-12-LW</i>		<i>4</i>		<i>3</i>		<i>2</i>	
						<i>1</i>	
						<i>-3</i>	
SAMPLED BY AND TITLE <i>Victor Clarke</i>		DATE/TIME <i>1-20-00</i>		RELINQUISHED BY <i>[Signature]</i>		DATE/TIME	
RECEIVED BY		DATE/TIME		RELINQUISHED BY:		DATE/TIME	
RECEIVED BY		DATE/TIME		RELINQUISHED BY:		DATE/TIME	
RECEIVED BY <i>[Signature]</i>		DATE/TIME <i>1/21/00 13:40</i>		SAMPLE SHIPPED VIA UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> <b>HAND</b> <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		AIR BILL #	
REMARKS				ENTERED INTO LIMS		COC REVIEWED	
						<i>good</i>	

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479



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

V7 Q5

## CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Law Gibb</i>		PROJECT NAME <i>Hunter AAF</i>		PROJECT NUMBER <i>12001-4-3411</i>		PURCHASE ORDER NO.			
CLIENT ADDRESS AND PHONE NUMBER <i>118 Town Park Dr. Kennesaw GA 30144 (770) 421-3400</i>		ANALYSES REQUESTED		FOR LAB USE ONLY		LAB # <i>117379</i>			
PROJECT MANAGER <i>Mr. David Goeshel</i>		FOR CONTAINERS <i>50.26/82608 VOCs 35004/82700 5 VOCs METALS AS, BA, PB &amp;</i>		PROJECT NO.		ACK			
COPY TO (if applicable) <i>Judy Hartness</i>				VERIFIED		QUOTE #		BS	
REQUESTED COMPLETION DATE <i>14 Day Standard</i>				SAMPLING REQUIREMENTS SDWA <input type="checkbox"/> NPOES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		NO. OF SAMP <i>3</i>		PG <i>1</i> OF <i>2</i>	
SAMPLE ID	DATE	TIME	C O M P	G R A B	S O I L	REMARKS/ADDITIONAL INFORMATION			
<i>1</i>	<i>1/20/00</i>	<i>14:20</i>	<i>X</i>			<i>MMW-19-W -1</i>			
<i>2</i>	<i>1/20/00</i>	<i>19:36</i>	<i>X</i>			<i>MMW-18-W -2</i>			
SAMPLED BY AND TITLE <i>W. Clark (SITE MGR)</i>		DATE/TIME <i>1-20-00</i>	RELINQUISHED BY <i>[Signature]</i>		DATE/TIME	HAZWRAP/NEESA Y N			
RECEIVED BY		DATE/TIME	RELINQUISHED BY:		DATE/TIME	OC LEVEL 1 2 3			
RECEIVED BY		DATE/TIME	RELINQUISHED BY:		DATE/TIME	COC <input checked="" type="checkbox"/> ANA REQ <input checked="" type="checkbox"/> TEMP <i>1°C (13/00)</i>			
RECEIVED BY LAB <i>W. K. [Signature]</i>		DATE/TIME <i>1/21/00 13:40</i>	SAMPLE SHIPPED VIA UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> <b>HAND</b> <input checked="" type="checkbox"/> OTHER _____		AIR BILL #	CUST SEAL <i>NO</i> PH <i>(MGR)</i>			
REMARKS		ENTERED INTO LMS		REVIEWED		SAMPLE COND. <i>good</i>			

F-98



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

January 31, 2000

## Case Narrative ASI Sample 117309

Two water samples were collected on January 19, 2000 and arrived at ASI on January 20, 2000. All conditions for proper preservation and shipment were met. Samples were logged into LIMS as ASI sample 117309 for analysis of VOA, BNA, and metals.

Base/Neutrals and Acids were analyzed in batch 54993 using EPA method 8270. Recoveries for several compounds in the LC were outside of acceptance limits. All recoveries were within control limits with the exception of indeno(1,2,3)pyrene which was slightly high. All sample results for BNA were BDL. All other necessary measurement quality objectives were met.

Volatile organics were analyzed in batch 55080 using EPA method 8260. The LCSD was re-analyzed for better recoveries within a 24 hour period. Sample 117309-2 was used for the MS/MSD and all other necessary measurement quality objectives were met for VOA analysis.

Lead was analyzed in batch 54363 using GFAA EPA method 7421. Arsenic and barium were analyzed in batch 54391 using ICP EPA method 6010. Samples were redigested in batch 54391 to include client-specific QC samples. The MSD recovery was low for arsenic and the MS/MSD recoveries were low for barium. All other measurement quality objectives were met for metals.

Callie Brinkley  
Quality Assurance



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117309-1

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-20, 01/19/2000, 15:07, received 01/20/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	BDL J	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

*gaw*  
2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-20, 01/19/2000, 15:07, received 01/20/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117309-2

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-17, 01/19/2000, 15:09, received 01/20/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	BDL J	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

*gaw*  
2/10/00



## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-17, 01/19/2000, 15:09, received 01/20/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **117309-3**

January 31, 2000

### Sample Description

Law Environmental

Water, Hunter AAF, Project #12001-9-3441, DUP-W, 01/19/2000, 15:09, received 01/19/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	BDL <i>J</i>	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

*gaw*  
2/10/00

## Sample Description

Law Environmental

Water, Hunter AAF, Project #12001-9-3441, DUP-W, 01/19/2000, 15:09, received 01/19/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00

# ASI ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
 110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201

V8 B504

CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Law Gbb</i>			PROJECT NAME <i>HunterAAF</i>		PROJECT NUMBER <i>12001-9-3411</i>		PURCHASE ORDER NO.					
CLIENT ADDRESS AND PHONE NUMBER <i>112 Town Park Dr. Kennesaw GA 30144 (770) 421-3400</i>			ANALYSES REQUESTED							FOR LAB USE ONLY		
PROJECT MANAGER <i>McDavid Govershel</i>			# OF CONTAINERS <i>50 30 B / 82600 (VOC)</i> <i>35 20 C / 82700 SVOC</i> <i>METALS AS, BA, Pb</i>							LAB # <i>117309</i>		
REQUESTED COMPLETION DATE <i>14 Day Standard JAT</i>										ACK		
SAMPLING REQUIREMENTS SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>			QUOTE #			BS						
SAMPLE ID			NO. OF SAMP <i>3</i>			PG <i>2</i>			OE <i>2</i>			
DATE			REMARKS/ADDITIONAL INFORMATION									
TIME			} -1									
C O M P												
S O I L												
SAMPLE DESCRIPTIONS												
<i>1</i>			<i>1/18/00 15:07</i>			<i>X</i>			<i>HMW-20</i>			
<i>2</i>			<i>15:07</i>			<i>↓</i>			<i>"</i>			
<i>3</i>			<i>15:07</i>			<i>↓</i>			<i>"</i>			
SAMPLED BY AND TITLE <i>Victor Clarke Manager</i>			DATE/TIME <i>1-19-00 12:20-17:30</i>		RELINQUISHED BY <i>[Signature]</i>		DATE/TIME <i>1/19/00 17:30</i>		HAZWRAP/NEESA Y N			
RECEIVED BY			DATE/TIME		RELINQUISHED BY		DATE/TIME		OC LEVEL 1 2 3			
RECEIVED BY			DATE/TIME		RELINQUISHED BY		DATE/TIME		COC <input checked="" type="checkbox"/> ICE			
RECEIVED BY LAB <i>[Signature]</i>			DATE/TIME <i>1/20/00 9:00</i>		SAMPLE SHIPPED VIA <input checked="" type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> <input checked="" type="checkbox"/> FED-EX <input type="checkbox"/> HAND <input type="checkbox"/> OTI		DATE/TIME <i>1-19-00</i>		ANA REQ <input checked="" type="checkbox"/> TEMP <i>21.109°C</i>			
REMARKS			DATE/TIME		RELINQUISHED BY		DATE/TIME		CUST SEAL <input checked="" type="checkbox"/> PH (MET)			
									SAMPLE COND <i>good</i>			

F-88

Victor Clarke

Phone 912 3-3888

FedEx Tracking Number 813984610923



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

V 8 B 5

## CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Law Cobb</i>			PROJECT NAME <i>Hunter AAF</i>			PROJECT NUMBER <i>12001-9-3411</i>			PURCHASE ORDER NO.		
CLIENT ADDRESS AND PHONE NUMBER <i>112 Town Park Dr. Kennesaw GA 30144 (770) 421-3400</i>			ANALYSES REQUESTED			FOR LAB USE ONLY			LAB # <i>117309</i>		
PROJECT MANAGER <i>Mr. David Goetsch</i>						ACK			VERIFIED		
REQUESTED COMPLETION DATE <i>14 Day Standard Test</i>			COPY TO (if applicable) <i>Judy Hartness</i>			QUOTE #			BS		
SAMPLING REQUIREMENTS SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>			NO. OF SAMP <i>3</i>			PG <i>2</i>			OF <i>2</i>		
SAMPLE ID						DATE			TIME		
C O M P			G R A B			S O I L			SAMPLE DESCRIPTIONS		
<i>1</i>			<i>1/19/00 15:09</i>			<i>X</i>			<i>HMW-17</i>		
<i>1/17/00</i>			<i>15:09</i>						<i>DUP-W</i>		
SAMPLED BY AND TIME <i>Victor Clarke</i>			DATE/TIME <i>1/19/00 17:30</i>			RELINQUISHED BY <i>[Signature]</i>			DATE/TIME <i>1/19/00 17:30</i>		
RECEIVED BY			DATE/TIME			RELINQUISHED BY			DATE/TIME		
RECEIVED BY			DATE/TIME			RELINQUISHED BY			DATE/TIME		
RECEIVED BY LAB <i>Windy</i>			DATE/TIME <i>1/22/00 9:00</i>			SAMPLE SHIPPED VIA UPS <input type="checkbox"/> BUS <input type="checkbox"/> <b>FED-EX</b> <input checked="" type="checkbox"/> HAND <input type="checkbox"/> OTHER <input type="checkbox"/>			AIR BILL # <i>813 984 610 923</i>		
REMARKS			ENTERED INTO LIMS			COC REVIEWED			HAZWRAP/NEESA Y N		
									DC LEVEL 1 2 3		
									COC <input checked="" type="checkbox"/>		
									ANA REC <input checked="" type="checkbox"/>		
									CUST SEAL <i>OK</i>		
									SAMPLE COND <i>good</i>		
									ICE TEMP <i>22 (09/00)</i>		
									PH <i>1 (Mest)</i>		

PAGE 02

ANALYTICAL SERVICES

F-89

471



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

January 28, 2000


Case Narrative ASI Sample 117186

Five water samples were collected on January 17, 2000 and arrived at ASI on January 18, 2000. One equipment blank and two QC samples were included. All conditions for proper preservation and shipment were met. Samples were logged into LIMS as ASI sample 117186 for analysis of VOA, BNA, and metals.

Base/Neutrals and Acids were analyzed in batch 54908 using EPA method 8270. Recoveries were high for the LC for several compounds. All non-QC sample results for BNA were BDL. All other necessary measurement quality objectives were met.

Volatile organics were analyzed in batch 55047 using EPA method 8260. LC recoveries were low for acetone and 2-butanone; the LCD recoveries were within acceptance range. The LC/LCD RPDs were high for acetone and 2-butanone. Samples 117186-1, -2, and -3 were analyzed at a 1:5 dilution. All other necessary measurement quality objectives were met for VOA analysis.

Lead was analyzed in batch 54383 using GFAA EPA method 7421. Arsenic and barium were analyzed in batch 54391 using ICP EPA method 6010. Samples were redigested to include client-specific QC samples. The MSD recovery was low for arsenic and the MS/MSD recoveries were low for barium. All other measurement quality objectives were met for metals.

  
Callie Brinkley  
Quality Assurance

**RECEIVED**

FEB 02, 2000

LAW ENVIRONMENTAL



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117186-1

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-14R, 01/17/2000, 15:38, received 01/18/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	48 J	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	220	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	9	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

*gaw*  
2/10/00

**Sample Description**

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-14R, 01/17/2000, 15:38, received 01/18/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **117186-4**

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HMW-2, 01/16/2000, 13:47, received 01/18/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 7421	<b>Metals</b> Total Lead (Pb)	BDL <i>gaw</i> 2/10/00	3	ug/L



# ANALYTICAL SERVICES, INC.

459

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117186-5

January 31, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, Equipment Blank, 01/16/2000, 11:17, received 01/18/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Metals</b>				
EPA 6010	Total Arsenic (As)	BDL	10	ug/L
EPA 6010	Total Barium (Ba)	BDL	20	ug/L
EPA 7421	Total Lead (Pb)	BDL	3	ug/L
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L

gaw  
2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, Equipment Blank, 01/16/2000, 11:17, received 01/18/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00

# ASI ANALYTIC SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
 110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201

V2P2

CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Law Gabb</i>			PROJECT NAME <i>Hunter AAF</i>			PROJECT NUMBER <i>12001-9-3411</i>			PURCHASE ORDER NO.		
CLIENT ADDRESS AND PHONE NUMBER <i>112 Town park DR. Kennesaw, GA 30144</i>			ANALYSES REQUESTED <i>5030B/8260B (VOC) 3520C/8270C METALS AS, BA, PB METALS PB</i>			LAB ID			FOR LAB USE ONLY		
PROJECT MANAGER <i>Mr. David</i>									COPY TO (if applicable) <i>Judy Hartness</i>		
REQUESTED COMPLETION DATE			SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			PROJECT NO.			ACK VERIFIED		
SAMPLE ID			DATE			TIME			QUOTE #		
COM P			GRA B			SOIL			NO. OF SAMP <i>5</i> PG <i>2</i> OF <i>2</i>		
SAMPLE DESCRIPTIONS			1			2			REMARKS/ADDITIONAL INFORMATION		
<i>1 HMW-2</i>			<i>1</i>			<i>1</i>			<i>-4 * P.S. Call PM</i>		
<i>2 Equipment Blank</i>			<i>6</i>			<i>3 2 1</i>			<i>-5 For Turn around time on Analysis 770-421-3400</i>		
RECEIVED BY AND TITLE <i>Victor Clarke</i>			DATE/TIME <i>1-17-00 18:30</i>			RELINQUISHED BY <i>[Signature]</i>			DATE/TIME <i>1-17-00 18:30</i>		
RECEIVED BY			DATE/TIME			RELINQUISHED BY			DATE/TIME		
RECEIVED BY			DATE/TIME			RELINQUISHED BY			DATE/TIME		
RECEIVED BY LAB <i>Wahyud</i>			DATE/TIME <i>1/18/00 09:00</i>			SAMPLE SHIPPED VIA UPS BUS <b>FED-EX</b> HAND OTHER			AIR BILL # <i>813 984 611 047</i>		
REMARKS			ENTERED INTO LIMS			DOC REVIEWED					

F-79

197

# ASI ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

**CHAIN OF CUSTODY RECORD**

V 2 P2

CLIENT NAME <i>Law Gobb</i>				# OF CONTAINERS	PROJECT NAME <i>Hunter AAF</i>		PROJECT NUMBER <i>12001-9-3411</i>		L A B  I D	PURCHASE ORDER NO.					
CLIENT ADDRESS AND PHONE NUMBER <i>112 Town park Dr. Kennesaw GA 30144 (770) 421-3400</i>					ANALYSES REQUESTED						FOR LAB USE ONLY				
PROJECT MANAGER <i>MR. David Go</i>		COPY TO (if applicable) <i>Judy HARTNESS</i>									LAB # <i>117186</i>				
REQUESTED COMPLETION DATE		SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER									PROJECT NO.				
				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____								ACK		VERIFIED	
				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> _____								QUOTE #		BS	
SAMPLE ID	DATE	TIME	C O M P	G R A B	S O I L	SAMPLE DESCRIPTIONS									
1	1/17/00	15:38		X		HMW-14R	6	3	2	1	-1	(MS/MSD)			
2		15:38				HMW-14R-WMS	6	3	2	1	-2	(MS/MSD)			
3		15:38				HMW-14R-WMSD	6	3	2	1	-3	(MS/MSD)			
								<span style="font-size: 1.5em; font-family: cursive;">*PS) call PM For Turn around TIME ON ANALYSIS</span>							
SAMPLED BY AND TITLE <i>Victor Clarke</i>				DATE/TIME <i>1-17-00 18:30</i>		RELINQUISHED BY <i>[Signature]</i>			DATE/TIME <i>1/17/00 18:30</i>		HAZWRAP/NEESA Y N				
RECEIVED BY				DATE/TIME		RELINQUISHED BY			DATE/TIME		OC LEVEL 1 2 3		<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
RECEIVED BY				DATE/TIME		RELINQUISHED BY			DATE/TIME		COC		<input type="checkbox"/> ICE		
RECEIVED BY LAB <i>[Signature]</i>				DATE/TIME <i>1/18/00 0800</i>		SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input checked="" type="checkbox"/> FEDEX <input type="checkbox"/> HAND <input type="checkbox"/> OTHER			AIR BILL # <i>813 984 611 047</i>		ANA REQ		TEMP <i>4/2 (OR)</i>		
REMARKS											CUST SEAL <i>MS</i>		PH <i>1 (MET)</i>		
											SAMPLE COND <i>good</i>				
											ENTERED INTO LIMS		COC REVIEWED		

F-80

UNIVERSITY MICROFILMS



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092

(770) 734-4200 • (770) 734-4201 FAX

January 17, 2000

Case Narrative ASI Sample 116636

Twelve Encore soil samples and one aqueous sample were collected on January 5, 2000 and arrived at ASI on January 6, 2000. All conditions for proper preservation and shipment were met. Samples were logged into LIMS as ASI sample 116636 for analysis of VOC, BNA, pesticides, PCB and percent moisture. All soil samples were reported on a dry-weight basis. All holding times were met.

Base/Neutrals and Acids in water were analyzed in batch 54627 using EPA method 8270. The LC recoveries were high for benzo(ghi)perylene, di-n-butylphthalate, dinbenzo(a,h)anthracene, diethylphthalate, and indeno (1,2,3-cd) pyrene. All recoveries were within control limits. S1 and S2 surrogate recoveries were low for the LCS. The LC/LCS were re-extracted and re-analyzed with surrogate recoveries within acceptance range. The S2 surrogate recovery was low for dayblank 01/06. The dayblank was re-analyzed with recoveries within acceptance range. The S2 surrogate recovery was low for sample 116636-13. The sample was re-analyzed with the same results. All other necessary measurement quality objectives were met.

VOC in soil were analyzed in batch 54642 using EPA method 8260. The LC recovery for tetrachloroethene was slightly low but within control limits. The MS/MSD was analyzed in duplicate. Duplicate samples for 116636-2 and -6 were analyzed and reported due to poor instrument purge in the original analyses. Sample 116636-9 was analyzed three times due to poor instrument purge with results reported from the second duplicate. All other necessary measurement quality objectives were met for this batch.

VOC in water were analyzed in batch 54683 using EPA method 8260. The LC recoveries were high for 2-butanone and chloromethane. The LCS was analyzed in duplicate and all other necessary measurement quality objectives were met.

PCBs in soil were analyzed in batch 54687 using EPA method 8082. The LC was re-analyzed with a PCB 1254 spike as per client request. Sample 116636-9 was analyzed in duplicate and all other necessary measurement quality objectives were met.

Pesticides in soil were analyzed in batch 54689 using EPA method 8081. Sample 116583-1 was used for the MS/MSD. The S3 surrogate recoveries were high for 116636-5 and -9 Dup. All other necessary measurement quality objectives were met for this batch.

Percent moisture for the soil samples was analyzed in batch 54668. Sample 116636-8 was analyzed in duplicate and all necessary measurement quality objectives were met.



Callie Brinkley  
Quality Assurance

405



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-1**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-31-1, 01/05/2000, 09:20, received 01/06/2000

### Analytical Method

### Analyte

### Result

### Detection Limit

### Units

#### General Chemistry

Analytical Method	Analyte	Result	Detection Limit	Units
ASTM D 2216	Moisture	6.0	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	53	ug/kg
EPA 8260B	Benzene	BDL	5.3	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.3	ug/kg
EPA 8260B	Chlorobenzene	BDL	5.3	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.3	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.3	ug/kg
EPA 8260B	Methylene chloride	BDL	5.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.3	ug/kg
EPA 8260B	Toluene	BDL	5.3	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	Trichloroethene	BDL	5.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.3	ug/kg

#### Volatile Organics

EPA 8260B	Acetone	BDL	53	ug/kg
EPA 8260B	Benzene	BDL	5.3	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.3	ug/kg
EPA 8260B	Chlorobenzene	BDL	5.3	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.3	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.3	ug/kg
EPA 8260B	Methylene chloride	BDL	5.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.3	ug/kg
EPA 8260B	Toluene	BDL	5.3	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	Trichloroethene	BDL	5.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.3	ug/kg

OK  
2-10-2000

BDL - Below Detection Limit

Note: Results reported on dry-weight basis





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-2**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-31-2, 01/05/2000, 09:30, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	6.0	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	53	ug/kg
EPA 8260B	Benzene	BDL	5.3	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.3	ug/kg
EPA 8260B	Chlorobenzene	BDL	5.3 J	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.3	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.3	ug/kg
EPA 8260B	Methylene chloride	BDL	5.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.3	ug/kg
EPA 8260B	Toluene	BDL	5.3	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	Trichloroethene	BDL	5.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.3	ug/kg

*gth*  
2-10-2000

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

407



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-3**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-32-1, 01/05/2000, 09:55, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	5.3	0.04	%
<b>PCB's</b>				
EPA 8082	PCB 1254	BDL	35	ug/kg
		<i>gsw</i> 2/10/00		

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116636-4

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-32-2, 01/05/2000, 10:00, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
	<b>General Chemistry</b>			
ASTM D 2216	Moisture	8.6	0.04	%
	<b>PCB's</b>			
EPA 8082	PCB 1254	BDL	36	ug/kg

*gaw*  
2/10/00

409



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-5**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, Duplicate D, 01/05/2000, 12:00, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	5.5	0.04	%
<b>PCB's</b>				
EPA 8082	PCB 1254	BDL	35	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-6**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-33-1, 01/05/2000, 11:40, received 01/06/2000

### Analytical Method

### Analyte

### Result

### Detection Limit

### Units

#### General Chemistry

Analytical Method	Analyte	Result	Detection Limit	Units
ASTM D 2216	Moisture	6.5	0.04	%

#### Volatile Organics

EPA 8260B	Acetone	BDL	53	ug/kg
EPA 8260B	Benzene	BDL	5.3	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.3	ug/kg
EPA 8260B	Chlorobenzene	BDL	5.3 J	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.3	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.3	ug/kg
EPA 8260B	Methylene chloride	BDL	5.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.3	ug/kg
EPA 8260B	Toluene	BDL	5.3 J	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	Trichloroethene	BDL	5.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.3	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

Page 1 of 2

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-33-1, 01/05/2000, 11:40, received 01/06/2000

**Analytical**

<b>Method</b>	<b>Analyte</b>	<b>Result</b>	<b>Detection Limit</b>	<b>Units</b>
EPA 8082	PCB's PCB 1254	BDL	35	ug/kg

*gaw*  
*2/10/00*

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-9**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-33-2, 01/05/2000, 11:45, received 01/06/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	6.2	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	53	ug/kg
EPA 8260B	Benzene	BDL	5.3	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.3	ug/kg
EPA 8260B	Chlorobenzene	BDL	5.3 J	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.3	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.3	ug/kg
EPA 8260B	Methylene chloride	BDL	5.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.3	ug/kg
EPA 8260B	Toluene	BDL	5.3 J	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.3	ug/kg
EPA 8260B	Trichloroethene	BDL	5.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.3	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*Jan 2-10-2000*

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-33-2, 01/05/2000, 11:45, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8082	PCB's PCB 1254	BDL	35	ug/kg

*gaw*  
*2/10/00*

BDL - Below Detection Limit

Note: Results reported on dry-weight basis





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116636-10

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-34-1, 01/05/2000, 12:15, received 01/06/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	7.4	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	54	ug/kg
EPA 8260B	Benzene	BDL	5.4	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.4	ug/kg
EPA 8260B	Chlorobenzene	BDL <i>J</i>	5.4 <i>J</i>	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.4	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.4	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.4	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.4	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.4	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.4	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.4	ug/kg
EPA 8260B	Methylene chloride	BDL	5.4	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.4	ug/kg
EPA 8260B	Toluene	BDL <i>J</i>	5.4 <i>J</i>	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.4	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.4	ug/kg
EPA 8260B	Trichloroethene	BDL	5.4	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.4	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.4	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*904*  
*2-10-2000*

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-34-1, 01/05/2000, 12:15, received 01/06/2000

**Analytical**

<b>Method</b>	<b>Analyte</b>	<b>Result</b>	<b>Detection Limit</b>	<b>Units</b>
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.6	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.6	ug/kg
EPA 8081A	Chlordane	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.6	ug/kg
EPA 8081A	Dieldrin	BDL	3.6	ug/kg
EPA 8081A	Methoxychlor	BDL	18	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

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## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-11**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-34-2, 01/05/2000, 12:25, received 01/06/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	10.7	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	56	ug/kg
EPA 8260B	Benzene	BDL	5.6	ug/kg
EPA 8260B	2-Butanone	BDL	28	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.6	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.6	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.6	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.6	ug/kg
EPA 8260B	Methylene chloride	BDL	5.6	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.6	ug/kg
EPA 8260B	Toluene	BDL J	5.6	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.6	ug/kg
EPA 8260B	Trichloroethene	BDL	5.6	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.6	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.6	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*GMH*  
*2-10-2000*

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-34-2, 01/05/2000, 12:25, received 01/06/2000

**Analytical**

<b>Method</b>	<b>Analyte</b>	<b>Result</b>	<b>Detection Limit</b>	<b>Units</b>
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.7	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.7	ug/kg
EPA 8081A	Chlordane	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.7	ug/kg
EPA 8081A	Dieldrin	BDL	3.7	ug/kg
EPA 8081A	Methoxychlor	BDL	19	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

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## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116636-12**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, Duplicate F, 01/05/2000, 14:30, received 01/06/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	12	0.04	%
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.7	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.7	ug/kg
EPA 8081A	Chlordane	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.7	ug/kg
EPA 8081A	Dieldrin	BDL	3.7	ug/kg
EPA 8081A	Methoxychlor	BDL	19	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

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419

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel

Report No. 116636-13

January 18, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, SB-40-W, 01/05/2000, 18:00, received 01/06/2000

### Analytical Method

### Analyte

### Result

### Detection Limit

### Units

#### Volatile Organics

EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L

#### Base/Neutral Extractable Organics

EPA 8270C	Acenaphthene	BDL	10	ug/L
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*gaw*  
2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, SB-40-W, 01/05/2000, 18:00, received 01/06/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

gaw  
2/10/00

# ASI

# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
 110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201

V X P1/5

CHAIN OF CUSTODY RECORD

CLIENT NAME <b>LAW ENG + ENV SERVICES</b>			PROJECT NAME <b>HUNTER AAF</b>		PROJECT NUMBER <b>12001-9-3411</b>		PURCHASE ORDER NO.					
CLIENT ADDRESS AND PHONE NUMBER <b>112 Town Park Drive (770) 421- KENNESAW, GA 30144 3400</b>			ANALYSES REQUESTED				FOR LAB USE ONLY					
PROJECT MANAGER <b>DAVID GOERSTEL</b>		COPY TO (if applicable)		NO OF CONTAINERS	ENCLOSURE VOLs - SW821dB	MOISTURE - D2216	PCB - SW 802a	Pesticide SW 8081A	VOLs - SW821dB	LAB # <b>116636</b>		
REQUESTED COMPLETION DATE <b>1/8/00 (48hr)</b>		SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>								PROJECT NO.		
SAMPLE ID	DATE	TIME	COMP	SOIL	SAMPLE DESCRIPTIONS					ACK	VERIFIED	
										QUOTE #	BS	
										NO. OF SAMP	PG	OF
										<b>13</b>	<b>1</b>	<b>2</b>
										REMARKS/ADDITIONAL INFORMATION		
•	1/5/00	0920	XX	SB-31-1	4	2	1			-1	48hr TAT - SOIL	
•	1/5/00	0930	XX	SB-31-2	4	3	1			-2	48hr TAT - SOIL	
•	1/5/00	0955	XX	SB-32-1	1					-3	48hr TAT - SOIL	
•	1/5/00	1000	XX	SB-32-2	1					-4	48hr TAT - SOIL	
•	1/5/00	1200	XX	Duplicate D	1					-5	48hr TAT - SOIL	
•	1/5/00	1140	XX	SB-33-1	5	3	1			-6	48hr TAT - SOIL	
•	1/5/00	1140	XX	SB-33-1MS/MSD	1				-7 MS	-8 MSD	-7	48hr TAT - SOIL
•	1/5/00	1145	XX	SB-33-2	5	3	1			-9	-8	48hr TAT - SOIL
•	1/5/00	1215	XX	SB-34-1	5	3	1			-10	-9	48hr TAT - SOIL
•	1/5/00	1225	XX	SB-34-2	5	3	1			-11	-10	48hr TAT - SOIL
•	1/5/00	1430	XX	Duplicate F	1					-12	-11	48hr TAT - SOIL
•	1/5/00	1415	XX	HMW-14R-1	5	3	1					14 day TAT - SOIL
•	1/5/00	1440	XX	HMW-14R-2	5	3	1					14 day TAT - SOIL
•	1/5/00	1440	XX	HMW-14R-2MS/MSD	5	3	1					14 day TAT - SOIL
•	1/5/00	1530	XX	SB-30-1	5	3	1					14 day TAT - SOIL
SAMPLED BY AND TITLE <b>TREMAS M. KELLER / Gen. Mgr</b>			DATE/TIME <b>1/5/00</b>		RELINQUISHED BY <i>[Signature]</i>			DATE/TIME <b>1/5/00 19:45</b>		HAZWRAP/NEESA Y N		
RECEIVED BY <b>FED EX 813984611404</b>			DATE/TIME <b>1/5/00 19:45</b>		RELINQUISHED BY:			DATE/TIME		OC LEVEL 1 2 3		
RECEIVED BY			DATE/TIME		RELINQUISHED BY:			DATE/TIME		COC <input checked="" type="checkbox"/>		
RECEIVED BY LAB <i>[Signature]</i>			DATE/TIME <b>1/6/00 9:00</b>		SAMPLE SHIPPED VIA <b>FED-EX</b>			AIR BILL # <b>813984611404</b>		ICE <input checked="" type="checkbox"/>		
REMARKS					OTHER			ENTERED INTO LIMS		COC REVIEWED		

F-39

421



# ASI ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
 110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
 (770) 734-4200 • FAX (770) 734-4201

V X P1/5

CHAIN OF CUSTODY RECORD

CLIENT NAME <b>LAW ENG + ENV. SVCS</b>			PROJECT NAME <b>Hunter AAF</b>		PROJECT NUMBER <b>12001-9-3411</b>		PURCHASE ORDER NO.																																								
CLIENT ADDRESS AND PHONE NUMBER <b>112 Town Park Drive (770) 421- Kennesaw, GA 30144 3400</b>			# OF CONTAINERS	ANALYSES REQUESTED						FOR LAB USE ONLY																																					
PROJECT MANAGER <b>DAVID GOERSTHEL</b>				<table border="1"> <tr> <td style="writing-mode: vertical-rl; text-orientation: mixed;">ENCLOSURE VOCs - SW 8270C</td> <td style="writing-mode: vertical-rl; text-orientation: mixed;">VOCs - SW 8270C</td> <td style="writing-mode: vertical-rl; text-orientation: mixed;">MOISTURE DZ 16 40ml</td> <td style="writing-mode: vertical-rl; text-orientation: mixed;">VOCs - SW 8270C</td> <td style="writing-mode: vertical-rl; text-orientation: mixed;">VOCs - SW 8270C</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						ENCLOSURE VOCs - SW 8270C	VOCs - SW 8270C	MOISTURE DZ 16 40ml	VOCs - SW 8270C	VOCs - SW 8270C								LAB # <b>116636</b>																									
ENCLOSURE VOCs - SW 8270C	VOCs - SW 8270C	MOISTURE DZ 16 40ml								VOCs - SW 8270C	VOCs - SW 8270C																																				
REQUESTED COMPLETION DATE <b>1/8/00 (48hr)</b>			PROJECT NO.			ACK			VERIFIED																																						
SAMPLE ID			DATE			TIME			COM P			GRA I L			SO I L			SAMPLE DESCRIPTIONS			COPY TO (if applicable)			SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			QUOTE #			BS			NO. OF SAMP			PG			OF								
•			1/5/00			1530			XX			X			X			SB-30-2			5			3			1			1															REMARKS/ADDITIONAL INFORMATION		
•			1/5/00			1800			X			X			X			SB-40-W			5			3			2												-13			14day TAT - Soil					
•			1/5/00			1200												HAAFTB-W2			2			2																		48hr TAT - Water					
•			1/5/00			1200																																				14day TAT - Water					
SAMPLED BY AND TITLE <i>Thomas R. Keill / Geologist</i>			DATE/TIME <b>1/5/00</b>			RELINQUISHED BY <i>[Signature]</i>			DATE/TIME <b>1/5/00 1945</b>			HAZWRAP/NEESA Y N			OC LEVEL 1 2 3			COC <input checked="" type="checkbox"/>			ICE <input checked="" type="checkbox"/>			ANA REQ <input checked="" type="checkbox"/>			TEMP <b>2.2 (in. 2)</b>			CUST SEAL <input checked="" type="checkbox"/>			PH <b>n/a</b>			SAMPLE COND. <b>good</b>											
RECEIVED BY <b>FEDEX 813 984611404</b>			DATE/TIME <b>1/5/00 1945</b>			RELINQUISHED BY:			DATE/TIME																																						
RECEIVED BY LAB <i>[Signature]</i>			DATE/TIME <b>1/6/00 9:00</b>			SAMPLE SHIPPED VIA <b>FED-EX</b>			AIR BILL # <b>813984611404</b>			ENTERED INTO LIMS			COC REVIEW																																

F-40



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

January 18, 2000

Case Narrative ASI Sample 116731

Eleven Encore soil samples were collected on January 6, 2000 and arrived at ASI on January 7, 2000. All conditions for proper preservation and shipment were met. Samples were logged into LIMS as ASI sample 116731 for analysis of VOC, BNA, pesticides, and percent moisture. All soil samples were reported on a dry-weight basis. All holding times were met.

Organochlorine pesticides in soil were analyzed in batch 54698 using EPA method 8081. A second LSC was analyzed to include a chlordane spike. The S1 surrogate recoveries were low for 116731-5 and -9 due to matrix interference. All other necessary measurement quality objectives were met for this batch.

Base/Neutrals and Acids in water were analyzed in batch 54713 using EPA method 8270. Law Environmental samples 116641-3MS and -4MSD and 116731-2MS and -3MSD were analyzed. Recoveries for 116731-2MS and -3MSD were reported. The MS/MSD recoveries for pyrene were high. 116731-2MS and -3MSD were re-extracted and re-analyzed in order to confirm results. Sample 116731-9 and -9 Dup were re-analyzed at a 1:10 dilution. Sample 116731-1 was re-extracted and re-analyzed twice in order to confirm results. All other necessary measurement quality objectives were met.

VOC in soil were analyzed in batch 54784 using EPA method 8260. The MS/MSD was analyzed in duplicate. MS recoveries were low for benzene, trichlorethene, toluene, and chlorobenzene. MSD recoveries were low for toluene and chlorobenzene. No dilutions were necessary and all other necessary measurement quality objectives were met for this batch.

Percent moisture was analyzed in batch 54744. Samples 116731-9 and -11 were analyzed in duplicate and all necessary measurement quality objectives were met.

Callie Brinkley  
Quality Assurance



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. 116731-1

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-35-1, 01/06/2000, 09:35, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	9.4	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	55	ug/kg
EPA 8260B	Benzene	BDL	5.5	ug/kg
EPA 8260B	2-Butanone	BDL	27	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.5	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.5	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.5	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.5	ug/kg
EPA 8260B	Methylene chloride	BDL	5.5	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.5	ug/kg
EPA 8260B	Toluene	BDL J	5.5	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	Trichloroethene	BDL	5.5	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.5	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.5	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*QA*  
*2-10-2000*

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-35-1, 01/06/2000, 09:35, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	360	ug/kg
EPA 8270C	Acenaphthylene	BDL	360	ug/kg
EPA 8270C	Anthracene	BDL	360	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	360	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	360	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	360	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	360	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	360	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	360	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	360	ug/kg
EPA 8270C	Chrysene	BDL	360	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	360	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	360	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	Diethylphthalate	BDL	360	ug/kg
EPA 8270C	Fluoranthene	500	360	ug/kg
EPA 8270C	Fluorene	BDL	360	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	360	ug/kg
EPA 8270C	Naphthalene	BDL	360	ug/kg
EPA 8270C	Phenanthrene	BDL	360	ug/kg
EPA 8270C	Pyrene	BDL	360	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.5	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.5	ug/kg
EPA 8081A	Chlordane	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.5	ug/kg
EPA 8081A	Dieldrin	BDL	3.5	ug/kg
EPA 8081A	Methoxychlor	BDL	18	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. 116731-4

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-35-2, 01/06/2000, 10:05, received 01/07/2000

### Analytical Method

### Analyte

### Result

### Detection Limit

### Units

#### General Chemistry

Analytical Method	Analyte	Result	Detection Limit	Units
ASTM D 2216	Moisture	4.7	0.04	%

#### Volatile Organics

EPA 8260B	Acetone	BDL	52	ug/kg
EPA 8260B	Benzene	BDL	5.2	ug/kg
EPA 8260B	2-Butanone	BDL	26	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.2	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.2	ug/kg
EPA 8260B	Chloroethane	BDL	10	ug/kg
EPA 8260B	Chloroform	BDL	5.2	ug/kg
EPA 8260B	Chloromethane	BDL	10	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.2	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.2	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.2	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.2	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.2	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.2	ug/kg
EPA 8260B	Methylene chloride	BDL	5.2	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.2	ug/kg
EPA 8260B	Toluene	BDL J	5.2	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.2	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.2	ug/kg
EPA 8260B	Trichloroethene	BDL	5.2	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.2	ug/kg
EPA 8260B	Vinyl chloride	BDL	10	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.2	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*gms*  
2-10-2000

## Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-35-2, 01/06/2000, 10:05, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	350	ug/kg
EPA 8270C	Acenaphthylene	BDL	350	ug/kg
EPA 8270C	Anthracene	BDL	350	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	350	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	350	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	350	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	350	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	350	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	350	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	350	ug/kg
EPA 8270C	Chrysene	BDL	350	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	350	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	350	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	350	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	350	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	350	ug/kg
EPA 8270C	Diethylphthalate	BDL	350	ug/kg
EPA 8270C	Fluoranthene	BDL	350	ug/kg
EPA 8270C	Fluorene	BDL	350	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	350	ug/kg
EPA 8270C	Naphthalene	BDL	350	ug/kg
EPA 8270C	Phenanthrene	BDL	350	ug/kg
EPA 8270C	Pyrene	BDL	350	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.5	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.5	ug/kg
EPA 8081A	Chlordane	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.5	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.5	ug/kg
EPA 8081A	Dieldrin	BDL	3.5	ug/kg
EPA 8081A	Methoxychlor	BDL	18	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. **116731-5**

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-36-1, 01/06/2000, 10:45, received 01/07/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	9.2	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	55	ug/kg
EPA 8260B	Benzene	BDL	5.5	ug/kg
EPA 8260B	2-Butanone	BDL	28	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.5	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.5	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.5	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.5	ug/kg
EPA 8260B	Methylene chloride	BDL	5.5	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.5	ug/kg
EPA 8260B	Toluene	BDL J	5.5	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	Trichloroethene	BDL	5.5	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.5	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.5	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*Handwritten:* 2-10-2000

## Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-36-1, 01/06/2000, 10:45, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	360	ug/kg
EPA 8270C	Acenaphthylene	970 J	360	ug/kg
EPA 8270C	Anthracene	870	360	ug/kg
EPA 8270C	Benzo(a)anthracene	8700	360	ug/kg
EPA 8270C	Benzo(b)fluoranthene	8700	360	ug/kg
EPA 8270C	Benzo(k)fluoranthene	8600	360	ug/kg
EPA 8270C	Benzo(ghi)perylene	5700	360	ug/kg
EPA 8270C	Benzo(a)pyrene	8900	360	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	360	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	360	ug/kg
EPA 8270C	Chrysene	8900	360	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	360	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	360	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	360	ug/kg
EPA 8270C	Diethylphthalate	BDL	360	ug/kg
EPA 8270C	Fluoranthene	11000 -	360	ug/kg
EPA 8270C	Fluorene	BDL	360	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	5700	360	ug/kg
EPA 8270C	Naphthalene	BDL	360	ug/kg
EPA 8270C	Phenanthrene	2400 J	360	ug/kg
EPA 8270C	Pyrene	10000 J	360	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.6	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.6	ug/kg
EPA 8081A	Chlordane	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.6	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.6	ug/kg
EPA 8081A	Dieldrin	BDL	3.6	ug/kg
EPA 8081A	Methoxychlor	BDL	19	ug/kg

gaw  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. 116731-6

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-36-2, 01/06/2000, 12:15, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	16	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	60	ug/kg
EPA 8260B	Benzene	BDL	6.0	ug/kg
EPA 8260B	2-Butanone	BDL	30	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.0	ug/kg
EPA 8260B	Chlorobenzene	BDL J	6.0	ug/kg
EPA 8260B	Chloroethane	BDL	12	ug/kg
EPA 8260B	Chloroform	BDL	6.0	ug/kg
EPA 8260B	Chloromethane	BDL	12	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.0	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.0	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.0	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.0	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.0	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.0	ug/kg
EPA 8260B	Methylene chloride	BDL	6.0	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.0	ug/kg
EPA 8260B	Toluene	BDL J	6.0	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.0	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.0	ug/kg
EPA 8260B	Trichloroethene	BDL	6.0	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.0	ug/kg
EPA 8260B	Vinyl chloride	BDL	12	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.0	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-36-2, 01/06/2000, 12:15, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	390	ug/kg
EPA 8270C	Acenaphthylene	BDL	390	ug/kg
EPA 8270C	Anthracene	BDL	390	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	390	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	390	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	390	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	390	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	390	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	390	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	390	ug/kg
EPA 8270C	Chrysene	BDL	390	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	390	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	390	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	390	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	390	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	390	ug/kg
EPA 8270C	Diethylphthalate	BDL	390	ug/kg
EPA 8270C	Fluoranthene	BDL	390	ug/kg
EPA 8270C	Fluorene	BDL	390	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	390	ug/kg
EPA 8270C	Naphthalene	BDL	390	ug/kg
EPA 8270C	Phenanthrene	BDL	390	ug/kg
EPA 8270C	Pyrene	BDL	390	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. 116731-7

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, HMW-18-1, 01/06/2000, 12:55, received 01/07/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	22	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	64	ug/kg
EPA 8260B	Benzene	BDL	6.4	ug/kg
EPA 8260B	2-Butanone	BDL	32	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.4	ug/kg
EPA 8260B	Chlorobenzene	BDL J	6.4	ug/kg
EPA 8260B	Chloroethane	BDL	13	ug/kg
EPA 8260B	Chloroform	BDL	6.4	ug/kg
EPA 8260B	Chloromethane	BDL	13	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.4	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.4	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.4	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.4	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.4	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.4	ug/kg
EPA 8260B	Methylene chloride	BDL	6.4	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.4	ug/kg
EPA 8260B	Toluene	BDL J	6.4	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.4	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.4	ug/kg
EPA 8260B	Trichloroethene	BDL	6.4	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.4	ug/kg
EPA 8260B	Vinyl chloride	BDL	13	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.4	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*QMS*  
*2-10-2000*

## Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, HMW-18-1, 01/06/2000, 12:55, received 01/07/2000

## Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	420	ug/kg
EPA 8270C	Acenaphthylene	BDL	420	ug/kg
EPA 8270C	Anthracene	BDL	420	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	420	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	420	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	420	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	420	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	420	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	420	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	420	ug/kg
EPA 8270C	Chrysene	BDL	420	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	420	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	420	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	420	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	420	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	420	ug/kg
EPA 8270C	Diethylphthalate	BDL	420	ug/kg
EPA 8270C	Fluoranthene	BDL	420	ug/kg
EPA 8270C	Fluorene	BDL	420	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	420	ug/kg
EPA 8270C	Naphthalene	BDL	420	ug/kg
EPA 8270C	Phenanthrene	BDL	420	ug/kg
EPA 8270C	Pyrene	BDL	420	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	4.2	ug/kg
EPA 8081A	Chlordane-gamma	BDL	4.2	ug/kg
EPA 8081A	Chlordane	BDL	4.2	ug/kg
EPA 8081A	4,4'-DDD	BDL	4.2	ug/kg
EPA 8081A	4,4'-DDE	BDL	4.2	ug/kg
EPA 8081A	4,4'-DDT	BDL	4.2	ug/kg
EPA 8081A	Dieldrin	BDL	4.2	ug/kg
EPA 8081A	Methoxychlor	BDL	22	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel

Report No. 116731-8

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, HMW-18-2, 01/06/2000, 13:05, received 01/07/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	14	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	58	ug/kg
EPA 8260B	Benzene	BDL	5.8	ug/kg
EPA 8260B	2-Butanone	BDL	29	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.8	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.8	ug/kg
EPA 8260B	Chloroethane	BDL	12	ug/kg
EPA 8260B	Chloroform	BDL	5.8	ug/kg
EPA 8260B	Chloromethane	BDL	12	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.8	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.8	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.8	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.8	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.8	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.8	ug/kg
EPA 8260B	Methylene chloride	BDL	5.8	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.8	ug/kg
EPA 8260B	Toluene	BDL J	5.8	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.8	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.8	ug/kg
EPA 8260B	Trichloroethene	BDL	5.8	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.8	ug/kg
EPA 8260B	Vinyl chloride	BDL	12	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.8	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*PH*  
2-10-2000

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, HMW-18-2, 01/06/2000, 13:05, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	380	ug/kg
EPA 8270C	Acenaphthylene	BDL	380	ug/kg
EPA 8270C	Anthracene	BDL	380	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	380	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	380	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	380	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	380	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	380	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	380	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	380	ug/kg
EPA 8270C	Chrysene	BDL	380	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	380	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	380	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	Diethylphthalate	BDL	380	ug/kg
EPA 8270C	Fluoranthene	BDL	380	ug/kg
EPA 8270C	Fluorene	BDL	380	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	380	ug/kg
EPA 8270C	Naphthalene	BDL	380	ug/kg
EPA 8270C	Phenanthrene	BDL	380	ug/kg
EPA 8270C	Pyrene	BDL	380	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. 116731-9

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, Duplicate C, 01/06/2000, 12:00, received 01/07/2000

### Analytical Method

### Analyte

### Result

### Detection Limit

### Units

#### General Chemistry

Analytical Method	Analyte	Result	Detection Limit	Units
ASTM D 2216	Moisture	9.7	0.04	%

#### Volatile Organics

EPA 8260B	Acetone	BDL	55	ug/kg
EPA 8260B	Benzene	BDL	5.5	ug/kg
EPA 8260B	2-Butanone	BDL	28	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.5	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.5	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.5	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.5	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.5	ug/kg
EPA 8260B	Methylene chloride	BDL	5.5	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.5	ug/kg
EPA 8260B	Toluene	BDL J	5.5	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.5	ug/kg
EPA 8260B	Trichloroethene	BDL	5.5	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.5	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.5	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*gph*  
2-10-2000

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, Duplicate C, 01/06/2000, 12:00, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	370	ug/kg
EPA 8270C	Acenaphthylene	720 J	370	ug/kg
EPA 8270C	Anthracene	990	370	ug/kg
EPA 8270C	Benzo(a)anthracene	8000	370	ug/kg
EPA 8270C	Benzo(b)fluoranthene	8600	370	ug/kg
EPA 8270C	Benzo(k)fluoranthene	8100	370	ug/kg
EPA 8270C	Benzo(ghi)perylene	5400	370	ug/kg
EPA 8270C	Benzo(a)pyrene	8700	370	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	370	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	370	ug/kg
EPA 8270C	Chrysene	8000	370	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	2100	370	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	370	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	Diethylphthalate	BDL	370	ug/kg
EPA 8270C	Fluoranthene	11000 -	370	ug/kg
EPA 8270C	Fluorene	BDL	370	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	5200	370	ug/kg
EPA 8270C	Naphthalene	BDL	370	ug/kg
EPA 8270C	Phenanthrene	3600 J	370	ug/kg
EPA 8270C	Pyrene	9700 J	370	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.7	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.7	ug/kg
EPA 8081A	Chlordane	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.7	ug/kg
EPA 8081A	Dieldrin	BDL	3.7	ug/kg
EPA 8081A	Methoxychlor	BDL	19	ug/kg

Qaw  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. **116731-10**

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-37-1, 01/06/2000, 13:30, received 01/07/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	11	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	56	ug/kg
EPA 8260B	Benzene	BDL	5.6	ug/kg
EPA 8260B	2-Butanone	BDL	28	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.6	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.6	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.6	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.6	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.6	ug/kg
EPA 8260B	Methylene chloride	BDL	5.6	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.6	ug/kg
EPA 8260B	Toluene	BDL J	5.6	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.6	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.6	ug/kg
EPA 8260B	Trichloroethene	BDL	5.6	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.6	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.6	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*gpt*  
2-10-2000

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-37-1, 01/06/2000, 13:30, received 01/07/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	370	ug/kg
EPA 8270C	Acenaphthylene	BDL	370	ug/kg
EPA 8270C	Anthracene	BDL	370	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	370	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	370	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	370	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	370	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	370	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	370	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	370	ug/kg
EPA 8270C	Chrysene	BDL	370	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	370	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	370	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	370	ug/kg
EPA 8270C	Diethylphthalate	BDL	370	ug/kg
EPA 8270C	Fluoranthene	BDL	370	ug/kg
EPA 8270C	Fluorene	BDL	370	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	370	ug/kg
EPA 8270C	Naphthalene	BDL	370	ug/kg
EPA 8270C	Phenanthrene	BDL	370	ug/kg
EPA 8270C	Pyrene	BDL	370	ug/kg
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	3.7	ug/kg
EPA 8081A	Chlordane-gamma	BDL	3.7	ug/kg
EPA 8081A	Chlordane	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDD	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDE	BDL	3.7	ug/kg
EPA 8081A	4,4'-DDT	BDL	3.7	ug/kg
EPA 8081A	Dieldrin	BDL	3.7	ug/kg
EPA 8081A	Methoxychlor	BDL	19	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. Dave Goershel  
Report No. **116731-11**

January 19, 2000

### Sample Description

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-37-2, 01/06/2000, 13:45, received 01/07/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	18	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	61	ug/kg
EPA 8260B	Benzene	BDL	6.1	ug/kg
EPA 8260B	2-Butanone	BDL	30	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.1	ug/kg
EPA 8260B	Chlorobenzene	BDL J	6.1	ug/kg
EPA 8260B	Chloroethane	BDL	12	ug/kg
EPA 8260B	Chloroform	BDL	6.1	ug/kg
EPA 8260B	Chloromethane	BDL	12	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.1	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.1	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.1	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.1	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.1	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.1	ug/kg
EPA 8260B	Methylene chloride	BDL	6.1	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.1	ug/kg
EPA 8260B	Toluene	BDL J	6.1	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.1	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.1	ug/kg
EPA 8260B	Trichloroethene	BDL	6.1	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.1	ug/kg
EPA 8260B	Vinyl chloride	BDL	12	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.1	ug/kg

*gaw*  
2-10-2000

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

**Sample Description**

Law Environmental

Soil, Hunter AAF, Project #12001-9-3411, SB-37-2, 01/06/2000, 13:45, received 01/07/2000

**Analytical  
Method****Analyte****Result****Detection Limit****Units****Base/Neutral Extractable Organics**

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8270C	Acenaphthene	BDL	400	ug/kg
EPA 8270C	Acenaphthylene	BDL	400	ug/kg
EPA 8270C	Anthracene	BDL	400	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	400	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	400	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	400	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	400	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	400	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	400	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	400	ug/kg
EPA 8270C	Chrysene	BDL	400	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	400	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	400	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	400	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	400	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	400	ug/kg
EPA 8270C	Diethylphthalate	BDL	400	ug/kg
EPA 8270C	Fluoranthene	BDL	400	ug/kg
EPA 8270C	Fluorene	BDL	400	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	400	ug/kg
EPA 8270C	Naphthalene	BDL	400	ug/kg
EPA 8270C	Phenanthrene	BDL	400	ug/kg
EPA 8270C	Pyrene	BDL	400	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

# ASI ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

V I I T I

## CHAIN OF CUSTODY RECORD

CLIENT NAME <b>LAW ENGINEERING &amp; ENV SERVICES</b>				# OF CONTAINERS	PROJECT NAME <b>HUNTER AAF</b>		PROJECT NUMBER <b>12001-9-3411</b>		PURCHASE ORDER NO.				
CLIENT ADDRESS AND PHONE NUMBER <b>112 TOWN PARK DR KENNESAW GA 30144</b>					ANALYSES REQUESTED						FOR LAB USE ONLY		
PROJECT MANAGER <b>DAVE GOERSHAL</b>		COPY TO (if applicable)			D2216 Monitor	SW 8260B VOCs - ENCORE	SW 8270C SVOCs	SW 8081A Pests.	LAB # <b>116731</b>				
REQUESTED COMPLETION DATE <b>STANDARD TAT</b>		SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>							PROJECT NO.				
SAMPLE ID		DATE TIME		ACK					VERIFIED				
C O M P		G R A B		S O I L		SAMPLE DESCRIPTIONS		QUOTE #		BS			
NO. OF SAMP		PG		OF		REMARKS/ADDITIONAL INFORMATION							
1/6/00		09:35		X		SB-35-1		-1					
1/6/00		09:35		X		SB-35-1MS/MSD		-2 MS -3 MSD					
1/6/00		10:05		X		SB-35-2		-4 -5					
1/6/00		10:45		X		SB-36-1		-5 -4					
1/6/00		12:15		X		SB-36-2		-6 -5					
1/6/00		12:53		X		HMW-18-1		-7 -6					
1/6/00		13:05		X		HMW-18-2		-8 -7					
1/6/00		12:00		X		DUPLICATE C		-9 -8					
1/6/00		13:30		X		SB-37-1		-10 -9					
1/6/00		13:45		X		SB-37-2		-11 -10					
SAMPLED BY AND TITLE <b>THOMAS M. KELLER/Geo</b>				DATE/TIME <b>1/6/00</b>		RELINQUISHED BY <i>[Signature]</i>		DATE/TIME <b>1/6/00/19:45</b>		HAZWRAP/NEESA Y N			
RECEIVED BY: <b>FED-EX # 812984611220</b>				DATE/TIME <b>1/6/00 19:45</b>		RELINQUISHED BY:		DATE/TIME:		OC LEVEL 1 2 3			
RECEIVED BY:				DATE/TIME:		RELINQUISHED BY:		DATE/TIME:		COC <input checked="" type="checkbox"/> ICE <input checked="" type="checkbox"/>			
RECEIVED BY LIAISON <i>[Signature]</i>				DATE/TIME <b>1/7/00 09:15</b>		SAMPLE SHIPPED VIA UPS BUS FED-EX HAND OTHER		AIR BILL #		ANA REQ <input checked="" type="checkbox"/> TEMP <b>4°C (11:00)</b>			
REMARKS <b>Water</b>				DATE/TIME <b>1/7/00</b>		ENTERED INTO LIMS		COC REVIEWED		CUST SEAL <b>Intact</b> PH = <b>n/a</b>			
										SAMPLE COND. <i>[Signature]</i>			

F-72



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

January 17, 2000

Case Narrative ASI Sample 116583

Seven Encore soil samples and two aqueous samples were collected on January 4, 2000 and arrived at ASI on January 5, 2000. One aqueous trip blank and one aqueous equipment blank accompanied the samples. All conditions for proper preservation and shipment were met. Samples were logged into LIMS as ASI sample 116583 for analysis of VOC, BNA, pesticides, PCB and percent moisture. All soil samples were reported on a dry-weight basis. All holding times were met.

Pesticides in water were analyzed in batch 54625 using EPA method 8081. Sample 116583-1 was used for the MS/MSD. All necessary measurement quality objectives were met for this batch.

VOC in soil were analyzed in batch 54603 using EPA method 8260. Several surrogate recoveries were out of range for sample 116583-4 and -6. The samples were analyzed in duplicate and all recoveries were within control limits. Sample 116583-3 was analyzed in duplicate for the MS/MSD. Sample 116583-2 was also analyzed for the MS/MSD due to low recoveries using sample -3. Recoveries were still low due to matrix interference. Results for the MS/MSD were reported from the duplicate analysis of sample -3. MS recoveries were low for chlorobenzene and MSD recoveries were low for tetrachloroethene, toluene, and chlorobenzene. Sample 116583-6 was analyzed three times and at a 1:5 dilution. Detection limits were raised for sample -6 since results were reported from the 1.0 gram sample volume. All other necessary measurement quality objectives were met for this batch.

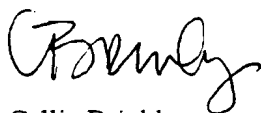
VOC in water were analyzed in batch 54637 using EPA method 8260. The LC recoveries were high for acetone, 2-butanone, chloroethane, and trans-1,2-dichloroethene. All recoveries were within control limits. Sample 116583-10 was used for the MS/MSD and all other necessary measurement quality objectives were met.

Base/Neutrals and Acids in soil were analyzed in batch 54611 using EPA method 8270. The LC/LCS was re-analyzed in order to ensure better recoveries. The LC recovery was high for indeno (1,2,3-cd) pyrene but was within control limits. Sample 116583-2 was used for the MS/MSD. Surrogate S4 recovery was slightly low for the MSD. Sample -2 and the MS/MSD were analyzed at a 1:10 dilution. All other necessary measurement quality objectives were met.

Base/Neutrals and Acids in water were analyzed in batch 54627 using EPA method 8270. . The LC recoveries were high for benzo(ghi)perylene, di-n-butylphthalate, dinbenzo(a,h)anthracene, diethylphthalate, and indeno (1,2,3-cd) pyrene. All recoveries were within control limits. S1 and S2 surrogate recoveries were low for the LCS. The LC/LCS was re-extracted and re-analyzed with surrogate recoveries within acceptance range. All other necessary measurement quality objectives were met.

PCBs in water were analyzed in batch 54714 using EPA method 8082. LC recoveries for PCB 1016 and 1260 were low but within control limits. An LCS2 was analyzed with a PCB 1254 spike but recovery was zero. The MS/MSD recoveries were within acceptance range. S1 and S2 surrogate recoveries were low for the LCS. The LC/LCS were re-analyzed with the same results. Sample 116583-1 was used for the MS/MSD and all other necessary measurement quality objectives were met.

Percent moisture for the soil samples was analyzed in batch 54632. Sample 116583-7 was analyzed in duplicate and all necessary measurement quality objectives were met.



Callie Brinkley  
Quality Assurance

385



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-1

January 18, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HAAFEB-SO, 01/04/2000, 10:00, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L

*gaw*  
2/10/00



**Sample Description**

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HAAFEB-SO, 01/04/2000, 10:00, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L
<b>Pesticides</b>				
EPA 8081A	Chlordane-alpha	BDL	0.5	ug/L
EPA 8081A	Chlordane-gamma	BDL	0.5	ug/L
EPA 8081A	Chlordane	BDL	0.5	ug/L
EPA 8081A	4,4'-DDD	BDL	0.1	ug/L
EPA 8081A	4,4'-DDE	BDL	0.1	ug/L
EPA 8081A	4,4'-DDT	BDL	0.1	ug/L
EPA 8081A	Dieldrin	BDL	0.2	ug/L
EPA 8081A	Methoxychlor	BDL	0.5	ug/L
<b>PCB's</b>				
EPA 8082	PCB 1254	BDL J	1.0	ug/L

gaw  
2/10/00



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116583-2**

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-38-1, 01/04/2000, 10:50, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	12	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	57	ug/kg
EPA 8260B	Benzene	BDL	5.7	ug/kg
EPA 8260B	2-Butanone	BDL	28	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.7	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.7	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.7	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.7	ug/kg
EPA 8260B	Methylene chloride	BDL	5.7	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.7	ug/kg
EPA 8260B	Toluene	BDL	5.7	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.7	ug/kg
EPA 8260B	Trichloroethene	BDL	5.7	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.7	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.7	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-38-1, 01/04/2000, 10:50, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	1700	380	ug/kg
EPA 8270C	Acenaphthylene	1100	380	ug/kg
EPA 8270C	Anthracene	7400	380	ug/kg
EPA 8270C	Benzo(a)anthracene	15000	380	ug/kg
EPA 8270C	Benzo(b)fluoranthene	8600	380	ug/kg
EPA 8270C	Benzo(k)fluoranthene	9400	380	ug/kg
EPA 8270C	Benzo(ghi)perylene	5500	380	ug/kg
EPA 8270C	Benzo(a)pyrene	9900	380	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	380	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	380	ug/kg
EPA 8270C	Chrysene	14000	380	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	3100	380	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	380	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	380	ug/kg
EPA 8270C	Diethylphthalate	BDL	380	ug/kg
EPA 8270C	Fluoranthene	33000-	380	ug/kg
EPA 8270C	Fluorene	3900	380	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	5600 J	380	ug/kg
EPA 8270C	Naphthalene	530	380	ug/kg
EPA 8270C	Phenanthrene	39000	380	ug/kg
EPA 8270C	Pyrene	25000 J	380	ug/kg

*Law*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

389



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-3

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-38-2, 01/04/2000, 11:10, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	25	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	67	ug/kg
EPA 8260B	Benzene	BDL	6.7	ug/kg
EPA 8260B	2-Butanone	BDL	33	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.7	ug/kg
EPA 8260B	Chlorobenzene	BDL	6.7	ug/kg
EPA 8260B	Chloroethane	BDL	13	ug/kg
EPA 8260B	Chloroform	BDL	6.7	ug/kg
EPA 8260B	Chloromethane	BDL	13	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.7	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.7	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.7	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.7	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.7	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.7	ug/kg
EPA 8260B	Methylene chloride	BDL	6.7	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.7	ug/kg
EPA 8260B	Toluene	BDL	6.7	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.7	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.7	ug/kg
EPA 8260B	Trichloroethene	BDL	6.7	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.7	ug/kg
EPA 8260B	Vinyl chloride	BDL	13	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.7	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-38-2, 01/04/2000, 11:10, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	440	ug/kg
EPA 8270C	Acenaphthylene	BDL	440	ug/kg
EPA 8270C	Anthracene	BDL	440	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	440	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	440	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	440	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	440	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	440	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	440	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	440	ug/kg
EPA 8270C	Chrysene	BDL	440	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	440	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	440	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	Diethylphthalate	BDL	440	ug/kg
EPA 8270C	Fluoranthene	BDL	440	ug/kg
EPA 8270C	Fluorene	BDL	440	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	440	ug/kg
EPA 8270C	Naphthalene	BDL	440	ug/kg
EPA 8270C	Phenanthrene	BDL	440	ug/kg
EPA 8270C	Pyrene	BDL	440	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

391



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-4

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, Duplicate E, 01/04/2000, 11:10, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	24	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	66	ug/kg
EPA 8260B	Benzene	BDL	6.6	ug/kg
EPA 8260B	2-Butanone	BDL	33	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.6	ug/kg
EPA 8260B	Chlorobenzene	BDL	6.6	ug/kg
EPA 8260B	Chloroethane	BDL	13	ug/kg
EPA 8260B	Chloroform	BDL	6.6	ug/kg
EPA 8260B	Chloromethane	BDL	13	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.6	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.6	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.6	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.6	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.6	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.6	ug/kg
EPA 8260B	Methylene chloride	BDL	6.6	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.6	ug/kg
EPA 8260B	Toluene	BDL	6.6	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.6	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.6	ug/kg
EPA 8260B	Trichloroethene	BDL	6.6	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.6	ug/kg
EPA 8260B	Vinyl chloride	BDL	13	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.6	ug/kg

J  
↓

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis

**Sample Description**

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, Duplicate E, 01/04/2000, 11:10, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	430	ug/kg
EPA 8270C	Acenaphthylene	BDL	430	ug/kg
EPA 8270C	Anthracene	BDL	430	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	430	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	430	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	430	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	430	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	430	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	430	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	430	ug/kg
EPA 8270C	Chrysene	BDL	430	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	430	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	430	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	Diethylphthalate	BDL	430	ug/kg
EPA 8270C	Fluoranthene	BDL	430	ug/kg
EPA 8270C	Fluorene	BDL	430	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	430	ug/kg
EPA 8270C	Naphthalene	BDL	430	ug/kg
EPA 8270C	Phenanthrene	BDL	430	ug/kg
EPA 8270C	Pyrene	BDL	430	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

Page 2 of 2



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-5

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-39-1, 01/04/2000, 14:45, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	15	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	59	ug/kg
EPA 8260B	Benzene	BDL	5.9	ug/kg
EPA 8260B	2-Butanone	BDL	29	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.9	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.9	ug/kg
EPA 8260B	Chloroethane	BDL	12	ug/kg
EPA 8260B	Chloroform	BDL	5.9	ug/kg
EPA 8260B	Chloromethane	BDL	12	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.9	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.9	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.9	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.9	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.9	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.9	ug/kg
EPA 8260B	Methylene chloride	BDL	5.9	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.9	ug/kg
EPA 8260B	Toluene	BDL	5.9	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.9	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.9	ug/kg
EPA 8260B	Trichloroethene	BDL	5.9	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.9	ug/kg
EPA 8260B	Vinyl chloride	BDL	12	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.9	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis





# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel

Report No. 116583-6

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-39-2, 01/04/2000, 15:00, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	16	0.4	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	300	ug/kg
EPA 8260B	Benzene	BDL	30	ug/kg
EPA 8260B	2-Butanone	BDL	150	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	30	ug/kg
EPA 8260B	Chlorobenzene	BDL J	30	ug/kg
EPA 8260B	Chloroethane	BDL	60	ug/kg
EPA 8260B	Chloroform	BDL	30	ug/kg
EPA 8260B	Chloromethane	BDL	60	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	30	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	30	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	30	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	30	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	30	ug/kg
EPA 8260B	Ethylbenzene	BDL	30	ug/kg
EPA 8260B	Methylene chloride	BDL	30	ug/kg
EPA 8260B	Tetrachloroethene	BDL	30	ug/kg
EPA 8260B	Toluene	BDL	30	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	30	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	30	ug/kg
EPA 8260B	Trichloroethene	BDL	30	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	30	ug/kg
EPA 8260B	Vinyl chloride	BDL	60	ug/kg
EPA 8260B	Xylenes (total)	BDL	30	ug/kg

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

*Full  
2-10-2000*

395



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-7

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-40-1, 01/04/2000, 12:50, received 01/05/2000

### Analytical Method

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	13	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	57	ug/kg
EPA 8260B	Benzene	BDL	5.7	ug/kg
EPA 8260B	2-Butanone	BDL	29	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	5.7	ug/kg
EPA 8260B	Chlorobenzene	BDL J	5.7	ug/kg
EPA 8260B	Chloroethane	BDL	11	ug/kg
EPA 8260B	Chloroform	BDL	5.7	ug/kg
EPA 8260B	Chloromethane	BDL	11	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	5.7	ug/kg
EPA 8260B	Ethylbenzene	BDL	5.7	ug/kg
EPA 8260B	Methylene chloride	BDL	5.7	ug/kg
EPA 8260B	Tetrachloroethene	BDL	5.7	ug/kg
EPA 8260B	Toluene	BDL	5.7	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	5.7	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	5.7	ug/kg
EPA 8260B	Trichloroethene	BDL	5.7	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	5.7	ug/kg
EPA 8260B	Vinyl chloride	BDL	11	ug/kg
EPA 8260B	Xylenes (total)	BDL	5.7	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-8

January 18, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB-40-2, 01/04/2000, 13:05, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	21	0.04	%
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	63	ug/kg
EPA 8260B	Benzene	BDL	6.3	ug/kg
EPA 8260B	2-Butanone	BDL	32	ug/kg
EPA 8260B	Carbon tetrachloride	BDL	6.3	ug/kg
EPA 8260B	Chlorobenzene	BDL J	6.3	ug/kg
EPA 8260B	Chloroethane	BDL	13	ug/kg
EPA 8260B	Chloroform	BDL	6.3	ug/kg
EPA 8260B	Chloromethane	BDL	13	ug/kg
EPA 8260B	1,1-Dichloroethane	BDL	6.3	ug/kg
EPA 8260B	1,2-Dichloroethane	BDL	6.3	ug/kg
EPA 8260B	1,1-Dichloroethene	BDL	6.3	ug/kg
EPA 8260B	cis-1,2-Dichloroethene	BDL	6.3	ug/kg
EPA 8260B	trans-1,2-Dichloroethene	BDL	6.3	ug/kg
EPA 8260B	Ethylbenzene	BDL	6.3	ug/kg
EPA 8260B	Methylene chloride	BDL	6.3	ug/kg
EPA 8260B	Tetrachloroethene	BDL	6.3	ug/kg
EPA 8260B	Toluene	BDL	6.3	ug/kg
EPA 8260B	1,1,1-Trichloroethane	BDL	6.3	ug/kg
EPA 8260B	1,1,2-Trichloroethane	BDL	6.3	ug/kg
EPA 8260B	Trichloroethene	BDL	6.3	ug/kg
EPA 8260B	Trichlorofluoromethane	BDL	6.3	ug/kg
EPA 8260B	Vinyl chloride	BDL	13	ug/kg
EPA 8260B	Xylenes (total)	BDL	6.3	ug/kg

*gaw*  
2/10/00

BDL - Below Detection Limit  
Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116583-9**

January 18, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, HAAFTB-W1, 01/04/2000, 18:30, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L

*gaw*  
2/10/00



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 116583-10

January 18, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, SB-38-W, 01/04/2000, 17:30, received 01/05/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L

*gaw*  
2/10/00

## Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, SB-38-W, 01/04/2000, 17:30, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gas*  
2/10/00



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. **116583-11**

January 18, 2000

### Sample Description

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, Duplicate-TP, 01/04/2000, 17:30, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>Volatile Organics</b>				
EPA 8260B	Acetone	BDL	20	ug/L
EPA 8260B	Benzene	BDL	5	ug/L
EPA 8260B	2-Butanone	BDL	25	ug/L
EPA 8260B	Carbon tetrachloride	BDL	5	ug/L
EPA 8260B	Chlorobenzene	BDL	5	ug/L
EPA 8260B	Chloroethane	BDL	10	ug/L
EPA 8260B	Chloroform	BDL	5	ug/L
EPA 8260B	Chloromethane	BDL	3	ug/L
EPA 8260B	1,1-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,2-Dichloroethane	BDL	5	ug/L
EPA 8260B	1,1-Dichloroethene	BDL	5	ug/L
EPA 8260B	cis-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	trans-1,2-Dichloroethene	BDL	5	ug/L
EPA 8260B	Ethylbenzene	BDL	5	ug/L
EPA 8260B	Methylene chloride	BDL	5	ug/L
EPA 8260B	Tetrachloroethene	BDL	5	ug/L
EPA 8260B	Toluene	BDL	5	ug/L
EPA 8260B	1,1,1-Trichloroethane	BDL	5	ug/L
EPA 8260B	1,1,2-Trichloroethane	BDL	5	ug/L
EPA 8260B	Trichloroethene	BDL	5	ug/L
EPA 8260B	Trichlorofluoromethane	BDL	5	ug/L
EPA 8260B	Vinyl chloride	BDL	2	ug/L
EPA 8260B	Xylenes (total)	BDL	5	ug/L
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	10	ug/L

*gaw*  
2/10/00

**Sample Description**

Law Environmental

Water, grab, Hunter AAF, Project #12001-9-3411, Duplicate-TP, 01/04/2000, 17:30, received 01/05/2000

Analytical Method	Analyte	Result	Detection Limit	Units
EPA 8270C	Acenaphthylene	BDL	10	ug/L
EPA 8270C	Anthracene	BDL	10	ug/L
EPA 8270C	Benzo(a)anthracene	BDL	10	ug/L
EPA 8270C	Benzo(b)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(k)fluoranthene	BDL	10	ug/L
EPA 8270C	Benzo(ghi)perylene	BDL	10	ug/L
EPA 8270C	Benzo(a)pyrene	BDL	10	ug/L
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	10	ug/L
EPA 8270C	4-Bromophenyl phenyl ether	BDL	10	ug/L
EPA 8270C	Chrysene	BDL	10	ug/L
EPA 8270C	Dibenzo(a,h)anthracene	BDL	10	ug/L
EPA 8270C	Di-n-butylphthalate	BDL	10	ug/L
EPA 8270C	1,3-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,4-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	1,2-Dichlorobenzene	BDL	10	ug/L
EPA 8270C	Diethylphthalate	BDL	10	ug/L
EPA 8270C	Fluoranthene	BDL	10	ug/L
EPA 8270C	Fluorene	BDL	10	ug/L
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	10	ug/L
EPA 8270C	Naphthalene	BDL	10	ug/L
EPA 8270C	Phenanthrene	BDL	10	ug/L
EPA 8270C	Pyrene	BDL	10	ug/L

*gaw*  
2/10/00





# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

MDM  
NTP2 VB

## CHAIN OF CUSTODY RECORD

CLIENT NAME				PROJECT NAME				PROJECT NUMBER				PURCHASE ORDER NO.							
LAW ENG & ENV. SERVICES				Hunter AAP				12001-9-3411				FOR LAB USE ONLY							
CLIENT ADDRESS AND PHONE NUMBER				ANALYSES REQUESTED								LAB #							
112 Town Park Drive (770) 421-3400 Kennesaw, GA 30144				VOCs - SW 8260B		SVOCs - SW 8270C		Pest - SW 8081A		PCBs - SW 8082		VOCs - SW 8260B ENH		Mistwa - D2216		116583			
PROJECT MANAGER				COPY TO (if applicable)				LAB ID				PROJECT NO.							
DAVID GOERSTEL																			
REQUESTED COMPLETION DATE				SAMPLING REQUIREMENTS				ACK				VERIFIED							
11/7/00 (48 hr)				SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>															
SAMPLE ID	DATE	TIME	C O M P	G R A B	S O I L	SAMPLE DESCRIPTIONS	# OF CONTAINERS					QUOTE #							
												BS							
	11/4/00	10:00	X			HAAFEB-SO	7	3	2	-	-						WATER		
	11/4/00	10:50	X			SB-38-1	5		1		3	1					48 hr turn - soil		
	11/4/00	11:10	X			SB-38-2	5		1		3	1					48 hr turn - soil		
	11/4/00	11:10	X			Duplicate E	5		1		3	1					48 hr. turn - soil		
	11/4/00	1445	X			SB-39-1	4				3	1					48 hr. turn - soil		
	11/4/00	1500	X			SB-39-2	4				3	1					48 hr turn - soil		
	11/4/00	1250	X			SB-40-1	4				3	1					48 hr. turn - soil		
	11/4/00	1305	X			SB-40-2	4				3	1					48 hr turn - soil		
	11/4/00	1830	X			HAAFTB-W1	2	2									48hr turn - water		
	11/4/00	1730	X			SB-38-W	5	3	2								48 hr turn - water		
	11/4/00	1730	X			Duplicate - TP	5	3	2								48 hr turn - water		
SAMPLED BY AND TITLE				DATE/TIME				RELINQUISHED BY				DATE/TIME				HAZWRAP/NEESA Y N			
S. J. Geology				11/4/00				[Signature]				11/4/00 19:45				OC LEVEL 1 2 3			
RECEIVED BY				DATE/TIME				RELINQUISHED BY:				DATE/TIME				COC			
FED EX 813984611426				11/4/00 19:45												ANA REQ			
RECEIVED BY				DATE/TIME				RELINQUISHED BY:				DATE/TIME				CUST SEAL			
																PH = 10.18			
RECEIVED BY LAB				DATE/TIME				SAMPLE SHIPPED VIA				AIR BILL #				SAMPLE COND.			
MDM				11/5/00 8:55				UPS BUS FED-EX HAND OTHER				8139846114-6				Good			
REMARKS								500				ENTERED INTO LIMS				COC REVIEWED			

F-20



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GA 30092  
(770) 734-4200 • (770) 734-4201 FAX

February 15, 2000

Case Narrative ASI Sample 117719

One water and two soil samples were collected on January 31, 2000 and arrived at ASI on February 1, 2000. The sample cooler temperature was 1°C upon arrival at ASI. Samples were logged into LIMS as ASI sample 117719 for analysis of VOA, BNA, pesticides, oil and grease, phenols, pH, percent moisture, and metals.

Base/Neutrals in water were analyzed in batch 55218 using EPA method 8270. LC recoveries for several compounds were slightly low. All recoveries were within control limits with the exception of benzo(b)fluoranthene. In sample 117719-1, benzo(b)fluoranthene was flagged to indicate that the quantitation is an estimate. Sample 117719-1 was used for the MS/MSD and all other necessary measurement quality objectives were met. Base/Neutrals in soil were analyzed in batch 54764 using EPA method 8270. No dilutions were made and all measurement quality objectives were met.

Volatile organics were analyzed in batch 55197 using EPA method 8260. LC recoveries for methylene chloride and trans-1,2-dichloroethene were slightly high. All recoveries were within control limits. Sample 117719-1 was used for the MS/MSD and all other necessary measurement quality objectives were met.

Pesticides were analyzed in batch 55460 using EPA method 8081. A second LCS was analyzed to include toxaphene. Sample 117719-1 was used for the MS/MSD. Surrogate recoveries were low for sample 117719-1 and the MS/MSD due to matrix interference. These samples were re-analyzed with similar results. All other measurement quality objectives were met.

ICP metals were analyzed in batch 54429 using EPA method 6010. The MS/MSD recoveries were slightly high for arsenic. Lead was analyzed in batch 54430 using GFAA EPA method 7421. Mercury was analyzed in batch 53606 using EPA method 7470. All other measurement quality objectives were met for metals.

pH was analyzed in batch 55201 using EPA method 9040. Sample 117719-1 is reported as estimated since it was received out of hold. All other measurement quality objectives were met.

Phenol was analyzed in batch 55212 using EPA method 9066. All measurement quality objectives were met.

Percent moisture was analyzed on the soil samples in batch 55219 using method ASTM D 2216. All measurement quality objectives were met.

Oil and grease was analyzed in batch 55242 using EPA method 1664. All measurement quality objectives were met.

  
Callie Brinkley  
Quality Assurance



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117719-2

February 15, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB41-1, 01/31/2000, 11:46, received 02/01/2000

### Analytical

Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	24	0.04	%
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	430	ug/kg
EPA 8270C	Acenaphthylene	BDL	430	ug/kg
EPA 8270C	Anthracene	BDL	430	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	430	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	430	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	430	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	430	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	430	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	430	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	430	ug/kg
EPA 8270C	Chrysene	BDL	430	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	430	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	430	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	430	ug/kg
EPA 8270C	Diethylphthalate	BDL	430	ug/kg
EPA 8270C	Fluoranthene	BDL	430	ug/kg
EPA 8270C	Fluorene	BDL	430	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	430	ug/kg
EPA 8270C	Naphthalene	BDL	430	ug/kg
EPA 8270C	Phenanthrene	BDL	430	ug/kg
EPA 8270C	Pyrene	BDL	430	ug/kg

*gaw*  
3/1/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis

483



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis

110 Technology Parkway Norcross, GA 30092

(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Law Environmental  
112 Town Park Drive  
Kennesaw, GA 30144

Attention: Mr. David Goershel  
Report No. 117719-3

February 15, 2000

### Sample Description

Law Environmental

Soil, grab, Hunter AAF, Project #12001-9-3411, SB42-1, 01/31/2000, 14:28, received 02/01/2000

Analytical Method	Analyte	Result	Detection Limit	Units
<b>General Chemistry</b>				
ASTM D 2216	Moisture	25	0.04	%
<b>Base/Neutral Extractable Organics</b>				
EPA 8270C	Acenaphthene	BDL	440	ug/kg
EPA 8270C	Acenaphthylene	BDL	440	ug/kg
EPA 8270C	Anthracene	BDL	440	ug/kg
EPA 8270C	Benzo(a)anthracene	BDL	440	ug/kg
EPA 8270C	Benzo(b)fluoranthene	BDL	440	ug/kg
EPA 8270C	Benzo(k)fluoranthene	BDL	440	ug/kg
EPA 8270C	Benzo(ghi)perylene	BDL	440	ug/kg
EPA 8270C	Benzo(a)pyrene	BDL	440	ug/kg
EPA 8270C	4-Bromophenyl phenyl ether	BDL	440	ug/kg
EPA 8270C	Bis(2-ethylhexyl)phthalate	BDL	440	ug/kg
EPA 8270C	Chrysene	BDL	440	ug/kg
EPA 8270C	Dibenzo(a,h)anthracene	BDL	440	ug/kg
EPA 8270C	Di-n-butylphthalate	BDL	440	ug/kg
EPA 8270C	1,3-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	1,4-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	1,2-Dichlorobenzene	BDL	440	ug/kg
EPA 8270C	Diethylphthalate	BDL	440	ug/kg
EPA 8270C	Fluoranthene	BDL	440	ug/kg
EPA 8270C	Fluorene	BDL	440	ug/kg
EPA 8270C	Indeno(1,2,3-cd)pyrene	BDL	440	ug/kg
EPA 8270C	Naphthalene	BDL	440	ug/kg
EPA 8270C	Phenanthrene	BDL	440	ug/kg
EPA 8270C	Pyrene	BDL	440	ug/kg

*gaw*  
3/1/00

BDL - Below Detection Limit

Note: Results reported on dry-weight basis



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS  
110 TECHNOLOGY PARKWAY • NORCROSS, GA 30092  
(770) 734-4200 • FAX (770) 734-4201

V 2 X 1 U 2

## CHAIN OF CUSTODY RECORD

CLIENT NAME <b>LAW Gbb</b>		PROJECT NAME <b>HunterAAF</b>		PROJECT NUMBER <b>12001-3411</b>		PURCHASE ORDER NO.	
CLIENT ADDRESS AND PHONE NUMBER <b>112 town park dr kenosaw GA 30144 (770) 491-3400</b>		# OF CONTAINERS <b>5 VOC</b>		ANALYSES REQUESTED		FOR LAB USE ONLY	
PROJECT MANAGER <b>David Gardner</b> COPY TO (if applicable) <b>Judy Morris</b>						LAB # <b>117719</b>	
REQUESTED COMPLETION DATE <b>48 HRTAT</b>		SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		PROJECT NO.		ACK	
SAMPLE ID		DATE		TIME		VERIFIED	
SAMPLE DESCRIPTIONS		COM		GRAIL		QUOTE #	
		P		B		BS	
		S		O		NO. OF SAMP	
		I		I		PG	
						2	
						OF 2	
						REMARKS/ADDITIONAL INFORMATION	
1		1/31/00		11:46		-2	
2		1/11		11:46		HOLD!	
3		1/31/00		14:28		-3	
4		1/31/00		14:28		HOLD	
5		1/31/00		11:31		HOLD PER SH 2/1/00	
						* HOLD ON SB42-2	
						" " SB41-2	
						Pending Analyticals	
						ON SB41-1	
						and SB SB42-1	
SAMPLED BY AND TITLE <b>Victor Clarke</b>		DATE/TIME <b>1-31-00</b>		RELINQUISHED BY <b>[Signature]</b>		DATE/TIME <b>1-31-00 11:45</b>	
RECEIVED BY:		DATE/TIME		RELINQUISHED BY:		DATE/TIME	
RECEIVED BY		DATE/TIME		RELINQUISHED BY:		DATE/TIME	
RECEIVED BY LAB <b>Winkyard</b>		DATE/TIME <b>2/1/00 11:45</b>		SAMPLE SHIPPED VIA UPS BUS FED-EX <b>HAND</b> OTHER		AIR BILL #	
REMARKS						HAZWRAP/NEESA Y N	
						OC LEVEL 1 2 3	
						COC <input checked="" type="checkbox"/>	
						ANA REQ <input checked="" type="checkbox"/>	
						CUST SEAL NO	
						TEMP 1°C (18°F)	
						PH 1 (A) 2 (P) 4 (N)	
						SAMPLE COND. <b>good</b>	
						ENTERED INTO LIMS	
						COC REVIEWED	

F-102

## CASE NARRATIVE

SDG# HFTA01  
PROJECT#s S117071

STL Savannah

TCL Semivolatiles Fraction

The following samples were analyzed according to SW-846 Method 8270C.

SL#	SAMPLE DESCRIPTION	MATRIX
S117071*1	SB-50 (0-2)	Solid
S117071*2	SB-45 (0-2)	Solid
S117071*3	SB-49 (0-2)	Solid
S117071*6	SB-EQBLNK01	Liquid

The liquid sample was extracted in batch 1031A and the soil samples were extracted in batch 1101A. The liquid sample was extracted with a lab control sample (LCS) spiked with the full compound spiking list and the soil samples were extracted with a LCS spiked with the routine spike compound list.

A matrix spike and matrix spike duplicate were performed on sample S117071-2 (SB-45 (0-2)).

**CASE NARRATIVE**

SDG# HFTA01  
PROJECT#s S117071

**STL Savannah**

**Metals Fraction**

The following samples were analyzed according to SW-846 Method 6010B for barium and chromium.

SL#	SAMPLE DESCRIPTION	MATRIX
S117071*4	SB-48 (2-5)	Solid
S117071*5	SB-47 (2-4)	Solid
S117071*6	SB-EQBLNK01	Liquid

There were no exceptions to the established quality control criteria observed during the analysis of samples in this delivery group.

LOG NO: S1-17071  
 Received: 31 OCT 01  
 Reported: 08 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144  
 Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 164811112

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#	
17071-1	SB-50 (0-2)	10-31-01/09:00	HFTA01	
17071-2	SB-45 (0-2)	10-31-01/09:30	HFTA01	
17071-3	SB-49 (0-2)	10-31-01/10:05	HFTA01	
-----				
PARAMETER		17071-1	17071-2	17071-3
-----				
TCL Semivolatiles (8270)				
Acenaphthene, ug/kg dw		340U	340U	330U
Acenaphthylene, ug/kg dw		340U	340U	330U
Anthracene, ug/kg dw		340U	340U	330U
Benzo(a)anthracene, ug/kg dw		340U	340U	330U
Benzo(b)fluoranthene, ug/kg dw		340U	340U	330U
Benzo(k)fluoranthene, ug/kg dw		340U	340U	330U
Benzo(g,h,i)perylene, ug/kg dw		340U	340U	330U
Benzo(a)pyrene, ug/kg dw		340U	340U	330U
bis(2-Ethylhexyl)phthalate, ug/kg dw		340U	340U	330U
4-Bromophenylphenyl ether, ug/kg dw		340U	340U	330U
Chrysene, ug/kg dw		340U	340U	330U
Dibenzo(a,h)anthracene, ug/kg dw		340U	340U	330U
Di-n-butylphthalate, ug/kg dw		340U	340U	330U
1,2-Dichlorobenzene, ug/kg dw		340U	340U	330U
1,3-Dichlorobenzene, ug/kg dw		340U	340U	330U
1,4-Dichlorobenzene, ug/kg dw		340U	340U	330U
Diethylphthalate, ug/kg dw		340U	340U	330U
Fluoranthene, ug/kg dw		340U	340U	330U
Fluorene, ug/kg dw		340U	340U	330U
Indeno(1,2,3-cd)pyrene, ug/kg dw		340U	340U	330U
-----				



626

**SEVERN  
TRENT  
SERVICES**

5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.st-inc.com

STL Savannah

LOG NO: S1-17071  
Received: 31 OCT 01  
Reported: 08 NOV 01

Mr. David Wilderman

Law Engineering and Environmental Services/Remediation Group

3200 Town Point Drive, Suite 100

Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 164811112

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17071-1	SB-50 (0-2)	10-31-01/09:00	HFTA01
17071-2	SB-45 (0-2)	10-31-01/09:30	HFTA01
17071-3	SB-49 (0-2)	10-31-01/10:05	HFTA01

PARAMETER	17071-1	17071-2	17071-3
Naphthalene, ug/kg dw	340U	340U	330U
Phenanthrene, ug/kg dw	340U	340U	330U
Pyrene, ug/kg dw	340U	340U	330U
Surrogate - Nitrobenzene - d5	65 %	38 %	40 %
Surrogate - 2-Fluorobiphenyl	65 %	48 %	50 %
Surrogate - Terphenyl-d14	70 %	54 %	52 %
n-Nitrosodi-n-propylamine, ug/kg dw	---	340U	---
2,4-Dinitrotoluene, ug/kg dw	---	340U	---
1,2,4-Trichlorobenzene, ug/kg dw	---	340U	---
Dilution Factor	1	1	1
Prep Date	11.01.01	11.01.01	11.01.01
Analysis Date	11.01.01	11.01.01	11.01.01
Batch ID	1101A	1101A	1101A
Percent Solids	96	98	99

**STL Savannah**

LOG NO: S1-17071  
 Received: 31 OCT 01  
 Reported: 08 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 164811112

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17071-4	SB-48 (2-5)	10-31-01/10:50	HFTA01
PARAMETER		17071-4	
Chromium (6010)			
Chromium, mg/kg dw		3.9	
Dilution Factor		1	
Prep Date		11.01.01	
Analysis Date		11.02.01	
Batch ID		1101B	
Percent Solids		94	

628

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TRENT  
SERVICES**

5102 LaRoche Avenue • Savannah, GA 31404 • Tel: 912 354 7858 • Fax: 912 352 0165 • www.stl-inc.com

**STL Savannah**

LOG NO: S1-17071  
Received: 31 OCT 01  
Reported: 08 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 164811112

**REPORT OF RESULTS**

Page 4

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17071-5	SB-47 (2-4)	10-31-01/11:45	HFTA01
PARAMETER		17071-5	
Barium (6010)			
Barium, mg/kg dw		6.5	
Dilution Factor		1	
Prep Date		11.01.01	
Analysis Date		11.02.01	
Batch ID		1101B	
Percent Solids		92	

£-245

LOG NO: S1-17071  
Received: 31 OCT 01  
Reported: 08 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 164811112

**REPORT OF RESULTS**

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17071-6	SB-EQBLNK01	10-31-01/08:05	HFTA01
PARAMETER		17071-6	
TCL Semivolatiles (8270)			
	Acenaphthene, ug/l		10U
	Acenaphthylene, ug/l		10U
	Anthracene, ug/l		10U
	Benzo(a)anthracene, ug/l		10U
	Benzo(b)fluoranthene, ug/l		10U
	Benzo(k)fluoranthene, ug/l		10U
	Benzo(g,h,i)perylene, ug/l		10U
	Benzo(a)pyrene, ug/l		10U
	bis(2-Ethylhexyl)phthalate, ug/l		10U
	4-Bromophenylphenyl ether, ug/l		10U
	Chrysene, ug/l		10U
	Dibenzo(a,h)anthracene, ug/l		10U
	Di-n-butylphthalate, ug/l		10U
	1,2-Dichlorobenzene, ug/l		10U
	1,3-Dichlorobenzene, ug/l		10U
	1,4-Dichlorobenzene, ug/l		10U
	Diethylphthalate, ug/l		10U
	Fluoranthene, ug/l		10U
	Fluorene, ug/l		10U
	Indeno(1,2,3-cd)pyrene, ug/l		10U
	Naphthalene, ug/l		10U
	Phenanthrene, ug/l		10U

LOG NO: S1-17071  
Received: 31 OCT 01  
Reported: 08 NOV 01

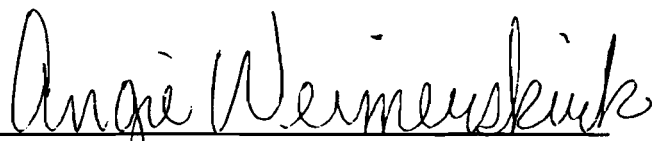
Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 164811112  
Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17071-6	SB-EQBLNK01	10-31-01/08:05	HFTA01
PARAMETER		17071-6	
Pyrene, ug/l		10U	
Surrogate - Nitrobenzene - d5		79 %	
Surrogate - 2-Fluorobiphenyl		75 %	
Surrogate - Terphenyl-d14		94 %	
Dilution Factor		1	
Prep Date		10.31.01	
Analysis Date		11.01.01	
Batch ID		1031A	
Barium (6010)			
Barium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.01.01	
Analysis Date		11.02.01	
Batch ID		1101G	
Chromium (6010)			
Chromium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.01.01	
Analysis Date		11.02.01	
Batch ID		1101G	

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL project manager who signed this test report.

  
Angie Weimerskirk, Project Manager

**SEVERN  
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SERVICES**

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**STL Savannah**

**STL Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.stl-inc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE <b>Hunter AAF</b>	PROJECT NO. <b>12001-9-3411</b>	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS										PAGE	OF				
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	+5VOC	Chromium	Barium	VOC	Metals (8 RCL)	PRESERVATIVE									STANDARD REPORT DELIVERY <input type="checkbox"/>	DATE DUE _____
CLIENT (SITE) PM <b>David Wilderman</b>	CLIENT PHONE <b>770-421-3400</b>	CLIENT FAX																EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	DATE DUE _____
CLIENT NAME <b>LAW Eng.</b>	CLIENT E-MAIL																	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	
CLIENT ADDRESS <b>3200 TownPoint Dr. Suite 100</b>	COMPANY CONTRACTING THIS WORK (if applicable)																		

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS		
DATE	TIME						1	2	3	4	5	6	7	8	9	10			
10/31/01	9:00	SB-50 (0-2)	G	X			1												
	9:30	SB-45 (0-2)	G	X			1												
	10:05	SB-49 (0-2)	G	X			1												
	10:50	SB-48 (2-5)	G	X				1											
	11:45	SB-47 (2-4)	G	X					2										
10/31/01	8:05	SB-EQBLNK 01	G	X			2			3	1								

RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>10/26/01</b>	TIME <b>11:40</b>	RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>10/31/01</b>	TIME <b>14:10</b>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <b>[Signature]</b>	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) **[Signature]** DATE **10/31/01** TIME **2:15** CUSTODY INTACT YES  NO  CUSTODY SEAL NO. **5417** STL SAVANNAH LOG NO. **11** LABORATORY REMARKS



CASE NARRATIVE

STL Savannah

SDG# HFTA03  
PROJECT#s S117209, S117211A

Acid & Base Neutral Extractables Fraction

The following samples were analyzed according to SW-846 Method 8270C.

SL#	SAMPLE DESCRIPTION	MATRIX
S117209*1	1DW-DECON	Liquid
S117211A*1	HMW-3	Liquid
S117209*2	HMW-100	Liquid

There were no exceptions to the established quality control criteria observed during the analysis of samples in this delivery group.

LOG NO: S1-17209  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03

PARAMETER	17209-1	17209-1-DL
Acid & Base Neutral Extractables (8270)		
Acenaphthene, ug/l	10U	---
Acenaphthylene, ug/l	10U	---
Anthracene, ug/l	10U	---
Benzo(a)anthracene, ug/l	10U	---
Benzo(b)fluoranthene, ug/l	10U	---
Benzo(k)fluoranthene, ug/l	10U	---
Benzo(g,h,i)perylene, ug/l	10U	---
Benzo(a)pyrene, ug/l	10U	---
bis(2-Ethylhexyl)phthalate, ug/l	34	---
Chrysene, ug/l	10U	---
Dibenzo(a,h)anthracene, ug/l	10U	---
Di-n-butylphthalate, ug/l	10U	---
1,2-Dichlorobenzene, ug/l	10U	---
1,3-Dichlorobenzene, ug/l	10U	---
1,4-Dichlorobenzene, ug/l	10U	---
Diethylphthalate, ug/l	10U	---
Fluoranthene, ug/l	10U	---
Fluorene, ug/l	10U	---
Indeno(1,2,3-cd)pyrene, ug/l	10U	---
Naphthalene, ug/l	10U	---
Phenanthrene, ug/l	10U	---



648

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127

**REPORT OF RESULTS**

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
-----			
PARAMETER		17209-1	17209-1-DL
-----			
Pyrene, ug/l		10U	---
4-Bromophenylphenyl ether, ug/l		10U	---
Surrogate-NBZ		60 %	---
Surrogate-2FBP		70 %	---
Surrogate-TPH		74 %	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.11.01	---
Batch ID		1107E	---
-----			

LOG NO: S1-17209  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman

Law Engineering and Environmental Services/Remediation Group

3200 Town Point Drive, Suite 100

Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 120111127

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
PARAMETER		17209-1	17209-1-DL
Volatiles by GC/MS (8260)			
Acetone, ug/l		5600E	5600D
Benzene, ug/l		4.0U	20U
2-Butanone (MEK), ug/l		40U	200U
Carbon tetrachloride, ug/l		4.0U	20U
Chlorobenzene, ug/l		4.0U	20U
Chloroethane, ug/l		4.0U	20U
Chloroform, ug/l		4.0U	20U
Chloromethane, ug/l		4.0U	20U
1,1-Dichloroethane, ug/l		4.0U	20U
1,2-Dichloroethane, ug/l		4.0U	20U
1,1-Dichloroethene, ug/l		4.0U	20U
cis-1,2-Dichloroethene, ug/l		4.0U	20U
trans-1,2-Dichloroethene, ug/l		4.0U	20U
Ethylbenzene, ug/l		4.0U	20U
Methylene chloride (Dichloromethane), ug/l		20U	100U
Tetrachloroethene, ug/l		4.0U	20U
Toluene, ug/l		4.0U	20U
1,1,1-Trichloroethane, ug/l		4.0U	20U
1,1,2-Trichloroethane, ug/l		4.0U	20U
Trichloroethene, ug/l		4.0U	20U
Vinyl chloride, ug/l		4.0U	20U

LOG NO: S1-17209  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127  
 Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
<hr/>			
PARAMETER		17209-1	17209-1-DL
<hr/>			
Xylenes, Total, ug/l		8.0U	40U
Trichlorofluoromethane, ug/l		4.0U	20U
Surrogate - Toluene-d8		114 %	108 %
Surrogate - 4-Bromofluorobenzene		90 %	90 %
Surrogate - Dibromofluoromethane		94 %	88 %
Dilution Factor		4	20
Analysis Date		11.07.01	11.07.01
Batch ID		1B1107	1B1107
<hr/>			
<b>Mercury (7470)</b>			
Mercury, mg/l		0.00020U	---
Dilution Factor		1	---
Prep Date		11.08.01	---
Analysis Date		11.08.01	---
Batch ID		1108R	---
<hr/>			
<b>Arsenic (6010)</b>			
Arsenic, mg/l		0.010U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.12.01	---
Batch ID		1107K	---
<hr/>			

LOG NO: S1-17209  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
-----			
PARAMETER		17209-1	17209-1-DL
-----			
Barium (6010)			
Barium, mg/l		0.010U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.09.01	---
Batch ID		1107K	---
Cadmium (6010)			
Cadmium, mg/l		0.0050U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.09.01	---
Batch ID		1107K	---
Chromium (6010)			
Chromium, mg/l		0.010U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.09.01	---
Batch ID		1107K	---
-----			

F-268

652

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
PARAMETER		17209-1	17209-1-DL
Lead (6010)			
Lead, mg/l		0.0056	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.12.01	---
Batch ID		1107K	---
Selenium (6010)			
Selenium, mg/l		0.010U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.09.01	---
Batch ID		1107K	---
Silver (6010)			
Silver, mg/l		0.010U	---
Dilution Factor		1	---
Prep Date		11.07.01	---
Analysis Date		11.09.01	---
Batch ID		1107K	---

LOG NO: S1-17209  
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Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
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 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-1	1DW-DECON	11-06-01/21:50	HFTA03
17209-1-DL	1DW-DECON	11-06-01/21:50	HFTA03
PARAMETER		17209-1	17209-1-DL
Oil & Grease (Hexane Extractable Material) (1664)		5.0U	
Dilution Factor		1	---
Prep Date		11.08.01	---
Analysis Date		11.12.01	---
Batch ID		1108A	---

LOG NO: S1-17209  
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Mr. David Wilderman  
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 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127  
 Page 8

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER		17209-2	
Acid & Base Neutral Extractables (8270)			
	Acenaphthene, ug/l		10U
	Acenaphthylene, ug/l		10U
	Anthracene, ug/l		10U
	Benzo(a)anthracene, ug/l		10U
	Benzo(b)fluoranthene, ug/l		10U
	Benzo(k)fluoranthene, ug/l		10U
	Benzo(g,h,i)perylene, ug/l		10U
	Benzo(a)pyrene, ug/l		10U
	bis(2-Ethylhexyl)phthalate, ug/l		10U
	Chrysene, ug/l		10U
	Dibenzo(a,h)anthracene, ug/l		10U
	Di-n-butylphthalate, ug/l		10U
	1,2-Dichlorobenzene, ug/l		10U
	1,3-Dichlorobenzene, ug/l		10U
	1,4-Dichlorobenzene, ug/l		10U
	Diethylphthalate, ug/l		10U
	Fluoranthene, ug/l		10U
	Fluorene, ug/l		10U
	Indeno(1,2,3-cd)pyrene, ug/l		10U
	Naphthalene, ug/l		10U
	Phenanthrene, ug/l		10U
	Pyrene, ug/l		10U

LOG NO: S1-17209  
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 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127

REPORT OF RESULTS

Page 9

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER		17209-2	
4-Bromophenylphenyl ether, ug/l		10U	
Surrogate-NBZ		80 %	
Surrogate-2FBP		82 %	
Surrogate-TPH		66 %	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.11.01	
Batch ID		1107E	



656

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127  
Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER	17209-2		
Volatiles by GC/MS (8260)			
Acetone, ug/l		25U	
Benzene, ug/l		4.3	
2-Butanone (MEK), ug/l		10U	
Carbon tetrachloride, ug/l		1.0U	
Chlorobenzene, ug/l		1.0U	
Chloroethane, ug/l		1.0U	
Chloroform, ug/l		1.0U	
Chloromethane, ug/l		1.0U	
1,1-Dichloroethane, ug/l		1.0U	
1,2-Dichloroethane, ug/l		1.0U	
1,1-Dichloroethene, ug/l		1.0U	
cis-1,2-Dichloroethene, ug/l		1.0U	
trans-1,2-Dichloroethene, ug/l		1.0U	
Ethylbenzene, ug/l		1.0U	
Methylene chloride (Dichloromethane), ug/l		5.0U	
Tetrachloroethene, ug/l		1.0U	
Toluene, ug/l		1.0U	
1,1,1-Trichloroethane, ug/l		1.0U	
1,1,2-Trichloroethane, ug/l		1.0U	
Trichloroethene, ug/l		1.0U	
Vinyl chloride, ug/l		1.0U	
Xylenes, Total, ug/l		2.0U	

F-273

LOG NO: S1-17209  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
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 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127  
 Page 11

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER		17209-2	
Trichlorofluoromethane, ug/l		1.0U	
Surrogate - Toluene-d8		106 %	
Surrogate - 4-Bromofluorobenzene		90 %	
Surrogate - Dibromofluoromethane		86 %	
Dilution Factor		1	
Analysis Date		11.07.01	
Batch ID		1B1107	
Mercury (7470)			
Mercury, mg/l		0.00020U	
Dilution Factor		1	
Prep Date		11.08.01	
Analysis Date		11.08.01	
Batch ID		1108R	
Arsenic (6010)			
Arsenic, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.12.01	
Batch ID		1107K	

*F-274*

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
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Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127  
Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER		17209-2	
Barium (6010)			
	Barium, mg/l	0.020	
	Dilution Factor	1	
	Prep Date	11.07.01	
	Analysis Date	11.09.01	
	Batch ID	1107K	
Cadmium (6010)			
	Cadmium, mg/l	0.0050U	
	Dilution Factor	1	
	Prep Date	11.07.01	
	Analysis Date	11.09.01	
	Batch ID	1107K	
Chromium (6010)			
	Chromium, mg/l	0.010U	
	Dilution Factor	1	
	Prep Date	11.07.01	
	Analysis Date	11.09.01	
	Batch ID	1107K	

LOG NO: S1-17209  
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 Reported: 26 NOV 01

Mr. David Wilderman  
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 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120111127  
 Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-2	HMW-100	11-06-01/12:00	HFTA03
PARAMETER		17209-2	
Lead (6010)			
Lead, mg/l		0.0050U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.12.01	
Batch ID		1107K	
Selenium (6010)			
Selenium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	
Silver (6010)			
Silver, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	

660

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
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3200 Town Point Drive, Suite 100  
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Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127

REPORT OF RESULTS

Page 14

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-3	TRIP BLANK	11-06-01	HFTA03
PARAMETER		17209-3	
Volatiles by GC/MS (8260)			
	Acetone, ug/l		25U
	Benzene, ug/l		1.0U
	2-Butanone (MEK), ug/l		10U
	Carbon tetrachloride, ug/l		1.0U
	Chlorobenzene, ug/l		1.0U
	Chloroethane, ug/l		1.0U
	Chloroform, ug/l		1.0U
	Chloromethane, ug/l		1.0U
	1,1-Dichloroethane, ug/l		1.0U
	1,2-Dichloroethane, ug/l		1.0U
	1,1-Dichloroethene, ug/l		1.0U
	cis-1,2-Dichloroethene, ug/l		1.0U
	trans-1,2-Dichloroethene, ug/l		1.0U
	Ethylbenzene, ug/l		1.0U
	Methylene chloride (Dichloromethane), ug/l		5.0U
	Tetrachloroethene, ug/l		1.0U
	Toluene, ug/l		1.0U
	1,1,1-Trichloroethane, ug/l		1.0U
	1,1,2-Trichloroethane, ug/l		1.0U
	Trichloroethene, ug/l		1.0U
	Vinyl chloride, ug/l		1.0U
	Xylenes, Total, ug/l		2.0U

F-277

LOG NO: S1-17209  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
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3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120111127

REPORT OF RESULTS

Page 15


LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17209-3	TRIP BLANK	11-06-01	HFTA03
PARAMETER		17209-3	
Trichlorofluoromethane, ug/l		1.0U	
Surrogate - Toluene-d8		106 %	
Surrogate - 4-Bromofluorobenzene		92 %	
Surrogate - Dibromofluoromethane		88 %	
Dilution Factor		1	
Analysis Date		11.07.01	
Batch ID		IB1107	

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

U = Indicates compound was analyzed for but not detected.

E (Organic) = Result exceeded the upper calibration limit.

D = Result is from a secondary dilution.

  
Angie Weimerskirk, Project Manager

**SEVERN  
TRENT  
SERVICES**

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**STL Savannah**

**STL Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.stl-inc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE <b>HUNTER AAF</b>	PROJECT NO. <b>12001-9-3411</b>	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS				PAGE	OF	
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	<b>SVOCs, OIL, GREASE</b>	<b>SVOCs</b>	<b>Hg</b>	<b>METALS (COPPER)</b>	<b>VOCs</b>	STANDARD REPORT DELIVERY <input type="checkbox"/>	
CLIENT (SITE) PM <b>DAVID WILDERMAN</b>	CLIENT PHONE <b>770-421-3400</b>	CLIENT FAX		<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	DATE DUE _____
CLIENT NAME <b>LAW ENG.</b>	CLIENT E-MAIL			<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>
CLIENT ADDRESS <b>3200 Town Point Dr., Suite 100, Kennesaw, GA 30144</b>	COMPANY CONTRACTING THIS WORK (if applicable)			<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	<b>TRIP BLANK</b>	DATE DUE _____

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME											
11-6-01	2150	10W-DECON	GX					2	1	1	3	7-10 DAYS TAT
11-6-01	1200	HMW-100	GX					2	1	1	3	7-10 DAYS TAT
<del>11-6-01</del>	<del>2015</del>	<del>HMW-3</del>	<del>GX</del>									
		TRIP BLANK										

**RUSH!**

RELINQUISHED BY: (SIGNATURE) <b>RE</b>	DATE <b>10/22/01</b>	TIME <b>1146</b>	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <b>11/6/01</b>	TIME <b>11:15</b>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE <b>11/06/01</b>	TIME <b>8:00</b>	CUSTODY IMPACT YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	STL SAVANNAH LOG NO. <b>51-17209</b>	LABORATORY REMARKS
---	-------------------------	---------------------	--	------------------	---	--------------------

5-279

662

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30071, Phone (770)449-8800, FAX (770)449-5477  
 FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved  
 LABORATORY REPORT

Accura Sample ID #: AC21686 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW1

**ANALYSIS: Metals - Mercury - RCRA**

Method Ref: 7470A

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.030	J	0.50
Cadmium	<RL		0.0050
Chromium	<RL		0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	2.2	J	10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 13 of 36

Client Sample ID: HSW1

AALSample ID #: AC21686 Accura Project #: 29042



3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	4.4	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

<u>Analyte Name</u>
1,1,1,2-Tetrachloroethane

<u>Analytical Results</u>
<RL

Qualifier

<u>Reported Detection Limits</u>
5.0

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 14 of 36

Client Sample ID: HSW1

AALSample ID #: AC21686

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	4.5	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	13	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	8.5	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	1.9	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	9.9	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 15 of 36

Client Sample ID: HSW1

AAL Sample ID #: AC21686

Accura Project #: 29042

n-Propylbenzene	2.1	J	5.0
p-Isopropyltoluene	<RL		5.0
sec-Butylbenzene	<RL		5.0
Styrene	<RL		5.0
tert-butylbenzene	<RL		5.0
Tetrachloroethene	<RL		5.0
Toluene	14		5.0
trans-1,2-Dichloroethene	<RL		5.0
trans-1,3-Dichloropropene	<RL		5.0
trans-1,4-Dichloro-2-Butene	<RL		5.0
Trichloroethene	<RL		5.0
Trichlorofluoromethane	<RL		5.0
Vinyl Acetate	<RL		5.0
Vinyl Chloride	<RL		2.0
Xylenes (Total)	67		5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	89		
4-Bromofluorobenzene (80-120)	102		
Toluene-d8 (80-119)	101		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	68		
2-Fluorobiphenyl (Range 40-106)	72		
2-Fluorophenol (Range 12-75)	39		
Nitrobenzene-d5 (Range 11-135)	123		
Phenol-d6 (Range 9-71)	25		
p-Terphenyl-d14 (Range 34-128)	71		

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 LABORATORY REPORT

Accura Sample ID #: AC21685 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW2

**ANALYSIS: Metals - Mercury - RCRA**

Method Ref: 7470A  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Method Ref: 3010A/6010B  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.025	J	0.50
Cadmium	<RL		0.0050
Chromium	0.00090	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Method Ref: 8270C  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	<RL		10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

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<RL = Less than Reporting Limit

Pg 9 of 36

Client Sample ID: HSW2

AALSample ID #: AC21685

Accura Project #: 29042

3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	<RL	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,1,1,2-Tetrachloroethane	<RL		5.0

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 10 of 36

Client Sample ID: HSW2

AALSample ID #: AC21685

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	3.3	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

ACCURA ANALYTICAL LABORATORY, INC.

Client Sample ID: HSW2

<RL = Less than Reporting Limit

Pg 11 of 36

AALSample ID #: AC21685

Accura Project #: 29042

n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	5.0
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	90		
4-Bromofluorobenzene (80-120)	112		
Toluene-d8 (80-119)	102		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	50		
2-Fluorobiphenyl (Range 40-106)	59		
2-Fluorophenol (Range 12-75)	28		
Nitrobenzene-d5 (Range 11-135)	64		
Phenol-d6 (Range 9-71)	19		
p-Terphenyl-d14 (Range 34-128)	60		

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 LABORATORY REPORT

Accura Sample ID #: AC21683 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savannah. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW3

**ANALYSIS: Metals - Mercury - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Method Ref: 7470A  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Method Ref: 3010A/6010B  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.029	J	0.50
Cadmium	<RL		0.0050
Chromium	0.0010	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/4/2001 Method Ref: 8270C  
 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	<RL		10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 1 of 36

Client Sample ID: HSW3

AALSample ID #: AC21683 Accura Project #: 29042



3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	<RL	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,1,1,2-Tetrachloroethane	<RL		5.0

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 2 of 36

Client Sample ID: HSW3

AALSample ID #: AC21683

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	2.7	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 3 of 36

Client Sample ID: HSW3

AALSample ID #: AC21683

Accura Project #: 29042

n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	5.0
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	96		
4-Bromofluorobenzene (80-120)	114		
Toluene-d8 (80-119)	108		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/4/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	46		
2-Fluorobiphenyl (Range 40-106)	58		
2-Fluorophenol (Range 12-75)	23		
Nitrobenzene-d5 (Range 11-135)	55		
Phenol-d6 (Range 9-71)	16		
p-Terphenyl-d14 (Range 34-128)	65		

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 LABORATORY REPORT

Accura Sample ID #: AC21688 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW4

**ANALYSIS: Metals - Mercury - RCRA**

Method Ref: 7470A  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Method Ref: 3010A/6010B  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.024	J	0.50
Cadmium	<RL		0.0050
Chromium	0.00080	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Method Ref: 8270C  
 Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	<RL		10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 19 of 36

Client Sample ID: HSW4

AALSample ID #: AC21688 Accura Project #: 29042

3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	<RL	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

Analyte Name

Analytical Results

Qualifier

Reported Detection Limits

1,1,1,2-Tetrachloroethane

<RL

5.0

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<RL = Less than Reporting Limit

Pg 20 of 36

Client Sample ID: HSW4

AALSample ID #: AC21688

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	1.1	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-terti-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 21 of 36

Client Sample ID: HSW4

AALSample ID #: AC21688

Accura Project #: 29042

F-295

n-Propylbenzene	<RL		5.0
p-Isopropyltoluene	<RL		5.0
sec-Butylbenzene	<RL		5.0
Styrene	<RL		5.0
tert-butylbenzene	<RL		5.0
Tetrachloroethene	<RL		5.0
Toluene	1.1	J	5.0
trans-1,2-Dichloroethene	<RL		5.0
trans-1,3-Dichloropropene	<RL		5.0
trans-1,4-Dichloro-2-Butene	<RL		5.0
Trichloroethene	<RL		5.0
Trichlorofluoromethane	<RL		5.0
Vinyl Acetate	<RL		5.0
Vinyl Chloride	<RL		2.0
Xylenes (Total)	<RL		5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	95		
4-Bromofluorobenzene (80-120)	112		
Toluene-d8 (80-119)	103		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	54		
2-Fluorobiphenyl (Range 40-106)	60		
2-Fluorophenol (Range 12-75)	29		
Nitrobenzene-d5 (Range 11-135)	63		
Phenol-d6 (Range 9-71)	20		
p-Terphenyl-d14 (Range 34-128)	61		

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 LABORATORY REPORT

Accura Sample ID #: AC21689 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW5

**ANALYSIS: Metals - Mercury - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Method Ref: 7470A  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Method Ref: 3010A/6010B  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.024	J	0.50
Cadmium	0.00030	J	0.0050
Chromium	0.013	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Method Ref: 8270C  
 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		11
1,2-Dichlorobenzene	<RL		11
1,3-Dichlorobenzene	<RL		11
1,4-Dichlorobenzene	<RL		11
1-Methylnaphthalene	<RL		11
2,4,5-Trichlorophenol	<RL		11
2,4,6-Trichlorophenol	<RL		11
2,4-Dichlorophenol	<RL		11
2,4-Dimethylphenol	<RL		11
2,4-Dinitrophenol	<RL		55
2,4-Dinitrotoluene	<RL		11
2,6-Dinitrotoluene	<RL		11
2-Chloronaphthalene	<RL		11
2-Chlorophenol	<RL		11
2-Methylnaphthalene	<RL		11
2-Methylphenol	<RL		11
2-Nitroaniline	<RL		22
2-Nitrophenol	<RL		11
3,3'-Dichlorobenzidine	<RL		11

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<RL = Less than Reporting Limit

Pg 23 of 36

Client Sample ID: HSW5

AALSample ID #: AC21689

Accura Project #: 29042



3,4-Methylphenol	<RL	22
3-Nitroaniline	<RL	22
4,6-Dinitro-2-methylphenol	<RL	22
4-Bromophenyl phenyl ether	<RL	11
4-Chloro-3-methylphenol	<RL	11
4-Chloroaniline	<RL	11
4-Chlorophenyl p henyl ether	<RL	11
4-Nitroaniline	<RL	22
4-Nitrophenol	<RL	11
Acenaphthene	<RL	11
Acenaphthylene	<RL	11
Anthracene	<RL	11
Benzidine	<RL	11
Benzo(a)anthracene	<RL	11
Benzo(a)pyrene	<RL	11
Benzo(b)fluoranthene	<RL	11
Benzo(g,h,i)perylene	<RL	11
Benzo(k)fluoranthene	<RL	11
Benzoic acid	<RL	55
Benzyl alcohol	<RL	11
bis(2-Chloroethoxy)methane	<RL	11
bis(2-Chloroethyl)ether	<RL	11
bis(2-Chloroisopropyl)ether	<RL	11
bis(2-Ethylhexyl)phthalate	<RL	11
Butyl benzyl phthalate	<RL	11
Carbazole	<RL	11
Chrysene	<RL	11
Dibenz(a,h)anthracene	<RL	11
Dibenzofuran	<RL	11
Diethylphthalate	<RL	11
Dimethylphthalate	<RL	11
Di-n-butylphthalate	<RL	11
Di-n-octylphthalate	<RL	11
Fluoranthene	<RL	11
Fluorene	<RL	11
Hexachlorobenzene	<RL	11
Hexachlorobutadiene	<RL	11
Hexachlorocyclopentadiene	<RL	11
Hexachloroethane	<RL	11
Indeno(1,2,3-cd)pyrene	<RL	11
Isophorone	<RL	11
Naphthalene	<RL	11
Nitrobenzene	<RL	11
N-Nitrosodimethylamine	<RL	11
N-Nitroso-di-n-propylamine	<RL	11
N-Nitrosodiphenylamine	<RL	11
Pentachlorophenol	<RL	22
Phenanthrene	<RL	11
Phenol	<RL	11
Pyrene	<RL	11

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

Analyte Name

Analytical Results

Qualifier

Reported Detection Limits

1,1,1,2-Tetrachloroethane

<RL

5.0

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<RL = Less than Reporting Limit

Pg 24 of 36

Client Sample ID: HSW5

AALSample ID #: AC21689

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 25 of 36

Client Sample ID: HSW5

AALSample ID #: AC21689

Accura Project #: 29042

n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	5.0
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001      Date Analyzed: 11/2/2001      Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	99		
4-Bromofluorobenzene (80-120)	119		
Toluene-d8 (80-119)	110		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001      Date Analyzed: 11/5/2001      Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	62		
2-Fluorobiphenyl (Range 40-106)	71		
2-Fluorophenol (Range 12-75)	33		
Nitrobenzene-d5 (Range 11-135)	69		
Phenol-d6 (Range 9-71)	23		
p-Terphenyl-d14 (Range 34-128)	77		

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 LABORATORY REPORT

Accura Sample ID #: AC21684 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW6

**ANALYSIS: Metals - Mercury - RCRA**

Method Ref: 7470A

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	0.00087	J	0.0020

**ANALYSIS: Metals - RCRA**

Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.025	J	0.50
Cadmium	<RL		0.0050
Chromium	0.0013	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/4/2001 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	<RL		10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

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<RL = Less than Reporting Limit

Pg 5 of 36

Client Sample ID: HSW6

AALSample ID #: AC21684 Accura Project #: 29042

3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	<RL	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

Analyte NameAnalytical ResultsQualifierReported Detection Limits

1,1,1,2-Tetrachloroethane

&lt;RL

5.0

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&lt;RL = Less than Reporting Limit

Pg 6 of 36

Client Sample ID: HSW6

AALSAMPLE ID #: AC21684

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 7 of 36

Client Sample ID: HSW6

AALS Sample ID #: AC21684

Accura Project #: 29042

F-303

n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	50
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	94		
4-Bromofluorobenzene (80-120)	115		
Toluene-d8 (80-119)	106		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/4/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	49		
2-Fluorobiphenyl (Range 40-106)	65		
2-Fluorophenol (Range 12-75)	29		
Nitrobenzene-d5 (Range 11-135)	66		
Phenol-d6 (Range 9-71)	20		
p-Terphenyl-d14 (Range 34-128)	78		

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&lt;RL = Less than Reporting Limit

Pg 8 of 36

Client Sample ID: HSW6

AALSAMPLE ID #: AC21684

Accura Project #: 29042

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 LABORATORY REPORT

Accura Sample ID #: AC21687 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savannah. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: TRIP BLANK 2

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep:	11/2/2001	Date Analyzed:	11/2/2001	Result Units:	ug/L
Analyte Name	Analytical Results	Qualifier	Reported	Detection	Limits
1,1,1,2-Tetrachloroethane	<RL				5.0
1,1,1-Trichloroethane	<RL				5.0
1,1,2,2-Tetrachloroethane	<RL				5.0
1,1,2-Trichloroethane	<RL				5.0
1,1-Dichloroethane	<RL				5.0
1,1-Dichloroethene	<RL				5.0
1,1-Dichloropropene	<RL				5.0
1,2,3-Trichlorobenzene	<RL				5.0
1,2,3-Trichloropropane	<RL				5.0
1,2,4-Trichlorobenzene	<RL				5.0
1,2,4-Trimethylbenzene	<RL				5.0
1,2-Dibromo-3-Chloropropane	<RL				5.0
1,2-Dibromoethane	<RL				5.0
1,2-Dichlorobenzene	<RL				5.0
1,2-Dichloroethane	<RL				5.0
1,2-Dichloropropane	<RL				5.0
1,3,5-Trimethylbenzene	<RL				5.0
1,3-Dichlorobenzene	<RL				5.0
1,3-Dichloropropane	<RL				5.0
1,4-Dichlorobenzene	<RL				5.0
2,2-Dichloropropane	<RL				5.0
2-Butanone	<RL				5.0
2-Chloroethyl Vinyl Ether	<RL				5.0
2-Chlorotoluene	<RL				5.0
2-Hexanone	<RL				10
4-Chlorotoluene	<RL				5.0
4-Methyl-2-Pentanone	<RL				10
Acetone	<RL				100
Acrolein	<RL				100
Acrylonitrile	<RL				5.0
Benzene	<RL				5.0
Bromobenzene	<RL				5.0
Bromochloromethane	<RL				5.0
Bromodichloromethane	<RL				5.0
Bromoform	<RL				5.0
Bromomethane	<RL				10

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<RL = Less than Reporting Limit

Pg 17 of 36

Client Sample ID: TRIP BLANK 2

AALS Sample ID #: AC21687 Accura Project #: 29042



Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0
n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	50
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters** Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	93		
4-Bromofluorobenzene (80-120)	111		
Toluene-d8 (80-119)	102		

ACCURA ANALYTICAL LABORATORY, INC.  
Client Sample ID: TRIP BLANK 2

<RL = Less than Reporting Limit

AALSample ID #: AC21687 Accura Project #: 29042

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 LABORATORY REPORT

Accura Sample ID #: AC21690 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savann. Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: HSW DUP1

**ANALYSIS: Metals - Mercury - RCRA**

Method Ref: 7470A

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Method Ref: 3010A/6010B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	0.032	J	0.50
Cadmium	<RL		0.0050
Chromium	0.0012	J	0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		11
1,2-Dichlorobenzene	<RL		11
1,3-Dichlorobenzene	<RL		11
1,4-Dichlorobenzene	<RL		11
1-Methylnaphthalene	1.7	J	11
2,4,5-Trichlorophenol	<RL		11
2,4,6-Trichlorophenol	<RL		11
2,4-Dichlorophenol	<RL		11
2,4-Dimethylphenol	<RL		11
2,4-Dinitrophenol	<RL		55
2,4-Dinitrotoluene	<RL		11
2,6-Dinitrotoluene	<RL		11
2-Chloronaphthalene	<RL		11
2-Chlorophenol	<RL		11
2-Methylnaphthalene	<RL		11
2-Methylphenol	<RL		11
2-Nitroaniline	<RL		22
2-Nitrophenol	<RL		11
3,3'-Dichlorobenzidine	<RL		11

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<RL = Less than Reporting Limit

Pg 27 of 36

Client Sample ID: HSW DUP1

AALSample ID #: AC21690 Accura Project #: 29042

3,4-Methylphenol	<RL	22
3-Nitroaniline	<RL	22
4,6-Dinitro-2-methylphenol	<RL	22
4-Bromophenyl phenyl ether	<RL	11
4-Chloro-3-methylphenol	<RL	11
4-Chloroaniline	<RL	11
4-Chlorophenyl phenyl ether	<RL	11
4-Nitroaniline	<RL	22
4-Nitrophenol	<RL	11
Acenaphthene	<RL	11
Acenaphthylene	<RL	11
Anthracene	<RL	11
Benzidine	<RL	11
Benzo(a)anthracene	<RL	11
Benzo(a)pyrene	<RL	11
Benzo(b)fluoranthene	<RL	11
Benzo(g,h,i)perylene	<RL	11
Benzo(k)fluoranthene	<RL	11
Benzoic acid	<RL	55
Benzyl alcohol	<RL	11
bis(2-Chloroethoxy)methane	<RL	11
bis(2-Chloroethyl)ether	<RL	11
bis(2-Chloroisopropyl)ether	<RL	11
bis(2-Ethylhexyl)phthalate	<RL	11
Butyl benzyl phthalate	<RL	11
Carbazole	<RL	11
Chrysene	<RL	11
Dibenz(a,h)anthracene	<RL	11
Dibenzofuran	<RL	11
Diethylphthalate	<RL	11
Dimethylphthalate	<RL	11
Di-n-butylphthalate	<RL	11
Di-n-octylphthalate	<RL	11
Fluoranthene	<RL	11
Fluorene	<RL	11
Hexachlorobenzene	<RL	11
Hexachlorobutadiene	<RL	11
Hexachlorocyclopentadiene	<RL	11
Hexachloroethane	<RL	11
Indeno(1,2,3-cd)pyrene	<RL	11
Isophorone	<RL	11
Naphthalene	3.6	11
Nitrobenzene	<RL	11
N-Nitrosodimethylamine	<RL	11
N-Nitroso-di-n-propylamine	<RL	11
N-Nitrosodiphenylamine	<RL	11
Pentachlorophenol	<RL	22
Phenanthrene	<RL	11
Phenol	<RL	11
Pyrene	<RL	11

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

Analyte Name

Analytical Results

Qualifier

Reported Detection Limits

1,1,1,2-Tetrachloroethane

<RL

5.0

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<RL = Less than Reporting Limit

Pg 28 of 36

Client Sample ID: HSW DUP1

AALSample ID #: AC21690

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	3.7	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	12	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	8.3	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	1.8	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	9.0	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 29 of 36

Client Sample ID: HSW DUP1

AALSample ID #: AC21690

Accura Project #: 29042

F-309

n-Propylbenzene	1.8	J	5.0
p-Isopropyltoluene	<RL		5.0
sec-Butylbenzene	<RL		5.0
Styrene	<RL		5.0
tert-butylbenzene	<RL		5.0
Tetrachloroethene	<RL		5.0
Toluene	13		5.0
trans-1,2-Dichloroethene	<RL		5.0
trans-1,3-Dichloropropene	<RL		5.0
trans-1,4-Dichloro-2-Butene	<RL		5.0
Trichloroethene	<RL		5.0
Trichlorofluoromethane	<RL		5.0
Vinyl Acetate	<RL		5.0
Vinyl Chloride	<RL		2.0
Xylenes (Total)	64		5.0

**ANALYSIS: X VOC Sample Surrogates-Waters** Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	87		
4-Bromofluorobenzene (80-120)	105		
Toluene-d8 (80-119)	99		

**ANALYSIS: X SVOC(3510) Sample Surr. (Water)** Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 19-141)	61		
2-Fluorobiphenyl (Range 40-106)	64		
2-Fluorophenol (Range 12-75)	29		
Nitrobenzene-d5 (Range 11-135)	62		
Phenol-d6 (Range 9-71)	20		
p-Terphenyl-d14 (Range 34-128)	82		

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 LABORATORY REPORT

Accura Sample ID #: AC21691 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savannah Date Sampled: 10/31/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: TRIP BLANK1

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Result Units: ug/L

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,1,1,2-Tetrachloroethane	<RL		5.0
1,1,1-Trichloroethane	<RL		5.0
1,1,2,2-Tetrachloroethane	<RL		5.0
1,1,2-Trichloroethane	<RL		5.0
1,1-Dichloroethane	<RL		5.0
1,1-Dichloroethene	<RL		5.0
1,1-Dichloropropene	<RL		5.0
1,2,3-Trichlorobenzene	<RL		5.0
1,2,3-Trichloropropane	<RL		5.0
1,2,4-Trichlorobenzene	<RL		5.0
1,2,4-Trimethylbenzene	<RL		5.0
1,2-Dibromo-3-Chloropropane	<RL		5.0
1,2-Dibromoethane	<RL		5.0
1,2-Dichlorobenzene	<RL		5.0
1,2-Dichloroethane	<RL		5.0
1,2-Dichloropropane	<RL		5.0
1,3,5-Trimethylbenzene	<RL		5.0
1,3-Dichlorobenzene	<RL		5.0
1,3-Dichloropropane	<RL		5.0
1,4-Dichlorobenzene	<RL		5.0
2,2-Dichloropropane	<RL		5.0
2-Butanone	<RL		5.0
2-Chloroethyl Vinyl Ether	<RL		5.0
2-Chlorotoluene	<RL		5.0
2-Hexanone	<RL		10
4-Chlorotoluene	<RL		5.0
4-Methyl-2-Pentanone	<RL		10
Acetone	<RL		100
Acrolein	<RL		100
Acrylonitrile	<RL		5.0
Benzene	<RL		5.0
Bromobenzene	<RL		5.0
Bromochloromethane	<RL		5.0
Bromodichloromethane	<RL		5.0
Bromoform	<RL		5.0
Bromomethane	<RL		10

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<RL = Less than Reporting Limit

Pg 31 of 36

Client Sample ID: TRIP BLANK1

AALS Sample ID #: AC21691 Accura Project #: 29042

Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0
n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	6.9	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	50
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC Sample Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (81-132)	94		
4-Bromofluorobenzene (80-120)	114		
Toluene-d8 (80-119)	105		

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30071, Phone (770)449-8800, FAX (770)449-5477  
 FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved  
 LABORATORY REPORT

Accura Sample ID #: AC21692 Accura Project #: 29042  
 Client: US Army Corp of Engrs, Savannah. Date Sampled: 11/2/2001  
 Client Contact: JAMES CUBBEDGE Date Received: 11/2/2001  
 Client Project Number: D0#0154 Date Reported: 11/6/2001  
 Client Project Name: FDTA ON HUNTER AAF Sample Matrix: WATER  
 Client Sample ID: METHOD BLANK

**ANALYSIS: Metals - Mercury - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/2/2001 Method Ref: 7470A  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Mercury	<RL		0.0020

**ANALYSIS: Metals - RCRA**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/5/2001 Method Ref: 3010A/6010B  
 Result Units: mg/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
Arsenic	<RL		0.050
Barium	<RL		0.50
Cadmium	<RL		0.0050
Chromium	<RL		0.050
Lead	<RL		0.010
Selenium	<RL		0.050
Silver	<RL		0.050

**ANALYSIS: SVOC's - USACE**

Date Ext/Dig/Prep: 11/2/2001 Date Analyzed: 11/4/2001 Method Ref: 8270C  
 Result Units: ug/L  

Analyte Name	Analytical Results	Qualifier	Reported Detection Limits
1,2,4-Trichlorobenzene	<RL		10
1,2-Dichlorobenzene	<RL		10
1,3-Dichlorobenzene	<RL		10
1,4-Dichlorobenzene	<RL		10
1-Methylnaphthalene	<RL		10
2,4,5-Trichlorophenol	<RL		10
2,4,6-Trichlorophenol	<RL		10
2,4-Dichlorophenol	<RL		10
2,4-Dimethylphenol	<RL		10
2,4-Dinitrophenol	<RL		50
2,4-Dinitrotoluene	<RL		10
2,6-Dinitrotoluene	<RL		10
2-Chloronaphthalene	<RL		10
2-Chlorophenol	<RL		10
2-Methylnaphthalene	<RL		10
2-Methylphenol	<RL		10
2-Nitroaniline	<RL		20
2-Nitrophenol	<RL		10
3,3'-Dichlorobenzidine	<RL		10

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Pg 33 of 36

Client Sample ID: METHOD BLANK

AAL Sample ID #: AC21692

Accura Project #: 29042



3,4-Methylphenol	<RL	20
3-Nitroaniline	<RL	20
4,6-Dinitro-2-methylphenol	<RL	20
4-Bromophenyl phenyl ether	<RL	10
4-Chloro-3-methylphenol	<RL	10
4-Chloroaniline	<RL	10
4-Chlorophenyl phenyl ether	<RL	10
4-Nitroaniline	<RL	20
4-Nitrophenol	<RL	10
Acenaphthene	<RL	10
Acenaphthylene	<RL	10
Anthracene	<RL	10
Benzidine	<RL	10
Benzo(a)anthracene	<RL	10
Benzo(a)pyrene	<RL	10
Benzo(b)fluoranthene	<RL	10
Benzo(g,h,i)perylene	<RL	10
Benzo(k)fluoranthene	<RL	10
Benzoic acid	<RL	50
Benzyl alcohol	<RL	10
bis(2-Chloroethoxy)methane	<RL	10
bis(2-Chloroethyl)ether	<RL	10
bis(2-Chloroisopropyl)ether	<RL	10
bis(2-Ethylhexyl)phthalate	<RL	10
Butyl benzyl phthalate	<RL	10
Carbazole	<RL	10
Chrysene	<RL	10
Dibenz(a,h)anthracene	<RL	10
Dibenzofuran	<RL	10
Diethylphthalate	<RL	10
Dimethylphthalate	<RL	10
Di-n-butylphthalate	<RL	10
Di-n-octylphthalate	<RL	10
Fluoranthene	<RL	10
Fluorene	<RL	10
Hexachlorobenzene	<RL	10
Hexachlorobutadiene	<RL	10
Hexachlorocyclopentadiene	<RL	10
Hexachloroethane	<RL	10
Indeno(1,2,3-cd)pyrene	<RL	10
Isophorone	<RL	10
Naphthalene	<RL	10
Nitrobenzene	<RL	10
N-Nitrosodimethylamine	<RL	10
N-Nitroso-di-n-propylamine	<RL	10
N-Nitrosodiphenylamine	<RL	10
Pentachlorophenol	<RL	20
Phenanthrene	<RL	10
Phenol	<RL	10
Pyrene	<RL	10

**ANALYSIS: VOC's - USACE**

Method Ref: 8260B

Date Ext/Dig/Prep: 11/2/2001

Date Analyzed: 11/2/2001

Result Units: ug/L

<u>Analyte Name</u>
1,1,1,2-Tetrachloroethane

<u>Analytical Results</u>
<RL

Qualifier

<u>Reported Detection Limits</u>
5.0

ACCURA ANALYTICAL LABORATORY, INC.

<RL = Less than Reporting Limit

Client Sample ID: METHOD BLANK

AALSample ID #: AC21692

Accura Project #: 29042

1,1,1-Trichloroethane	<RL	5.0
1,1,2,2-Tetrachloroethane	<RL	5.0
1,1,2-Trichloroethane	<RL	5.0
1,1-Dichloroethane	<RL	5.0
1,1-Dichloroethene	<RL	5.0
1,1-Dichloropropene	<RL	5.0
1,2,3-Trichlorobenzene	<RL	5.0
1,2,3-Trichloropropane	<RL	5.0
1,2,4-Trichlorobenzene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	5.0
1,2-Dibromo-3-Chloropropane	<RL	5.0
1,2-Dibromoethane	<RL	5.0
1,2-Dichlorobenzene	<RL	5.0
1,2-Dichloroethane	<RL	5.0
1,2-Dichloropropane	<RL	5.0
1,3,5-Trimethylbenzene	<RL	5.0
1,3-Dichlorobenzene	<RL	5.0
1,3-Dichloropropane	<RL	5.0
1,4-Dichlorobenzene	<RL	5.0
2,2-Dichloropropane	<RL	5.0
2-Butanone	<RL	5.0
2-Chloroethyl Vinyl Ether	<RL	5.0
2-Chlorotoluene	<RL	5.0
2-Hexanone	<RL	10
4-Chlorotoluene	<RL	5.0
4-Methyl-2-Pentanone	<RL	10
Acetone	<RL	100
Acrolein	<RL	100
Acrylonitrile	<RL	5.0
Benzene	<RL	5.0
Bromobenzene	<RL	5.0
Bromochloromethane	<RL	5.0
Bromodichloromethane	<RL	5.0
Bromoform	<RL	5.0
Bromomethane	<RL	10
Carbon Disulfide	<RL	5.0
Carbon Tetrachloride	<RL	5.0
Chlorobenzene	<RL	5.0
Chlorodibromomethane	<RL	5.0
Chloroethane	<RL	5.0
Chloroform	<RL	5.0
Chloromethane	<RL	10
cis-1,2-Dichloroethene	<RL	5.0
cis-1,3-Dichloropropene	<RL	5.0
cis-1,4-Dichloro-2-Butene	<RL	5.0
Dibromomethane	<RL	5.0
Dichlorodifluoromethane	<RL	10
Ethylbenzene	<RL	5.0
Hexachlorobutadiene	<RL	5.0
Iodomethane	<RL	5.0
Isopropylbenzene	<RL	5.0
Methyl Methacrylate	<RL	5.0
Methylene Chloride	<RL	5.0
Methyl-tert-Butyl Ether	<RL	5.0
Naphthalene	<RL	5.0
n-Butylbenzene	<RL	5.0

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<RL = Less than Reporting Limit

Pg 35 of 36

Client Sample ID: METHOD BLANK

AALSample ID#: AC21692

Accura Project #: 29042

F-315

n-Propylbenzene	<RL	5.0
p-Isopropyltoluene	<RL	5.0
sec-Butylbenzene	<RL	5.0
Styrene	<RL	5.0
tert-butylbenzene	<RL	5.0
Tetrachloroethene	<RL	5.0
Toluene	<RL	5.0
trans-1,2-Dichloroethene	<RL	5.0
trans-1,3-Dichloropropene	<RL	5.0
trans-1,4-Dichloro-2-Butene	<RL	5.0
Trichloroethene	<RL	5.0
Trichlorofluoromethane	<RL	5.0
Vinyl Acetate	<RL	50
Vinyl Chloride	<RL	2.0
Xylenes (Total)	<RL	5.0

**ANALYSIS: X VOC OC Surrogates-Waters**

Method Ref: 5030B/8260B

Date Ext/Dig/Prep: 11/2/2001      Date Analyzed: 11/2/2001      Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4 (83-124)	95		
4-Bromofluorobenzene (81-118)	118		
Toluene-d8 (84-115)	110		

**ANALYSIS: X SVOC (3510) OC Surr. (Water)**

Method Ref: 8270C

Date Ext/Dig/Prep: 11/2/2001      Date Analyzed: 11/4/2001      Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Qualifier</u>	<u>Reported Detection Limits</u>
2,4,6-Tribromophenol (Range 37-125)	49		
2-Fluorobiphenyl (Range 42-114)	65		
2-Fluorophenol (Range 12-110)	26		
Nitrobenzene-d5 (Range 44-114)	70		
Phenol-d6 (Range 5-126)	21		
p-Terphenyl-d14 (Range 56-130)	87		

**QUALITY CONTROL RESULTS**

**WATER VOLATILES  
 BATCH W102901B**

Sample ID	Spike Analyte	Spike Amt (ug/L)	LCS Result (ug/L)	LCSD Result (ug/L)	LCS Recovery (%)	LCSD Recovery (%)	RPD	Reference Range		
								RPD	Recovery (%)	
LCS	1,1-Dichloroethene	50.00	58.02	NA	116	NA	NA	20	86 - 117	
LCS	Benzene	50.00	51.84	NA	104	NA	NA	20	87 - 120	
LCS	Trichloroethene	50.00	49.15	NA	98	NA	NA	20	89 - 114	
LCS	Toluene	50.00	53.61	NA	107	NA	NA	20	84 - 115	
LCS	Chlorobenzene	50.00	51.96	NA	104	NA	NA	20	84 - 115	
Sample ID	Spike Analyte	Sample Result (ug/L)	Spike Amt (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	MS Recovery (%)	MSD Recovery (%)	RPD	Reference Range	
AC21683	1,1-Dichloroethene	<RDL	50.00	56.38	56.36	113	113	0	20	78 - 117
AC21683	Benzene	<RDL	50.00	51.26	51.25	103	103	0	20	82 - 123
AC21683	Trichloroethene	<RDL	50.00	48.83	48.39	98	97	1	20	79 - 120
AC21683	Toluene	<RDL	50.00	52.54	52.69	105	105	0	20	77 - 116
AC21683	Chlorobenzene	<RDL	50.00	50.44	50.50	101	101	0	20	79 - 110

\* = Outside limits

F-317

QUALITY CONTROL RESULTS

WATER SEMIVOLATILES  
 BATCH BNAW220

Sample ID	Spike Analyte	Spike Amt (ug/L)	LCS Result (ug/L)	LCSD Result (ug/L)	LCS Recovery (%)	LCSD Recovery (%)	RPD	Reference Range		
								RPD	Recovery (%)	
LCS	Phenol	100.00	19.61	NA	20	NA	NA	20	15 - 126	
LCS	2-Chlorophenol	100.00	41.03	NA	41	NA	NA	20	18 - 124	
LCS	4-Chloro-3-methylphenol	100.00	69.62	NA	70	NA	NA	20	22 - 137	
LCS	4-Nitrophenol	100.00	9.83	NA	10	NA	NA	20	8 - 141	
LCS	Pentachlorophenol	100.00	34.84	NA	35	NA	NA	20	10 - 149	
LCS	1,4-Dichlorobenzene	50.00	20.39	NA	41	NA	NA	20	25 - 95	
LCS	n-Nitroso-di-n-propylamine	50.00	35.97	NA	72	NA	NA	20	51 - 110	
LCS	1,2,4-Trichlorobenzene	50.00	22.51	NA	45	NA	NA	20	29 - 99	
LCS	Acenaphthene	50.00	31.44	NA	63	NA	NA	20	44 - 114	
LCS	2,4-Dinitrotoluene	50.00	33.99	NA	68	NA	NA	20	41 - 121	
LCS	Pyrene	50.00	41.60	NA	83	NA	NA	20	51 - 123	
Sample ID	Spike Analyte	Sample Result (ug/L)	Spike Amt (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	MS Recovery (%)	MSD Recovery (%)	RPD	Reference Range	
									RPD	Recovery (%)
AC21683	Phenol	<RDL	100.00	21.31	37.19	21	37	54 *	20	10 - 129
AC21683	2-Chlorophenol	<RDL	100.00	31.06	51.03	31	51	49 *	20	28 - 120
AC21683	4-Chloro-3-methylphenol	<RDL	100.00	60.26	77.18	60	77	25 *	20	49 - 125
AC21683	4-Nitrophenol	<RDL	100.00	13.41	22.85	13	23	52 *	20	9 - 145
AC21683	Pentachlorophenol	<RDL	100.00	16.23	24.65	16	25	41 *	20	9 - 172
AC21683	1,4-Dichlorobenzene	<RDL	50.00	31.44	36.41	63	73	15	20	41 - 97
AC21683	n-Nitroso-di-n-propylamine	<RDL	50.00	38.68	41.21	77	82	6	20	47 - 118
AC21683	1,2,4-Trichlorobenzene	<RDL	50.00	33.68	37.51	67	75	11	20	37 - 109
AC21683	Acenaphthene	<RDL	50.00	37.38	39.70	75	79	6	20	55 - 113
AC21683	2,4-Dinitrotoluene	<RDL	50.00	32.46	34.83	65	70	7	20	39 - 120
AC21683	Pyrene	<RDL	50.00	43.29	43.43	87	87	0	20	39 - 142

\* = Outside limits

**QUALITY CONTROL RESULTS**

**WATER METALS - RCRA  
 BATCH 110201-A**

Sample ID	Spike Analyte	Spike Amt (mg/L)	LCS Result (mg/L)	LCSD Result (mg/L)	LCS Recovery (%)	LCSD Recovery (%)	RPD	Reference Range		
								RPD	Recovery (%)	
LCS	Arsenic	1.00	1.02	1.01	102	101	1	20	75 - 125	
LCS	Barium	1.00	1.01	1.00	101	100	1	20	75 - 125	
LCS	Cadmium	1.00	1.00	0.99	100	99	1	20	75 - 125	
LCS	Chromium	1.00	0.99	0.98	99	98	1	20	75 - 125	
LCS	Lead	1.00	1.00	1.00	100	100	1	20	75 - 125	
LCS	Selenium	1.00	1.01	1.00	101	100	1	20	75 - 125	
LCS	Silver	1.00	1.02	1.01	102	101	1	20	75 - 125	
Sample ID	Spike Analyte	Sample Result (mg/L)	Spike Amt (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	MS Recovery (%)	MSD Recovery (%)	RPD	Reference Range	
AC21690	Arsenic	<RDL	1.00	0.99	0.99	99	99	1	20	75 - 125
AC21690	Barium	<RDL	1.00	1.00	0.98	100	98	1	20	75 - 125
AC21690	Cadmium	<RDL	1.00	0.96	0.95	96	95	1	20	75 - 125
AC21690	Chromium	<RDL	1.00	0.96	0.94	96	94	1	20	75 - 125
AC21690	Lead	<RDL	1.00	0.99	0.98	99	98	1	20	75 - 125
AC21690	Selenium	<RDL	1.00	0.98	0.97	98	97	0	20	75 - 125
AC21690	Silver	<RDL	1.00	0.98	0.89	98	89	9	20	75 - 125

\* = Outside limits

\*\* = Recovery could not be determined due to high sample concentration



F-319

Accura Analytical Laboratory, Inc.  
 6017 Commercial Drive  
 Norcross, GA 30071  
 Accura Project # 29042  
 USACE - DO 0154  
 FDTA on Hunter AAF

**QUALITY CONTROL RESULTS**

**WATER MERCURY  
 BATCH 110201HG**

Sample ID	Spike Analyte	Spike Amt (ug/L)	LCS Result (ug/L)	LCSD Result (ug/L)	LCS Recovery (%)	LCSD Recovery (%)	RPD	RPD	Reference Range Recovery (%)
LCS	Mercury	3.00	3.54	NA	118	NA	NA	20	61 - 143
Sample ID	Spike Analyte	Sample Result (ug/L)	Spike Amt (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	MS Recovery (%)	MSD Recovery (%)	RPD	Reference Range RPD   Recovery (%)
AC21466	Mercury	<RDL	3.00	2.63	2.62	88	87	0	20   65 - 130

\* = Outside limits

\*\* = Recovery could not be determined due to high sample concentration

Mercury

704

F-320



CASE NARRATIVE

STL Savannah

SDG# HFTA02  
PROJECT#s S117111

TCL Semivolatiles Fraction

The following samples were analyzed according to SW-846 Method 8270C.

SL#	SAMPLE DESCRIPTION	MATRIX
S117111*1	SB-46 (4-6)	Solid
S117111*2	SB-44 (6-8)	Solid
S117111*3	SB-46 (12-14)	Solid
S117111*4	SB-43 (2-4)	Solid
S117111*5	SB-100 (2-4)	Solid
S117111*6	SB-44 (2-4)	Solid
S117111*7	SB-43 (0-2)	Solid
S117111*8	SB-EQBLNK02	Liquid

The soil samples were extracted in batch 1102A and the liquid sample was extracted in batch 1102B.

A matrix spike and matrix spike duplicate were performed on sample S117111-4 (SB-43 (2-4)).

The liquid and soil lab control samples were spiked with the routine spike compound list. The spike recovery of pyrene was outside quality control limits (high biased) in the soil lab control sample extracted in batch 1102A. There were no target analytes detected in the associated method blank or client samples; therefore, data has been provided.



**CASE NARRATIVE**

SDG# HFTA02  
PROJECT#s S117111

**STL Savannah**

Volatiles by GC/MS Fraction

The following samples were analyzed according to SW-846 Method 8260B.

SL#	SAMPLE DESCRIPTION	MATRIX
S117111*1	SB-46 (4-6)	Solid
S117111*2	SB-44 (6-8)	Solid
S117111*3	SB-46 (12-14)	Solid
S117111*4	SB-43 (2-4)	Solid
S117111*5	SB-100 (2-4)	Solid
S117111*6	SB-44 (2-4)	Solid
S117111*7	SB-43 (0-2)	Solid
S117111*8	SB-EQBLNK02	Liquid
S117111*9	Trip Blank	Liquid

A matrix spike and matrix spike duplicate was performed on sample S117111-4 (SB-43 (2-4)).

Due to chemical breakdown of isopropyl alcohol (used to clean sampling instruments), acetone exceeded the upper calibration limit in the equipment blank (S117111-8); therefore, the sample was not reanalyzed diluted and original data has been provided.

606



**CASE NARRATIVE**

SDG# HFTA02  
PROJECT#s S117111

**STL Savannah**

Metals Fraction

The following samples were analyzed according to SW-846 Method 6010B for chromium.

SL#	SAMPLE DESCRIPTION	MATRIX
S117111*1	SB-46 (4-6)	Solid
S117111*2	SB-44 (6-8)	Solid
S117111*3	SB-46 (12-14)	Solid
S117111*4	SB-43 (2-4)	Solid
S117111*5	SB-100 (2-4)	Solid
S117111*6	SB-44 (2-4)	Solid
S117111*7	SB-43 (0-2)	Solid
S117111*8	SB-EQBLNK02	Liquid

Sample S117111-4 (SB-43 (2-4)) was the designated matrix spike / matrix spike duplicate.

LOG NO: S1-17111  
 Received: 01 NOV 01  
 Reported: 13 NOV 01

Mr. David Wilderman

Law Engineering and Environmental Services/Remediation Group

3200 Town Point Drive, Suite 100

Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 114311113

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#			
17111-1	SB-46 (4-6)	10-31-01/17:35	HFTA02			
17111-2	SB-44 (6-8)	11-01-01/18:00	HFTA02			
17111-3	SB-46 (12-14)	10-31-01/17:50	HFTA02			
17111-4	SB-43 (2-4)	11-01-01/10:30	HFTA02			
17111-5	SB-100 (2-4)	11-01-01/12:00	HFTA02			
PARAMETER		17111-1	17111-2	17111-3	17111-4	17111-5
TCL Semivolatiles (8270)						
Acenaphthene, ug/kg dw		340U	380U	380U	350U	350U
Acenaphthylene, ug/kg dw		340U	380U	380U	350U	350U
Anthracene, ug/kg dw		340U	380U	380U	350U	350U
Benzo(a)anthracene, ug/kg dw		340U	380U	380U	350U	350U
Benzo(b)fluoranthene, ug/kg dw		340U	380U	380U	350U	350U
Benzo(k)fluoranthene, ug/kg dw		340U	380U	380U	350U	350U
Benzo(g,h,i)perylene, ug/kg dw		340U	380U	380U	350U	350U
Benzo(a)pyrene, ug/kg dw		340U	380U	380U	350U	350U
bis(2-Ethylhexyl)phthalate, ug/kg dw		340U	380U	380U	350U	350U
4-Bromophenylphenyl ether, ug/kg dw		340U	380U	380U	350U	350U
Chrysene, ug/kg dw		340U	380U	380U	350U	350U
Dibenzo(a,h)anthracene, ug/kg dw		340U	380U	380U	350U	350U
Di-n-butylphthalate, ug/kg dw		340U	380U	380U	350U	350U
1,2-Dichlorobenzene, ug/kg dw		340U	380U	380U	350U	350U
1,3-Dichlorobenzene, ug/kg dw		340U	380U	380U	350U	350U
1,4-Dichlorobenzene, ug/kg dw		340U	380U	380U	350U	350U

608

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Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144

CL Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

**REPORT OF RESULTS**

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-1	SB-46 (4-6)	10-31-01/17:35	HFTA02
17111-2	SB-44 (6-8)	11-01-01/18:00	HFTA02
17111-3	SB-46 (12-14)	10-31-01/17:50	HFTA02
17111-4	SB-43 (2-4)	11-01-01/10:30	HFTA02
17111-5	SB-100 (2-4)	11-01-01/12:00	HFTA02

PARAMETER	17111-1	17111-2	17111-3	17111-4	17111-5
Diethylphthalate, ug/kg dw	340U	380U	380U	350U	350U
Fluoranthene, ug/kg dw	340U	380U	380U	350U	350U
Fluorene, ug/kg dw	340U	380U	380U	350U	350U
Indeno(1,2,3-cd)pyrene, ug/kg dw	340U	380U	380U	350U	350U
Naphthalene, ug/kg dw	340U	380U	380U	350U	350U
Phenanthrene, ug/kg dw	340U	380U	380U	350U	350U
Pyrene, ug/kg dw	340U	380U	380U	350U	350U
Surrogate - Nitrobenzene - d5	82 %	79 %	79 %	72 %	89 %
Surrogate - 2-Fluorobiphenyl	88 %	84 %	89 %	78 %	100 %
Surrogate - Terphenyl-d14	88 %	95 %	89 %	78 %	100 %
2,4-Dinitrotoluene, ug/kg dw	---	---	---	350U	---
1,2,4-Trichlorobenzene, ug/kg dw	---	---	---	350U	---
n-Nitrosodi-n-propylamine, ug/kg dw	---	---	---	350U	---
Dilution Factor	1	1	1	1	1
Prep Date	11.02.01	11.02.01	11.02.01	11.02.01	11.02.01
Analysis Date	11.02.01	11.02.01	11.02.01	11.02.01	11.02.01
Batch ID	1102A	1102A	1102A	1102A	1102A

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Received: 01 NOV 01  
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Code: 114311113

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-1	SB-46 (4-6)	10-31-01/17:35	HFTA02
17111-2	SB-44 (6-8)	11-01-01/18:00	HFTA02
17111-3	SB-46 (12-14)	10-31-01/17:50	HFTA02
17111-4	SB-43 (2-4)	11-01-01/10:30	HFTA02
17111-5	SB-100 (2-4)	11-01-01/12:00	HFTA02

PARAMETER	17111-1	17111-2	17111-3	17111-4	17111-5
<b>Volatiles by GC/MS (8260)</b>					
Acetone, ug/kg dw	60U	59U	58U	60U	60U
Benzene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
2-Butanone (MEK), ug/kg dw	30U	30U	29U	30U	30U
Carbon tetrachloride, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Chlorobenzene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Chloroethane, ug/kg dw	12U	12U	12U	12U	12U
Chloroform, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Chloromethane, ug/kg dw	12U	12U	12U	12U	12U
1,1-Dichloroethene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
1,2-Dichloroethane, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
1,1-Dichloroethane, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
cis-1,2-Dichloroethene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
trans-1,2-Dichloroethene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Ethylbenzene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Methylene chloride (Dichloromethane), ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Tetrachloroethene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Toluene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U

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3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-1	SB-46 (4-6)	10-31-01/17:35	HFTA02
17111-2	SB-44 (6-8)	11-01-01/18:00	HFTA02
17111-3	SB-46 (12-14)	10-31-01/17:50	HFTA02
17111-4	SB-43 (2-4)	11-01-01/10:30	HFTA02
17111-5	SB-100 (2-4)	11-01-01/12:00	HFTA02

PARAMETER	17111-1	17111-2	17111-3	17111-4	17111-5
1,1,1-Trichloroethane, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
1,1,2-Trichloroethane, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
richloroethene, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Trichlorofluoromethane, ug/kg dw	6.0U	5.9U	5.8U	6.0U	6.0U
Vinyl chloride, ug/kg dw	12U	12U	12U	12U	12U
Xylenes, Total, ug/kg dw	12U	12U	12U	12U	12U
Surrogate - Toluene-d8	100 %	95 %	103 %	98 %	90 %
Surrogate - 4-Bromofluorobenzene	98 %	80 %	103 %	93 %	70 %
Surrogate - Dibromofluoromethane	100 %	95 %	95 %	93 %	93 %
Dilution Factor	1	1	1	1	1
Analysis Date	11.02.01	11.02.01	11.02.01	11.02.01	11.02.01
Batch ID	1L1102	1L1102	1L1102	1L1102	1L1102
Chromium (6010)					
Chromium, mg/kg dw	1.9	4.3	3.9	2.6	2.9
Dilution Factor	1	1	1	1	1
Prep Date	11.02.01	11.02.01	11.02.01	11.02.01	11.02.01
Analysis Date	11.02.01	11.02.01	11.02.01	11.02.01	11.02.01
Batch ID	1102A	1102A	1102A	1102A	1102A
Percent Solids	96	88	86	93	93

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REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-8	SB-EQBLNK02	11-01-01/11:00	HFTA02
PARAMETER		17111-8	
TCL Semivolatiles (8270)			
	Acenaphthene, ug/l		10U
	Acenaphthylene, ug/l		10U
	Anthracene, ug/l		10U
	Benzo(a)anthracene, ug/l		10U
	Benzo(b)fluoranthene, ug/l		10U
	Benzo(k)fluoranthene, ug/l		10U
	Benzo(g,h,i)perylene, ug/l		10U
	Benzo(a)pyrene, ug/l		10U
	bis(2-Ethylhexyl)phthalate, ug/l		10U
	4-Bromophenylphenyl ether, ug/l		10U
	Chrysene, ug/l		10U
	Dibenzo(a,h)anthracene, ug/l		10U
	Di-n-butylphthalate, ug/l		10U
	1,2-Dichlorobenzene, ug/l		10U
	1,3-Dichlorobenzene, ug/l		10U
	1,4-Dichlorobenzene, ug/l		10U
	Diethylphthalate, ug/l		10U
	Fluoranthene, ug/l		10U
	Fluorene, ug/l		10U
	Indeno(1,2,3-cd)pyrene, ug/l		10U
	Naphthalene, ug/l		10U
	Phenanthrene, ug/l		10U

612

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3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144

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Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

Page 10

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-8	SB-EQBLNK02	11-01-01/11:00	HFTA02
PARAMETER		17111-8	
Pyrene, ug/l		10U	
Surrogate - Nitrobenzene - d5		104 %	
Surrogate - 2-Fluorobiphenyl		110 %	
Surrogate - Terphenyl-d14		120 %	
Dilution Factor		1	
Prep Date		11.02.01	
Analysis Date		11.05.01	
Batch ID		1102B	



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Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 114311113

REPORT OF RESULTS

Page 11

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-8	SB-EQBLNK02	11-01-01/11:00	HFTA02
PARAMETER		17111-8	
Volatiles by GC/MS (8260)			
Acetone, ug/l		2100E	
Benzene, ug/l		5.0U	
2-Butanone (MEK), ug/l		25U	
Carbon tetrachloride, ug/l		5.0U	
Chlorobenzene, ug/l		5.0U	
Chloroethane, ug/l		10U	
Chloroform, ug/l		5.0U	
Chloromethane, ug/l		10U	
1,1-Dichloroethene, ug/l		5.0U	
1,2-Dichloroethane, ug/l		5.0U	
1,1-Dichloroethane, ug/l		5.0U	
cis-1,2-Dichloroethene, ug/l		5.0U	
trans-1,2-Dichloroethene, ug/l		5.0U	
Ethylbenzene, ug/l		5.0U	
Methylene chloride (Dichloromethane), ug/l		5.0U	
Tetrachloroethene, ug/l		5.0U	
Toluene, ug/l		5.0U	
1,1,1-Trichloroethane, ug/l		5.0U	
1,1,2-Trichloroethane, ug/l		5.0U	
Trichloroethene, ug/l		5.0U	
Trichlorofluoromethane, ug/l		5.0U	
Vinyl chloride, ug/l		10U	

614

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Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

**REPORT OF RESULTS**

Page 12

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-8	SB-EQBLNK02	11-01-01/11:00	HFTA02
<b>PARAMETER</b>		<b>17111-8</b>	
Xylenes, Total, ug/l		10U	
Surrogate - Toluene-d8		104 %	
Surrogate - 4-Bromofluorobenzene		100 %	
Surrogate - Dibromofluoromethane		104 %	
Dilution Factor		1	
Analysis Date		11.02.01	
atch ID		1L1102	
<b>Chromium (6010)</b>			
Chromium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.02.01	
Analysis Date		11.02.01	
Batch ID		1102H	

LOG NO: S1-17111  
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Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 114311113

Page 5

## REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-6	SB-44 (2-4)	11-01-01/17:50	HFTA02
17111-7	SB-43 (0-2)	11-01-01/10:15	HFTA02
PARAMETER		17111-6	17111-7
TCL Semivolatiles (8270)			
Acenaphthene, ug/kg dw		350U	370U
Acenaphthylene, ug/kg dw		350U	370U
Anthracene, ug/kg dw		350U	370U
Benzo(a)anthracene, ug/kg dw		350U	370U
Benzo(b)fluoranthene, ug/kg dw		350U	370U
Benzo(k)fluoranthene, ug/kg dw		350U	370U
Benzo(g,h,i)perylene, ug/kg dw		350U	370U
Benzo(a)pyrene, ug/kg dw		350U	370U
bis(2-Ethylhexyl)phthalate, ug/kg dw		350U	370U
4-Bromophenylphenyl ether, ug/kg dw		350U	370U
Chrysene, ug/kg dw		350U	370U
Dibenzo(a,h)anthracene, ug/kg dw		350U	370U
Di-n-butylphthalate, ug/kg dw		350U	370U
1,2-Dichlorobenzene, ug/kg dw		350U	370U
1,3-Dichlorobenzene, ug/kg dw		350U	370U
1,4-Dichlorobenzene, ug/kg dw		350U	370U
Diethylphthalate, ug/kg dw		350U	370U
Fluoranthene, ug/kg dw		350U	370U
Fluorene, ug/kg dw		350U	370U
Indeno(1,2,3-cd)pyrene, ug/kg dw		350U	370U
Naphthalene, ug/kg dw		350U	370U

616

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Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

**REPORT OF RESULTS**

Page 6

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-6	SB-44 (2-4)	11-01-01/17:50	HFTA02
17111-7	SB-43 (0-2)	11-01-01/10:15	HFTA02
PARAMETER		17111-6	17111-7
Phenanthrene, ug/kg dw		350U	370U
Pyrene, ug/kg dw		350U	370U
Surrogate - Nitrobenzene - d5		94 %	95 %
Surrogate - 2-Fluorobiphenyl		100 %	100 %
Surrogate - Terphenyl-d14		94 %	105 %
Dilution Factor		1	1
Prep Date		11.02.01	11.02.01
Analysis Date		11.02.01	11.02.01
Batch ID		1102A	1102A

E-733

LOG NO: S1-17111  
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Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 114311113

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-6	SB-44 (2-4)	11-01-01/17:50	HFTA02
17111-7	SB-43 (0-2)	11-01-01/10:15	HFTA02
PARAMETER		17111-6	17111-7
Volatiles by GC/MS (8260)			
Acetone, ug/kg dw		58U	88
Benzene, ug/kg dw		5.8U	5.8U
2-Butanone (MEK), ug/kg dw		29U	29U
Carbon tetrachloride, ug/kg dw		5.8U	5.8U
Chlorobenzene, ug/kg dw		5.8U	5.8U
Chloroethane, ug/kg dw		12U	12U
Chloroform, ug/kg dw		5.8U	5.8U
Chloromethane, ug/kg dw		12U	12U
1,1-Dichloroethene, ug/kg dw		5.8U	5.8U
1,2-Dichloroethane, ug/kg dw		5.8U	5.8U
1,1-Dichloroethane, ug/kg dw		5.8U	5.8U
cis-1,2-Dichloroethene, ug/kg dw		5.8U	5.8U
trans-1,2-Dichloroethene, ug/kg dw		5.8U	5.8U
Ethylbenzene, ug/kg dw		5.8U	5.8U
Methylene chloride (Dichloromethane), ug/kg dw		5.8U	5.8U
Tetrachloroethene, ug/kg dw		5.8U	5.8U
Toluene, ug/kg dw		5.8U	5.8U
1,1,1-Trichloroethane, ug/kg dw		5.8U	5.8U
1,1,2-Trichloroethane, ug/kg dw		5.8U	5.8U
Trichloroethene, ug/kg dw		5.8U	5.8U
Trichlorofluoromethane, ug/kg dw		5.8U	5.8U

618

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Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

**REPORT OF RESULTS**

Page 8

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-6	SB-44 (2-4)	11-01-01/17:50	HFTA02
17111-7	SB-43 (0-2)	11-01-01/10:15	HFTA02
PARAMETER		17111-6	17111-7
Vinyl chloride, ug/kg dw		12U	12U
Xylenes, Total, ug/kg dw		12U	12U
Surrogate - Toluene-d8		98 %	96 %
Surrogate - 4-Bromofluorobenzene		79 %	78 %
Surrogate - Dibromofluoromethane		93 %	100 %
Dilution Factor		1	1
Analysis Date		11.02.01	11.02.01
Batch ID		1L1102	1L1102
Chromium (6010)			
Chromium, mg/kg dw		2.7	2.4
Dilution Factor		1	1
Prep Date		11.02.01	11.02.01
Analysis Date		11.02.01	11.02.01
Batch ID		1102A	1102A
Percent Solids		93	89

LOG NO: S1-17111  
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Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 114311113

Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-9	Trip Blank	11-01-01	HFTA02
PARAMETER	17111-9		
Volatiles by GC/MS (8260)			
Acetone, ug/l		50U	
Benzene, ug/l		5.0U	
2-Butanone (MEK), ug/l		25U	
Carbon tetrachloride, ug/l		5.0U	
Chlorobenzene, ug/l		5.0U	
Chloroethane, ug/l		10U	
Chloroform, ug/l		5.0U	
Chloromethane, ug/l		10U	
1,1-Dichloroethene, ug/l		5.0U	
1,2-Dichloroethane, ug/l		5.0U	
1,1-Dichloroethane, ug/l		5.0U	
cis-1,2-Dichloroethene, ug/l		5.0U	
trans-1,2-Dichloroethene, ug/l		5.0U	
Ethylbenzene, ug/l		5.0U	
Methylene chloride (Dichloromethane), ug/l		5.0U	
Tetrachloroethene, ug/l		5.0U	
Toluene, ug/l		5.0U	
1,1,1-Trichloroethane, ug/l		5.0U	
1,1,2-Trichloroethane, ug/l		5.0U	
Trichloroethene, ug/l		5.0U	
Trichlorofluoromethane, ug/l		5.0U	
Vinyl chloride, ug/l		10U	

620

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STL Savannah

LOG NO: S1-17111  
Received: 01 NOV 01  
Reported: 13 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 114311113

REPORT OF RESULTS

Page 14

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17111-9	Trip Blank	11-01-01	HFTA02
PARAMETER		17111-9	
Xylenes, Total, ug/l		10U	
Surrogate - Toluene-d8		100 %	
Surrogate - 4-Bromofluorobenzene		100 %	
Surrogate - Dibromofluoromethane		100 %	
Dilution Factor		1	
Analysis Date		11.02.01	
Batch ID		1L1102	

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

U = Indicates compound was analyzed for but not detected.  
E (Organic) = Result exceeded the upper calibration limit.

*Angie Weimerskirck*  
Angie Weimerskirck, Project Manager



**SEVERN  
TRENT  
SERVICES**

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**STL Savannah**

**STL Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.stl-inc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE <b>HORIZAL AAF</b>	PROJECT NO. <b>12001-9-3411</b>	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS						PAGE <b>1</b>	OF <b>1</b>
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Vol's SVOC's Chromium	<b>PRESERVATIVE</b>	STANDARD REPORT DELIVERY DATE DUE _____  EXPEDITED REPORT DELIVERY (SURCHARGE) DATE DUE _____	NUMBER OF COOLERS SUBMITTED PER SHIPMENT:				
CLIENT (SITE) PM <b>DAVID WINKELMAN</b>	CLIENT PHONE <b>770-421-3400</b>	CLIENT FAX									
CLIENT NAME <b>LAW ENG.</b>	CLIENT E-MAIL										
CLIENT ADDRESS <b>3200 TOWNPOINT DR, NW, KENNESAW, GA 30144</b>											
COMPANY CONTRACTING THIS WORK (if applicable)											

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	WATER	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED						REMARKS
DATE	TIME							1	2	3	4	5	6	
11-1-01	11:40	SB-EQBANK 02	G	X				3	2	1				
10-31-01	17:35	SB-46 (4-6)	G	X				4	1	1				48 TAT
11-1-01	18:00	SB-44 (6-8)	G	X				4	1	1				↓
10-31-01	17:50	SB-46 (12-14)	G	X				4	1	1				

**RUSH**

RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>10/22/01</b>	TIME <b>11:00</b>	RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>11-1-01</b>	TIME <b>2005</b>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <b>[Signature]</b>	DATE	TIME	RECEIVED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>11-1-01</b>	TIME <b>20:05</b>	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY (SIGNATURE) <b>[Signature]</b>	DATE <b>11-1-01</b>	TIME <b>7:30pm</b>	CUSTODY INTACT YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO. <b>11910</b>	STL SAVANNAH LOG NO. <b>51-1711</b>	LABORATORY REMARKS
--	------------------------	-----------------------	--	----------------------------------	--	--------------------

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL Savannah

STL Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.stl-inc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE <b>HUNTER</b>	PROJECT NO. <b>12001-9-3411</b>	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	<b>VOCs</b> <b>SVOCS</b> <b>CHLORINUM</b>	STANDARD REPORT DELIVERY <input type="radio"/>	
CLIENT (SITE) PM <b>DAVID WILDERMAN</b>	CLIENT PHONE <b>770-421-3400</b>	CLIENT FAX			DATE DUE _____	
CLIENT NAME <b>LAW</b>	CLIENT E-MAIL				EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="radio"/>	
CLIENT ADDRESS <b>3200 TOWN POINT DR. N.W., KENNESAW, GA</b>				DATE DUE _____		NUMBER OF COOLERS SUBMITTED PER SHIPMENT:
COMPANY CONTRACTING THIS WORK (if applicable)				<b>PRESERVATIVE</b>		

SAMPLE		SAMPLE IDENTIFICATION	G	X			NUMBER OF CONTAINERS SUBMITTED										REMARKS
DATE	TIME						1	2	3	4	5	6	7	8	9	10	
11-1-01	10:30	SB-43 (2-4)	G	X			4	1	1								48 TAG
11-1-01	10:30	SB-43 (2-4) MS/USD	G	X			4	1	1								↓
11-1-01	12:00	SB-100 (2-4)	G	X			4	1	1								
11-1-01	17:50	SB-44 (2-4)	G	X			4	1	1								
11-1-01	10:15	SB-43 (0-2)	G	X			4	1	1								

**HURRY**

RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>10/22/01</b>	TIME <b>11:40</b>	RELINQUISHED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>11-1-01</b>	TIME <b>20:05</b>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <b>[Signature]</b>	DATE	TIME	RECEIVED BY: (SIGNATURE) <b>[Signature]</b>	DATE <b>11-1-01</b>	TIME <b>20:05</b>	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <b>K. Corner</b>	DATE <b>11/2/01</b>	TIME <b>7:30 PM</b>	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>	CUSTODY SEALING YES <input type="radio"/> NO <input type="radio"/>	STL SAVANNAH LOG NO. <b>517110-51-1711</b>	LABORATORY REMARKS
---	------------------------	------------------------	---	--	---	--------------------



### CASE NARRATIVE

SDG# HFTA03  
PROJECT#s S117211, S117211A, S117209

STL Savannah

Volatiles by GC/MS Fraction

The following samples were analyzed according to SW-846 Method 8260B.

SL#	SAMPLE DESCRIPTION	MATRIX
S117211*2	HMW-22	Liquid
S117211*3	HMW-21	Liquid
S117211A*2	HMW-14R	Liquid
S117211A*3	Trip Blank	Liquid
S117209*1	1DW-DECON	Liquid
S117209*3	TRIP BLANK	Liquid
S117211A*1	HMW-3	Liquid
S117209*2	HMW-100	Liquid
S117211*1	SB-43A (0-2)	Solid

Sample S117211-2 (HMW-22) was the designated matrix spike/matrix spike duplicate.

Due to the abundance of target analytes, sample S117209-1 was analyzed at a primary dilution of 1:4 and a secondary dilution of 1:20.

Due to the abundance of target analytes, samples S117211-3 and S117211A-2 were analyzed at secondary dilutions of 1:4 and 1:5, respectively.

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STL Savannah

LOG NO: S1-17211

Received: 07 NOV 01

Reported: 26 NOV 01

Mr. David Wilderman

Law Engineering and Environmental Services/Remediation Group

3200 Town Point Drive, Suite 100

Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF

Sampled By: Client

Code: 120411127

## REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#	
17211-2	HMW-22	11-06-01/12:30	HFTA03	
17211-3	HMW-21	11-06-01/10:30	HFTA03	
17211-3-DL	HMW-21	11-06-01/10:30	HFTA03	
PARAMETER		17211-2	17211-3	17211-3-DL
Volatiles by GC/MS (8260)				
Acetone, ug/l		25U	25U	100U
Benzene, ug/l		1.0U	1.0U	4.0U
2-Butanone (MEK), ug/l		10U	10U	40U
Carbon tetrachloride, ug/l		1.0U	1.0U	4.0U
Chlorobenzene, ug/l		1.0U	1.0U	4.0U
Chloroethane, ug/l		1.0U	1.0U	4.0U
Chloroform, ug/l		1.0U	1.0U	4.0U
Chloromethane, ug/l		1.0U	1.0U	4.0U
1,1-Dichloroethane, ug/l		1.0U	1.0U	4.0U
1,2-Dichloroethane, ug/l		1.0U	1.0U	4.0U
1,1-Dichloroethene, ug/l		1.0U	1.6	4.0U
cis-1,2-Dichloroethene, ug/l		1.0U	450E	390D
trans-1,2-Dichloroethene, ug/l		1.0U	5.8	4.0U
Ethylbenzene, ug/l		1.0U	1.0U	4.0U
Methylene chloride (Dichloromethane), ug/l		5.0U	5.0U	20U
Tetrachloroethene, ug/l		1.0U	1.0U	4.0U
Toluene, ug/l		1.0U	1.0U	4.0U
1,1,1-Trichloroethane, ug/l		1.0U	1.0U	4.0U
1,1,2-Trichloroethane, ug/l		1.0U	1.0U	4.0U
Trichloroethene, ug/l		1.0U	1.0U	4.0U

F-250

634

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LOG NO: S1-17211  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120411127

**REPORT OF RESULTS**

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211-2	HMW-22	11-06-01/12:30	HFTA03
17211-3	HMW-21	11-06-01/10:30	HFTA03
17211-3-DL	HMW-21	11-06-01/10:30	HFTA03

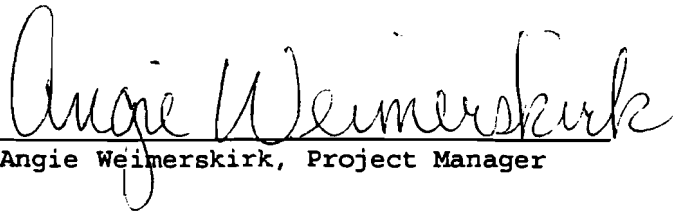
PARAMETER	17211-2	17211-3	17211-3-DL
Vinyl chloride, ug/l	1.0U	5.4	4.7D
Xylenes, Total, ug/l	2.0U	2.0U	8.0U
Trichlorofluoromethane, ug/l	1.0U	1.0U	4.0U
Surrogate - Toluene-d8	104 %	104 %	106 %
Surrogate - 4-Bromofluorobenzene	90 %	90 %	88 %
Surrogate - Dibromofluoromethane	90 %	90 %	88 %
Dilution Factor	1	1	4
Analysis Date	11.07.01	11.07.01	11.07.01
Batch ID	1B1107	1B1107	1B1107

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

U = Indicates compound was analyzed for but not detected.

E (Organic) = Result exceeded the upper calibration limit.

D = Result is from a secondary dilution.

  
Angie Weimerskirck, Project Manager

F-251

LOG NO: S1-17211A  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-2	HMW-14R	11-06-01/15:40	HFTA03
17211A-2-D	HMW-14R	11-06-01/15:40	HFTA03
17211A-3	Trip Blank	11-06-01	HFTA03
PARAMETER		17211A-2	17211A-3
Volatiles by GC/MS (8260)			
Acetone, ug/l		25U	120U
Benzene, ug/l		1.1	5.0U
2-Butanone (MEK), ug/l		10U	50U
Carbon tetrachloride, ug/l		1.0U	5.0U
Chlorobenzene, ug/l		1.0U	5.0U
Chloroethane, ug/l		1.0U	5.0U
Chloroform, ug/l		1.0U	5.0U
Chloromethane, ug/l		1.0U	5.0U
1,1-Dichloroethane, ug/l		1.0U	5.0U
1,2-Dichloroethane, ug/l		1.0U	5.0U
1,1-Dichloroethene, ug/l		1.0U	5.0U
cis-1,2-Dichloroethene, ug/l		740E	950D
trans-1,2-Dichloroethene, ug/l		33	32D
Ethylbenzene, ug/l		1.0U	5.0U
Methylene chloride (Dichloromethane), ug/l		5.0U	25U
Tetrachloroethene, ug/l		1.0U	5.0U
Toluene, ug/l		1.0U	5.0U
1,1,1-Trichloroethane, ug/l		1.0U	5.0U
1,1,2-Trichloroethane, ug/l		1.0U	5.0U
Trichloroethene, ug/l		1.0U	5.0U

F.252

636

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**STL Savannah**

LOG NO: S1-17211A  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120411127

**REPORT OF RESULTS**

Page 8

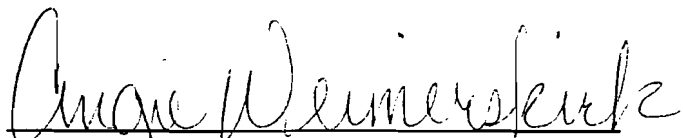
LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-2	HMW-14R	11-06-01/15:40	HFTA03
17211A-2-D	HMW-14R	11-06-01/15:40	HFTA03
17211A-3	Trip Blank	11-06-01	HFTA03
-----			
PARAMETER		17211A-2	17211A-2-DL 17211A-3
-----			
Vinyl chloride, ug/l		4.8	5.0U 1.0U
Xylenes, Total, ug/l		2.0U	10U 2.0U
Trichlorofluoromethane, ug/l		1.0U	5.0U 1.0U
Surrogate - Toluene-d8		108 %	104 % 106 %
Surrogate - 4-Bromofluorobenzene		90 %	88 % 90 %
Surrogate - Dibromofluoromethane		90 %	86 % 86 %
Dilution Factor		1	5 1
Analysis Date		11.07.01	11.07.01 11.07.01
Batch ID		1B1107	1B1107 1B1107

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

U = Indicates compound was analyzed for but not detected.

D = Result is from a secondary dilution.

E (Organic) = Result exceeded the upper calibration limit.

  
Angie Weimerskirk, Project Manager

F-253

LOG NO: S1-17211A  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

C1 Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
PARAMETER		17211A-1	
Acid & Base Neutral Extractables (8270)			
	Acenaphthene, ug/l		10U
	Acenaphthylene, ug/l		10U
	Anthracene, ug/l		10U
	Benzo(a)anthracene, ug/l		10U
	Benzo(b)fluoranthene, ug/l		10U
	Benzo(k)fluoranthene, ug/l		10U
	Benzo(g,h,i)perylene, ug/l		10U
	Benzo(a)pyrene, ug/l		10U
	bis(2-Ethylhexyl)phthalate, ug/l		10U
	Chrysene, ug/l		10U
	Dibenzo(a,h)anthracene, ug/l		10U
	Di-n-butylphthalate, ug/l		10U
	1,2-Dichlorobenzene, ug/l		10U
	1,3-Dichlorobenzene, ug/l		10U
	1,4-Dichlorobenzene, ug/l		10U
	Diethylphthalate, ug/l		10U
	Fluoranthene, ug/l		10U
	Fluorene, ug/l		10U
	Indeno(1,2,3-cd)pyrene, ug/l		10U
	Naphthalene, ug/l		10U
	Phenanthrene, ug/l		10U
	Pyrene, ug/l		10U



638

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**STL Savannah**

LOG NO: S1-17211A  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120411127  
Page 2

**REPORT OF RESULTS**

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
<b>PARAMETER</b>		<b>17211A-1</b>	
4-Bromophenylphenyl ether, ug/l		10U	
Surrogate-NBZ		92 %	
Surrogate-2FBP		84 %	
Surrogate-TPH		52 %	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.12.01	
Batch ID		1107E	

*F-255*

LOG NO: S1-17211A  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144  
 Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
PARAMETER	17211A-1		
Volatiles by GC/MS (8260)			
Acetone, ug/l		25U	
Benzene, ug/l		1.0U	
2-Butanone (MEK), ug/l		10U	
Carbon tetrachloride, ug/l		1.0U	
Chlorobenzene, ug/l		1.0U	
Chloroethane, ug/l		1.0U	
Chloroform, ug/l		1.0U	
Chloromethane, ug/l		1.0U	
1,1-Dichloroethane, ug/l		1.0U	
1,2-Dichloroethane, ug/l		1.0U	
1,1-Dichloroethene, ug/l		1.0U	
cis-1,2-Dichloroethene, ug/l		1.0U	
trans-1,2-Dichloroethene, ug/l		1.0U	
Ethylbenzene, ug/l		1.0U	
Methylene chloride (Dichloromethane), ug/l		5.0U	
Tetrachloroethene, ug/l		1.0U	
Toluene, ug/l		1.0U	
1,1,1-Trichloroethane, ug/l		1.0U	
1,1,2-Trichloroethane, ug/l		1.0U	
Trichloroethene, ug/l		1.0U	
Vinyl chloride, ug/l		1.0U	
Xylenes, Total, ug/l		2.0U	

640

LOG NO: S1-17211A  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
PARAMETER		17211A-1	
Trichlorofluoromethane, ug/l		1.0U	
Surrogate - Toluene-d8		106 %	
Surrogate - 4-Bromofluorobenzene		90 %	
Surrogate - Dibromofluoromethane		90 %	
Dilution Factor		1	
Analysis Date		11.07.01	
Batch ID		1B1107	
Mercury (7470)			
Mercury, mg/l		0.00020U	
Dilution Factor		1	
Prep Date		11.08.01	
Analysis Date		11.09.01	
Batch ID		1108R	
Arsenic (6010)			
Arsenic, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.12.01	
Batch ID		1107K	

LOG NO: S1-17211A  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
PARAMETER		17211A-1	
Barium (6010)			
Barium, mg/l		0.019	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	
Cadmium (6010)			
Cadmium, mg/l		0.0050U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	
Chromium (6010)			
Chromium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	

642

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**STL Savannah**

LOG NO: S1-17211A  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120411127

**REPORT OF RESULTS**

Page 6

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211A-1	HMW-3	11-06-01/20:15	HFTA03
PARAMETER		17211A-1	
Lead (6010)			
Lead, mg/l		0.0050U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.12.01	
Batch ID		1107K	
selenium (6010)			
Selenium, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	
Silver (6010)			
Silver, mg/l		0.010U	
Dilution Factor		1	
Prep Date		11.07.01	
Analysis Date		11.09.01	
Batch ID		1107K	

F-259

LOG NO: S1-17211  
 Received: 07 NOV 01  
 Reported: 26 NOV 01

Mr. David Wilderman  
 Law Engineering and Environmental Services/Remediation Group  
 3200 Town Point Drive, Suite 100  
 Kennesaw, GA 30144

Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
 Sampled By: Client  
 Code: 120411127

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211-1	SB-43A (0-2)	11-05-01/16:40	HFTA03
PARAMETER		17211-1	
Volatiles by GC/MS (8260)			
	Acetone, ug/kg dw		60U
	Benzene, ug/kg dw		6.0U
	2-Butanone (MEK), ug/kg dw		30U
	Carbon tetrachloride, ug/kg dw		6.0U
	Chlorobenzene, ug/kg dw		6.0U
	Chloroethane, ug/kg dw		12U
	Chloroform, ug/kg dw		6.0U
	Chloromethane, ug/kg dw		12U
	1,1-Dichloroethene, ug/kg dw		6.0U
	1,2-Dichloroethane, ug/kg dw		6.0U
	1,1-Dichloroethane, ug/kg dw		6.0U
	cis-1,2-Dichloroethene, ug/kg dw		6.0U
	trans-1,2-Dichloroethene, ug/kg dw		6.0U
	Ethylbenzene, ug/kg dw		6.0U
	Methylene chloride (Dichloromethane), ug/kg dw		6.0U
	Tetrachloroethene, ug/kg dw		6.0U
	Toluene, ug/kg dw		6.0U
	1,1,1-Trichloroethane, ug/kg dw		6.0U
	1,1,2-Trichloroethane, ug/kg dw		6.0U
	Trichloroethene, ug/kg dw		6.0U
	Trichlorofluoromethane, ug/kg dw		6.0U
	Vinyl chloride, ug/kg dw		12U

F-260

644

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SERVICES**

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**STL Savannah**

LOG NO: S1-17211  
Received: 07 NOV 01  
Reported: 26 NOV 01

Mr. David Wilderman  
Law Engineering and Environmental Services/Remediation Group  
3200 Town Point Drive, Suite 100  
Kennesaw, GA 30144  
Cl Project No: 12001-9-3411

Project: 12001-9-3411/HAAF  
Sampled By: Client  
Code: 120411127

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
17211-1	SB-43A (0-2)	11-05-01/16:40	HFTA03
PARAMETER		17211-1	
Xylenes, Total, ug/kg dw		6.0U	
Surrogate - Toluene-d8		93 %	
Surrogate - 4-Bromofluorobenzene		70 %	
Surrogate - Dibromofluoromethane		100 %	
Dilution Factor		1	
Analysis Date		11.08.01	
Batch ID		1M1108	
Percent Solids		92	

F-261

**SEVERN  
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**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**STL Savannah**

**STL Savannah**  
5102 LaRoche Avenue  
Savannah, GA 31404

Website: www.stl-inc.com  
Phone: (912) 354-7858  
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:  
Fax:

PROJECT REFERENCE <b>HUNTER AAF</b>	PROJECT NO.	PROJECT LOCATION (STATE) <b>GA</b>	MATRIX TYPE	REQUIRED ANALYSIS								PAGE <b>1</b>	OF <b>1</b>
STL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	SVOES METALS (COB) Hg. VOES	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	HUB HUB RESERVATIVE	STANDARD REPORT DELIVERY <input type="checkbox"/>	
CLIENT (SITE) PM <b>DAVID WILKINSON</b>	CLIENT PHONE <b>770-421-3400</b>	CLIENT FAX										DATE DUE _____	
CLIENT NAME <b>LAW</b>	CLIENT E-MAIL											EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS <b>3200 TOWN POINT DR., SUITE 100, KENNESAW, GA 30144</b>	COMPANY CONTRACTING THIS WORK (if applicable)											DATE DUE _____	
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:													

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED								REMARKS
DATE	TIME							1	2	3	4	5	6	7	8	
11-6-01	2015	HMW-3	G	X				2	1	1	3					7-10 DAYS TAT
11-6-01	1230	HMW-22	G	X							3					24-48 TAT
11-6-01	1030	HMW-21	G	X							3					24-48 TAT
		<del>HMW-3</del>	G	X												
11-6-01	1540	HMW-142	G	X							3					7-10 DAY TAT
11-6-01	1230	HMW-22 MS	G	X							3					24-48 TAT
11-6-01	1230	HMW-22 MSD	G	X							3					24-48 TAT
11-5-01	1640	SB-43A (0-2)	G	X							3					24-48 TAT
		3-TAP BLANKS														

**RUSH**

RELINQUISHED BY: (SIGNATURE) <b>KC</b>	DATE <b>10/22/01</b>	TIME <b>1140</b>	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <b>11-6-01</b>	TIME <b>11:45</b>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <b>KC</b>	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <b>KC</b>	DATE <b>11/7/01</b>	TIME <b>8AM</b>	CUSTODY INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	STL SAVANNAH LOG NO. <b>11-17211</b>	LABORATORY REMARKS
--	------------------------	--------------------	---	------------------	---	--------------------



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Analytical Management Laboratories</u>	Sample ID: <u>HMW-14R</u>
Client ID: <u>CESAS</u>	Project ID: <u>DAACG , DO# 0037</u>
Matrix: <u>W</u>	Project Num: <u>3412</u>
Sample g/ml: <u>25</u>	Lab Sample ID: <u>341202</u>
% Solids: not dec. _____	Date Collected: <u>6/26/03</u> Time: <u>14:10</u>
Instrument ID: <u>V5973A</u>	Dilution Factor: <u>1</u>
Analytical Method: <u>8260B</u>	Date Analyzed: <u>7/3/03</u> Time: <u>5:20</u>
Prep Method: <u>EPA 5030</u>	Date Received: <u>6/27/03 9:15:00 AM</u>
Analytical Batch: <u>1348</u>	

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
96-12-8	1,2-Dibromo3chloropropane		µg/l	U	0.133	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
107-02-8	Acrolein		µg/l	U	2	4
107-13-1	Acrylonitrile		µg/l	U	2	4
71-43-2	Benzene	1.26	µg/l	J	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2

EPA Lab Code:KS00902  
Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Analytical Management Laboratories</u>	Sample ID: <u>HMW-14R</u>
Client ID: <u>CESAS</u>	Project ID: <u>DAACG, DO# 0037</u>
Matrix: <u>W</u>	Project Num: <u>3412</u>
Sample g/ml: <u>25</u>	Lab Sample ID: <u>341202</u>
% Solids: <u>not dec.</u>	Date Collected: <u>6/26/03</u> Time: <u>14:10</u>
Instrument ID: <u>V5973A</u>	Dilution Factor: <u>1</u>
Analytical Method: <u>8260B</u>	Date Analyzed: <u>7/3/03</u> Time: <u>5:20</u>
Prep Method: <u>EPA 5030</u>	Date Received: <u>6/27/03 9:15:00 AM</u>
Analytical Batch: <u>1348</u>	

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL	
74-83-9	Bromomethane		µg/l	U	0.201	2	
75-15-0	Carbon disulfide		µg/l	U	0.183	2	
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2	
108-90-7	Chlorobenzene		µg/l	U	0.156	2	
75-00-3	Chloroethane		µg/l	U	0.207	2	
67-66-3	Chloroform		µg/l	U	0.214	2	
74-87-3	Chloromethane		µg/l	U	0.173	2	
156-59-2	cis-1,2-Dichloroethene	967	µg/l	E	0.151	2	- USE DILUTED VALUE INSTEAD
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2	
124-48-1	Dibromochloromethane		µg/l	U	0.133	2	
74-95-3	Dibromomethane		µg/l	U	0.1	2	
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2	
108-20-3	Diisopropyl ether		µg/l	U	0.5	2	
100-41-4	Ethylbenzene		µg/l	U	0.1	2	
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2	
74-88-2	Iodomethane		µg/l	U	0.2	2	
98-82-8	Isopropylbenzene		µg/l	U	0.1	2	
75-09-2	Methylene chloride		µg/l	U	0.398	2	
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2	
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2	
91-20-3	Naphthalene		µg/l	U	0.139	2	
104-51-8	n-Butylbenzene		µg/l	U	0.14	2	
103-65-1	n-Propylbenzene		µg/l	U	0.1	2	
95-47-6	o-Xylene		µg/l	U	0.102	2	
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2	
100-42-5	Styrene		µg/l	U	0.1	2	
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2	
127-18-4	Tetrachloroethene		µg/l	U	0.115	2	
108-88-3	Toluene		µg/l	U	0.105	2	
156-60-5	trans-1,2-Dichloroethene	69.8	µg/l	E	0.152	2	- USE DILUTED VALUE INSTEAD
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2	
79-01-6	Trichloroethene	4.36	µg/l		0.151	2	
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2	
108-05-4	Vinyl acetate		µg/l	U	0.5	2	
75-01-4	Vinyl chloride	4.58	µg/l		0.239	2	

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1349

Sample ID: HMW-14R  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341202  
 Date Collected: 6/26/03 Time: 14:10  
 Dilution Factor: 50  
 Date Analyzed: 7/3/03 Time: 9:26  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	11.1	100
71-55-6	1,1,1-Trichloroethane		µg/l	U	9	100
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	5	100
79-00-5	1,1,2-Trichloroethane		µg/l	U	7.15	100
75-34-3	1,1-Dichloroethane		µg/l	U	10.7	100
75-35-4	1,1-Dichloroethene		µg/l	U	9.15	100
563-58-6	1,1-Dichloropropene		µg/l	U	5	100
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	7.1	100
96-18-4	1,2,3-Trichloropropane		µg/l	U	5.35	100
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	5.4	100
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	5.55	100
96-12-8	1,2Dibromo3chloropropane		µg/l	U	6.65	100
106-93-4	1,2-Dibromoethane		µg/l	U	5.85	100
95-50-1	1,2-Dichlorobenzene		µg/l	U	7.05	100
107-06-2	1,2-Dichloroethane		µg/l	U	9.1	100
78-87-5	1,2-Dichloropropane		µg/l	U	5.95	100
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	5.65	100
541-73-1	1,3-Dichlorobenzene		µg/l	U	9.45	100
142-28-9	1,3-Dichloropropane		µg/l	U	5.35	100
106-46-7	1,4-Dichlorobenzene		µg/l	U	7.5	100
590-20-7	2,2-Dichloropropane		µg/l	U	5.4	100
78-93-3	2-Butanone		µg/l	U	24	100
95-49-8	2-Chlorotoluene		µg/l	U	5.3	100
591-78-6	2-Hexanone		µg/l	U	8.15	100
106-43-4	4-Chlorotoluene		µg/l	U	5	100
99-87-6	4-Isopropyltoluene		µg/l	U	5	100
108-10-1	4-Methyl-2-pentanone		µg/l	U	6.4	100
67-64-1	Acetone		µg/l	U	30.6	100
107-02-8	Acrolein		µg/l	U	100	200
107-13-1	Acrylonitrile		µg/l	U	100	200
71-43-2	Benzene		µg/l	U	6.95	100
108-86-1	Bromobenzene		µg/l	U	7.8	100
74-97-5	Bromochloromethane		µg/l	U	8.25	100
75-27-4	Bromodichloromethane		µg/l	U	6.75	100
75-25-2	Bromoform		µg/l	U	8.15	100

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DILUTED SAMPLE  
FOR HMW-14R

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID V5973A  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1349

Sample ID: HMW-14R  
Project ID DAACG , DO# 0037  
Project Num 3412  
Lab Sample ID: 341202  
Date Collected: 6/26/03 Time: 14:10  
Dilution Factor: 50  
Date Analyzed: 7/3/03 Time: 9:26  
Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-83-9	Bromomethane		µg/l	U	10	100
75-15-0	Carbon disulfide		µg/l	U	9.15	100
56-23-5	Carbon tetrachloride		µg/l	U	6.85	100
108-90-7	Chlorobenzene		µg/l	U	7.8	100
75-00-3	Chloroethane		µg/l	U	10.4	100
67-66-3	Chloroform		µg/l	U	10.7	100
74-87-3	Chloromethane		µg/l	U	8.65	100
156-59-2	cis-1,2-Dichloroethene	1163	µg/l		7.55	100
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	5	100
124-48-1	Dibromochloromethane		µg/l	U	6.65	100
74-95-3	Dibromomethane		µg/l	U	5	100
75-71-8	Dichlorodifluoromethane		µg/l	U	25	100
108-20-3	Diisopropyl ether		µg/l	U	25	100
100-41-4	Ethylbenzene		µg/l	U	5	100
87-68-3	Hexachlorobutadiene		µg/l	U	9.6	100
74-88-2	Iodomethane		µg/l	U	10	100
98-82-8	Isopropylbenzene		µg/l	U	5	100
75-09-2	Methylene chloride		µg/l	U	19.9	100
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	5	100
m+p xylene	m-Xylene and p-Xylene		µg/l	U	10.8	100
91-20-3	Naphthalene		µg/l	U	6.95	100
104-51-8	n-Butylbenzene		µg/l	U	7	100
103-65-1	n-Propylbenzene		µg/l	U	5	100
95-47-6	o-Xylene		µg/l	U	5.1	100
135-98-8	sec-Butylbenzene		µg/l	U	6.65	100
100-42-5	Styrene		µg/l	U	5	100
98-06-6	tert-Butylbenzene		µg/l	U	8.5	100
127-18-4	Tetrachloroethene		µg/l	U	5.75	100
108-88-3	Toluene		µg/l	U	5.25	100
156-60-5	trans-1,2-Dichloroethene	53	µg/l	J	7.6	100
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	5	100
79-01-6	Trichloroethene		µg/l	U	7.55	100
75-69-4	Trichlorofluoromethane		µg/l	U	5.55	100
108-05-4	Vinyl acetate		µg/l	U	25	100
75-01-4	Vinyl chloride		µg/l	U	12	100

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1348

Sample ID: HMW-20  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341203  
 Date Collected: 6/26/03 Time: 14:55  
 Dilution Factor: 1  
 Date Analyzed: 7/3/03 Time: 5:52  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
96-12-8	1,2Dibromo3chloropropane		µg/l	U	0.133	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
107-02-8	Acrolein		µg/l	U	2	4
107-13-1	Acrylonitrile		µg/l	U	2	4
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Analytical Management Laboratories</u>	Sample ID: <u>HMW-20</u>
Client ID: <u>CESAS</u>	Project ID: <u>DAACG, DO# 0037</u>
Matrix: <u>W</u>	Project Num: <u>3412</u>
Sample g/ml: <u>25</u>	Lab Sample ID: <u>341203</u>
% Solids: <u>not dec.</u>	Date Collected: <u>6/26/03</u> Time: <u>14:55</u>
Instrument ID: <u>V5973A</u>	Dilution Factor: <u>1</u>
Analytical Method: <u>8260B</u>	Date Analyzed: <u>7/3/03</u> Time: <u>5:52</u>
Prep Method: <u>EPA 5030</u>	Date Received: <u>6/27/03 9:15:00 AM</u>
Analytical Batch: <u>1348</u>	

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLQ
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene	0.54	µg/l	J	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
108-20-3	Diisopropyl ether		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
74-88-2	Iodomethane		µg/l	U	0.2	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1348

Sample ID: HMW-21  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341204  
 Date Collected: 6/26/03 Time: 15:50  
 Dilution Factor: 1  
 Date Analyzed: 7/3/03 Time: 6:24  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene	3.51	µg/l		0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
96-12-8	1,2Dibromo3chloropropane		µg/l	U	0.133	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
107-02-8	Acrolein		µg/l	U	2	4
107-13-1	Acrylonitrile		µg/l	U	2	4
71-43-2	Benzene	0.82	µg/l	J	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1348

Sample ID: HMW-21  
 Project ID DAACG, DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341204  
 Date Collected: 6/26/03 Time: 15:50  
 Dilution Factor: 1  
 Date Analyzed: 7/3/03 Time: 6:24  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene	751	µg/l	E	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
108-20-3	Diisopropyl ether		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
74-88-2	Iodomethane		µg/l	U	0.2	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene	15.9	µg/l		0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride	11.3	µg/l		0.239	2

— USE DILUTED  
VALUE INSTEAD

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1349

Sample ID: HMW-21  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341204  
 Date Collected: 6/26/03 Time: 15:50  
 Dilution Factor: 50  
 Date Analyzed: 7/3/03 Time: 9:58  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	11.1	100
71-55-6	1,1,1-Trichloroethane		µg/l	U	9	100
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	5	100
79-00-5	1,1,2-Trichloroethane		µg/l	U	7.15	100
75-34-3	1,1-Dichloroethane		µg/l	U	10.7	100
75-35-4	1,1-Dichloroethene		µg/l	U	9.15	100
563-58-6	1,1-Dichloropropene		µg/l	U	5	100
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	7.1	100
96-18-4	1,2,3-Trichloropropane		µg/l	U	5.35	100
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	5.4	100
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	5.55	100
96-12-8	1,2Dibromo3chloropropane		µg/l	U	6.65	100
106-93-4	1,2-Dibromoethane		µg/l	U	5.85	100
95-50-1	1,2-Dichlorobenzene		µg/l	U	7.05	100
107-06-2	1,2-Dichloroethane		µg/l	U	9.1	100
78-87-5	1,2-Dichloropropane		µg/l	U	5.95	100
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	5.65	100
541-73-1	1,3-Dichlorobenzene		µg/l	U	9.45	100
142-28-9	1,3-Dichloropropane		µg/l	U	5.35	100
106-46-7	1,4-Dichlorobenzene		µg/l	U	7.5	100
590-20-7	2,2-Dichloropropane		µg/l	U	5.4	100
78-93-3	2-Butanone		µg/l	U	24	100
95-49-8	2-Chlorotoluene		µg/l	U	5.3	100
591-78-6	2-Hexanone		µg/l	U	8.15	100
106-43-4	4-Chlorotoluene		µg/l	U	5	100
99-87-6	4-Isopropyltoluene		µg/l	U	5	100
108-10-1	4-Methyl-2-pentanone		µg/l	U	6.4	100
67-64-1	Acetone		µg/l	U	30.6	100
107-02-8	Acrolein		µg/l	U	100	200
107-13-1	Acrylonitrile		µg/l	U	100	200
71-43-2	Benzene		µg/l	U	6.95	100
108-86-1	Bromobenzene		µg/l	U	7.8	100
74-97-5	Bromochloromethane		µg/l	U	8.25	100
75-27-4	Bromodichloromethane		µg/l	U	6.75	100
75-25-2	Bromoform		µg/l	U	8.15	100

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DIUTED SAMPLE  
FOR HMW-21

Lab Name: Analytical Managment Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec.  
Instrument ID V5973A  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1349

Sample ID: HMW-21  
Project ID DAACG , DO# 0037  
Project Num 3412  
Lab Sample ID: 341204  
Date Collected: 6/26/03 Time: 15:50  
Dilution Factor: 50  
Date Analyzed: 7/3/03 Time: 9:58  
Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-83-9	Bromomethane		µg/l	U	10	100
75-15-0	Carbon disulfide		µg/l	U	9.15	100
56-23-5	Carbon tetrachloride		µg/l	U	6.85	100
108-90-7	Chlorobenzene		µg/l	U	7.8	100
75-00-3	Chloroethane		µg/l	U	10.4	100
67-66-3	Chloroform		µg/l	U	10.7	100
74-87-3	Chloromethane		µg/l	U	8.65	100
156-59-2	cis-1,2-Dichloroethene	907	µg/l		7.55	100
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	5	100
124-48-1	Dibromochloromethane		µg/l	U	6.65	100
74-95-3	Dibromomethane		µg/l	U	5	100
75-71-8	Dichlorodifluoromethane		µg/l	U	25	100
108-20-3	Diisopropyl ether		µg/l	U	25	100
100-41-4	Ethylbenzene		µg/l	U	5	100
87-68-3	Hexachlorobutadiene		µg/l	U	9.6	100
74-88-2	Iodomethane		µg/l	U	10	100
98-82-8	Isopropylbenzene		µg/l	U	5	100
75-09-2	Methylene chloride		µg/l	U	19.9	100
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	5	100
m+p xylene	m-Xylene and p-Xylene		µg/l	U	10.8	100
91-20-3	Naphthalene		µg/l	U	6.95	100
104-51-8	n-Butylbenzene		µg/l	U	7	100
103-65-1	n-Propylbenzene		µg/l	U	5	100
95-47-6	o-Xylene		µg/l	U	5.1	100
135-98-8	sec-Butylbenzene		µg/l	U	6.65	100
100-42-5	Styrene		µg/l	U	5	100
98-06-6	tert-Butylbenzene		µg/l	U	8.5	100
127-18-4	Tetrachloroethene		µg/l	U	5.75	100
108-88-3	Toluene		µg/l	U	5.25	100
156-60-5	trans-1,2-Dichloroethene		µg/l	U	7.6	100
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	5	100
79-01-6	Trichloroethene		µg/l	U	7.55	100
75-69-4	Trichlorofluoromethane		µg/l	U	5.55	100
108-05-4	Vinyl acetate		µg/l	U	25	100
75-01-4	Vinyl chloride		µg/l	U	12	100

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0036

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
HMW-21

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID V5973A  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1348

Sample ID: HMW-DUP  
Project ID DAACG , DO# 0037  
Project Num 3412  
Lab Sample ID: 341205  
Date Collected: 6/26/03 Time: 13:00  
Dilution Factor: 1  
Date Analyzed: 7/3/03 Time: 6:55  
Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene	3.37	µg/l		0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
96-12-8	1,2Dibromo3chloropropane		µg/l	U	0.133	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
107-02-8	Acrolein		µg/l	U	2	4
107-13-1	Acrylonitrile		µg/l	U	2	4
71-43-2	Benzene	0.9	µg/l	J	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
HMW-21

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec.  
Instrument ID: V5973A  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1348

Sample ID: HMW-DUP  
Project ID: DAACG, DO# 0037  
Project Num: 3412  
Lab Sample ID: 341205  
Date Collected: 6/26/03 Time: 13:00  
Dilution Factor: 1  
Date Analyzed: 7/3/03 Time: 6:55  
Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene	724	µg/l	E	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
108-20-3	Diisopropyl ether		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
74-88-2	Iodomethane		µg/l	U	0.2	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene	3.04	µg/l		0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene	0.36	µg/l	J	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride	11.4	µg/l		0.239	2

- USE DILUTED  
VALUE INSTEAD

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DILUTED SAMPLE  
FOR HMW-DUP

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1349

Sample ID: HMW-DUP  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341205  
 Date Collected: 6/26/03 Time: 13:00  
 Dilution Factor: 50  
 Date Analyzed: 7/3/03 Time: 10:29  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLQ
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	11.1	100
71-55-6	1,1,1-Trichloroethane		µg/l	U	9	100
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	5	100
79-00-5	1,1,2-Trichloroethane		µg/l	U	7.15	100
75-34-3	1,1-Dichloroethane		µg/l	U	10.7	100
75-35-4	1,1-Dichloroethene		µg/l	U	9.15	100
563-58-6	1,1-Dichloropropene		µg/l	U	5	100
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	7.1	100
96-18-4	1,2,3-Trichloropropane		µg/l	U	5.35	100
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	5.4	100
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	5.55	100
96-12-8	1,2-Dibromo3chloropropane		µg/l	U	6.65	100
106-93-4	1,2-Dibromoethane		µg/l	U	5.85	100
95-50-1	1,2-Dichlorobenzene		µg/l	U	7.05	100
107-06-2	1,2-Dichloroethane		µg/l	U	9.1	100
78-87-5	1,2-Dichloropropane		µg/l	U	5.95	100
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	5.65	100
541-73-1	1,3-Dichlorobenzene		µg/l	U	9.45	100
142-28-9	1,3-Dichloropropane		µg/l	U	5.35	100
106-46-7	1,4-Dichlorobenzene		µg/l	U	7.5	100
590-20-7	2,2-Dichloropropane		µg/l	U	5.4	100
78-93-3	2-Butanone		µg/l	U	24	100
95-49-8	2-Chlorotoluene		µg/l	U	5.3	100
591-78-6	2-Hexanone		µg/l	U	8.15	100
106-43-4	4-Chlorotoluene		µg/l	U	5	100
99-87-6	4-Isopropyltoluene		µg/l	U	5	100
108-10-1	4-Methyl-2-pentanone		µg/l	U	6.4	100
67-64-1	Acetone		µg/l	U	30.6	100
107-02-8	Acrolein		µg/l	U	100	200
107-13-1	Acrylonitrile		µg/l	U	100	200
71-43-2	Benzene		µg/l	U	6.95	100
108-86-1	Bromobenzene		µg/l	U	7.8	100
74-97-5	Bromochloromethane		µg/l	U	8.25	100
75-27-4	Bromodichloromethane		µg/l	U	6.75	100
75-25-2	Bromoform		µg/l	U	8.15	100

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0037

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DILUTED SAMPLE  
FOR HMW-DUP

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec.  
 Instrument ID: V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1349

Sample ID: HMW-DUP  
 Project ID: DAACG, DO# 0037  
 Project Num: 3412  
 Lab Sample ID: 341205  
 Date Collected: 6/26/03 Time: 13:00  
 Dilution Factor: 50  
 Date Analyzed: 7/3/03 Time: 10:29  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
74-83-9	Bromomethane		µg/l	U	10	100
75-15-0	Carbon disulfide		µg/l	U	9.15	100
56-23-5	Carbon tetrachloride		µg/l	U	6.85	100
108-90-7	Chlorobenzene		µg/l	U	7.8	100
75-00-3	Chloroethane		µg/l	U	10.4	100
67-66-3	Chloroform		µg/l	U	10.7	100
74-87-3	Chloromethane		µg/l	U	8.65	100
156-59-2	cis-1,2-Dichloroethene	909	µg/l		7.55	100
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	5	100
124-48-1	Dibromochloromethane		µg/l	U	6.65	100
74-95-3	Dibromomethane		µg/l	U	5	100
75-71-8	Dichlorodifluoromethane		µg/l	U	25	100
108-20-3	Diisopropyl ether		µg/l	U	25	100
100-41-4	Ethylbenzene		µg/l	U	5	100
87-68-3	Hexachlorobutadiene		µg/l	U	9.6	100
74-88-2	Iodomethane		µg/l	U	10	100
98-82-8	Isopropylbenzene		µg/l	U	5	100
75-09-2	Methylene chloride		µg/l	U	19.9	100
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	5	100
m+p xylene	m-Xylene and p-Xylene		µg/l	U	10.8	100
91-20-3	Naphthalene		µg/l	U	6.95	100
104-51-8	n-Butylbenzene		µg/l	U	7	100
103-65-1	n-Propylbenzene		µg/l	U	5	100
95-47-6	o-Xylene		µg/l	U	5.1	100
135-98-8	sec-Butylbenzene		µg/l	U	6.65	100
100-42-5	Styrene		µg/l	U	5	100
98-06-6	tert-Butylbenzene		µg/l	U	8.5	100
127-18-4	Tetrachloroethene		µg/l	U	5.75	100
108-88-3	Toluene		µg/l	U	5.25	100
156-60-5	trans-1,2-Dichloroethene		µg/l	U	7.6	100
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	5	100
79-01-6	Trichloroethene		µg/l	U	7.55	100
75-69-4	Trichlorofluoromethane		µg/l	U	5.55	100
108-05-4	Vinyl acetate		µg/l	U	25	100
75-01-4	Vinyl chloride		µg/l	U	12	100

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1348

Sample ID: DMW-22  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341201  
 Date Collected: 6/26/03 Time: 11:15  
 Dilution Factor: 1  
 Date Analyzed: 7/3/03 Time: 4:49  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
96-12-8	1,2Dibromo3chloropropane		µg/l	U	0.133	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
107-02-8	Acrolein		µg/l	U	2	4
107-13-1	Acrylonitrile		µg/l	U	2	4
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromofom		µg/l	U	0.163	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID V5973A  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1348

Sample ID: DMW-22  
 Project ID DAACG , DO# 0037  
 Project Num 3412  
 Lab Sample ID: 341201  
 Date Collected: 6/26/03 Time: 11:15  
 Dilution Factor: 1  
 Date Analyzed: 7/3/03 Time: 4:49  
 Date Received: 6/27/03 9:15:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
108-20-3	Diisopropyl ether		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
74-88-2	Iodomethane		µg/l	U	0.2	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent





15130 B South Keeler  
 Olathe, Kansas 66062  
 Phone (913) 829-0101  
 Fax (913) 829-1181

22546

Page 1 of 1

Chain of Custody Record / Request for Analysis

Client Contact Name: Mark Harvison  
 Company Name: USACE  
 Address: 100W. Olathe Ave  
 City, State, Zip: Saint Mary GA 31401  
 Phone #: (912) 652-5151  
 Fax #: (912) 652-5311

Project Name: DAACG  
 Project Number: \_\_\_\_\_  
 Purchase Order Number: DO# 037  
 Project Due Date: \_\_\_\_\_  
 Project Comments: \_\_\_\_\_  
 Sampler's Signature: \_\_\_\_\_

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>3412</u>					Method # --->															Please include any information that may be useful in the analysis of the sample.  Example: high concentration					
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRAB Metals		Lead	Flash Point	Paint Filter	pH	Comments:
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															
3412-01	DMW-22	6/26/03	1115	Ag	3										3										HMW-22 in log
3412-02	HMW-14P		1410	Ag	1																				
3412-03	HMW-20		1455	Ag	1																				
3412-04	HMW-81		1550	Ag	1																				should read H
3412-05	HMW-DUP		1300	Ag	1																				Gas on container
3412-06	HMW-BLK		1700	Ag	1																				Per Tracey
3412-07	TRIP Blank																								Tracey (M)
8																									
9																									
10																									

IV-353

0011

C U S T O D Y	Relinquished By: <u>T. Tracey</u>	Date/Time: <u>6/26/03 1730</u>	Received By: <u>FEDEX</u>	Date/Time: <u>6/26/03 1730</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>Tracey</u>	Date/Time: <u>06/27/03 09:15am</u>

By signing the request (chain of custody) you are ordering work from Analytical Management Laboratories, Inc. which constitutes the acceptance of the terms and conditions on the back of this form.

<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier <u>FEDEX</u> <input type="checkbox"/> Airbill # <u>840243931924</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> 2.1°C <input type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> _____
--	---	---	---	-------------------------------------

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0112

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439004

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V211

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/03/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	1.0	U	5 115 115 115 115 115 115 115 115 115
75-01-4	Vinyl chloride	1.6	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethylene	1.0	U	
67-64-1	Acetone	3.8	J	
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	5.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
78-93-3	2-Butanone	5.0	U	
540-59-0	1,2-Dichloroethylene (total)	88.9	U	
67-66-3	Chloroform	1.0	U	
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
71-43-2	Benzene	1.7	U	
79-01-6	Trichloroethylene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropylene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	J	
10061-02-6	trans-1,3-Dichloropropylene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
591-78-6	2-Hexanone	5.0	U	
127-18-4	Tetrachloroethylene	1.0	U	
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
100-41-4	Ethylbenzene	0.27	J	
1330-20-7	Xylenes (total)	4.2	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	

F04, F07

F04, F06

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0212

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439005

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V215

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/03/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 5.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	4.6	J
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-35-4	1,1-Dichloroethylene	5.0	U
67-64-1	Acetone	25.0	U
75-15-0	Carbon disulfide	25.0	U
75-09-2	Methylene chloride	25.0	U
75-34-3	1,1-Dichloroethane	5.0	U
78-93-3	2-Butanone	25.0	U
540-59-0	1,2-Dichloroethylene (total)	290	
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
71-43-2	Benzene	2.9	J
79-01-6	Trichloroethylene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropylene	5.0	U
108-10-1	4-Methyl-2-pentanone	25.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropylene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
591-78-6	2-Hexanone	25.0	U
127-18-4	Tetrachloroethylene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylenes (total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U

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FORM I VOA

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IV-358

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0312

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V220

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/04/04 - 1 DAY OUT

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 100.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

*USO*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	100	U	<i>J 5</i>
75-01-4	Vinyl chloride	<del>1320</del>	<del>ED</del>	
74-83-9	Bromomethane	100	U	
75-00-3	Chloroethane	100	U	
75-35-4	1,1-Dichloroethylene	100	U	
67-64-1	Acetone	500	U	
75-15-0	Carbon disulfide	500	U	
75-09-2	Methylene chloride	500	U	
75-34-3	1,1-Dichloroethane	100	U	
78-93-3	2-Butanone	500	U	
540-59-0	1,2-Dichloroethylene (total)	<del>10300</del>	<del>ED</del>	
67-66-3	Chloroform	100	U	
71-55-6	1,1,1-Trichloroethane	100	U	
56-23-5	Carbon tetrachloride	100	U	
107-06-2	1,2-Dichloroethane	100	U	
71-43-2	Benzene	100	U	
79-01-6	Trichloroethylene	100	U	
78-87-5	1,2-Dichloropropane	100	U	
75-27-4	Bromodichloromethane	100	U	
10061-01-5	cis-1,3-Dichloropropylene	100	U	
108-10-1	4-Methyl-2-pentanone	500	U	
108-88-3	Toluene	111	U	
10061-02-6	trans-1,3-Dichloropropylene	100	U	
79-00-5	1,1,2-Trichloroethane	100	U	
591-78-6	2-Hexanone	500	U	
127-18-4	Tetrachloroethylene	100	U	
124-48-1	Dibromochloromethane	100	U	
108-90-7	Chlorobenzene	100	U	
100-41-4	Ethylbenzene	100	U	
1330-20-7	Xylenes (total)	100	U	
100-42-5	Styrene	100	U	
75-25-2	Bromoform	100	U	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	

*1010* *10300* *J 5* *A03* *F01, F07*

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IV-359

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0412

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439008

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V217

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/03/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 10.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.0	U
75-01-4	Vinyl chloride	43.1	U
74-83-9	Bromomethane	10.0	U
75-00-3	Chloroethane	10.0	U
75-35-4	1,1-Dichloroethylene	10.0	U
67-64-1	Acetone	50.0	U
75-15-0	Carbon disulfide	50.0	U
75-09-2	Methylene chloride	50.0	U
75-34-3	1,1-Dichloroethane	10.0	U
78-93-3	2-Butanone	50.0	U
540-59-0	1,2-Dichloroethylene (total)	923	U
67-66-3	Chloroform	10.0	U
71-55-6	1,1,1-Trichloroethane	10.0	U
56-23-5	Carbon tetrachloride	10.0	U
107-06-2	1,2-Dichloroethane	10.0	U
71-43-2	Benzene	10.0	U
79-01-6	Trichloroethylene	10.0	U
78-87-5	1,2-Dichloropropane	10.0	U
75-27-4	Bromodichloromethane	10.0	U
10061-01-5	cis-1,3-Dichloropropylene	10.0	U
108-10-1	4-Methyl-2-pentanone	50.0	U
108-88-3	Toluene	10.0	U
10061-02-6	trans-1,3-Dichloropropylene	10.0	U
79-00-5	1,1,2-Trichloroethane	10.0	U
591-78-6	2-Hexanone	50.0	U
127-18-4	Tetrachloroethylene	10.0	U
124-48-1	Dibromochloromethane	10.0	U
108-90-7	Chlorobenzene	10.0	U
100-41-4	Ethylbenzene	10.0	U
1330-20-7	Xylenes (total)	10.0	U
100-42-5	Styrene	10.0	U
75-25-2	Bromoform	10.0	U
79-34-5	1,1,2,2-Tetrachloroethane	10.0	U

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IV-360

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0512

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439  
 Matrix: (soil/water) WATER Lab Sample ID: 117439007  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 9V212  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/03/04  
 GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	2.6	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	3.3	J
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
540-59-0	1,2-Dichloroethylene (total)	22.2	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	J
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

115-25-112  
 F04, F07  
 F04, F06

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IV-361



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0612

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439010

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V214

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/03/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethylene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
540-59-0	1,2-Dichloroethylene (total)	75.9	
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethylene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropylene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	J
10061-02-6	trans-1,3-Dichloropropylene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethylene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U

Handwritten notes: A vertical line on the right side of the table is labeled 'u' at the top and 'u' at the bottom. A horizontal line is drawn across the '75.9' value. The number '1.0' is written next to the 'Toluene' row. The text 'F04, F06' is written next to the 'Toluene' row.

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IV-362

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0614

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439  
 Matrix: (soil/water) WATER Lab Sample ID: 117439009  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 9V213  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/03/04  
 GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	1.0	U
75-01-4	-----Vinyl chloride	1.0	U
74-83-9	-----Bromomethane	1.0	U
75-00-3	-----Chloroethane	1.0	U
75-35-4	-----1,1-Dichloroethylene	1.0	U
67-64-1	-----Acetone	5.0	U
75-15-0	-----Carbon disulfide	5.0	U
75-09-2	-----Methylene chloride	5.0	U
75-34-3	-----1,1-Dichloroethane	1.0	U
78-93-3	-----2-Butanone	5.0	U
540-59-0	-----1,2-Dichloroethylene (total)	76.2	
67-66-3	-----Chloroform	1.0	U
71-55-6	-----1,1,1-Trichloroethane	1.0	U
56-23-5	-----Carbon tetrachloride	1.0	U
107-06-2	-----1,2-Dichloroethane	1.0	U
71-43-2	-----Benzene	1.0	U
79-01-6	-----Trichloroethylene	1.0	U
78-87-5	-----1,2-Dichloropropane	1.0	U
75-27-4	-----Bromodichloromethane	1.0	U
10061-01-5	-----cis-1,3-Dichloropropylene	1.0	U
108-10-1	-----4-Methyl-2-pentanone	5.0	U
108-88-3	-----Toluene	1.0	U
10061-02-6	-----trans-1,3-Dichloropropylene	1.0	U
79-00-5	-----1,1,2-Trichloroethane	1.0	U
591-78-6	-----2-Hexanone	5.0	U
127-18-4	-----Tetrachloroethylene	1.0	U
124-48-1	-----Dibromochloromethane	1.0	U
108-90-7	-----Chlorobenzene	1.0	U
100-41-4	-----Ethylbenzene	1.0	U
1330-20-7	-----Xylenes (total)	1.0	U
100-42-5	-----Styrene	1.0	U
75-25-2	-----Bromoform	1.0	U
79-34-5	-----1,1,2,2-Tetrachloroethane	1.0	U

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FORM I VOA

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0712

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439  
 Matrix: (soil/water) WATER Lab Sample ID: 117439003  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 9V218  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/03/04  
 GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 20.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	20.0	U
75-01-4	Vinyl chloride	20.0	U
74-83-9	Bromomethane	20.0	U
75-00-3	Chloroethane	20.0	U
75-35-4	1,1-Dichloroethylene	20.0	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	100	U
75-09-2	Methylene chloride	100	U
75-34-3	1,1-Dichloroethane	20.0	U
78-93-3	2-Butanone	100	U
540-59-0	1,2-Dichloroethylene (total)	1560	
67-66-3	Chloroform	20.0	U
71-55-6	1,1,1-Trichloroethane	20.0	U
56-23-5	Carbon tetrachloride	20.0	U
107-06-2	1,2-Dichloroethane	20.0	U
71-43-2	Benzene	20.0	U
79-01-6	Trichloroethylene	20.0	U
78-87-5	1,2-Dichloropropane	20.0	U
75-27-4	Bromodichloromethane	20.0	U
10061-01-5	cis-1,3-Dichloropropylene	20.0	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20.0	J
10061-02-6	trans-1,3-Dichloropropylene	20.0	U
79-00-5	1,1,2-Trichloroethane	20.0	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethylene	20.0	U
124-48-1	Dibromochloromethane	20.0	U
108-90-7	Chlorobenzene	20.0	U
100-41-4	Ethylbenzene	20.0	U
1330-20-7	Xylenes (total)	20.0	U
100-42-5	Styrene	20.0	U
75-25-2	Bromoform	20.0	U
79-34-5	1,1,2,2-Tetrachloroethane	20.0	U

Handwritten notes: A vertical line on the right side of the table spans from the top to the bottom, with the number '4' written vertically next to it. A horizontal line is drawn across the row for '108-88-3 Toluene', with the number '20' written to its left. To the right of this line, the text 'F04, F06' is written. Another '4' is written vertically below the '20'.

FORM I VOA

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IV-364

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS0812

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439011

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V222

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/04/04 - 1 DAY OUT

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	1.0	U	US A03
75-01-4	Vinyl chloride	1.0	U	
74-83-9	Bromomethane	1.0	U	
75-00-3	Chloroethane	1.0	U	
75-35-4	1,1-Dichloroethylene	1.0	U	
67-64-1	Acetone	2.4	J	↓ US, F04, F07
75-15-0	Carbon disulfide	5.0	U	
75-09-2	Methylene chloride	5.0	U	
75-34-3	1,1-Dichloroethane	1.0	U	
78-93-3	2-Butanone	5.0	U	
540-59-0	1,2-Dichloroethylene (total)	1.1	U	
67-66-3	Chloroform	1.0	U	↓ US
71-55-6	1,1,1-Trichloroethane	1.0	U	
56-23-5	Carbon tetrachloride	1.0	U	
107-06-2	1,2-Dichloroethane	1.0	U	
71-43-2	Benzene	1.0	U	
79-01-6	Trichloroethylene	1.0	U	
78-87-5	1,2-Dichloropropane	1.0	U	
75-27-4	Bromodichloromethane	1.0	U	
10061-01-5	cis-1,3-Dichloropropylene	1.0	U	
108-10-1	4-Methyl-2-pentanone	5.0	U	
108-88-3	Toluene	1.0	J	1.0 0.99 J, F04, F06
10061-02-6	trans-1,3-Dichloropropylene	1.0	U	
79-00-5	1,1,2-Trichloroethane	1.0	U	
591-78-6	2-Hexanone	5.0	U	
127-18-4	Tetrachloroethylene	1.0	U	
124-48-1	Dibromochloromethane	1.0	U	
108-90-7	Chlorobenzene	1.0	U	
100-41-4	Ethylbenzene	1.0	U	
1330-20-7	Xylenes (total)	1.0	U	
100-42-5	Styrene	1.0	U	
75-25-2	Bromoform	1.0	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	

FORM I VOA

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS1412

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439001

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V219

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/03/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 25.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

*USE*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	-----Chloromethane	25.0	U	u
75-01-4	-----Vinyl chloride	25.0	U	
74-83-9	-----Bromomethane	25.0	U	
75-00-3	-----Chloroethane	25.0	U	
75-35-4	-----1,1-Dichloroethylene	25.0	U	
67-64-1	-----Acetone	125	U	
75-15-0	-----Carbon disulfide	125	U	
75-09-2	-----Methylene chloride	125	U	
75-34-3	-----1,1-Dichloroethane	25.0	U	
78-93-3	-----2-Butanone	125	U	
540-59-0	-----1,2-Dichloroethylene (total)	1390	2900 <del>2900</del> <i>ED</i>	J A03
67-66-3	-----Chloroform	25.0	U	u
71-55-6	-----1,1,1-Trichloroethane	25.0	U	
56-23-5	-----Carbon tetrachloride	25.0	U	
107-06-2	-----1,2-Dichloroethane	25.0	U	
71-43-2	-----Benzene	25.0	U	
79-01-6	-----Trichloroethylene	25.0	U	
78-87-5	-----1,2-Dichloropropane	25.0	U	
75-27-4	-----Bromodichloromethane	25.0	U	
10061-01-5	-----cis-1,3-Dichloropropylene	25.0	U	
108-10-1	-----4-Methyl-2-pentanone	125	U	
108-88-3	-----Toluene	31.9		u F04, F07
10061-02-6	-----trans-1,3-Dichloropropylene	25.0	U	
79-00-5	-----1,1,2-Trichloroethane	25.0	U	
591-78-6	-----2-Hexanone	125	U	
127-18-4	-----Tetrachloroethylene	25.0	U	
124-48-1	-----Dibromochloromethane	25.0	U	
108-90-7	-----Chlorobenzene	25.0	U	
100-41-4	-----Ethylbenzene	25.0	U	
1330-20-7	-----Xylenes (total)	29.4		u
100-42-5	-----Styrene	25.0	U	
75-25-2	-----Bromoform	25.0	U	
79-34-5	-----1,1,2,2-Tetrachloroethane	25.0	U	

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IV-366

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AS2112

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439  
 Matrix: (soil/water) WATER Lab Sample ID: 117439002  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 9V216  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/03/04  
 GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.0	U
75-01-4	Vinyl chloride	10.0	U
74-83-9	Bromomethane	10.0	U
75-00-3	Chloroethane	10.0	U
75-35-4	1,1-Dichloroethylene	10.0	U
67-64-1	Acetone	50.0	U
75-15-0	Carbon disulfide	50.0	U
75-09-2	Methylene chloride	50.0	U
75-34-3	1,1-Dichloroethane	10.0	U
78-93-3	2-Butanone	50.0	U
540-59-0	1,2-Dichloroethylene (total)	721	
67-66-3	Chloroform	10.0	U
71-55-6	1,1,1-Trichloroethane	10.0	U
56-23-5	Carbon tetrachloride	10.0	U
107-06-2	1,2-Dichloroethane	10.0	U
71-43-2	Benzene	10.0	U
79-01-6	Trichloroethylene	10.0	U
78-87-5	1,2-Dichloropropane	10.0	U
75-27-4	Bromodichloromethane	10.0	U
10061-01-5	cis-1,3-Dichloropropylene	10.0	U
108-10-1	4-Methyl-2-pentanone	50.0	U
108-88-3	Toluene	10.0	U
10061-02-6	trans-1,3-Dichloropropylene	10.0	U
79-00-5	1,1,2-Trichloroethane	10.0	U
591-78-6	2-Hexanone	50.0	U
127-18-4	Tetrachloroethylene	10.0	U
124-48-1	Dibromochloromethane	10.0	U
108-90-7	Chlorobenzene	10.0	U
100-41-4	Ethylbenzene	10.0	U
1330-20-7	Xylenes (total)	10.0	U
100-42-5	Styrene	10.0	U
75-25-2	Bromoform	10.0	U
79-34-5	1,1,2,2-Tetrachloroethane	10.0	U

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FORM I VOA

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IV-367

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TH0404

TRIP

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439

Matrix: (soil/water) WATER

Lab Sample ID: 117439012

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9V226

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/04/04

- 1 DAY OUT.

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1.0 U	
75-01-4	Vinyl chloride	1.0 U	
74-83-9	Bromomethane	1.0 U	
75-00-3	Chloroethane	1.0 U	
75-35-4	1,1-Dichloroethylene	1.0 U	
67-64-1	Acetone	3.6 J	
75-15-0	Carbon disulfide	5.0 U	
75-09-2	Methylene chloride	5.0 U	
75-34-3	1,1-Dichloroethane	1.0 U	
78-93-3	2-Butanone	5.0 U	
540-59-0	1,2-Dichloroethylene (total)	1.0 U	
67-66-3	Chloroform	1.0 U	
71-55-6	1,1,1-Trichloroethane	1.0 U	
56-23-5	Carbon tetrachloride	1.0 U	
107-06-2	1,2-Dichloroethane	1.0 U	
71-43-2	Benzene	1.0 U	
79-01-6	Trichloroethylene	1.0 U	
78-87-5	1,2-Dichloropropane	1.0 U	
75-27-4	Bromodichloromethane	1.0 U	
10061-01-5	cis-1,3-Dichloropropylene	1.0 U	
108-10-1	4-Methyl-2-pentanone	5.0 U	
108-88-3	Toluene	0.60 J	
10061-02-6	trans-1,3-Dichloropropylene	1.0 U	
79-00-5	1,1,2-Trichloroethane	1.0 U	
591-78-6	2-Hexanone	5.0 U	
127-18-4	Tetrachloroethylene	1.0 U	
124-48-1	Dibromochloromethane	1.0 U	
108-90-7	Chlorobenzene	1.0 U	
100-41-4	Ethylbenzene	1.0 U	
1330-20-7	Xylenes (total)	1.0 U	
100-42-5	Styrene	1.0 U	
75-25-2	Bromoform	1.0 U	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	

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**CHAIN OF CUSTODY RECORD**

COC NO.: HLTM43

pg 1 of 3

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				117439% REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: <del>Patty Stoll</del> Sharon Stollen																PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patricia A. Stoll</i>		(Printed Name) PATRICIA A. STOLL														No. of Bottles/ Vials:			
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH													
01 AS1412	7/20/04	0952	Water		2													2	
02 AS2112		1045			2													2	
03 ASØ712		1235			2													2	
04 ASØ112		1000			2													2	
05 ASØ212		1030			2													2	
06 ASØ312		1055			2													2	
07 ASØ512		1120			2													2	
08 ASØ412		1140			2													2	
09 ASØ614		1155			2													2	
10 ASØ612		1155			2													2	
11 ASØ812		1215			2													2	
12 THØ4Ø4		0745			2													2	
301 AFØ5B2	117442%	1425		2														2	
RELINQUISHED BY: <i>Patricia A. Stoll</i>		Date/Time 7/22/04		RECEIVED BY: <i>Mike Baker</i>		Date/Time 7-22-04		TOTAL NUMBER OF CONTAINERS: 158860				Cooler Temperature: 4°C							
COMPANY NAME: SAIC		11:25		COMPANY NAME: Gel		14:15		Cooler ID: 76				FEDEX NUMBER: N/A							
RECEIVED BY: <i>Ben Wattley</i>		Date/Time 7-22-04		RELINQUISHED BY:		Date/Time													
COMPANY NAME: Gel		11:25		COMPANY NAME:															
RELINQUISHED BY: <i>Ben Wattley</i>		Date/Time 7-22-04		RECEIVED BY:		Date/Time													
COMPANY NAME:		14:15		COMPANY NAME:															

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301

**FORMER FIRE TRAINING AREA**  
**CALENDAR YEAR 2004 GROUNDWATER SAMPLES (WELLS)**

**2004**

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0232

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442007

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U609

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/31/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	u ↓
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0432

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442014  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U614  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/01/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	U U F04, F06 U U
108-88-3-----	Toluene	1.0	J	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0632

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442016  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U705  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/01/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	31.0		=
108-88-3-----	Toluene	1.2		U F04, F07
100-41-4-----	Ethylbenzene	5.9		=
1330-20-7-----	Xylenes (total)	0.39	J	J

DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0832

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442010

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U612

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/01/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	U
108-88-3-----	Toluene	1.0	J	U F04, F06
100-41-4-----	Ethylbenzene	1.0	U	U
1330-20-7-----	Xylenes (total)	1.0	U	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0836

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442011  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U613  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/01/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	4 U F04, F06 4 4
108-88-3-----	Toluene	1.0	J	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

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133

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC0932

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442015

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U615

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/01/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	1.0	U
108-88-3-----	Toluene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
1330-20-7-----	Xylenes (total)	1.0	U

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135

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC1032

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442009  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U611  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 07/31/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	8.6	
108-88-3-----	Toluene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
1330-20-7-----	Xylenes (total)	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC1132

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442017  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U616  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/01/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2	Benzene	4.7		
108-88-3	Toluene	1.0	0.82	J
100-41-4	Ethylbenzene	1.2		
1330-20-7	Xylenes (total)	2.0		

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139



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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC1332

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442012

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7V106

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/02/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene		91.3	
108-88-3-----	Toluene	1.0	<del>0.84</del>	J
100-41-4-----	Ethylbenzene		46.0	
1330-20-7-----	Xylenes (total)	169	208	ED

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC1334

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442013

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7V107

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 08/02/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

*USE*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene		89.4	
108-88-3-----	Toluene	1.0	0.91	J
100-41-4-----	Ethylbenzene		45.4	
1330-20-7-----	Xylenes (total)	166	205	ED

= U F04, F06 =

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC2332

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442018  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U706  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 08/01/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 5.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene	336	
108-88-3-----	Toluene	5.0	U
100-41-4-----	Ethylbenzene	12.5	
1330-20-7-----	Xylenes (total)	5.0	U

11212

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

IV-383

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AC2432

Lab Name: GEL, LLC. Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117439-1  
 Matrix: (soil/water) WATER Lab Sample ID: 117442008  
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7U610  
 Level: (low/med) LOW Date Received: 07/22/04  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 07/31/04  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2	Benzene	1.0	32.5	
108-88-3	Toluene		<del>0.49</del> J	= W F04, F06 = J
100-41-4	Ethylbenzene		2.4	
1330-20-7	Xylenes (total)		0.87 J	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

IV-384

151

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TH0403

TRIP

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117439-1

Matrix: (soil/water) WATER

Lab Sample ID: 117442006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U608

Level: (low/med) LOW

Date Received: 07/22/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/31/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	U J U U
108-88-3-----	Toluene	0.42	J	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

DATA VALIDATION  
COPY

**CHAIN OF CUSTODY RECORD**

COC NO.: *HLTM43*

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				<i>1174427</i> REQUESTED PARAMETERS													LABORATORY NAME: General Engineering Laboratory					
PROJECT NUMBER: 01-1055-04-8991-200																	LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407					
PROJECT MANAGER: <del>Patty Stott</del> <i>Sharon Stolla</i>																	PHONE NO: (843) 556-8171					
Sampler (Signature) <i>Pat A Stoll</i>		(Printed Name) <i>PATRICIA A. STOLL</i>																				
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH														No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
<i>AF07B2</i>	<i>7/20/04</i>	<i>1435</i>	<i>water</i>	<i>2</i>																<i>2</i>		
<i>AF12B6</i>		<i>1445</i>		<i>2</i>																<i>2</i>		
<i>AF12B2</i>		<i>1450</i>		<i>2</i>																<i>2</i>		
<i>AF02B2</i>		<i>1535</i>		<i>2</i>																<i>2</i>		
<i>TH0403</i>		<i>0745</i>		<i>2</i>																<i>2</i>		
<i>AC0232</i>	<i>7/19/04</i>	<i>1531</i>		<i>2</i>																<i>2</i>		
<i>AC2432</i>		<i>1418</i>		<i>2</i>																<i>2</i>		
<i>AC1032</i>		<i>1453</i>		<i>2</i>																<i>2</i>		
<i>AC0832</i>		<i>1320</i>		<i>2</i>																<i>2</i>		
<i>AC0836</i>		<i>1325</i>		<i>2</i>																<i>2</i>		
<i>AC1332</i>		<i>1238</i>		<i>2</i>																<i>2</i>		
<i>AC1384</i>		<i>1236</i>		<i>2</i>																<i>2</i>		
<i>AC0432</i>		<i>1153</i>		<i>2</i>																<i>2</i>		
RELINQUISHED BY: <i>Pat - C. Stoll</i>		Date/Time <i>7/22/04</i>		RECEIVED BY: <i>Mike Kuhler</i>		Date/Time <i>7-22-04</i>		TOTAL NUMBER OF CONTAINERS: <i>60 58</i>													Cooler Temperature: <i>4°C</i>	
COMPANY NAME: <i>SAIC</i>		<i>11:25</i>		COMPANY NAME: <i>GeL</i>		<i>14:15</i>		Cooler ID: <i>76</i>													FEDEX NUMBER: <i>N/A</i>	
RECEIVED BY: <i>Ben Watters</i>		Date/Time <i>7-22-04</i>		RELINQUISHED BY:		Date/Time																
COMPANY NAME: <i>GeL</i>		<i>11:25</i>		COMPANY NAME:																		
RELINQUISHED BY: <i>Ben Watters</i>		Date/Time <i>7-22-04</i>		RECEIVED BY:		Date/Time																
COMPANY NAME:		<i>14:15</i>		COMPANY NAME:																		

IV-386

**CHAIN OF CUSTODY RECORD**

COC NO.: *HLTMA3*

*pg 5 of 5*

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				<i>1174427</i> REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory					
PROJECT NUMBER: 01-1055-04-8991-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407					
PROJECT MANAGER: <del>Patty Stoll</del> <i>Sharon Stoll</i>																PHONE NO: (843) 556-8171					
Sampler (Signature) <i>Patty Stoll</i>		(Printed Name) <i>PATRICIA A. STOLL</i>																			
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH													No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
<i>AC0932</i>	<i>7/19/04</i>	<i>1320</i>	<i>water</i>	<i>2</i>															<i>2</i>		
<i>AC0632</i>	↓	<i>1235</i>	↓	<i>2</i>															<i>2</i>		
<i>AC1132</i>	↓	<i>1155</i>	↓	<i>2</i>															<i>2</i>		
<i>AC2332</i>	<i>7/19/04</i>	<i>1505</i>	<i>water</i>	<i>2</i>															<i>2</i>		
<i>PS Stoll 7/22/04</i>																					
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time <i>7/22/04</i>		RECEIVED BY: <i>Nick Kambou</i>		Date/Time <i>7-22-04</i>		TOTAL NUMBER OF CONTAINERS: <i>PS 5860</i>				Cooler Temperature: <i>4°C</i>									
COMPANY NAME: <i>SAIC</i>		Date/Time <i>11:25</i>		COMPANY NAME: <i>Ge</i>		Date/Time <i>1415</i>		Cooler ID: <i>76</i>				FEDEX NUMBER: <i>N/A</i>									
RECEIVED BY: <i>Ben Watters</i>		Date/Time <i>7-22-04</i>		RELINQUISHED BY:		Date/Time															
COMPANY NAME: <i>Ge</i>		Date/Time <i>11:25</i>		COMPANY NAME:																	
RELINQUISHED BY: <i>Ben Watters</i>		Date/Time <i>7-22-04</i>		RECEIVED BY:		Date/Time															
COMPANY NAME:		Date/Time <i>14:15</i>		COMPANY NAME:																	

10 IV-387

**DAACG CHLORINATED SOLVENTS AREA  
VERTICAL PROFILE GROUNDWATER SAMPLES**

**2002**



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## Summary of Analytical Results

Client ID: **DVP1-15-08-02**  
Sample Depth:

Sample ID **2475-001**  
Matrix: **WATER**

Date Collected: **08/06/2002 08:40**  
Date Received: **08/07/2002 07:16**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Debra Trinidad**  
Prep Date: **08/08/02**  
Prep Time: **11:44**

Analyst: **Debra Trinidad**  
Date Analyzed: **08/08/02**  
Time Analyzed: **13:43**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-15-08-02  
Sample Depth:

Sample ID 2475-001  
Matrix: WATER

Date Collected: 08/06/2002 08:40  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 13:43

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP1-20-08-02**  
Sample Depth:

Sample ID **2475-002**  
Matrix: **WATER**

Date Collected: **08/06/2002 08:50**  
Date Received: **08/07/2002 07:16**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Debra Trinidad**  
Prep Date: **08/08/02**  
Prep Time: **11:44**

Analyst: **Debra Trinidad**  
Date Analyzed: **08/08/02**  
Time Analyzed: **14:09**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP1-20-08-02**  
Sample Depth:

Sample ID **2475-002**  
Matrix: **WATER**

Date Collected: 08/06/2002 08:50  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 14:09

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP1-25-08-02**  
Sample Depth:

Sample ID **2475-003**  
Matrix: WATER

Date Collected: 08/06/2002 09:00  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 18:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	8.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.4	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP1-25-08-02**  
Sample Depth:

Sample ID **2475-003**  
Matrix: WATER

Date Collected: 08/06/2002 09:00  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 18:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	1.5	5.0	ug/L	J
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U





## Summary of Analytical Results

Client ID: DVP1-30-08-02  
Sample Depth:

Sample ID 2475-004  
Matrix: WATER

Date Collected: 08/06/2002 09:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 18:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	11	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.4	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP1-30-08-02  
Sample Depth:

Sample ID 2475-004  
Matrix: WATER

Date Collected: 08/06/2002 09:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 18:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-35-08-02  
Sample Depth:

Sample ID 2475-005  
Matrix: WATER

Date Collected: 08/06/2002 09:55  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 14:35

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.2	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-35-08-02  
Sample Depth:

Sample ID 2475-005  
Matrix: WATER

Date Collected: 08/06/2002 09:55  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 14:35

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP1-40-08-02**  
Sample Depth:

Sample ID **2475-006**  
Matrix: WATER

Date Collected: 08/06/2002 10:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.7	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-40-08-02  
Sample Depth:

Sample ID 2475-006  
Matrix: WATER

Date Collected: 08/06/2002 10:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-45-08-02  
Sample Depth:

Sample ID 2475-007  
Matrix: WATER

Date Collected: 08/06/2002 10:45  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 19:59

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	9.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP1-45-08-02**  
Sample Depth:

Sample ID **2475-007**  
Matrix: **WATER**

Date Collected: **08/06/2002 10:45**  
Date Received: **08/07/2002 07:16**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Debra Trinidad**  
Prep Date: **08/07/02**  
Prep Time: **15:25**

Analyst: **Debra Trinidad**  
Date Analyzed: **08/07/02**  
Time Analyzed: **19:59**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	1.5	5.0	ug/L	J
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP1-50-08-02  
Sample Depth:

Sample ID 2475-008  
Matrix: WATER

Date Collected: 08/06/2002 11:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:27

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	4.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP1-50-08-02**  
Sample Depth:

Sample ID **2475-008**  
Matrix: WATER

Date Collected: 08/06/2002 11:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:27

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-15-08-02**  
Sample Depth:

Sample ID **2475-009**  
Matrix: WATER

Date Collected: 08/06/2002 12:55  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:53

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-15-08-02**  
Sample Depth:

Sample ID **2475-009**  
Matrix: WATER

Date Collected: 08/06/2002 12:55  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 15:53

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-20-08-02**  
Sample Depth:

Sample ID **2475-010**  
Matrix: WATER

Date Collected: 08/06/2002 13:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 16:19

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	17	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.5	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-20-08-02**  
Sample Depth:

Sample ID **2475-010**  
Matrix: WATER

Date Collected: 08/06/2002 13:05  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 16:19

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	1.8	5.0	ug/L	J
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP2-20

Client ID: DVP2-DUP1  
Sample Depth:

Sample ID 2475-011  
Matrix: WATER

Date Collected: 08/06/2002 13:10  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 21:43

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	12	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





# Summary of Analytical Results

DUPLICATE FOR  
DVP2-20

Client ID: DVP2-DUP1  
Sample Depth:

Sample ID 2475-011  
Matrix: WATER

Date Collected: 08/06/2002 13:10  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 21:43

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP2-25-08-02  
Sample Depth:

Sample ID 2475-012  
Matrix: WATER

Date Collected: 08/06/2002 13:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 17:08

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	6.6	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP2-25-08-02  
Sample Depth:

Sample ID 2475-012  
Matrix: WATER

Date Collected: 08/06/2002 13:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/08/02  
Prep Time: 11:44

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 17:08

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-30-08-02**  
Sample Depth:

Sample ID **2475-013**  
Matrix: WATER

Date Collected: 08/06/2002 13:25  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 23:48

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	9.9	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.2	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-30-08-02**  
Sample Depth:

Sample ID **2475-013**  
Matrix: WATER

Date Collected: 08/06/2002 13:25  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/07/02  
Time Analyzed: 23:48

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-35-08-02**  
Sample Depth:

Sample ID **2475-014**  
Matrix: WATER

Date Collected: 08/06/2002 14:00  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 00:14

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.2	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP2-35-08-02  
Sample Depth:

Sample ID 2475-014  
Matrix: WATER

Date Collected: 08/06/2002 14:00  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 00:14

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP2-40-08-02  
Sample Depth:

Sample ID 2475-015  
Matrix: WATER

Date Collected: 08/06/2002 14:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 00:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP2-40-08-02  
Sample Depth:

Sample ID 2475-015  
Matrix: WATER

Date Collected: 08/06/2002 14:15  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 00:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP2-45-08-02**  
Sample Depth:

Sample ID **2475-016**  
Matrix: **WATER**

Date Collected: **08/06/2002 14:50**  
Date Received: **08/07/2002 07:16**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Debra Trinidad**  
Prep Date: **08/07/02**  
Prep Time: **15:25**

Analyst: **Debra Trinidad**  
Date Analyzed: **08/08/02**  
Time Analyzed: **01:05**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP2-45-08-02**  
Sample Depth:

Sample ID **2475-016**  
Matrix: **WATER**

Date Collected: **08/06/2002 14:50**  
Date Received: **08/07/2002 07:16**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Debra Trinidad**  
Prep Date: **08/07/02**  
Prep Time: **15:25**

Analyst: **Debra Trinidad**  
Date Analyzed: **08/08/02**  
Time Analyzed: **01:05**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP2-45

Client ID: **DVP2-DUP2**  
Sample Depth:

Sample ID **2475-017**  
Matrix: WATER

Date Collected: 08/06/2002 14:50  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 01:31

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.3	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP 2-45

Client ID: **DVP2-DUP2**  
Sample Depth:

Sample ID **2475-017**  
Matrix: WATER

Date Collected: 08/06/2002 14:50  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 01:31

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP2-50-08-02  
Sample Depth:

Sample ID 2475-018  
Matrix: WATER

Date Collected: 08/06/2002 15:10  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 01:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	22	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP2-50-08-02  
Sample Depth:

Sample ID 2475-018  
Matrix: WATER

Date Collected: 08/06/2002 15:10  
Date Received: 08/07/2002 07:16

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Debra Trinidad  
Prep Date: 08/07/02  
Prep Time: 15:25

Analyst: Debra Trinidad  
Date Analyzed: 08/08/02  
Time Analyzed: 01:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-15-08-02**  
Sample Depth:

Sample ID **2480-001**  
Matrix: **WATER**

Date Collected: **08/07/2002 08:35**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/09/02**  
Prep Time: **09:16**

Analyst: **Thomas Gatch**  
Date Analyzed: **08/09/02**  
Time Analyzed: **17:54**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	8.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP3-15-08-02**  
Sample Depth:

Sample ID **2480-001**  
Matrix: WATER

Date Collected: 08/07/2002 08:35  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/09/02  
Prep Time: 09:16

Analyst: Thomas Gatch  
Date Analyzed: 08/09/02  
Time Analyzed: 17:54

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-20-08-02**  
Sample Depth:

Sample ID **2480-002**  
Matrix: WATER

Date Collected: 08/07/2002 08:45  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/09/02  
Prep Time: 09:16

Analyst: Thomas Gatch  
Date Analyzed: 08/09/02  
Time Analyzed: 19:18

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP3-20-08-02  
Sample Depth:

Sample ID 2480-002  
Matrix: WATER

Date Collected: 08/07/2002 08:45  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/09/02  
Prep Time: 09:16

Analyst: Thomas Gatch  
Date Analyzed: 08/09/02  
Time Analyzed: 19:18

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP3-25-08-02  
Sample Depth:

Sample ID 2480-003  
Matrix: WATER

Date Collected: 08/07/2002 08:56  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/09/02  
Prep Time: 09:16

Analyst: Thomas Gatch  
Date Analyzed: 08/09/02  
Time Analyzed: 19:46

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.2	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-25-08-02**  
Sample Depth:

Sample ID **2480-003**  
Matrix: **WATER**

Date Collected: **08/07/2002 08:56**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/09/02**  
Prep Time: **09:16**

Analyst: **Thomas Gatch**  
Date Analyzed: **08/09/02**  
Time Analyzed: **19:46**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-30-08-02**  
Sample Depth:

Sample ID **2480-004**  
Matrix: **WATER**

Date Collected: **08/07/2002 09:07**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **17:17**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP3-30-08-02  
Sample Depth:

Sample ID 2480-004  
Matrix: WATER

Date Collected: 08/07/2002 09:07  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 17:17

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-35-08-02**  
Sample Depth:

Sample ID **2480-005**  
Matrix: WATER

Date Collected: 08/07/2002 09:48  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 17:45

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	9.0	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP3-35-08-02**  
Sample Depth:

Sample ID **2480-005**  
Matrix: **WATER**

Date Collected: **08/07/2002 09:48**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **17:45**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP3-40-08-02  
Sample Depth:

Sample ID 2480-006  
Matrix: WATER

Date Collected: 08/07/2002 10:02  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 18:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	4.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP3-40-08-02  
Sample Depth:

Sample ID 2480-006  
Matrix: WATER

Date Collected: 08/07/2002 10:02  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 18:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP3-40

Client ID: **DVP3-DUP3**  
Sample Depth:

Sample ID **2480-007**  
Matrix: **WATER**

Date Collected: 08/07/2002 10:07  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 18:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP3-40

Client ID: **DVP3-DUP3**  
Sample Depth:

Sample ID **2480-007**  
Matrix: WATER

Date Collected: 08/07/2002 10:07  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 18:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-45-08-02**  
Sample Depth:

Sample ID **2480-008**  
Matrix: **WATER**

Date Collected: **08/07/2002 10:35**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **19:09**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP3-45-08-02  
Sample Depth:

Sample ID 2480-008  
Matrix: WATER

Date Collected: 08/07/2002 10:35  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 19:09

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP3-50-08-02**  
Sample Depth:

Sample ID **2480-009**  
Matrix: WATER

Date Collected: 08/07/2002 11:05  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 19:37

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP3-50-08-02**  
Sample Depth:

Sample ID **2480-009**  
Matrix: **WATER**

Date Collected: **08/07/2002 11:05**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **19:37**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP4-15-08-02  
Sample Depth:

Sample ID 2480-011  
Matrix: WATER

Date Collected: 08/07/2002 13:11  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 20:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP4-15-08-02**  
Sample Depth:

Sample ID **2480-011**  
Matrix: **WATER**

Date Collected: **08/07/2002 13:11**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **20:05**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: DVP4-20-08-02  
Sample Depth:

Sample ID 2480-012  
Matrix: WATER

Date Collected: 08/07/2002 13:25  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 20:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	11	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP4-20-08-02  
Sample Depth:

Sample ID 2480-012  
Matrix: WATER

Date Collected: 08/07/2002 13:25  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 20:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	0.83	5.0	ug/L	J
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-25-08-02**  
Sample Depth:

Sample ID **2480-013**  
Matrix: **WATER**

Date Collected: 08/07/2002 13:40  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:00

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP4-25-08-02  
Sample Depth:

Sample ID 2480-013  
Matrix: WATER

Date Collected: 08/07/2002 13:40  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:00

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP4-30-08-02  
Sample Depth:

Sample ID 2480-014  
Matrix: WATER

Date Collected: 08/07/2002 13:50  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:28

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	21	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP4-30-08-02**  
Sample Depth:

Sample ID **2480-014**  
Matrix: **WATER**

Date Collected: 08/07/2002 13:50  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:28

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-35-08-02**  
Sample Depth:

Sample ID **2480-015**  
Matrix: WATER

Date Collected: 08/07/2002 14:07  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:56

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	12	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP4-35-08-02**  
Sample Depth:

Sample ID **2480-015**  
Matrix: **WATER**

Date Collected: 08/07/2002 14:07  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 21:56

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	0.78	5.0	ug/L	J
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-40-08-02**  
Sample Depth:

Sample ID **2480-016**  
Matrix: **WATER**

Date Collected: 08/07/2002 14:25  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 22:24

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-40-08-02**  
Sample Depth:

Sample ID **2480-016**  
Matrix: **WATER**

Date Collected: 08/07/2002 14:25  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 22:24

### USACE VOCs by SW8260B

	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	1.5	5.0	ug/L	J
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP4-40

Client ID: **DVP4-DUP4**  
Sample Depth:

Sample ID **2480-017**  
Matrix: **WATER**

Date Collected: 08/07/2002 14:30  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 22:51

## USACE VOCs by SW8260B

	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP4-40

Client ID: **DVP4-DUP4**  
Sample Depth:

Sample ID **2480-017**  
Matrix: **WATER**

Date Collected: 08/07/2002 14:30  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 22:51

## USACE VOCs by SW8260B

	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	2.6	5.0	ug/L	J
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-45-08-02**  
Sample Depth:

Sample ID **2480-018**  
Matrix: **WATER**

Date Collected: 08/07/2002 15:20  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 23:19

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP4-45-08-02**  
Sample Depth:

Sample ID **2480-018**  
Matrix: **WATER**

Date Collected: 08/07/2002 15:20  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 23:19

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	1.3	5.0	ug/L	J
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP4-50-08-02**  
Sample Depth:

Sample ID **2480-019**  
Matrix: **WATER**

Date Collected: **08/07/2002 15:40**  
Date Received: **08/08/2002 07:40**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **12:05**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/10/02**  
Time Analyzed: **23:46**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	19	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP4-50-08-02**  
Sample Depth:

Sample ID **2480-019**  
Matrix: WATER

Date Collected: 08/07/2002 15:40  
Date Received: 08/08/2002 07:40

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 12:05

Analyst: Venkat Mudium  
Date Analyzed: 08/10/02  
Time Analyzed: 23:46

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP5-15-08-02  
Sample Depth:

Sample ID 2492-001  
Matrix: WATER

Date Collected: 08/08/2002 08:50  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 12:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	33	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	7.7	5.0	ug/L	
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-15-08-02**  
Sample Depth:

Sample ID **2492-001**  
Matrix: **WATER**

Date Collected: 08/08/2002 08:50  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 12:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	900	50	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	7.4	5.0	ug/L	
trans-1,2-Dichloroethene	52	5.0	ug/L	
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	9.0	2.0	ug/L	
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-20-08-02**  
Sample Depth:

Sample ID **2492-002**  
Matrix: WATER

Date Collected: 08/08/2002 09:10  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 21:06

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	17	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-20-08-02**  
Sample Depth:

Sample ID **2492-002**  
Matrix: WATER

Date Collected: 08/08/2002 09:10  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 21:06

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	42	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	1.7	5.0	ug/L	J
trans-1,2-Dichloroethene	1.3	5.0	ug/L	J
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	4.7	15	ug/L	J



## Summary of Analytical Results

Client ID: **DVP5-25-08-02**  
Sample Depth:

Sample ID **2492-003**  
Matrix: WATER

Date Collected: 08/08/2002 09:25  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 13:34

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	12	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	2.4	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-25-08-02**  
Sample Depth:

Sample ID **2492-003**  
Matrix: **WATER**

Date Collected: **08/08/2002 09:25**  
Date Received: **08/09/2002 10:23**

Analytical Method: **SW8260B**  
Prep Method: **SW8260B\_USACE**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **09:37**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/12/02**  
Time Analyzed: **13:34**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	1.9	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U





## Summary of Analytical Results

Client ID: DVP5-30-08-02  
Sample Depth:

Sample ID 2492-004  
Matrix: WATER

Date Collected: 08/08/2002 09:37  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 13:58

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	11	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP5-30-08-02**  
Sample Depth:

Sample ID **2492-004**  
Matrix: WATER

Date Collected: 08/08/2002 09:37  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 13:58

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	1.6	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

DUPLICATE FOR  
DVP5-30

Client ID: **DVP5-DUP5-08-02**  
Sample Depth:

Sample ID **2492-005**  
Matrix: WATER

Date Collected: 08/08/2002 09:40  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 14:26

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	13	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVPS-30

Client ID: **DVP5-DUP5-08-02**  
Sample Depth:

Sample ID **2492-005**  
Matrix: WATER

Date Collected: 08/08/2002 09:40  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 14:26

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	1.2	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-35-08-02**  
Sample Depth:

Sample ID **2492-006**  
Matrix: WATER

Date Collected: 08/08/2002 10:05  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 14:50

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP5-35-08-02  
Sample Depth:

Sample ID 2492-006  
Matrix: WATER

Date Collected: 08/08/2002 10:05  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 14:50

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP5-40-08-02  
Sample Depth:

Sample ID 2492-007  
Matrix: WATER

Date Collected: 08/08/2002 10:23  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 15:15

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	24	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP5-40-08-02  
Sample Depth:

Sample ID 2492-007  
Matrix: WATER

Date Collected: 08/08/2002 10:23  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 15:15

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	11	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-45-08-02**  
Sample Depth:

Sample ID **2492-008**  
Matrix: WATER

Date Collected: 08/08/2002 10:53  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 15:39

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	20	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP5-45-08-02**  
Sample Depth:

Sample ID **2492-008**  
Matrix: WATER

Date Collected: 08/08/2002 10:53  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 15:39

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	28	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	0.77	5.0	ug/L	J
trans-1,2-Dichloroethene	1.4	5.0	ug/L	J
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP5-50-08-02  
Sample Depth:

Sample ID 2492-009  
Matrix: WATER

Date Collected: 08/08/2002 11:15  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW8260B\_USACE

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 16:03

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.0	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP5-50-08-02**  
Sample Depth:

Sample ID **2492-009**  
Matrix: **WATER**

Date Collected: **08/08/2002 11:15**  
Date Received: **08/09/2002 10:23**

Analytical Method: **SW8260B**  
Prep Method: **SW8260B\_USACE**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **09:37**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/12/02**  
Time Analyzed: **16:03**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	3.3	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-15-08-02  
Sample Depth:

Sample ID 2492-012  
Matrix: WATER

Date Collected: 08/08/2002 13:15  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 17:20

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	14	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP6-15-08-02**  
Sample Depth:

Sample ID **2492-012**  
Matrix: WATER

Date Collected: 08/08/2002 13:15  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 17:20

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	180	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	6.4	5.0	ug/L	
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	2.9	2.0	ug/L	
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-20-08-02  
Sample Depth:

Sample ID 2492-013  
Matrix: WATER

Date Collected: 08/08/2002 13:20  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 17:48

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	12	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	4.0	5.0	ug/L	J
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP6-20-08-02  
Sample Depth:

Sample ID 2492-013  
Matrix: WATER

Date Collected: 08/08/2002 13:20  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 17:48

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	310	25	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	5.0	5.0	ug/L	J
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	3.4	2.0	ug/L	
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-25-08-02  
Sample Depth:

Sample ID 2492-014  
Matrix: WATER

Date Collected: 08/08/2002 13:45  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 18:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	18	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP6-25-08-02**  
Sample Depth:

Sample ID **2492-014**  
Matrix: WATER

Date Collected: 08/08/2002 13:45  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 18:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	50	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP6-30-08-02**  
Sample Depth:

Sample ID **2492-015**  
Matrix: WATER

Date Collected: 08/08/2002 13:55  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 18:44

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP6-30-08-02**  
Sample Depth:

Sample ID **2492-015**  
Matrix: **WATER**

Date Collected: **08/08/2002 13:55**  
Date Received: **08/09/2002 10:23**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **09:37**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/12/02**  
Time Analyzed: **18:44**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-35-08-02  
Sample Depth:

Sample ID 2492-016  
Matrix: WATER

Date Collected: 08/08/2002 14:42  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 19:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.2	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-35-08-02  
Sample Depth:

Sample ID 2492-016  
Matrix: WATER

Date Collected: 08/08/2002 14:42  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 19:13

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP6-40-08-02  
Sample Depth:

Sample ID 2492-017  
Matrix: WATER

Date Collected: 08/08/2002 15:00  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 19:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.1	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.1	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP6-40-08-02  
Sample Depth:

Sample ID 2492-017  
Matrix: WATER

Date Collected: 08/08/2002 15:00  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 19:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP6-45-08-02**  
Sample Depth:

Sample ID **2492-018**  
Matrix: WATER

Date Collected: 08/08/2002 15:30  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 20:09

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP6-45-08-02  
Sample Depth:

Sample ID 2492-018  
Matrix: WATER

Date Collected: 08/08/2002 15:30  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 20:09

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: **DVP6-50-08-02**  
Sample Depth:

Sample ID **2492-019**  
Matrix: WATER

Date Collected: 08/08/2002 16:15  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 20:37

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	0.88	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP6-50-08-02**  
Sample Depth:

Sample ID **2492-019**  
Matrix: WATER

Date Collected: 08/08/2002 16:15  
Date Received: 08/09/2002 10:23

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 09:37

Analyst: Venkat Mudium  
Date Analyzed: 08/12/02  
Time Analyzed: 20:37

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-10-08-02  
Sample Depth:

Sample ID 2503-011  
Matrix: WATER

Date Collected: 08/12/2002 13:50  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 19:36

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	16	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP7-10-08-02**  
Sample Depth:

Sample ID **2503-011**  
Matrix: WATER

Date Collected: 08/12/2002 13:50  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 19:36

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-15-08-02  
Sample Depth:

Sample ID 2503-012  
Matrix: WATER

Date Collected: 08/12/2002 14:00  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 20:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	15	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP7-15-08-02  
Sample Depth:

Sample ID 2503-012  
Matrix: WATER

Date Collected: 08/12/2002 14:00  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 20:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-20-08-02  
Sample Depth:

Sample ID 2503-013  
Matrix: WATER

Date Collected: 08/12/2002 14:10  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 20:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP7-20-08-02  
Sample Depth:

Sample ID 2503-013  
Matrix: WATER

Date Collected: 08/12/2002 14:10  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 20:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-25-08-02  
Sample Depth:

Sample ID 2503-014  
Matrix: WATER

Date Collected: 08/12/2002 14:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 21:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.4	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP7-25-08-02**  
Sample Depth:

Sample ID **2503-014**  
Matrix: WATER

Date Collected: 08/12/2002 14:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 21:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-30-08-02  
Sample Depth:

Sample ID 2503-015  
Matrix: WATER

Date Collected: 08/12/2002 14:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 21:29

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-30-08-02  
Sample Depth:

Sample ID 2503-015  
Matrix: WATER

Date Collected: 08/12/2002 14:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 21:29

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-35-08-02  
Sample Depth:

Sample ID 2503-016  
Matrix: WATER

Date Collected: 08/12/2002 15:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	4.9	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP7-35-08-02  
Sample Depth:

Sample ID 2503-016  
Matrix: WATER

Date Collected: 08/12/2002 15:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:01

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



Summary of Analytical Results

DUPLICATE FOR  
DVP 7 - 35

Client ID: DVP7-DUP8  
Sample Depth:

Sample ID 2503-017  
Matrix: WATER

Date Collected: 08/12/2002 15:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:29

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	6.1	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





# Summary of Analytical Results

DUPLICATE FOR  
DVP7-35

Client ID: DVP7-DUP8  
Sample Depth:

Sample ID 2503-017  
Matrix: WATER

Date Collected: 08/12/2002 15:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:29

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP7-40-08-02  
Sample Depth:

Sample ID 2503-018  
Matrix: WATER

Date Collected: 08/12/2002 15:40  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.8	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



### Summary of Analytical Results

Client ID: DVP7-40-08-02  
Sample Depth:

Sample ID 2503-018  
Matrix: WATER

Date Collected: 08/12/2002 15:40  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 12:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP7-45-08-02**  
Sample Depth:

Sample ID **2503-019**  
Matrix: WATER

Date Collected: 08/12/2002 15:55  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 13:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	11	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP7-45-08-02**  
Sample Depth:

Sample ID **2503-019**  
Matrix: WATER

Date Collected: 08/12/2002 15:55  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 13:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-10-08-02**  
Sample Depth:

Sample ID **2497-012**  
Matrix: **WATER**

Date Collected: 08/08/2002 12:25  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 07:43

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	9.2	5.0	ug/L	
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





### Summary of Analytical Results

Client ID: DVP8-10-08-02  
Sample Depth:

Sample ID 2497-012  
Matrix: WATER

Date Collected: 08/08/2002 12:25  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 07:43

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	4500	250	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	1.6	5.0	ug/L	J
trans-1,2-Dichloroethene	11	5.0	ug/L	
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	10	2.0	ug/L	
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: DVP8-15-08-02  
Sample Depth:

Sample ID 2497-013  
Matrix: WATER

Date Collected: 08/08/2002 12:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 08:10

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	6.4	5.0	ug/L	
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	10	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP8-15-08-02  
Sample Depth:

Sample ID 2497-013  
Matrix: WATER

Date Collected: 08/08/2002 12:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 08:10

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	2800	250	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	1.1	5.0	ug/L	J
trans-1,2-Dichloroethene	8.0	5.0	ug/L	
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	4.3	2.0	ug/L	
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-20-08-02**  
Sample Depth:

Sample ID **2497-014**  
Matrix: WATER

Date Collected: 08/09/2002 12:50  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 08:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	8.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-20-08-02**  
Sample Depth:

Sample ID **2497-014**  
Matrix: **WATER**

Date Collected: 08/09/2002 12:50  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 08:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	15	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-25-08-02**  
Sample Depth:

Sample ID **2497-015**  
Matrix: **WATER**

Date Collected: 08/08/2002 13:00  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 09:02

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-25-08-02**  
Sample Depth:

Sample ID **2497-015**  
Matrix: **WATER**

Date Collected: 08/08/2002 13:00  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 09:02

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	1.3	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP8-30-08-02  
Sample Depth:

Sample ID 2497-016  
Matrix: WATER

Date Collected: 08/08/2002 13:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 09:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP8-30-08-02  
Sample Depth:

Sample ID 2497-016  
Matrix: WATER

Date Collected: 08/08/2002 13:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 09:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-35-08-02**  
Sample Depth:

Sample ID **2497-017**  
Matrix: **WATER**

Date Collected: 08/09/2002 13:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:00

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	8.4	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP8-35-08-02**  
Sample Depth:

Sample ID **2497-017**  
Matrix: **WATER**

Date Collected: 08/09/2002 13:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:00

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	13	5.0	ug/L	
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	6.7	5.0	ug/L	
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP8-40-08-02  
Sample Depth:

Sample ID 2497-018  
Matrix: WATER

Date Collected: 08/09/2002 13:47  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:28

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-40-08-02**  
Sample Depth:

Sample ID **2497-018**  
Matrix: **WATER**

Date Collected: 08/09/2002 13:47  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:28

### USACE VOCs by SW8260B

	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	2.3	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	10	5.0	ug/L	
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP8-45-08-02  
Sample Depth:

Sample ID 2497-019  
Matrix: WATER

Date Collected: 08/09/2002 14:00  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:53

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.4	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP8-45-08-02**  
Sample Depth:

Sample ID **2497-019**  
Matrix: **WATER**

Date Collected: 08/09/2002 14:00  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/13/02  
Prep Time: 10:52

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 13:53

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	3.1	5.0	ug/L	J
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	6.7	5.0	ug/L	
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP9-10-08-02  
Sample Depth:

Sample ID 2497-001  
Matrix: WATER

Date Collected: 08/09/2002 08:27  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 02:45

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.6	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP9-10-08-02**  
Sample Depth:

Sample ID **2497-001**  
Matrix: **WATER**

Date Collected: 08/09/2002 08:27  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 02:45

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP9-15-08-02  
Sample Depth:

Sample ID 2497-002  
Matrix: WATER

Date Collected: 08/09/2002 08:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 03:12

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.0	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





### Summary of Analytical Results

Client ID: DVP9-15-08-02  
Sample Depth:

Sample ID 2497-002  
Matrix: WATER

Date Collected: 08/09/2002 08:35  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 03:12

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: **DVP9-20-08-02**  
Sample Depth:

Sample ID **2497-003**  
Matrix: WATER

Date Collected: 08/09/2002 08:45  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 03:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.5	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP9-20-08-02**  
Sample Depth:

Sample ID **2497-003**  
Matrix: **WATER**

Date Collected: 08/09/2002 08:45  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 03:40

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP9-25-08-02**  
Sample Depth:

Sample ID **2497-004**  
Matrix: **WATER**

Date Collected: 08/09/2002 08:53  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 04:07

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.9	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP9-25-08-02**  
Sample Depth:

Sample ID **2497-004**  
Matrix: **WATER**

Date Collected: 08/09/2002 08:53  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 04:07

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: DVP9-30-08-02  
Sample Depth:

Sample ID 2497-005  
Matrix: WATER

Date Collected: 08/09/2002 09:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 04:34

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	18	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	0.86	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP9-30-08-02**  
Sample Depth:

Sample ID **2497-005**  
Matrix: **WATER**

Date Collected: 08/09/2002 09:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 04:34

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP9-35-08-02**  
Sample Depth:

Sample ID **2497-006**  
Matrix: **WATER**

Date Collected: **08/09/2002 10:05**  
Date Received: **08/10/2002 09:30**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/12/02**  
Prep Time: **22:03**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/13/02**  
Time Analyzed: **05:56**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP9-35-08-02  
Sample Depth:

Sample ID 2497-006  
Matrix: WATER

Date Collected: 08/09/2002 10:05  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 05:56

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP9-35

Client ID: DVP9-DUP6-08-02  
Sample Depth:

Sample ID 2497-008  
Matrix: WATER

Date Collected: 08/09/2002 10:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 06:21

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



### Summary of Analytical Results

DUPLICATE FOR  
DVP9-35

Client ID: DVP9-DUP6-08-02  
Sample Depth:

Sample ID 2497-008  
Matrix: WATER

Date Collected: 08/09/2002 10:10  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 06:21

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP9-40-08-02  
Sample Depth:

Sample ID 2497-009  
Matrix: WATER

Date Collected: 08/09/2002 10:20  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 06:49

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP9-40-08-02  
Sample Depth:

Sample ID 2497-009  
Matrix: WATER

Date Collected: 08/09/2002 10:20  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 06:49

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP9-45-08-02**  
Sample Depth:

Sample ID **2497-011**  
Matrix: **WATER**

Date Collected: 08/09/2002 10:40  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 07:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U
Chloroform	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP9-45-08-02  
Sample Depth:

Sample ID 2497-011  
Matrix: WATER

Date Collected: 08/09/2002 10:40  
Date Received: 08/10/2002 09:30

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/12/02  
Prep Time: 22:03

Analyst: Venkat Mudium  
Date Analyzed: 08/13/02  
Time Analyzed: 07:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: DVP10-10-08-02  
Sample Depth:

Sample ID 2503-001  
Matrix: WATER

Date Collected: 08/12/2002 09:05  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 14:00

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP10-10-08-02**  
Sample Depth:

Sample ID **2503-001**  
Matrix: WATER

Date Collected: 08/12/2002 09:05  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 14:00

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-15-08-02  
Sample Depth:

Sample ID 2503-002  
Matrix: WATER

Date Collected: 08/12/2002 09:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 11:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	11	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-15-08-02  
Sample Depth:

Sample ID 2503-002  
Matrix: WATER

Date Collected: 08/12/2002 09:15  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 11:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-20-08-02  
Sample Depth:

Sample ID 2503-003  
Matrix: WATER

Date Collected: 08/12/2002 09:25  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 14:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.2	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-20-08-02  
Sample Depth:

Sample ID 2503-003  
Matrix: WATER

Date Collected: 08/12/2002 09:25  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 14:57

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-25-08-02  
Sample Depth:

Sample ID 2503-004  
Matrix: WATER

Date Collected: 08/12/2002 09:35  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 15:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	5.6	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP10-25-08-02**  
Sample Depth:

Sample ID **2503-004**  
Matrix: **WATER**

Date Collected: 08/12/2002 09:35  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 15:25

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: DVP10-30-08-02  
Sample Depth:

Sample ID 2503-005  
Matrix: WATER

Date Collected: 08/12/2002 09:45  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 15:54

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	10	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: DVP10-30-08-02  
Sample Depth:

Sample ID 2503-005  
Matrix: WATER

Date Collected: 08/12/2002 09:45  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 15:54

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP10-35-08-02**  
Sample Depth:

Sample ID **2503-006**  
Matrix: **WATER**

Date Collected: 08/12/2002 10:20  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 16:22

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	7.1	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-35-08-02  
Sample Depth:

Sample ID 2503-006  
Matrix: WATER

Date Collected: 08/12/2002 10:20  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Madium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Madium  
Date Analyzed: 08/14/02  
Time Analyzed: 16:22

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-40-08-02  
Sample Depth:

Sample ID 2503-007  
Matrix: WATER

Date Collected: 08/12/2002 12:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Madium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Madium  
Date Analyzed: 08/14/02  
Time Analyzed: 16:50

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	17	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: DVP10-40-08-02  
Sample Depth:

Sample ID 2503-007  
Matrix: WATER

Date Collected: 08/12/2002 12:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 16:50

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



Summary of Analytical Results

DUPLICATE FOR  
DVP10-40

Client ID: DVP10-DUP7-08-02  
Sample Depth:

Sample ID 2503-008  
Matrix: WATER

Date Collected: 08/12/2002 12:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 17:14

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	15	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





# Summary of Analytical Results

Duplicate for  
DVP10-40

Client ID: DVP10-DUP7-08-02  
Sample Depth:

Sample ID 2503-008  
Matrix: WATER

Date Collected: 08/12/2002 12:30  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/14/02  
Prep Time: 09:51

Analyst: Venkat Mudium  
Date Analyzed: 08/14/02  
Time Analyzed: 17:14

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



### Summary of Analytical Results

Client ID: **DVP10-45-08-02**  
Sample Depth:

Sample ID **2503-009**  
Matrix: WATER

Date Collected: 08/12/2002 12:50  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 11:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	8.3	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP10-45-08-02**  
Sample Depth:

Sample ID **2503-009**  
Matrix: WATER

Date Collected: 08/12/2002 12:50  
Date Received: 08/13/2002 09:29

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 11:33

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP11-10-08-02  
Sample Depth:

Sample ID: 2515-001  
Matrix: WATER

Date Collected: 08/13/2002 08:45  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 15:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	10	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-10-08-02**  
Sample Depth:

Sample ID: **2515-001**  
Matrix: **WATER**

Date Collected: **08/13/2002 08:45**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/15/02**  
Prep Time: **09:18**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/15/02**  
Time Analyzed: **15:41**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-15-08-02**  
Sample Depth:

Sample ID: **2515-002**  
Matrix: **WATER**

Date Collected: **08/13/2002 08:57**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/15/02**  
Prep Time: **09:18**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/15/02**  
Time Analyzed: **16:09**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	15	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-15-08-02**  
Sample Depth:

Sample ID: **2515-002**  
Matrix: **WATER**

Date Collected: 08/13/2002 08:57  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Madium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Madium  
Date Analyzed: 08/15/02  
Time Analyzed: 16:09

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-20-08-02**  
Sample Depth:

Sample ID: **2515-003**  
Matrix: **WATER**

Date Collected: 08/13/2002 09:10  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 16:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-20-08-02**  
Sample Depth:

Sample ID: **2515-003**  
Matrix: **WATER**

Date Collected: 08/13/2002 09:10  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Madium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Madium  
Date Analyzed: 08/15/02  
Time Analyzed: 16:38

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U





## Summary of Analytical Results

Client ID: DVP11-25-08-02  
Sample Depth:

Sample ID: 2515-004  
Matrix: WATER

Date Collected: 08/13/2002 09:18  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Madium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Madium  
Date Analyzed: 08/16/02  
Time Analyzed: 18:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP11-25-08-02**  
Sample Depth:

Sample ID: **2515-004**  
Matrix: **WATER**

Date Collected: **08/13/2002 09:18**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/16/02**  
Prep Time: **11:36**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/16/02**  
Time Analyzed: **18:41**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-30-08-02**  
Sample Depth:

Sample ID: **2515-005**  
Matrix: **WATER**

Date Collected: 08/13/2002 09:35  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 18:02

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	4.4	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-30-08-02**  
Sample Depth:

Sample ID: **2515-005**  
Matrix: **WATER**

Date Collected: 08/13/2002 09:35  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 18:02

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	4.1	5.0	ug/L	J
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-35-08-02**  
Sample Depth:

Sample ID: **2515-012**  
Matrix: **WATER**

Date Collected: 08/13/2002 13:25  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 22:41

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	2.4	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	1.1	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-35-08-02**  
Sample Depth:

Sample ID: **2515-012**  
Matrix: **WATER**

Date Collected: 08/13/2002 13:25  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 22:41

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP11-35

Client ID: **DVP11-DUP9-08-02**  
Sample Depth:

Sample ID: **2515-013**  
Matrix: **WATER**

Date Collected: 08/13/2002 13:25  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 20:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
<u>Bromoform</u>	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	0.95	5.0	ug/L	J
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





# Summary of Analytical Results

DUPLICATE FOR  
DVP 11-35

Client ID: **DVP11-DUP9-08-02**  
Sample Depth:

Sample ID: **2515-013**  
Matrix: **WATER**

Date Collected: 08/13/2002 13:25  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 20:16

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-40-08-02**  
Sample Depth:

Sample ID: **2515-014**  
Matrix: **WATER**

Date Collected: 08/13/2002 14:00  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 22:17

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP11-40-08-02**  
Sample Depth:

Sample ID: **2515-014**  
Matrix: **WATER**

Date Collected: 08/13/2002 14:00  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 22:17

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-45-08-02**  
Sample Depth:

Sample ID: **2515-015**  
Matrix: **WATER**

Date Collected: 08/13/2002 14:10  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 23:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP11-45-08-02**  
Sample Depth:

Sample ID: **2515-015**  
Matrix: **WATER**

Date Collected: 08/13/2002 14:10  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 23:05

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-10-08-02**  
Sample Depth:

Sample ID: **2515-006**  
Matrix: **WATER**

Date Collected: 08/13/2002 10:25  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/15/02  
Prep Time: 09:18

Analyst: Venkat Mudium  
Date Analyzed: 08/15/02  
Time Analyzed: 19:31

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-10-08-02**  
Sample Depth:

Sample ID: **2515-006**  
Matrix: **WATER**

Date Collected: **08/13/2002 10:25**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/15/02**  
Prep Time: **09:18**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/15/02**  
Time Analyzed: **19:31**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-15-08-02**  
Sample Depth:

Sample ID: **2515-007**  
Matrix: **WATER**

Date Collected: 08/13/2002 10:35  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 19:09

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	3.2	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
<u>Bromoform</u>	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-15-08-02**  
Sample Depth:

Sample ID: **2515-007**  
Matrix: **WATER**

Date Collected: **08/13/2002 10:35**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/16/02**  
Prep Time: **11:36**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/16/02**  
Time Analyzed: **19:09**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U





## Summary of Analytical Results

Client ID: **DVP12-20-08-02**  
Sample Depth:

Sample ID: **2515-008**  
Matrix: **WATER**

Date Collected: 08/13/2002 10:45  
Date Received: 08/14/2002 09:22

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/16/02  
Prep Time: 11:36

Analyst: Venkat Mudium  
Date Analyzed: 08/16/02  
Time Analyzed: 19:37

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP12-20-08-02**  
Sample Depth:

Sample ID: **2515-008**  
Matrix: **WATER**

Date Collected: **08/13/2002 10:45**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/16/02**  
Prep Time: **11:36**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/16/02**  
Time Analyzed: **19:37**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-25-08-02**  
Sample Depth:

Sample ID: **2515-009**  
Matrix: **WATER**

Date Collected: **08/13/2002 10:55**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/16/02**  
Prep Time: **11:36**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/16/02**  
Time Analyzed: **20:05**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-25-08-02**  
Sample Depth:

Sample ID: **2515-009**  
Matrix: **WATER**

Date Collected: **08/13/2002 10:55**  
Date Received: **08/14/2002 09:22**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/16/02**  
Prep Time: **11:36**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/16/02**  
Time Analyzed: **20:05**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-30-08-02**  
Sample Depth:

Sample ID: **2516-001**  
Matrix: **WATER**

Date Collected: 08/14/2002 08:55  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 20:44

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-30-08-02**  
Sample Depth:

Sample ID: **2516-001**  
Matrix: **WATER**

Date Collected: **08/14/2002 08:55**  
Date Received: **08/15/0002 00:00**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/17/02**  
Prep Time: **17:58**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/17/02**  
Time Analyzed: **20:44**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DUP12-30

Client ID: **DVP12-DUP10-08-02**  
Sample Depth:

Sample ID: **2516-002**  
Matrix: **WATER**

Date Collected: **08/14/2002 09:00**  
Date Received: **08/15/0002 00:00**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/17/02**  
Prep Time: **17:58**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/17/02**  
Time Analyzed: **21:11**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	4.7	50	ug/L	J
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



# Summary of Analytical Results

DUPLICATE FOR  
DVP12-30

Client ID: **DVP12-DUP10-08-02**  
Sample Depth:

Sample ID: **2516-002**  
Matrix: **WATER**

Date Collected: 08/14/2002 09:00  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 21:11

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U





## Summary of Analytical Results

Client ID: **DVP12-35-08-02**  
Sample Depth:

Sample ID: **2516-003**  
Matrix: **WATER**

Date Collected: 08/14/2002 09:10  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 21:39

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U





## Summary of Analytical Results

Client ID: **DVP12-35-08-02**  
Sample Depth:

Sample ID: **2516-003**  
Matrix: **WATER**

Date Collected: **08/14/2002 09:10**  
Date Received: **08/15/0002 00:00**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/17/02**  
Prep Time: **17:58**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/17/02**  
Time Analyzed: **21:39**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-40-08-02**  
Sample Depth:

Sample ID: **2516-004**  
Matrix: **WATER**

Date Collected: 08/14/2002 09:20  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 22:07

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-40-08-02**  
Sample Depth:

Sample ID: **2516-004**  
Matrix: **WATER**

Date Collected: **08/14/2002 09:20**  
Date Received: **08/15/0002 00:00**

Analytical Method: **SW8260B**  
Prep Method: **SW5030B**

Prep Chemist: **Venkat Mudium**  
Prep Date: **08/17/02**  
Prep Time: **17:58**

Analyst: **Venkat Mudium**  
Date Analyzed: **08/17/02**  
Time Analyzed: **22:07**

<b>USACE VOCs by SW8260B</b>	<b>Result</b>	<b>Rep Limit</b>	<b>Units</b>	<b>Qualifier</b>
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U



## Summary of Analytical Results

Client ID: DVP12-45-08-02  
Sample Depth:

Sample ID: 2516-005  
Matrix: WATER

Date Collected: 08/14/2002 09:35  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 22:35

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
1,1,1,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,1-Trichloroethane	<R.L.	5.0	ug/L	U
1,1,2,2-Tetrachloroethane	<R.L.	5.0	ug/L	U
1,1,2-Trichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethane	<R.L.	5.0	ug/L	U
1,1-Dichloroethene	<R.L.	5.0	ug/L	U
1,1-Dichloropropene	<R.L.	5.0	ug/L	U
1,2,3-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,3-Trichloropropane	<R.L.	5.0	ug/L	U
1,2,4-Trichlorobenzene	<R.L.	5.0	ug/L	U
1,2,4-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,2-Dibromo-3-Chloropropane	<R.L.	5.0	ug/L	U
1,2-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,2-Dichloroethane	<R.L.	5.0	ug/L	U
1,2-Dichloropropane	<R.L.	5.0	ug/L	U
1,3,5-Trimethylbenzene	<R.L.	5.0	ug/L	U
1,3-Dichlorobenzene	<R.L.	5.0	ug/L	U
1,3-Dichloropropane	<R.L.	5.0	ug/L	U
1,4-Dichlorobenzene	<R.L.	5.0	ug/L	U
2,2-Dichloropropane	<R.L.	5.0	ug/L	U
2-Butanone	<R.L.	50	ug/L	U
2-Chloroethyl Vinyl Ether	<R.L.	50	ug/L	U
2-Chlorotoluene	<R.L.	5.0	ug/L	U
2-Hexanone	<R.L.	50	ug/L	U
4-Chlorotoluene	<R.L.	5.0	ug/L	U
4-Methyl-2-Pentanone	<R.L.	50	ug/L	U
Acetone	<R.L.	50	ug/L	U
Acrolein	<R.L.	100	ug/L	U
Acrylonitrile	<R.L.	100	ug/L	U
Benzene	<R.L.	5.0	ug/L	U
Bromobenzene	<R.L.	5.0	ug/L	U
Bromochloromethane	<R.L.	5.0	ug/L	U
Bromodichloromethane	<R.L.	5.0	ug/L	U
Bromoform	<R.L.	5.0	ug/L	U
Bromomethane	<R.L.	5.0	ug/L	U
Carbon Disulfide	<R.L.	5.0	ug/L	U
Carbon Tetrachloride	<R.L.	5.0	ug/L	U
Chlorobenzene	<R.L.	5.0	ug/L	U
Chloroethane	<R.L.	5.0	ug/L	U



## Summary of Analytical Results

Client ID: **DVP12-45-08-02**  
Sample Depth:

Sample ID: **2516-005**  
Matrix: **WATER**

Date Collected: 08/14/2002 09:35  
Date Received: 08/15/0002 00:00

Analytical Method: SW8260B  
Prep Method: SW5030B

Prep Chemist: Venkat Mudium  
Prep Date: 08/17/02  
Prep Time: 17:58

Analyst: Venkat Mudium  
Date Analyzed: 08/17/02  
Time Analyzed: 22:35

USACE VOCs by SW8260B	Result	Rep Limit	Units	Qualifier
Chloroform	<R.L.	5.0	ug/L	U
Chloromethane	<R.L.	5.0	ug/L	U
cis-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
cis-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
cis-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Dibromochloromethane	<R.L.	5.0	ug/L	U
Dibromomethane	<R.L.	5.0	ug/L	U
Dichlorodifluoromethane	<R.L.	5.0	ug/L	U
Ethylbenzene	<R.L.	5.0	ug/L	U
Hexachlorobutadiene	<R.L.	5.0	ug/L	U
Iodomethane (Methyl Iodide)	<R.L.	5.0	ug/L	U
Isopropyl Ether	<R.L.	5.0	ug/L	U
Isopropylbenzene	<R.L.	5.0	ug/L	U
Methyl Methacrylate	<R.L.	100	ug/L	U
Methyl tert-butyl ether	<R.L.	5.0	ug/L	U
Methylene Chloride	<R.L.	5.0	ug/L	U
Naphthalene	<R.L.	5.0	ug/L	U
n-Butylbenzene	<R.L.	5.0	ug/L	U
n-Propylbenzene	<R.L.	5.0	ug/L	U
p-Isopropyltoluene	<R.L.	5.0	ug/L	U
sec-Butylbenzene	<R.L.	5.0	ug/L	U
Styrene	<R.L.	5.0	ug/L	U
tert-Butylbenzene	<R.L.	5.0	ug/L	U
Tetrachloroethene	<R.L.	5.0	ug/L	U
Toluene	<R.L.	5.0	ug/L	U
trans-1,2-Dichloroethene	<R.L.	5.0	ug/L	U
trans-1,3-Dichloropropene	<R.L.	5.0	ug/L	U
trans-1,4-Dichloro-2-butene	<R.L.	5.0	ug/L	U
Trichloroethene	<R.L.	5.0	ug/L	U
Trichlorofluoromethane	<R.L.	5.0	ug/L	U
Vinyl Acetate	<R.L.	100	ug/L	U
Vinyl Chloride	<R.L.	2.0	ug/L	U
Xylenes, Total	<R.L.	15	ug/L	U

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169012  
 Date Collected: 12/11/02 Time: 12:45  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 8:37  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM | VOA - Equivalent

0044

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169012  
 Date Collected: 12/11/02 Time: 12:45  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 8:37  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene	1.83	µg/l	J	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-15  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169013  
 Date Collected: 12/11/02 Time: 12:55  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 9:09  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169013  
 Date Collected: 12/11/02 Time: 12:55  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 9:09  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL	MQ
74-87-3	Chloromethane		µg/l	U	0.173		2
156-59-2	cis-1,2-Dichloroethene	1.15	µg/l	J	0.151		2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1		2
124-48-1	Dibromochloromethane		µg/l	U	0.133		2
74-95-3	Dibromomethane		µg/l	U	0.1		2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5		2
100-41-4	Ethylbenzene		µg/l	U	0.1		2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192		2
98-82-8	Isopropylbenzene		µg/l	U	0.1		2
75-09-2	Methylene chloride		µg/l	U	0.398		2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1		2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216		2
91-20-3	Naphthalene		µg/l	U	0.139		2
104-51-8	n-Butylbenzene		µg/l	U	0.14		2
103-65-1	n-Propylbenzene		µg/l	U	0.1		2
95-47-6	o-Xylene		µg/l	U	0.102		2
135-98-8	sec-Butylbenzene		µg/l	U	0.133		2
100-42-5	Styrene		µg/l	U	0.1		2
98-06-6	tert-Butylbenzene		µg/l	U	0.17		2
127-18-4	Tetrachloroethene		µg/l	U	0.115		2
108-88-3	Toluene		µg/l	U	0.105		2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152		2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1		2
79-01-6	Trichloroethene		µg/l	U	0.151		2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111		2
108-05-4	Vinyl acetate		µg/l	U	0.5		2
75-01-4	Vinyl chloride		µg/l	U	0.239		2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169014  
 Date Collected: 12/11/02 Time: 13:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 9:41  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-13-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169014  
 Date Collected: 12/11/02 Time: 13:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 9:41  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0049

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-25  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169015  
 Date Collected: 12/11/02 Time: 13:15  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 14:23  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0051

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169015  
 Date Collected: 12/11/02 Time: 13:15  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 14:23  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0052

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169017  
 Date Collected: 12/11/02 Time: 13:30  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 15:27  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM | VOA - Equivalent

0055

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169017  
 Date Collected: 12/11/02 Time: 13:30  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 15:27  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Analytical Management Laboratories</u>	Sample ID: <u>HAAF-DVP-13-35</u>
Client ID: <u>CESAS</u>	Project ID: <u>HAAF-MCA BARRACKS</u>
Matrix: <u>W</u>	Project Num: <u>1690</u>
Sample g/ml: <u>25</u>	Lab Sample ID: <u>169018</u>
% Solids: not dec. _____	Date Collected: <u>12/11/02</u> Time: <u>13:45</u>
Instrument ID: <u>Instru</u>	Dilution Factor: <u>1</u>
Analytical Method: <u>8260B</u>	Date Analyzed: <u>12/13/02</u> Time: <u>15:59</u>
Prep Method: <u>EPA 5030</u>	Date Received: <u>12/12/02 10:45:00 AM</u>
Analytical Batch: <u>1522</u>	

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0057



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-35  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169018  
 Date Collected: 12/11/02 Time: 13:45  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 15:59  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

DUPLICATE FOR  
DVP13-35

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID \_\_\_\_\_  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DUP10  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169019  
 Date Collected: 12/11/02 Time: 8:30  
 Dilution Factor: 10  
 Date Analyzed: 12/13/02 Time: 16:31  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	2.22	20
71-55-6	1,1,1-Trichloroethane		µg/l	U	1.8	20
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	1	20
79-00-5	1,1,2-Trichloroethane		µg/l	U	1.43	20
75-34-3	1,1-Dichloroethane		µg/l	U	2.14	20
75-35-4	1,1-Dichloroethene		µg/l	U	1.83	20
563-58-6	1,1-Dichloropropene		µg/l	U	1	20
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	1.42	20
96-18-4	1,2,3-Trichloropropane		µg/l	U	1.07	20
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	1.08	20
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	1.11	20
106-93-4	1,2-Dibromoethane		µg/l	U	1.17	20
95-50-1	1,2-Dichlorobenzene		µg/l	U	1.41	20
107-06-2	1,2-Dichloroethane		µg/l	U	1.82	20
78-87-5	1,2-Dichloropropane		µg/l	U	1.19	20
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	1.13	20
541-73-1	1,3-Dichlorobenzene		µg/l	U	1.89	20
142-28-9	1,3-Dichloropropane		µg/l	U	1.07	20
106-46-7	1,4-Dichlorobenzene		µg/l	U	1.5	20
590-20-7	2,2-Dichloropropane		µg/l	U	1.08	20
78-93-3	2-Butanone		µg/l	U	4.81	20
95-49-8	2-Chlorotoluene		µg/l	U	1.06	20
591-78-6	2-Hexanone		µg/l	U	1.63	20
106-43-4	4-Chlorotoluene		µg/l	U	1	20
99-87-6	4-Isopropyltoluene		µg/l	U	1	20
108-10-1	4-Methyl-2-pentanone		µg/l	U	1.28	20
67-64-1	Acetone		µg/l	U	6.12	20
71-43-2	Benzene		µg/l	U	1.39	20
108-86-1	Bromobenzene		µg/l	U	1.56	20
74-97-5	Bromochloromethane		µg/l	U	1.65	20
75-27-4	Bromodichloromethane		µg/l	U	1.35	20
75-25-2	Bromoform		µg/l	U	1.63	20
74-83-9	Bromomethane		µg/l	U	2.01	20
75-15-0	Carbon disulfide		µg/l	U	1.83	20
56-23-5	Carbon tetrachloride		µg/l	U	1.37	20
108-90-7	Chlorobenzene		µg/l	U	1.56	20
75-00-3	Chloroethane		µg/l	U	2.07	20
67-66-3	Chloroform		µg/l	U	2.14	20

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DVP13-35

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID \_\_\_\_\_  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1522

Sample ID: HAAF-DUP10  
Project ID: HAAF-MCA BARRACKS  
Project Num: 1690  
Lab Sample ID: 169019  
Date Collected: 12/11/02 Time: 8:30  
Dilution Factor: 10  
Date Analyzed: 12/13/02 Time: 16:31  
Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	1.73	20
156-59-2	cis-1,2-Dichloroethene		µg/l	U	1.51	20
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	1	20
124-48-1	Dibromochloromethane		µg/l	U	1.33	20
74-95-3	Dibromomethane		µg/l	U	1	20
75-71-8	Dichlorodifluoromethane		µg/l	U	5	20
100-41-4	Ethylbenzene		µg/l	U	1	20
87-68-3	Hexachlorobutadiene		µg/l	U	1.92	20
98-82-8	Isopropylbenzene		µg/l	U	1	20
75-09-2	Methylene chloride		µg/l	U	3.98	20
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	1	20
m+p xylene	m-Xylene and p-Xylene		µg/l	U	2.16	20
91-20-3	Naphthalene		µg/l	U	1.39	20
104-51-8	n-Butylbenzene		µg/l	U	1.4	20
103-65-1	n-Propylbenzene		µg/l	U	1	20
95-47-6	o-Xylene		µg/l	U	1.02	20
135-98-8	sec-Butylbenzene		µg/l	U	1.33	20
100-42-5	Styrene		µg/l	U	1	20
98-06-6	tert-Butylbenzene		µg/l	U	1.7	20
127-18-4	Tetrachloroethene		µg/l	U	1.15	20
108-88-3	Toluene		µg/l	U	1.05	20
156-60-5	trans-1,2-Dichloroethene		µg/l	U	1.52	20
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	1	20
79-01-6	Trichloroethene		µg/l	U	1.51	20
75-69-4	Trichlorofluoromethane		µg/l	U	1.11	20
108-05-4	Vinyl acetate		µg/l	U	5	20
75-01-4	Vinyl chloride		µg/l	U	2.39	20

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169020  
 Date Collected: 12/11/02 Time: 14:10  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 17:04  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0061

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-40  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169020  
 Date Collected: 12/11/02 Time: 14:10  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 17:04  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-45  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169021  
 Date Collected: 12/11/02 Time: 14:40  
 Dilution Factor: 25  
 Date Analyzed: 12/13/02 Time: 17:36  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	5.55	50
71-55-6	1,1,1-Trichloroethane		µg/l	U	4.5	50
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	2.5	50
79-00-5	1,1,2-Trichloroethane		µg/l	U	3.58	50
75-34-3	1,1-Dichloroethane		µg/l	U	5.35	50
75-35-4	1,1-Dichloroethene		µg/l	U	4.58	50
563-58-6	1,1-Dichloropropene		µg/l	U	2.5	50
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	3.55	50
96-18-4	1,2,3-Trichloropropane		µg/l	U	2.68	50
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	2.7	50
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	2.78	50
106-93-4	1,2-Dibromoethane		µg/l	U	2.92	50
95-50-1	1,2-Dichlorobenzene		µg/l	U	3.52	50
107-06-2	1,2-Dichloroethane		µg/l	U	4.55	50
78-87-5	1,2-Dichloropropane		µg/l	U	2.98	50
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	2.82	50
541-73-1	1,3-Dichlorobenzene		µg/l	U	4.73	50
142-28-9	1,3-Dichloropropane		µg/l	U	2.68	50
106-46-7	1,4-Dichlorobenzene		µg/l	U	3.75	50
590-20-7	2,2-Dichloropropane		µg/l	U	2.7	50
78-93-3	2-Butanone		µg/l	U	12	50
95-49-8	2-Chlorotoluene		µg/l	U	2.65	50
591-78-6	2-Hexanone		µg/l	U	4.08	50
106-43-4	4-Chlorotoluene		µg/l	U	2.5	50
99-87-6	4-Isopropyltoluene		µg/l	U	2.5	50
108-10-1	4-Methyl-2-pentanone		µg/l	U	3.2	50
67-64-1	Acetone		µg/l	U	15.3	50
71-43-2	Benzene		µg/l	U	3.48	50
108-86-1	Bromobenzene		µg/l	U	3.9	50
74-97-5	Bromochloromethane		µg/l	U	4.12	50
75-27-4	Bromodichloromethane		µg/l	U	3.38	50
75-25-2	Bromoform		µg/l	U	4.08	50
74-83-9	Bromomethane		µg/l	U	5.03	50
75-15-0	Carbon disulfide		µg/l	U	4.58	50
56-23-5	Carbon tetrachloride		µg/l	U	3.42	50
108-90-7	Chlorobenzene		µg/l	U	3.9	50
75-00-3	Chloroethane		µg/l	U	5.18	50
67-66-3	Chloroform		µg/l	U	5.35	50

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-13-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169021  
 Date Collected: 12/11/02 Time: 14:40  
 Dilution Factor: 25  
 Date Analyzed: 12/13/02 Time: 17:36  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
74-87-3	Chloromethane		µg/l	U	4.32	50
156-59-2	cis-1,2-Dichloroethene		µg/l	U	3.78	50
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	2.5	50
124-48-1	Dibromochloromethane		µg/l	U	3.32	50
74-95-3	Dibromomethane		µg/l	U	2.5	50
75-71-8	Dichlorodifluoromethane		µg/l	U	12.5	50
100-41-4	Ethylbenzene		µg/l	U	2.5	50
87-68-3	Hexachlorobutadiene		µg/l	U	4.8	50
98-82-8	Isopropylbenzene		µg/l	U	2.5	50
75-09-2	Methylene chloride		µg/l	U	9.95	50
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	2.5	50
m+p xylene	m-Xylene and p-Xylene		µg/l	U	5.4	50
91-20-3	Naphthalene		µg/l	U	3.48	50
104-51-8	n-Butylbenzene		µg/l	U	3.5	50
103-65-1	n-Propylbenzene		µg/l	U	2.5	50
95-47-6	o-Xylene		µg/l	U	2.55	50
135-98-8	sec-Butylbenzene		µg/l	U	3.32	50
100-42-5	Styrene		µg/l	U	2.5	50
98-06-6	tert-Butylbenzene		µg/l	U	4.25	50
127-18-4	Tetrachloroethene		µg/l	U	2.88	50
108-88-3	Toluene		µg/l	U	2.62	50
156-60-5	trans-1,2-Dichloroethene		µg/l	U	3.8	50
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	2.5	50
79-01-6	Trichloroethene		µg/l	U	3.78	50
75-69-4	Trichlorofluoromethane		µg/l	U	2.78	50
108-05-4	Vinyl acetate		µg/l	U	12.5	50
75-01-4	Vinyl chloride		µg/l	U	5.98	50



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169716  
 Date Collected: 12/12/02 Time: 13:40  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 14:58  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

0051



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169716  
 Date Collected: 12/12/02 Time: 13:40  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 14:58  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169717  
 Date Collected: 12/12/02 Time: 13:50  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 15:30  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0053

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-15  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1697  
 Lab Sample ID: 169717  
 Date Collected: 12/12/02 Time: 13:50  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 15:30  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

0054

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169718  
 Date Collected: 12/12/02 Time: 14:00  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 16:02  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

0055

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169718  
 Date Collected: 12/12/02 Time: 14:00  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 16:02  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169719  
 Date Collected: 12/12/02 Time: 14:10  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 16:34  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0057

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169719  
 Date Collected: 12/12/02 Time: 14:10  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 16:34  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169720  
 Date Collected: 12/12/02 Time: 14:20  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 17:06  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169720  
 Date Collected: 12/12/02 Time: 14:20  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 17:06  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169721  
 Date Collected: 12/12/02 Time: 14:30  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 17:38  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169721  
 Date Collected: 12/12/02 Time: 14:30  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 17:38  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0062

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169722  
 Date Collected: 12/12/02 Time: 14:50  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 18:10  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169722  
 Date Collected: 12/12/02 Time: 14:50  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 18:10  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169723  
 Date Collected: 12/12/02 Time: 15:20  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 18:42  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-14-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169723  
 Date Collected: 12/12/02 Time: 15:20  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 18:42  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169704  
 Date Collected: 12/12/02 Time: 10:15  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 18:37  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169704  
 Date Collected: 12/12/02 Time: 10:15  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 18:37  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169705  
 Date Collected: 12/12/02 Time: 10:25  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 19:09  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169705  
 Date Collected: 12/12/02 Time: 10:25  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 19:09  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169706  
 Date Collected: 12/12/02 Time: 10:35  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 19:41  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169706  
 Date Collected: 12/12/02 Time: 10:35  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 19:41  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-25  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1697  
 Lab Sample ID: 169707  
 Date Collected: 12/12/02 Time: 10:45  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 20:13  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169707  
 Date Collected: 12/12/02 Time: 10:45  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 20:13  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169708  
 Date Collected: 12/12/02 Time: 10:55  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 20:45  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169708  
 Date Collected: 12/12/02 Time: 10:55  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 20:45  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169709  
 Date Collected: 12/12/02 Time: 12:10  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 21:17  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-15-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169709  
 Date Collected: 12/12/02 Time: 12:10  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 21:17  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DUP-15-35

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DUP12  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169710  
 Date Collected: 12/12/02 Time: 8:00  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 21:49  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DVP-15-35

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DUP12  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169710  
 Date Collected: 12/12/02 Time: 8:00  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 21:49  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-15-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169711  
 Date Collected: 12/12/02 Time: 12:30  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 12:18  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-15-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169711  
 Date Collected: 12/12/02 Time: 12:30  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 12:18  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-15-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169715  
 Date Collected: 12/12/02 Time: 13:00  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 14:26  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1534

Sample ID: HAAF-DVP-15-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169715  
 Date Collected: 12/12/02 Time: 13:00  
 Dilution Factor: 1  
 Date Analyzed: 12/18/02 Time: 14:26  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169023  
 Date Collected: 12/11/02 Time: 15:25  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 18:40  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169023  
 Date Collected: 12/11/02 Time: 15:25  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 18:40  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Analytical Management Laboratories</u>	Sample ID: <u>HAAF-DVP-16-15</u>
Client ID: <u>CESAS</u>	Project ID: <u>HAAF-MCA BARRACKS</u>
Matrix: <u>W</u>	Project Num: <u>1690</u>
Sample g/ml: <u>25</u>	Lab Sample ID: <u>169024</u>
% Solids: not dec. _____	Date Collected: <u>12/11/02</u> Time: <u>15:35</u>
Instrument ID: <u>Instru</u>	Dilution Factor: <u>5</u>
Analytical Method: <u>8260B</u>	Date Analyzed: <u>12/13/02</u> Time: <u>19:12</u>
Prep Method: <u>EPA 5030</u>	Date Received: <u>12/12/02 10:45:00 AM</u>
Analytical Batch: <u>1522</u>	

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169024  
 Date Collected: 12/11/02 Time: 15:35  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 19:12  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169025  
 Date Collected: 12/11/02 Time: 15:45  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 19:44  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169025  
 Date Collected: 12/11/02 Time: 15:45  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 19:44  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169026  
 Date Collected: 12/11/02 Time: 15:55  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 20:16  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0073



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169026  
 Date Collected: 12/11/02 Time: 15:55  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 20:16  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169027  
 Date Collected: 12/11/02 Time: 16:10  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 20:48  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids; not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169027  
 Date Collected: 12/11/02 Time: 16:10  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 20:48  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DUP-16-30

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID Instru  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1522

Sample ID: HAAF-DUP11  
Project ID HAAF-MCA BARRACKS  
Project Num 1690  
Lab Sample ID: 169028  
Date Collected: 12/11/02 Time: 8:45  
Dilution Factor: 5  
Date Analyzed: 12/13/02 Time: 21:20  
Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DVP-16-30

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID Instru  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1522

Sample ID: HAAF-DUP11  
Project ID HAAF-MCA BARRACKS  
Project Num 1690  
Lab Sample ID: 169028  
Date Collected: 12/11/02 Time: 8:45  
Dilution Factor: 5  
Date Analyzed: 12/13/02 Time: 21:20  
Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169029  
 Date Collected: 12/11/02 Time: 16:40  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 21:52  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1522

Sample ID: HAAF-DVP-16-35  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169029  
 Date Collected: 12/11/02 Time: 16:40  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 21:52  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-16-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169701  
 Date Collected: 12/12/02 Time: 9:15  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 17:01  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

0020



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-16-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169701  
 Date Collected: 12/12/02 Time: 9:15  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 17:01  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-16-45  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1697  
 Lab Sample ID: 169702  
 Date Collected: 12/12/02 Time: 9:40  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 17:33  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1533

Sample ID: HAAF-DVP-16-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1697  
 Lab Sample ID: 169702  
 Date Collected: 12/12/02 Time: 9:40  
 Dilution Factor: 1  
 Date Analyzed: 12/17/02 Time: 17:33  
 Date Received: 12/13/02 10:30:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169001  
 Date Collected: 12/11/02 Time: 9:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 2:44  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-10  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169001  
 Date Collected: 12/11/02 Time: 9:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 2:44  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169002  
 Date Collected: 12/11/02 Time: 9:15  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 3:16  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM 1 VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-15  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169002  
 Date Collected: 12/11/02 Time: 9:15  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 3:16  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-20  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169003  
 Date Collected: 12/11/02 Time: 9:25  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 3:48  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-20  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169003  
 Date Collected: 12/11/02 Time: 9:25  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 3:48  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-25  
 Project ID: HAAF-MCA BARRACKS  
 Project Num: 1690  
 Lab Sample ID: 169004  
 Date Collected: 12/11/02 Time: 9:35  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 4:20  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-25  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169004  
 Date Collected: 12/11/02 Time: 9:35  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 4:20  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169005  
 Date Collected: 12/11/02 Time: 9:50  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 4:52  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM I VOA - Equivalent

0030

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-30  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169005  
 Date Collected: 12/11/02 Time: 9:50  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 4:52  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DVP-17-30

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID Instru  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1521

Sample ID: HAAF-DUP9  
Project ID HAAF-MCA BARRACKS  
Project Num 1690  
Lab Sample ID: 169007  
Date Collected: 12/11/02 Time: 8:00  
Dilution Factor: 5  
Date Analyzed: 12/13/02 Time: 5:56  
Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902  
Kansas Certification:E-10254

FORM I VOA - Equivalent

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE FOR  
DVP-17-30

Lab Name: Analytical Management Laboratories  
Client ID: CESAS  
Matrix: W  
Sample g/ml: 25  
% Solids: not dec. \_\_\_\_\_  
Instrument ID Instru  
Analytical Method: 8260B  
Prep Method: EPA 5030  
Analytical Batch: 1521

Sample ID: HAAF-DUP9  
Project ID HAAF-MCA BARRACKS  
Project Num 1690  
Lab Sample ID: 169007  
Date Collected: 12/11/02 Time: 8:00  
Dilution Factor: 5  
Date Analyzed: 12/13/02 Time: 5:56  
Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	ML
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10

EPA Lab Code:KS00902  
Kansas Certification:E-10254

FORM I VOA - Equivalent



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169006  
 Date Collected: 12/11/02 Time: 10:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 5:24  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM 1 VOA - Equivalent

0032



1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-35  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169006  
 Date Collected: 12/11/02 Time: 10:05  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 5:24  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MQL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169008  
 Date Collected: 12/11/02 Time: 10:20  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 6:28  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	0.222	2
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.18	2
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.1	2
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.143	2
75-34-3	1,1-Dichloroethane		µg/l	U	0.214	2
75-35-4	1,1-Dichloroethene		µg/l	U	0.183	2
563-58-6	1,1-Dichloropropene		µg/l	U	0.1	2
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.142	2
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.107	2
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.108	2
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.111	2
106-93-4	1,2-Dibromoethane		µg/l	U	0.117	2
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.141	2
107-06-2	1,2-Dichloroethane		µg/l	U	0.182	2
78-87-5	1,2-Dichloropropane		µg/l	U	0.119	2
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.113	2
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.189	2
142-28-9	1,3-Dichloropropane		µg/l	U	0.107	2
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.15	2
590-20-7	2,2-Dichloropropane		µg/l	U	0.108	2
78-93-3	2-Butanone		µg/l	U	0.481	2
95-49-8	2-Chlorotoluene		µg/l	U	0.106	2
591-78-6	2-Hexanone		µg/l	U	0.163	2
106-43-4	4-Chlorotoluene		µg/l	U	0.1	2
99-87-6	4-Isopropyltoluene		µg/l	U	0.1	2
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.128	2
67-64-1	Acetone		µg/l	U	0.612	2
71-43-2	Benzene		µg/l	U	0.139	2
108-86-1	Bromobenzene		µg/l	U	0.156	2
74-97-5	Bromochloromethane		µg/l	U	0.165	2
75-27-4	Bromodichloromethane		µg/l	U	0.135	2
75-25-2	Bromoform		µg/l	U	0.163	2
74-83-9	Bromomethane		µg/l	U	0.201	2
75-15-0	Carbon disulfide		µg/l	U	0.183	2
56-23-5	Carbon tetrachloride		µg/l	U	0.137	2
108-90-7	Chlorobenzene		µg/l	U	0.156	2
75-00-3	Chloroethane		µg/l	U	0.207	2
67-66-3	Chloroform		µg/l	U	0.214	2

EPA Lab Code:KS00902

Kansas Certification:E-10254

FORM | VOA - Equivalent

0036

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-40  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169008  
 Date Collected: 12/11/02 Time: 10:20  
 Dilution Factor: 1  
 Date Analyzed: 12/13/02 Time: 6:28  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-87-3	Chloromethane		µg/l	U	0.173	2
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.151	2
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.1	2
124-48-1	Dibromochloromethane		µg/l	U	0.133	2
74-95-3	Dibromomethane		µg/l	U	0.1	2
75-71-8	Dichlorodifluoromethane		µg/l	U	0.5	2
100-41-4	Ethylbenzene		µg/l	U	0.1	2
87-68-3	Hexachlorobutadiene		µg/l	U	0.192	2
98-82-8	Isopropylbenzene		µg/l	U	0.1	2
75-09-2	Methylene chloride		µg/l	U	0.398	2
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.1	2
m+p xylene	m-Xylene and p-Xylene		µg/l	U	0.216	2
91-20-3	Naphthalene		µg/l	U	0.139	2
104-51-8	n-Butylbenzene		µg/l	U	0.14	2
103-65-1	n-Propylbenzene		µg/l	U	0.1	2
95-47-6	o-Xylene		µg/l	U	0.102	2
135-98-8	sec-Butylbenzene		µg/l	U	0.133	2
100-42-5	Styrene		µg/l	U	0.1	2
98-06-6	tert-Butylbenzene		µg/l	U	0.17	2
127-18-4	Tetrachloroethene		µg/l	U	0.115	2
108-88-3	Toluene		µg/l	U	0.105	2
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.152	2
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.1	2
79-01-6	Trichloroethene		µg/l	U	0.151	2
75-69-4	Trichlorofluoromethane		µg/l	U	0.111	2
108-05-4	Vinyl acetate		µg/l	U	0.5	2
75-01-4	Vinyl chloride		µg/l	U	0.239	2

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Managment Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169010  
 Date Collected: 12/11/02 Time: 10:45  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 7:32  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	SQL
630-20-6	1,1,1,2-Tetrachloroethane		µg/l	U	1.11	10
71-55-6	1,1,1-Trichloroethane		µg/l	U	0.9	10
79-34-5	1,1,2,2-Tetrachloroethane		µg/l	U	0.5	10
79-00-5	1,1,2-Trichloroethane		µg/l	U	0.715	10
75-34-3	1,1-Dichloroethane		µg/l	U	1.07	10
75-35-4	1,1-Dichloroethene		µg/l	U	0.915	10
563-58-6	1,1-Dichloropropene		µg/l	U	0.5	10
87-61-6	1,2,3-Trichlorobenzene		µg/l	U	0.71	10
96-18-4	1,2,3-Trichloropropane		µg/l	U	0.535	10
120-82-1	1,2,4-Trichlorobenzene		µg/l	U	0.54	10
95-63-6	1,2,4-Trimethylbenzene		µg/l	U	0.555	10
106-93-4	1,2-Dibromoethane		µg/l	U	0.585	10
95-50-1	1,2-Dichlorobenzene		µg/l	U	0.705	10
107-06-2	1,2-Dichloroethane		µg/l	U	0.91	10
78-87-5	1,2-Dichloropropane		µg/l	U	0.595	10
108-67-8	1,3,5-Trimethylbenzene		µg/l	U	0.565	10
541-73-1	1,3-Dichlorobenzene		µg/l	U	0.945	10
142-28-9	1,3-Dichloropropane		µg/l	U	0.535	10
106-46-7	1,4-Dichlorobenzene		µg/l	U	0.75	10
590-20-7	2,2-Dichloropropane		µg/l	U	0.54	10
78-93-3	2-Butanone		µg/l	U	2.41	10
95-49-8	2-Chlorotoluene		µg/l	U	0.53	10
591-78-6	2-Hexanone		µg/l	U	0.815	10
106-43-4	4-Chlorotoluene		µg/l	U	0.5	10
99-87-6	4-Isopropyltoluene		µg/l	U	0.5	10
108-10-1	4-Methyl-2-pentanone		µg/l	U	0.64	10
67-64-1	Acetone		µg/l	U	3.06	10
71-43-2	Benzene		µg/l	U	0.695	10
108-86-1	Bromobenzene		µg/l	U	0.78	10
74-97-5	Bromochloromethane		µg/l	U	0.825	10
75-27-4	Bromodichloromethane		µg/l	U	0.675	10
75-25-2	Bromoform		µg/l	U	0.815	10
74-83-9	Bromomethane		µg/l	U	1.01	10
75-15-0	Carbon disulfide		µg/l	U	0.915	10
56-23-5	Carbon tetrachloride		µg/l	U	0.685	10
108-90-7	Chlorobenzene		µg/l	U	0.78	10
75-00-3	Chloroethane		µg/l	U	1.03	10
67-66-3	Chloroform		µg/l	U	1.07	10

EPA Lab Code:KS00902  
 Kansas Certification:E-10254

FORM | VOA - Equivalent

0040

1A - Equivalent  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Analytical Management Laboratories  
 Client ID: CESAS  
 Matrix: W  
 Sample g/ml: 25  
 % Solids: not dec. \_\_\_\_\_  
 Instrument ID Instru  
 Analytical Method: 8260B  
 Prep Method: EPA 5030  
 Analytical Batch: 1521

Sample ID: HAAF-DVP-17-45  
 Project ID HAAF-MCA BARRACKS  
 Project Num 1690  
 Lab Sample ID: 169010  
 Date Collected: 12/11/02 Time: 10:45  
 Dilution Factor: 5  
 Date Analyzed: 12/13/02 Time: 7:32  
 Date Received: 12/12/02 10:45:00 AM

CAS NO.	COMPOUND	RESULT	Units	Q	LLR	MLL
74-87-3	Chloromethane		µg/l	U	0.865	10
156-59-2	cis-1,2-Dichloroethene		µg/l	U	0.755	10
10061-01-5	cis-1,3-Dichloropropene		µg/l	U	0.5	10
124-48-1	Dibromochloromethane		µg/l	U	0.665	10
74-95-3	Dibromomethane		µg/l	U	0.5	10
75-71-8	Dichlorodifluoromethane		µg/l	U	2.5	10
100-41-4	Ethylbenzene		µg/l	U	0.5	10
87-68-3	Hexachlorobutadiene		µg/l	U	0.96	10
98-82-8	Isopropylbenzene		µg/l	U	0.5	10
75-09-2	Methylene chloride		µg/l	U	1.99	10
1634-04-4	Methyl-tert-butyl-ether		µg/l	U	0.5	10
m+p xylene	m-Xylene and p-Xylene		µg/l	U	1.08	10
91-20-3	Naphthalene		µg/l	U	0.695	10
104-51-8	n-Butylbenzene		µg/l	U	0.7	10
103-65-1	n-Propylbenzene		µg/l	U	0.5	10
95-47-6	o-Xylene		µg/l	U	0.51	10
135-98-8	sec-Butylbenzene		µg/l	U	0.665	10
100-42-5	Styrene		µg/l	U	0.5	10
98-06-6	tert-Butylbenzene		µg/l	U	0.85	10
127-18-4	Tetrachloroethene		µg/l	U	0.575	10
108-88-3	Toluene		µg/l	U	0.525	10
156-60-5	trans-1,2-Dichloroethene		µg/l	U	0.76	10
10061-02-6	trans-1,3-Dichloropropene		µg/l	U	0.5	10
79-01-6	Trichloroethene		µg/l	U	0.755	10
75-69-4	Trichlorofluoromethane		µg/l	U	0.555	10
108-05-4	Vinyl acetate		µg/l	U	2.5	10
75-01-4	Vinyl chloride		µg/l	U	1.2	10





# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

PAGE 1 of 2 28562

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100 W. OGLETHORPE AVE, PO BOX 889, SAVANNAH, GA 31402-0889

Client P.O. # D O # 0198

Report Sent to: (Client Contact): JIM COBBAGE

Contact Phone # 912 652-5660 Fax # 912-652-6012

Project Name: DAACG - HAAF

Project Number: -

### For Laboratory Use Only

Custody Seal:  Y  N

Page 1 OF 2

QC Level: N 1  2  3  4

Init/Temp: 886 / 20°C

Sample Condition: Good

AAL Lab Project # 12475

Samplers: (signature)

*D. Polacsek*

Samplers: (printed)

D. POLACSEK

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS										Remarks	Accura Sample ID No. AB
								8260											
DVP1-15-08-02	6 AUG 02 0840		X	W		DVP 1	3	3											2475-01
DVP1-20-08-02	6 AUG 02 0850		X	W		"	3	3											2
DVP1-25-08-02	6 AUG 02 0900		X	W		"	3	3											3
DVP1-30-08-02	6 AUG 02 0915		X	W		"	3	3											4
DVP1-35-08-02	6 AUG 02 0955		X	W		"	3	3											5
DVP1-40-08-02	6 AUG 02 1005		X	W		"	3	3											6
DVP1-45-08-02	6 AUG 02 1045		X	W		"	3	3											7
DVP1-50-08-02	6 AUG 02 1105		X	W		DVP 1 <sup>3CP</sup>	3	3											8
DVP2-15-08-02	6 AUG 02 1255		X	W		DVP 2	3	3											9
DVP2-20-08-02	6 AUG 02 1305		X	W		DVP 2	3	3											2475-010

Relinquished By:

*D. Polacsek*

Date / Time

08 AUG 02 1730

Received By:

SHIPPING

Date / Time

Special Requirements Or Remarks:

UNPRESERVED

Relinquished By:

UPS

Date / Time

080702 0716

Received By:

CHARLES LIGHT

Date / Time

080702 0716

Turnaround Time Requested:

IV-311



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

PAGE 2 of 2 32101

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: A5 LEFT

Address: 100 W. OGLETHORPE AVE, P.O. BOX 889, SAVANNAH, GA 31402-0889

Client P.O. # D.O.# 0198

Report Sent to: (Client Contact): SIM CUBBAGE

Contact Phone # 912-652-5660 Fax # 912-652-6012

Project Name: DALCF - HAAF

Project Number:                     

For Laboratory Use Only	
Custody Seal: <input checked="" type="checkbox"/> N	Page <u>2</u> OF <u>2</u>
QC Level: N 1 <input checked="" type="checkbox"/> 3 4	Init/Temp: <u>1898/29C</u>
Sample Condition: <u>GOOD</u>	AAL Lab Project # <u>2475</u>

Samplers: (signature)		Samplers: (printed)				No. of Containers	ANALYSIS	Remarks	Accura Sample ID No. AB
<u>Dan Polasek</u>		<u>D. POLASEK</u>							
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved				
DVP2-DUP1	6 AUG 02 1310		X	W		3	3		2475-011
DVP2-25-08-02	6 AUG 02 1315		X	W		3	3		12
DVP2-30-08-02	6 AUG 02 1325		X	W		3	3		13
DVP2-35-08-02	6 AUG 02 1400		X	W		3	3		14
DVP2-40-08-02	6 AUG 02 1415		X	W		3	3		15
DVP2-45-08-02	6 AUG 02 1450		X	W		3	3		16
DVP2-DUP2	6 AUG 02 1450		X	W		3	3		17
DVP2-50-08-02	6 AUG 02 1510		X	W		3	3		18
TRIP BLANK			X	W		2	2	"LARGE COOLER" 12389376 21 1001 7727	19
TRIP BLANK			X	W		2	2	"SMALL COOLER" 12389376 21 1001 7718	2475-020
Relinquished By: <u>Dan Polasek</u>		Date / Time: <u>06 AUG 02 1730</u>		Received By: <u>SHIPPING</u>		Date / Time: <u>                    </u>		Special Requirements Or Remarks: <u>UNPRESERVED</u>	
Relinquished By: <u>UPS</u>		Date / Time: <u>080702 0728 16</u>		Received By: <u>ARCHAELUS LIGHT</u>		Date / Time: <u>080702 0716</u>		Turnaround Time Requested: <u>                    </u>	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

FORM 1.0 11.0

IV-312



CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100 W. CLEVELAND, P.O. BOX 888, SAVANNAH, GA 31402

Client P.O. # 0889 DO # 0198

Report Sent to: (Client Contact): JIM CUBBAGE

Contact Phone # 912-652-5660 Fax # 712-652-6012

Project Name: DAAGC-HAAF

Project Number:

For Laboratory Use Only	
Custody Seal: <input checked="" type="radio"/> Y <input type="radio"/> N	Page 1 OF 3
QC Level: N 1 B 3 4	Init/Temp: 22C
Sample Condition: GOOD	AAL Lab Project # WO # 2480

Samplers: (signature) [Signature] Samplers: (printed) J. POLACSEK

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS										Remarks	Accura Sample ID No. AB		
								8260													
DVP3-15-08-02	7 AUG 02 0835		X	W		DVP 3	3	3													2480-001
DVP3-20-08-02	7 AUG 02 0845		X	W		"	3	3													2
DVP3-25-08-02	7 AUG 02 0856		X	W		"	3	3													3
DVP3-30-08-02	7 AUG 02 0907		X	W		"	3	3													4
DVP3-35-08-02	7 AUG 02 0948		X	W		"	3	3													5
DVP3-40-08-02	7 AUG 02 1002		X	W		"	3	3													6
DVP3-DUP3	7 AUG 02 1007		X	W		"	3	3													7
DVP3-45-08-02	7 AUG 02 1035		X	W		"	3	3													8
DVP3-50-08-02	7 AUG 02 1105		X	W		DVP 3	3	3													9
DVP3-BLK 1	7 AUG 02 1115		X	W		DVP 3	3	3													2480-010

Relinquished By: [Signature]	Date / Time: 7 AUG 02 1815	Received By: SHIPPING	Date / Time:	Special Requirements Or Remarks: UNPRESERVED
Relinquished By: UPS N/DIA	Date / Time: 8/20/02 07:40	Received By: [Signature]	Date / Time: 8/20/02 07:40	Turnaround Time Requested:

IV-313





CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100 W. OGLETHORPE AVE, P.O. BOX 889, SAVANNAH, GA 31402-0889

Client P.O. # DO # 0198

Report Sent to: (Client Contact): JIM CUBBAGE

For Laboratory Use Only

Contact Phone # 912-652-5660 Fax # 912-652-6012

Custody Seal: (Y) N Page 2 OF 3

Project Name: DAAGG-HAAF

QC Level: N 1 2 3 4 Init/Temp: 20°C

Project Number: -

Sample Condition: GOOD AAL Lab Project W-04-2480

Samplers: (signature) Dan Polasek Samplers: (printed) D. POLACSEK

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS										Remarks	Accura Sample ID No. AB			
								8260														
DVP4-15-08-02	7 AUG 02 1311		X	W		DVP 4	3	3													2480-01	1
DVP4-20-08-02	7 AUG 02 1325		X	W		"	3	3														2
DVP4-25-08-02	7 AUG 02 1340		X	W		"	3	3														3
DVP4-30-08-02	7 AUG 02 1350		X	W		"	3	3														4
DVP4-35-08-02	7 AUG 02 1407		X	W		"	3	3														5
DVP4-40-08-02	7 AUG 02 1425		X	W		"	3	3														6
DVP4-Dup 4	7 AUG 02 1430		X	W		"	3	3														7
DVP4-45-08-02	7 AUG 02 1520		X	W		"	3	3														8
<del>DVP4-45-0</del>																						
DVP4-50-08-02	7 AUG 02 1540		X	W		DVP 4	3	3													2480-01A	

IV-314

DKP

Relinquished By: Dan Polasek Date / Time: 7 AUG 02 1815 Received By: SHIPPING Date / Time: Special Requirements Or Remarks: UNPRESERVED

Relinquished By: UPS N/D/A Date / Time: 8/08/02 07:40 Received By: [Signature] Date / Time: 8/08/02 07:14 Turnaround Time Requested:



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

PAGE 3 of 3

32176

6017 Financial Drive, Norcross, GA 30071  
Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE AVE, P.O. BOX 889, SAVANNAH, GA 31402-0889  
 Report Sent to: (Client Contact): JIM CUBbage  
 Contact Phone # 912-652-5660 Fax # 912-652-6012  
 Project Name: DAACG-HAAF  
 Project Number: -

Billing address: AS LEFT  
 Client P.O. # DO #0198

For Laboratory Use Only			
Custody Seal:	<input checked="" type="radio"/> Y	<input type="radio"/> N	Page <u>3</u> OF <u>3</u>
QC Level:	N	1	2
Sample Condition:	<u>Good</u>	3	4
AAL Lab #		<u>WO# 2480</u>	

Samplers: (signature)				Samplers: (printed)				ANALYSIS 8260										Accura Sample ID No. AB	
<u>Don Polacsek</u>				<u>D. POLACSEK</u>														Remarks	
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers												
<u>TRIP BLANK</u>	<u>-</u>			<u>W</u>		<u>-</u>	<u>2</u>	<u>2</u>											<u>2480-020</u>
<u>DVP4-ALK2-08-02</u>	<u>7 AUG 02 1622</u>		<u>X</u>	<u>W</u>		<u>DVP 4</u>	<u>3</u>	<u>3</u>											<u>1</u>
<u>TRIP BLANK</u>	<u>-</u>			<u>W</u>		<u>-</u>	<u>2</u>	<u>2</u>											<u>2</u>

Relinquished By: <u>Don Polacsek</u>	Date / Time: <u>7 AUG 02 1815</u>	Received By: <u>SHIPPING</u>	Date / Time: _____	Special Requirements Or Remarks: <u>UNPRESERVED</u>
Relinquished By: <u>UPS N/D/A</u>	Date / Time: <u>07:40</u>	Received By: <u>MA</u>	Date / Time: <u>07:40</u>	Turnaround Time Requested: _____

Matrix Codes: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-315



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

1 of 2 31622

## CHAIN OF CUSTODY

Company Name: USACE Savannah District Billing address: Same

Address: 100 West Oglethorpe Ave Savannah, GA 31401 Client P.O. # DO # 0198

Report Sent to: (Client Contact): Jim Cabbage

Contact Phone # (912) 652-5660 Fax # (912) 652-6012

Project Name: DAACG-HAAF Savannah, GA

Project Number: \_\_\_\_\_

For Laboratory Use Only	
Custody Seal: <input checked="" type="radio"/> Y <input type="radio"/> N	Page <u>1</u> OF <u>2</u>
QC Level: N 1 <input checked="" type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4	Init/Temp: <u>14-20</u>
Sample Condition: <u>GOOD</u>	AAL Lab Project # <u>W-0#-2492</u>

Samplers: (signature)		Samplers: (printed)					No. of Containers	Remarks	Accura Sample ID No. AB										
<u>Michael Dardis</u>		<u>Michael Dardis</u>																	
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	ANALYSIS												
DUPS-15-08-02	8-8-02 0850		X	W		DAACG-HAAF	3	3										2492-001	
DUPS-20-08-02	8-8-02 0910		X	W		" "	3	3											2
DUPS-25-08-02	8-8-02 0925		X	W		" "	3	3											3
DUPS-30-08-02	8-8-02 0937		X	W		" "	3	3											4
DUPS-DUPS-08-02	8-8-02 0940		X	W		" "	3	3											5
DUPS-35-08-02	8-8-02 1005		X	W		" "	3	3											6
DUPS-40-08-02	8-8-02 1023		X	W		" "	3	3											7
DUPS-45-08-02	8-8-02 1053		X	W		" "	3	3											8
DUPS-50-08-02	8-8-02 1115		X	W		" "	3	3											9
Trip Blank				W		—	2	2											2492-010

Relinquished By: <u>Michael Dardis</u>	Date / Time: <u>8-8-02 1730</u>	Received By: <u>Shipped</u>	Date / Time: <u>8-8-02 1730</u>	Special Requirements Or Remarks:
Relinquished By: <u>UPS N/A</u>	Date / Time: <u>8/8/02/1023</u>	Received By: <u>GA</u>	Date / Time: <u>8/8/02/1023</u>	Turnaround Time Requested:

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-316





# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

31438

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: USACE Savannah District Billing address: Sgml

Address: 100 West Oglethorpe Ave Savannah, GA 31404 Client P.O. # DO #0198

Report Sent to: (Client Contact): Jim Cabbage

Contact Phone # (912) 652-5660 Fax # (912) 652-6012

Project Name: DAACG - HAA F Savannah, GA 31404

Project Number:

For Laboratory Use Only			
Custody Seal:	<input checked="" type="radio"/> Y <input type="radio"/> N	Page	<u>2</u> OF <u>2</u>
QC Level:	N 1 <input checked="" type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4	Init/Temp:	<u>22°C</u>
Sample Condition:	<u>Good</u>	AAL Lab #	<u>W-011-2492</u>

Samplers: (signature)	Samplers: (printed)
<u>Michael Jandis</u>	<u>Michael Jandis</u>

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS										Remarks	Accura Sample ID No. AB		
								1	2	3	4	5	6	7	8	9	10			11	12
DVP5-BIK3-08-02	8-8-02 1120		X	L		DAACG-HAAF	3	3													2492-011
DVP6-15-08-02	8-8-02 1315		X	L		" "	3	3													2
DVP6-20-08-02	8-8-02 1320		X	L		" "	3	3													3
DVP6-25-08-02	8-8-02 1345		X	L		" "	3	3													4
DVP6-30-08-02	8-8-02 1355		X	L		" "	3	3													5
DVP6-35-08-02	8-8-02 1442		X	L		" "	3	3													6
DVP6-40-08-02	8-8-02 1500		X	L		" "	3	3													7
DVP6-45-08-02	8-8-02 1530		X	L		" "	3	3													8
DVP6-50-08-02	8-8-02 1615		X	L		" "	3	3													9
DVP6-BIK4-08-02	8-8-02 1625		X	L		" "	3	3													2492-020

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
<u>Michael Jandis</u>	<u>8-8-02 1730</u>	<u>Shipped</u>	<u>8-8-02 1730</u>	
Relinquished By:	Date / Time	Received By:	Date / Time	Turnaround Time Requested:
<u>UPS NIMA</u>	<u>8/9/02/10:23</u>	<u>JM</u>	<u>8/9/02/10:23</u>	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-317

2492  
BIB



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

PAGE 1 of 3 31370

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS Billing address: AS LEFT

Address: 100 W. OGLETHORPE AVE, PO BOX 987, SAVANNAH, GA 31402 Client P.O. # 689

Report Sent to: (Client Contact): JIM CUBBAGE D.O. # 0198

Contact Phone # 912-652-5660 Fax # 912-652-6012

Project Name: DAACG-HAAF

Project Number: -

**For Laboratory Use Only**

Custody Seal:  Y  N Page 1 OF 3

QC Level: N 1  2  3  4 Init Temp: 4.2°C

Sample Condition: Good AAL Lab Project: W of 2503

Samplers: (signature) Dan Polacsek Samplers: (printed) D. POLACSEK

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS										Remarks	Accura Sample ID No. AB	
								1	2	3	4	5	6	7	8	9	10			11
DVP10-10-08-02	12 AUG 02 0905		X	W		DVP 10	3	3												2503-001
DVP10-15-08-02	12 AUG 02 0915		X	W		"	3	3												
DVP10-20-08-02	12 AUG 02 0925		X	W		"	3	3												
DVP10-25-08-02	12 AUG 02 0935		X	W		"	3	3												
DVP10-30-08-02	12 AUG 02 0945		X	W		"	3	3												
DVP10-35-08-02	12 AUG 02 1020		X	W		"	3	3												
DVP10-40-08-02	12 AUG 02 1230		X	W		"	3	3												
DVP10-Dup 7-08-02	12 AUG 02 1230		X	W		"	3	3												
DVP10-45-08-02	12 AUG 02 1250		X	W		"	3	3												
DVP10-04K6-08-02	12 AUG 02 1315		X	W		DVP 10	3	3												2503-010

Relinquished By: Dan Polacsek Date / Time: 12 AUG 02 1800 Received By: SHIPPING UPS Date / Time: 12 AUG 02 1900 Special Requirements Or Remarks: UNPRESERVED

Relinquished By: UPS N/D/A Date / Time: 08/30/02 9:29 Received By: [Signature] Date / Time: 08/30/02 9:29 Turnaround Time Requested:

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-318



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

PAGE 2 of 3

33789

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE AVE, PO BOX 889, SAVANNAH, GA 31402  
 Report Sent to: (Client Contact): JIM CUBBAGE  
 Contact Phone # 912-652-5660 Fax # 912-652-6012  
 Project Name: DAACG - HAAF  
 Project Number: -

Billing address: AS LEFT  
 Client P.O. # D.O. #0198

For Laboratory Use Only  
 Custody Seal:  Y  N Page 2 OF 3  
 QC Level: N 1  2  3  4 Init/Temp: 12°C  
 Sample Condition: GOOD AAL Lab Project # W-04-2503

Samplers: (signature)		Samplers: (printed)					ANALYSIS	No. of Containers	Remarks	Accura Sample ID No. AB
<u>Dan Blauack</u>		<u>D. POLACSEK</u>								
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:				
DVP7-10-08-02	12 AUG 02 1350		X	W		DVP 7	3	3		2503-011
DVP7-15-08-02	12 AUG 02 1400		X	W		"	3	3		2
DVP7-20-08-02	12 AUG 02 1410		X	W		"	3	3		3
DVP7-25-08-02	12 AUG 02 1415		X	W		"	3	3		4
DVP7-30-08-02	12 AUG 02 1430		X	W		"	3	3		5
DVP7-35-08-02	12 AUG 02 1515		X	W		"	3	3		6
DVP7-Dup 8	12 AUG 02 1515		X	W		"	3	3		7
DVP7-40-08-02	12 AUG 02 1540		X	W		"	3	3		8
DVP7-45-08-02	12 AUG 02 1555		X	W		DVP 7	3	3		9
DVP7-BLK7-08-02	12 AUG 02 1610		X	W		DVP 7	3	3		2503-020

Relinquished By: <u>Dan Blauack</u>	Date / Time: <u>12 AUG 02 1400</u>	Received By: <u>SHIPPING</u>	Date / Time: <u>12 AUG 02 1800</u>	Special Requirements Or Remarks: <u>UNPRESERVED</u>
Relinquished By: <u>VPS N/DIA</u>	Date / Time: <u>08/30/09 1200</u>	Received By: <u>[Signature]</u>	Date / Time: <u>08/30/09 1200</u>	Turnaround Time Requested:

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-2.XLS

IV-319





6017 Financial Drive, Norcross, GA 30071  
 Phone # (770) 449-8800 Fax # (770) 449-5477

**CHAIN OF CUSTODY**

Company Name: US ARMY CORPS OF ENGINEERS Billing address: AS LEFT

Address: 100 W. OGLETHORPE AVE, PO BOX 879, SAVANNAH, GA 31402-0879 Client P.O. # D.O. #0194

Report Sent to: (Client Contact): JIM CUABAGE

Contact Phone # 912-652-5660 Fax # 912-652-6012

Project Name: DAACG-HAAF

Project Number: -

**For Laboratory Use Only**

Custody Seal:  Y     N    Page 3 OF 3

QC Level: N 1  2    3 4    Init/Temp: 28

Sample Condition: GOOD    AAAL Lab # N-01 2503

Samplers: (signature) D. Polaksek      Samplers: (printed) D. POLAKSEK

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSTS						Remarks	Accura Sample ID No. AB <u>808</u>		
								1	2	3	4	5	6			7	8
TRIP BLANK	12 AUG 02			W		-	2	2									

Relinquished By: <u>D. Polaksek</u>	Date / Time: <u>12 AUG 02 1300</u>	Received By: <u>SHIPPING</u>	Date / Time: <u>12 AUG 02 1400</u>	Special Requirements Or Remarks: <u>UNPRESERVED</u>
Relinquished By: <u>OPE / N/D / A</u>	Date / Time: <u>08/31/02 12:29</u>	Received By: <u>[Signature]</u>	Date / Time: <u>08/31/02 09:29</u>	Turnaround Time Requested: <u> </u>

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-320



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

1 of 2  
31623

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: USACE Savannah District  
 Address: 100 West Odette Ave Savannah GA  
 Report Sent to: (Client Contact): Jim Cabbage 31401  
 Contact Phone # (912) 652-5660 Fax # (912) 652-6012  
 Project Name: DAACG-HAAF Savannah, GA  
 Project Number:

Billing address: Same  
 Client P.O. # DO# 0198

For Laboratory Use Only			
Custody Seal: <input checked="" type="radio"/> N	Page <u>1</u> OF <u>2</u>		
QC Level: N 1 <input checked="" type="radio"/> 2 3 4	Init/Temp: <u>BB/2°C</u>		
Sample Condition: <u>Good</u>	AAE Lab Project # <u>2497</u>		

Samplers: (signature)		Samplers: (printed)		ANALYSIS 8260										Accura Sample ID No. AB					
<u>Michael Dardis</u>		<u>Michael Dardis</u>																	
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers												Remarks
DVP9-10-08-02	8-9-02 0827		X	W		DAACG-HAAF	3	3											2497-001
DVP9-15-08-02	8-9-02 0835		X	W		" "	3	3											2
DVP9-20-08-02	8-9-02 0845		X	W		" "	3	3											3
DVP9-25-08-02	8-9-02 0853		X	W		" "	3	3											4
DVP9-30-08-02	8-9-02 0910		X	W		" "	3	3											5
DVP9-35-08-02	8-9-02 1005		X	W		" "	3	3											6
DVP9-BIK <sup>5</sup> 9-08-02	8-9-02 1000		X	W		" "	3	3											7
DVP9-Dup6-08-02	8-9-02 1010		X	W		" "	3	3											8
DVP9-40-08-02	8-9-02 1020		X	W		" "	3	3											9
Trip Blank	—			W		—	2	2											2497-010

Relinquished By: <u>Michael Dardis</u>	Date / Time <u>8-9-02 1630</u>	Received By: <u>Shipped</u>	Date / Time <u>8-9-02 1630</u>	Special Requirements Or Remarks:
Relinquished By: <u>UPS</u>	Date / Time <u>081002 0930</u>	Received By: <u>[Signature]</u>	Date / Time <u>081002 0930</u>	Turnaround Time Requested:

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-321





# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

2 of 2

31624

6017 Financial Drive, Norcross, GA 30071

Phone # (770) 449-8800 Fax # (770) 449-5477

## CHAIN OF CUSTODY

Company Name: USACE Savannah District Billing address: Same

Address: 100 West Oglethorpe Ave Savannah, GA 31401 Client P.O. # DO# 0198

Report Sent to: (Client Contact): Jim Cabbage

Contact Phone # (912) 652-5660 Fax # (912) 652-6012

Project Name: DAACG-HAAF Savannah, GA

Project Number: \_\_\_\_\_

For Laboratory Use Only			
Custody Seal:	<input checked="" type="radio"/> Y <input type="radio"/> N	Page	2 OF 2
QC Level:	N 1 <input checked="" type="radio"/> 2 3 4	Init/Temp:	800/22
Sample Condition:	Good	AAL Lab Project #	2497

Samplers: (signature)		Samplers: (printed)		ANALYSIS 8260										Accura Sample ID	
Michael Dardi		Michael Dardi's												Sample ID #	Sample Date / Time
DVP9-45-08-02	8-9-02 1040		X	W						DAACG-HAAF	3	3		2497-0	11
DVP8-10-08-02	8-9-02 1225		X	W						" "	3	3			2
DVP8-15-08-02	8-9-02 1235		X	W						" "	3	3	Sample Time 1235		3
DVP8-20-08-02	8-9-02 1250		X	W						" "	3	3			4
DVP8-25-08-02	8-9-02 1300		X	W						" "	3	3			5
DVP8-30-08-02	8-9-02 1310		X	L						" "	3	3			6
DVP8-35-08-02	8-9-02 1335		X	W						" "	3	3			7
DVP8-40-08-02	8-9-02 1347		X	W						" "	3	3			8
DVP8-45-08-02	8-9-02 1400		X	W						" "					9

Relinquished By: <u>Michael Dardi</u>		Date / Time: <u>8-9-02 1630</u>		Received By: <u>Shipped</u>		Date / Time: <u>8-9-02 1630</u>		Special Requirements Or Remarks:	
Relinquished By: <u>UPS</u>		Date / Time: <u>081002 0930</u>		Received By: <u>[Signature]</u>		Date / Time: <u>081002 0930</u>		Turnaround Time Requested:	

IV-322



CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100 W. OGLETHORPE, P.O. BOX 889, SAVANNAH, GA 31402-0889

Client P.O. #: DO #0199

Report Sent to: (Client Contact): JM CUBBEDGE

Contact Phone # 912-652-5660 Fax # 912-652-6012

Project Name: DAACG-HAAF

Project Number: -

For Laboratory Use Only			
Custody Seal:	① N	Page	1 OF 2
QC Level:	N 1 ② 3 4	Init/Temp:	M 2°C
Sample Condition:	(SUD)	AAL Lab Project:	W-01-2515

Samplers: (signature)	Samplers: (printed)
<i>Dana Polacsek</i>	D. POLACSEK

ANALYSIS									
8260									
Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	Remarks	Accura Sample ID No. AB
DVP11-10-08-02	13 AUG 02 0845		X	W		DVP11	3 3		2515-001
DVP11-15-08-02	13 AUG 02 0857		X	W		"	3 3		2
DVP11-20-08-02	13 AUG 02 0910		X	W		"	3 3		3
DVP11-25-08-02	13 AUG 02 0918		X	W		"	3 3		4
DVP11-30-08-02	13 AUG 02 0935		X	W		DVP11	3 3		5
DVP12-10-08-02	13 AUG 02 1025		X	W		DVP12	3 3		6
DVP12-15-08-02	13 AUG 02 1035		X	W		DVP12	3 3		7
DVP12-20-08-02	13 AUG 02 1045		X	W		"	3 3		8
DVP12-25-08-02	13 AUG 02 1055		X	W		DVP12	3 3		9
DVP11-08-07-02	13 AUG 02 1045		X	W		DVP11	3 3		2515-010

Relinquished By: <i>Dana Polacsek</i>	Date / Time: 13 AUG 02 1630	Received By: SHIPPING	Date / Time: 13 AUG 02 1630	Special Requirements Or Remarks: UNPRESERVED
Relinquished By: <i>VPS</i>	Date / Time: 08 AUG 02 1222	Received By: <i>EL</i>	Date / Time: 08 AUG 02 0922	Turnaround Time Requested:

IV-323



CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100 W. OGLETHORPE, PO BOX 989, SAVANNAH, GA 31402-0989

Client P.O. # JO # 098

Report Sent to: (Client Contact): JIM CUBBEDGE

For Laboratory Use Only

Contact Phone # 912-652-5660 Fax # 912-652-6012

Custody Seal: (Y) N Page 2 OF 2

Project Name: DAACG-HAAF

QC Level: N 1 2 3 4 Init Temp: MSR / 9°C

Project Number: 7

Sample Condition: Good AAL Lab Project # 2815

Samplers: (signature) [Signature] Samplers: (printed) D. POLACSEK

Table with columns: Sample ID #, Sample Date / Time, Comp, Grab, Matrix, Preserved, Sample Location, No. of Containers, Remarks, Accura Sample ID No. AB. Includes handwritten entries for DVP 12, DVP 11, and TRIP BLANK.

Relinquished By: [Signature] Date / Time: 13 AUG 02 1630 Received By: SHIPPING Date / Time: 13 AUG 02 1636 Special Requirements Or Remarks: UNPRESERVED

Relinquished By: UPS N/D/A Date / Time: 08/14/02 09:22 Received By: [Signature] Date / Time: 08/14/02 09:22 Turnaround Time Requested:

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

IV-324





CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS  
Address: 100 W. OGLETHORPE AVE, BOX 889, SAVANNAH, GA  
Report Sent to: (Client Contact): JIM CUBBEDGE  
Contact Phone # 912-652-5660 Fax # 912-652-6012  
Project Name: DAACG-HAAF  
Project Number: -

Billing address: AS 28T  
Client P.O. #: DO # 98

For Laboratory Use Only  
Custody Seal: (Y) N Page 1 OF 2  
QC Level: N 1 (2) 3 4 Init/Temp: 2°C  
Sample Condition: GOLD AAL Lab Project # W-# 2516

Samplers: (signature) [Signature]  
Samplers: (printed) D. POLACSEK

ANALYSIS 8260

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	Remarks	Accura Sample ID No. AB
DVP 12-30-08-02	14 AUG 02 0855		X	W		DVP 12	3		2516-001
DVP 12-30-10-08-02	14 AUG 02 0900		X	W		"	3		002
DVP 12-35-08-02	14 AUG 02 0910		X	W		"	3		003
DVP 12-40-08-02	14 AUG 02 0920		X	W		"	3		004
DVP 12-45-08-02	14 AUG 02 0935		X	W		DVP 12	3		005
TRIP BLANK	-			W		-	2		006
DRUM 9 AUG 02 1025	14 AUG 02 1025		X	W		DRUM 9 AUG	3		007
DRUM 14 AUG 02 1045	14 AUG 02 1045		X	W		DRUM 14 AUG	3		008
DRUM 6 AUG 02 1050	14 AUG 02 1050		X	W		DRUM 6 AUG	3		009
DRUM 8 AUG 02 1100	14 AUG 02 1100		X	W		DRUM 8 AUG	3		010

Relinquished By: [Signature] Date/Time: 14 AUG 02 1300 Received By: SHIPPING Date/Time: 14 AUG 02 1300 Special Requirements Or Remarks: UNPRESERVED  
Relinquished By: VPS N/DIA Date/Time: 081502/07:40 Received By: [Signature] Date/Time: 081502/07:40 Turnaround Time Requested:

IV-325



CHAIN OF CUSTODY

Company Name: US ARMY CORPS OF ENGINEERS

Billing address: AS LEFT

Address: 100W. OGLETHORPE AVE, P.O. BOX 889, SAVANNAH, GA 31402-0889

Client P.O. # 20, 0198

Report Sent to: (Client Contact): JIMMY CUBBEDGE

For Laboratory Use Only
Custody Seal: (Y) N Page 2 OF 2
QC Level: N 1 2 3 4 Init/Temp: 15.0°C
Sample Condition: GOOD AAL Lab Project #: W-07-2516

Contact Phone # 912-652-5660 Fax # 912-652-692

Project Name: DAACG-HAAF

Project Number: -

Table with columns: Samplers (signature), Samplers (printed), Sample ID #, Sample Date / Time, Comp, Grab, Matrix, Preserved, Sample Location, No. of Containers, Remarks, Accura Sample ID No. AB. Includes handwritten entries for DRUM 7 AUG and DVPI2-RLK9-08-02.

Relinquished By: [Signature] Date / Time: 14 AUG 02 1300 Received By: SHIPPING Date / Time: 14 AUG 02 1300 Special Requirements Or Remarks: UNPRESERVED
Relinquished By: UPS N/D/A Date / Time: 08/15/02 07:40 Received By: [Signature] Date / Time: 08/15/02 07:40 Turnaround Time Requested:

IV-326



15130 B South Keeler  
 Olathe, Kansas 66062  
 Phone (913) 829-0101  
 Fax (913) 829-1181

Chain of Custody Record / Request for Analysis

Client Contact Name: SIM CUBBEDGE  
 Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE, PO BOX 559  
 City, State, Zip: SAVANNAH, GA 31402  
 Phone #: (912) 652-5660  
 Fax #: (912) 652-6012

Project Name: HAAF-MCA BARRACKS  
 Project Number: \_\_\_\_\_  
 Purchase Order Number: DO# 0006  
 Project Due Date: \_\_\_\_\_  
 Project Comments: \_\_\_\_\_  
 Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1697</u>					Method # ---> <u>828</u>															Please include any information that may be useful in the analysis of the sample. Example: high concentration  Comments:					
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	FCRA8 Metals		Lead	Flash Point	Paint Filter	pH	
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															4° C
1697-01	HAAF-DVP-16-90	12/28/02	0915	W	3																				
1697-01	HAAF-DVP-16-MS	"	0920	W	3																				
1697-01	HAAF-DVP-16-MSD	"	0925	W	3																				
1697-02	HAAF-DVP-16-45	"	0940	W	3																				
1697-03	HAAF-DVP-16-BK11	"	0950	W	3																				
1697-04	HAAF-DVP-15-10	"	1015	W	3																				
1697-05	HAAF-DVP-15-15	"	1025	W	3																				
1697-06	HAAF-DVP-15-20	"	1035	W	3																				
1697-07	HAAF-DVP-15-25	"	1045	W	3																				
1697-08	HAAF-DVP-15-30	12/28/02	1055	W	3																				

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>12 Dec 02 1815</u>	Received By: <u>[Signature]</u>	Date/Time: <u>12 Dec 02 1815</u>
	Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: <u>12/13/02 10:30am</u>

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<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier Airbill #: <u>836385631900</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> <u>cooler #1: 1.9°C</u> <u>cooler #2: 2.4°C</u>
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IV-327

0010





Analytical Management Laboratories, Inc.

15130 B South Keeler  
Olathe, Kansas 66062  
Phone (913) 829-0101  
Fax (913) 829-1181

21783

Page 2 of 3

Chain of Custody Record / Request for Analysis

Client Contact Name: JIM CUBBERGE  
Company Name: US ARMY CORPS OF ENGINEERS  
Address: 100 W OGLETHORPE, PO BOX 889  
City, State, Zip: SAVANNAH, GA 31402  
Phone #: 912 652-5660  
Fax #: 912 652-6012

Project Name: HAAF MCA BARRACKS  
Project Number: \_\_\_\_\_  
Purchase Order Number: DO#0006  
Project Due Date: \_\_\_\_\_  
Project Comments: \_\_\_\_\_  
Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1697</u>						Method # --->														Please include any information that may be useful in the analysis of the sample. Example: high concentration					
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals		Lead	Flash Point	Paint Filter	pH	Comments:
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															
1697-09	HAAF-DVP-15-35	12 Dec 02	1210	W	3																				
1697-10	HAAF-DUP12	"	0800	W	3																				
1697-11	HAAF-DVP-15-40	"	1230	W	3																				
1697-11	HAAF-DVP-15-MS	"	1235	W	3																				
1697-11	HAAF-DVP-15-MSD	"	1240	W	3																				
1697-12	HAAF-DVP-15-BLK2	"	1250	W	3																				
1697-13	TRIP BLANK	-	-	W	2																				
1697-14	TRIP BLANK	-	-	W	2																				
1697-15	HAAF-DVP-15-45	12 Dec 02	1300	W	3																				
1697-16	HAAF-DVP-14-10	12 Dec 02	1340	W	3																				

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>12 Dec 02 1815</u>	Received By: <u>Fed Ex</u>	Date/Time: <u>12 Dec 02 1815</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/13/02 10:30am</u>

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<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier <input type="checkbox"/> Airbill #: <u>836385631900</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> cooler # 1: 1.9°C cooler # 2: 2.4°C
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IV-328

0011



15130 B South Keeler  
 Olathe, Kansas 66062  
 Phone (913) 829-0101  
 Fax (913) 829-1181

Chain of Custody Record / Request for Analysis

Client Contact Name: JIM CUBBEDGES  
 Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE, PO BOX 889  
 City, State, Zip: SAVANNAH, GA 31402  
 Phone #: (912) 652-5660  
 Fax #: (912) 652-6012

Project Name: HAF-MCA BARRACKS  
 Project Number: \_\_\_\_\_  
 Purchase Order Number: DO#0006  
 Project Due Date: \_\_\_\_\_  
 Project Comments: \_\_\_\_\_  
 Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1697</u>					Method # ---> <u>8260</u>															Please include any information that may be useful in the analysis of the sample. Example: high concentration  Comments:					
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals		Lead	Flash Point	Paint Filter	pH	
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															4° C
1697-17	HAAF-DVP-14-15	12 Dec 02	1350	W	3																				
1697-18	HAAF-DVP-14-20	"	1400	W	3																				
1697-19	HAAF-DVP-14-25	"	1410	W	3																				
1697-20	HAAF-DVP-14-30	"	1420	W	3																				
1697-21	HAAF-DVP-14-35	"	1430	W	3																				
1697-22	HAAF-DVP-14-40	"	1450	W	3																				
1697-23	HAAF-DVP-14-45	12 Dec 02	1520	W	3																				
8																									
9																									
10																									

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>12 Dec 02 1415</u>	Received By: <u>Fed Ex</u>	Date/Time: <u>12 Dec 02 1415</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/13/02 10:30am</u>

By signing the request (chain of custody) you are ordering work from Analytical Management Laboratories, Inc. which constitutes the acceptance of the terms and conditions on the back of this form.

<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier <input type="checkbox"/> Airbill #: <u>836385631900</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> cooler #1: 1.9°C cooler #2: 2.4°C
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IV-329

0012





Analytical Management Laboratories, Inc.

15130 B South Keeler  
Olathe, Kansas 66062  
Phone (913) 829-0101  
Fax (913) 829-1181

21799

Page 1 of 4

Chain of Custody Record / Request for Analysis

Client Contact Name: JIM CURBEDGE  
Company Name: US ARMY CORPS OF ENGINEERS  
Address: 100 W. OGLETHORPE, PO BOX 887  
City, State, Zip: SAVANNAH, GA 31406 31402  
Phone #: (912) 652-5660  
Fax #: (912) 652-6012

Project Name: HAAF-MCA BARBACKS  
Project Number: \_\_\_\_\_  
Purchase Order Number: DO #0006  
Project Due Date: \_\_\_\_\_  
Project Comments: \_\_\_\_\_  
Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1690</u>					Method # ---> <u>8260</u>																	Please include any information that may be useful in the analysis of the sample. Example: high concentration  Comments:		
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals	Lead	Flash Point		Paint Filter	pH
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved														
1690-01	HAAF-DVP-17-10	11 Dec 02	0905	W	3																			
1690-02	HAAF-DVP-17-15	"	0915	W	3																			
1690-03	HAAF-DVP-17-20	"	0925	W	3																			
1690-04	HAAF-DVP-17-25	"	0935	W	3																			
1690-05	HAAF-DVP-17-30	"	0950	W	3																			
1690-06	HAAF-DVP-17-35	"	1005	W	3																			
1690-07	HAAF-DVP-17-39	"	0806	W	3																			
1690-08	HAAF-DVP-17-40	"	1020	W	3																			
1690-08	HAAF-DVP-17-MS	"	1025	W	3																			
1690-08	HAAF-DVP-17-MSD	11 Dec 02	1030	W	2																			

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11 Dec 02 1830</u>	Received By: <u>Fed Ex</u>	Date/Time: <u>11 Dec 02 1830</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/12/02 10:45am</u>

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<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier <u>Fed Ex</u> <u>0272000031911</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> <u>cooler #1 &amp; 2: 1.9°C</u>
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IV-330

0010



Analytical Management Laboratories, Inc.

15130 B South Keeler  
Olathe, Kansas 66062  
Phone (913) 829-0101  
Fax (913) 829-1181

21779

Page 2 of 4

Chain of Custody Record / Request for Analysis

Client Contact Name: JIM CUBBEDGE  
Company Name: US ARMY CORPS OF ENGINEERS  
Address: 100 W. GLETHORPE AVE, P.O. BOX 889  
City, State, Zip: SAVANNAH, GA 31402  
Phone #: (912) 652-5660  
Fax #: (912) 652-6012

Project Name: HAAF-MCA BARRACKS  
Project Number: \_\_\_\_\_  
Purchase Order Number: DO # 0006  
Project Due Date: \_\_\_\_\_  
Project Comments: \_\_\_\_\_  
Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1690</u>						Method # --->															Please include any information that may be useful in the analysis of the sample.  Example: high concentration  Comments:				
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals	Lead		Flash Point	Paint Filter	pH	
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															4° C
1690-09	TRIP BLANK	-	-	W	2	2																			
1690-10	HAAF-DVP-17-45	11 Dec 02	1045	W	3																				
1690-11	HAAF-DVP-17-BLK9	"	1103	W	3																				
1690-12	HAAF-DVP-13-10	"	1245	W	3																				
1690-13	HAAF-DVP-13-15	"	1255	W	3																				# vial 1 of 3 was received broken (15)
1690-14	HAAF-DVP-13-20	"	1305	W	3																				
1690-15	HAAF-DVP-13-25	"	1315	W	3																				
1690-16	TRIP BLANK	-	-	W	2	2																			
1690-17	HAAF-DVP-13-30	"	1330	W	3																				
1690-18	HAAF-DVP-13-35	11 Dec 02	1345	W	3																				

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11 Dec 02 1830</u>	Received By: <u>Fed Ex</u>	Date/Time: <u>11 Dec 02 1830</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/12/02 10:45am</u>

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<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier <u>Fed Ex</u> <input type="checkbox"/> Airbill #: <u>836385631911</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> <u>Cooler #1 &amp; 2: 1.9°C</u>
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IV-331

0011





15130 B South Keeler  
 Olathe, Kansas 66062  
 Phone (913) 829-0101  
 Fax (913) 829-1181

21780

Page 3 of 34

Chain of Custody Record / Request for Analysis

Client Contact Name: JIM CUBBEDGE  
 Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE AVE, P.O. BOX 8859  
 City, State, Zip: JANNAH, GA 31402  
 Phone #: (912) 652-5660  
 Fax #: (912) 652-6022

Project Name: HAF-MCA BARRACKS  
 Project Number: \_\_\_\_\_  
 Purchase Order Number: 50#0006  
 Project Due Date: \_\_\_\_\_  
 Project Comments: \_\_\_\_\_  
 Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1690</u>					Method # ---->															Please include any information that may be useful in the analysis of the sample. Example: high concentration  Comments:					
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRAB Metals		Lead	Flash Point	Paint Filter	pH	
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															4° C
1690-19	HAAF-DUP-10	11 Dec 02	0830	W	3																				
1690-20	HAAF-DVP-13-40	"	1410	W	3																				
1690-20	HAAF-DVP-13-MS	"	1415	W	3																				
1690-20	HAAF-DVP-13-MSD	"	1420	W	3																				
1690-21	HAAF-DVP-13-45	"	1440	W	3																				
1690-22	HAAF-DVP-13-BLK10	"	1500	W	3																				
1690-23	HAAF-DVP-16-10	"	1525	W	3																				
1690-24	HAAF-DVP-16-15	"	1535	W	3																				
1690-25	HAAF-DVP-16-20	"	1545	W	3																				
1690-26	HAAF-DVP-16-25	11 Dec 02	1555	W	3																				

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11 Dec 02 1830</u>	Received By: <u>FedEx</u>	Date/Time: <u>11 Dec 02 1830</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/12/02 10:45am</u>

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<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier FedEx Bill # <u>824385431911</u>	<b>Custody Seals</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input type="checkbox"/> Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> cooler # 1 & 2 : 1.9°C
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IV-332

0012



15130 B South Keeler  
 Olathe, Kansas 66062  
 Phone (913) 829-0101  
 Fax (913) 829-1181

Analytical Management Laboratories, Inc.

21781

Page 4 of 4

Chain of Custody Record / Request for Analysis

Client Contact Name: SIM CUBBEDGE  
 Company Name: US ARMY CORPS OF ENGINEERS  
 Address: 100 W. OGLETHORPE AVE, PO BOX 859  
 City, State, Zip: SAVANNAH, GA, 31402  
 Phone #: (912) 652-5660  
 Fax #: (912) 652-6012

Project Name: HAAF MCA BARRACKS  
 Project Number: \_\_\_\_\_  
 Purchase Order Number: D O #0006  
 Project Due Date: \_\_\_\_\_  
 Project Comments: \_\_\_\_\_  
 Sampler's Signature: [Signature]

Analyses/Method to be Performed (Check all that apply)

Laboratory Project Number: <u>1690</u>					Method # --->																	Please include any information that may be useful in the analysis of the sample. Example: high concentration  Comments:			
Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative List total number of bottles for each preservative type.					TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals	Lead	Flash Point		Paint Filter	pH	
						HCl	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	Unpreserved															4° C
<u>1690-27</u>	<u>HAAF-DVP-16-30</u>	<u>11 Dec 02</u>	<u>1610</u>	<u>W</u>	<u>1</u>																				
<u>1690-28</u>	<u>HAAF-DVP 11</u>	<u>11 Dec 02</u>	<u>0845</u>	<u>W</u>	<u>1</u>																				
<u>1690-29</u>	<u>HAAF-DVP-16-35</u>	<u>11 Dec 02</u>	<u>1640</u>	<u>W</u>	<u>1</u>																				
4																									
5																									
6																									
7																									
8																									
9																									
10																									

C U S T O D Y	Relinquished By: <u>[Signature]</u>	Date/Time: <u>11 Dec 02 1330</u>	Received By: <u>Fed Ex</u>	Date/Time: <u>11 Dec 02 1830</u>
	Relinquished By: _____	Date/Time: _____	Received By: <u>[Signature]</u>	Date/Time: <u>12/12/02 10:45am</u>

By signing the request (chain of custody) you are ordering work from Analytical Management Laboratories, Inc. which constitutes the acceptance of the terms and conditions on the back of this form.

<b>Delivery Method</b> <input type="checkbox"/> Delivered in Person <input checked="" type="checkbox"/> Courier Courier # <u>926385621911</u>	<b>Custody Seals</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken	<b>Coolant</b> <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None	<b>Cooler Temp.</b> <input checked="" type="checkbox"/> Temp. Blank <input type="checkbox"/> Cooler	<b>Receiving Comments:</b> <u>cooler # 1 &amp; 2: 1.9°C</u>
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IV-333

0013



## Report of Analysis

**ARCADIS U.S., Inc.**  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: **Ft. Stewart (HAA01)**

Project Number: **GP08HAFS.H01B**

Lot Number: **KK07010**

Date Completed: **11/30/2009**

Date Revised: **12/22/2009**



**Nisreen Saikaly**  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* **KK07010** \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

---

## Case Narrative

### ARCADIS U.S., Inc.

#### Lot Number: KK07010

---

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

#### pH

As per method the holding time for pH analysis is 15 minutes from collection.

#### Volatile Organic Compounds

The LCS/LCSD recovery for Chloromethane (Methyl chloride), Dichlorodifluoromethane and Vinyl chloride were slightly above method control limits in batches 21537 and 21538. As per method, it is statistically likely that a few analytes will be outside control limits; up to five analytes may marginally exceed the control limits. Therefore the associated sample results were reported and no corrective action was required.

The LCS recovery for 1,2-Dibromoethane (EDB) and 1,1,2,2-Tetrachloroethane were outside method control limits in batch 22080. The LCSD results were within limits. The RPD for Acetone and Methyl acetate exceeded method control limits in batch 22080; Therefore the associated sample results were reported and no corrective action was required.

#### Pesticides

The RPD for Endrin aldehyde in the MS/MSD exceeded method control limits in batch 21759; however, all other QA/QC criteria for the LCS/LCSD were within acceptance criteria and method control limits. The associated sample results were reported and no corrective action was required.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary ARCADIS U.S., Inc. Lot Number: KK07010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HA01SB001 (8-10)	Solid	11/03/2009 1530	11/07/2009
002	HA01SB002 (6-6.5)	Solid	11/03/2009 1508	11/07/2009
003	HA01SB003 (8-10)	Solid	11/03/2009 1440	11/07/2009
004	HA01SB004 (2-4)	Solid	11/03/2009 1417	11/07/2009
005	HA01SB005 (0-2)	Solid	11/03/2009 1337	11/07/2009
006	HA01MW9 (1-2)	Solid	11/04/2009 1505	11/07/2009
007	HA01MW9 (9-10)	Solid	11/04/2009 1640	11/07/2009
008	HA01MW15 (1-2)	Solid	11/05/2009 1055	11/07/2009
009	HA01MW15 (5-6)	Solid	11/05/2009 1135	11/07/2009
010	HA01MW16 (1-2)	Solid	11/04/2009 1100	11/07/2009
011	HA01MW16 (10-11)	Solid	11/04/2009 1142	11/07/2009
012	HA01MW17 (1-2)	Solid	11/04/2009 0820	11/07/2009
013	HA01MW17 (6-7)	Solid	11/04/2009 0845	11/07/2009
014	H-10-HAA01	Solid	11/04/2009 1711	11/07/2009
015	H-11-HAA01	Solid	11/05/2009 0855	11/07/2009
016	TRIP BLANK	Aqueous	11/07/2009	11/07/2009

(16 samples)



# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KK07010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	HA01SB002 (6-6.5)	Solid	bis(2-Ethylhexyl)phthalate	8270D	540		ug/kg	6
004	HA01SB004 (2-4)	Solid	Chromium	6010C	4.9		mg/kg	9
005	HA01SB005 (0-2)	Solid	Chromium	6010C	2.6		mg/kg	10
006	HA01MW9 (1-2)	Solid	Xylenes (total)	8260B	3.5	J	ug/kg	12
006	HA01MW9 (1-2)	Solid	Mercury	7471B	0.017	J	mg/kg	14
006	HA01MW9 (1-2)	Solid	Arsenic	6010C	0.67		mg/kg	15
006	HA01MW9 (1-2)	Solid	Barium	6010C	23		mg/kg	15
006	HA01MW9 (1-2)	Solid	Chromium	6010C	4.0		mg/kg	15
006	HA01MW9 (1-2)	Solid	Lead	6010C	3.8		mg/kg	15
007	HA01MW9 (9-10)	Solid	Methyl acetate	8260B	9.5		ug/kg	16
007	HA01MW9 (9-10)	Solid	Xylenes (total)	8260B	3.2	J	ug/kg	17
007	HA01MW9 (9-10)	Solid	Mercury	7471B	0.014	J	mg/kg	18
007	HA01MW9 (9-10)	Solid	Arsenic	6010C	0.92		mg/kg	19
007	HA01MW9 (9-10)	Solid	Barium	6010C	17		mg/kg	19
007	HA01MW9 (9-10)	Solid	Cadmium	6010C	0.016	J	mg/kg	19
007	HA01MW9 (9-10)	Solid	Chromium	6010C	4.0		mg/kg	19
007	HA01MW9 (9-10)	Solid	Lead	6010C	5.9		mg/kg	19
008	HA01MW15 (1-2)	Solid	Mercury	7471B	0.028	J	mg/kg	23
008	HA01MW15 (1-2)	Solid	Arsenic	6010C	1.4		mg/kg	24
008	HA01MW15 (1-2)	Solid	Barium	6010C	13		mg/kg	24
008	HA01MW15 (1-2)	Solid	Chromium	6010C	6.8		mg/kg	24
008	HA01MW15 (1-2)	Solid	Lead	6010C	3.6		mg/kg	24
009	HA01MW15 (5-6)	Solid	1,2-Dichlorobenzene	8260B	3.6	J	ug/kg	25
009	HA01MW15 (5-6)	Solid	Mercury	7471B	0.015	J	mg/kg	27
009	HA01MW15 (5-6)	Solid	Arsenic	6010C	0.72		mg/kg	28
009	HA01MW15 (5-6)	Solid	Barium	6010C	9.0		mg/kg	28
009	HA01MW15 (5-6)	Solid	Cadmium	6010C	0.012	J	mg/kg	28
009	HA01MW15 (5-6)	Solid	Chromium	6010C	1.0		mg/kg	28
009	HA01MW15 (5-6)	Solid	Lead	6010C	1.8		mg/kg	28
010	HA01MW16 (1-2)	Solid	Mercury	7471B	0.030	J	mg/kg	32
010	HA01MW16 (1-2)	Solid	Arsenic	6010C	0.57		mg/kg	33
010	HA01MW16 (1-2)	Solid	Barium	6010C	3.6		mg/kg	33
010	HA01MW16 (1-2)	Solid	Cadmium	6010C	0.017	J	mg/kg	33
010	HA01MW16 (1-2)	Solid	Chromium	6010C	3.0		mg/kg	33
010	HA01MW16 (1-2)	Solid	Lead	6010C	2.9		mg/kg	33
010	HA01MW16 (1-2)	Solid	Silver	6010C	0.20	J	mg/kg	33
011	HA01MW16 (10-11)	Solid	Carbon disulfide	8260B	8.0		ug/kg	34
011	HA01MW16 (10-11)	Solid	Mercury	7471B	0.028	J	mg/kg	36
011	HA01MW16 (10-11)	Solid	Arsenic	6010C	0.65		mg/kg	37
011	HA01MW16 (10-11)	Solid	Barium	6010C	25		mg/kg	37
011	HA01MW16 (10-11)	Solid	Chromium	6010C	6.3		mg/kg	37
011	HA01MW16 (10-11)	Solid	Lead	6010C	4.2		mg/kg	37
011	HA01MW16 (10-11)	Solid	Silver	6010C	0.42		mg/kg	37
012	HA01MW17 (1-2)	Solid	1,2-Dichlorobenzene	8260B	3.6	J	ug/kg	38
012	HA01MW17 (1-2)	Solid	Toluene	8260B	13		ug/kg	38

# Executive Summary (Continued)

Lot Number: KK07010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
012	HA01MW17 (1-2)	Solid	1,2,4-Trichlorobenzene	8260B	2.4	J	ug/kg	38
012	HA01MW17 (1-2)	Solid	Xylenes (total)	8260B	12		ug/kg	39
012	HA01MW17 (1-2)	Solid	Mercury	7471B	0.032	J	mg/kg	41
012	HA01MW17 (1-2)	Solid	Arsenic	6010C	0.73		mg/kg	42
012	HA01MW17 (1-2)	Solid	Barium	6010C	3.6		mg/kg	42
012	HA01MW17 (1-2)	Solid	Cadmium	6010C	0.017	J	mg/kg	42
012	HA01MW17 (1-2)	Solid	Chromium	6010C	1.8		mg/kg	42
012	HA01MW17 (1-2)	Solid	Lead	6010C	2.3		mg/kg	42
012	HA01MW17 (1-2)	Solid	Silver	6010C	0.054	J	mg/kg	42
013	HA01MW17 (6-7)	Solid	Acetone	8260B	36		ug/kg	43
013	HA01MW17 (6-7)	Solid	Carbon tetrachloride	8260B	4.7	J	ug/kg	43
013	HA01MW17 (6-7)	Solid	Chloromethane (Methyl chloride)	8260B	4.1	J	ug/kg	43
013	HA01MW17 (6-7)	Solid	Isopropylbenzene	8260B	3.9	J	ug/kg	43
013	HA01MW17 (6-7)	Solid	Toluene	8260B	2.2	J	ug/kg	43
013	HA01MW17 (6-7)	Solid	Mercury	7471B	0.023	J	mg/kg	45
013	HA01MW17 (6-7)	Solid	Barium	6010C	17		mg/kg	46
013	HA01MW17 (6-7)	Solid	Cadmium	6010C	0.083	J	mg/kg	46
013	HA01MW17 (6-7)	Solid	Chromium	6010C	9.3		mg/kg	46
013	HA01MW17 (6-7)	Solid	Lead	6010C	5.2		mg/kg	46
014	H-10-HAA01	Solid	Ignitability (Pensky-Martens Closed-	1010A	>140		° F	47
014	H-10-HAA01	Solid	Barium	6010C	0.15	J	mg/L	50
015	H-11-HAA01	Solid	Ignitability (Pensky-Martens Closed-	1010A	>140		° F	51
015	H-11-HAA01	Solid	Barium	6010C	0.12	J	mg/L	54
015	H-11-HAA01	Solid	Lead	6010C	0.018	J	mg/L	54
016	TRIP BLANK	Aqueous	Acetone	8260B	3.0	BJ	ug/L	55
016	TRIP BLANK	Aqueous	Carbon disulfide	8260B	0.50	B	ug/L	55

(71 detections)

# Semivolatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-002</b>
Description: <b>HA01SB002 (6-6.5)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/03/2009 1508</b>	% Solids: <b>91.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/24/2009 1337	GLR	11/11/2009 1404	21368

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	540		71	23	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		72	33-102
2-Fluorophenol		48	28-104
Nitrobenzene-d5		96	22-109
Phenol-d5		56	27-103
Terphenyl-d14		62	41-120
2,4,6-Tribromophenol		87	30-117

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-003**

 Description: **HA01SB003 (8-10)**

 Matrix: **Solid**

 Date Sampled: **11/03/2009 1440**

 % Solids: **79.9 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/25/2009 1452	GLR	11/11/2009 1404	21368

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		83	13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		83	13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		83	22	ug/kg	1
Anthracene	120-12-7	8270D	ND		83	9.1	ug/kg	1
Atrazine	1912-24-9	8270D	ND		83	21	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		83	21	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		83	11	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		83	12	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		83	12	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		83	14	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		83	12	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		83	12	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		83	12	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		160	55	ug/kg	1
Caprolactam	105-60-2	8270D	ND		83	21	ug/kg	1
Carbazole	86-74-8	8270D	ND		83	18	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		83	10	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		83	8.4	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		83	13	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		83	11	ug/kg	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		83	14	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		83	14	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		83	11	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		83	14	ug/kg	1
Chrysene	218-01-9	8270D	ND		83	14	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		83	11	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		83	13	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		410	45	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		83	13	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		83	27	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		83	27	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		83	15	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		83	27	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		410	160	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		410	140	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		160	23	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		160	21	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		83	40	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		83	27	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		83	13	ug/kg	1
Fluorene	86-73-7	8270D	ND		83	11	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		83	18	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		83	14	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		410	30	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-003</b>
Description: <b>HA01SB003 (8-10)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/03/2009 1440</b>	% Solids: <b>79.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8270D	1	11/25/2009 1452	GLR	11/11/2009 1404	21368

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		83	11	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		83	12	ug/kg	1
Isophorone	78-59-1	8270D	ND		83	9.1	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		83	12	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		83	7.5	ug/kg	1
3 & 4-Methylphenol	106-44-5	8270D	ND		160	15	ug/kg	1
Naphthalene	91-20-3	8270D	ND		83	13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		160	28	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		160	48	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		160	24	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		83	6.7	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		160	23	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		410	120	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		83	16	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		83	10	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		410	170	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		83	11	ug/kg	1
Phenol	108-95-2	8270D	ND		83	11	ug/kg	1
Pyrene	129-00-0	8270D	ND		83	16	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		83	12	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		83	12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	33-102
2-Fluorophenol		52	28-104
Nitrobenzene-d5		45	22-109
Phenol-d5		54	27-103
Terphenyl-d14		62	41-120
2,4,6-Tribromophenol		54	30-117

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# ICP-AES

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-004</b>
Description: <b>HA01SB004 (2-4)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/03/2009 1417</b>	% Solids: <b>81.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1934	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Chromium	7440-47-3	6010C	4.9		0.30	0.062	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# ICP-AES

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-005**

Description: **HA01SB005 (0-2)**

Matrix: **Solid**

Date Sampled: **11/03/2009 1337**

% Solids: **88.4 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch					
1	3050B	6010C	1	11/12/2009 1940	KJC	11/11/2009 2021	21329					

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Chromium	7440-47-3	6010C	2.6		0.28	0.057	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-006**

 Description: **HA01MW9 (1-2)**

 Matrix: **Solid**

 Date Sampled: **11/04/2009 1505**

 % Solids: **93.7 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 0454	DLB		21537	4.81

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		22	7.4	ug/kg	1
Benzene	71-43-2	8260B	ND		5.5	1.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.5	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.5	0.78	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.5	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		11	2.7	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.5	1.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.5	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.5	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.5	1.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.5	0.92	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.5	1.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.5	0.75	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.5	1.7	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.5	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.5	0.94	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.5	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.5	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.5	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.5	1.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.5	0.81	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.5	1.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.5	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.5	0.84	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.5	1.7	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.5	1.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.5	0.75	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.5	0.91	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.5	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	1.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.5	0.89	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.5	0.74	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.5	0.44	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	1.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.5	0.68	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.5	2.9	ug/kg	1
Styrene	100-42-5	8260B	ND		5.5	1.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.5	0.52	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.5	2.6	ug/kg	1
Toluene	108-88-3	8260B	ND		5.5	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.5	2.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.5	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.5	0.94	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.5	0.88	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-006</b>
Description: <b>HA01MW9 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1505</b>	% Solids: <b>93.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 0454	DLB		21537	4.81

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.5	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.5	1.7	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.5	0.95	ug/kg	1
<b>Xylenes (total)</b>	<b>1330-20-7</b>	<b>8260B</b>	<b>3.5</b>	<b>J</b>	<b>5.5</b>	<b>3.2</b>	<b>ug/kg</b>	<b>1</b>

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		89	47-138
Toluene-d8		98	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-006</b>
Description: <b>HA01MW9 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1505</b>	% Solids: <b>93.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/18/2009 1746	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.8	0.35	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.8	0.41	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.8	0.31	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.8	0.33	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.8	0.37	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.8	0.30	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.8	0.25	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.8	0.26	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.8	0.33	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.8	0.29	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.8	0.34	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.8	0.35	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.8	0.26	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.8	0.24	ug/kg	1
Endrin	72-20-8	8081B	ND		1.8	0.34	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.8	0.31	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.8	0.23	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.8	0.41	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.8	0.32	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.0	1.4	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		86	9.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		99	58-123
Tetrachloro-m-xylene		75	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-006</b>
Description: <b>HA01MW9 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1505</b>	% Solids: <b>93.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2157	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.017	J	0.085	0.0060	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-006**

Description: **HA01MW9 (1-2)**

Matrix: **Solid**

Date Sampled: **11/04/2009 1505**

% Solids: **93.7 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1735	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
<b>Arsenic</b>	<b>7440-38-2</b>	<b>6010C</b>	<b>0.67</b>		<b>0.53</b>	<b>0.20</b>	<b>mg/kg</b>	<b>1</b>
<b>Barium</b>	<b>7440-39-3</b>	<b>6010C</b>	<b>23</b>		<b>1.4</b>	<b>0.097</b>	<b>mg/kg</b>	<b>1</b>
Cadmium	7440-43-9	6010C	ND		0.11	0.011	mg/kg	1
<b>Chromium</b>	<b>7440-47-3</b>	<b>6010C</b>	<b>4.0</b>		<b>0.27</b>	<b>0.054</b>	<b>mg/kg</b>	<b>1</b>
<b>Lead</b>	<b>7439-92-1</b>	<b>6010C</b>	<b>3.8</b>		<b>0.53</b>	<b>0.099</b>	<b>mg/kg</b>	<b>1</b>
Selenium	7782-49-2	6010C	ND		0.53	0.19	mg/kg	1
Silver	7440-22-4	6010C	ND		0.27	0.045	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-007**

 Description: **HA01MW9 (9-10)**

 Matrix: **Solid**

 Date Sampled: **11/04/2009 1640**

 % Solids: **83.1 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 0517	DLB		21537	5.91

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.8	ug/kg	1
Benzene	71-43-2	8260B	ND		5.1	1.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.1	1.7	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.1	0.71	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.1	1.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.1	1.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.1	1.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.1	1.7	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.1	1.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.1	0.84	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.1	1.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.1	0.69	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.1	1.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.1	1.7	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.1	0.87	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.1	1.7	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.1	1.7	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.1	1.7	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.1	1.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.1	0.74	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.1	1.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.1	1.7	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.1	0.77	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.1	1.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.1	0.93	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.1	0.69	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.1	0.83	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.1	1.7	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	1.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.1	0.81	ug/kg	1
<b>Methyl acetate</b>	<b>79-20-9</b>	<b>8260B</b>	<b>9.5</b>		<b>5.1</b>	<b>0.68</b>	<b>ug/kg</b>	<b>1</b>
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.1	0.41	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	1.5	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.1	0.62	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.1	2.6	ug/kg	1
Styrene	100-42-5	8260B	ND		5.1	1.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.1	0.48	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.1	2.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.1	1.7	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.1	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.1	1.7	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.1	0.87	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.1	0.80	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-007</b>
Description: <b>HA01MW9 (9-10)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1640</b>	% Solids: <b>83.1 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 0517	DLB		21537	5.91

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.1	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.1	1.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.1	0.88	ug/kg	1
<b>Xylenes (total)</b>	<b>1330-20-7</b>	<b>8260B</b>	<b>3.2</b>	<b>J</b>	<b>5.1</b>	<b>3.0</b>	<b>ug/kg</b>	<b>1</b>

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	53-142
Bromofluorobenzene		83	47-138
Toluene-d8		97	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-007</b>
Description: <b>HA01MW9 (9-10)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1640</b>	% Solids: <b>83.1 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2200	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.014	J	0.098	0.0070	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-007</b>
Description: <b>HA01MW9 (9-10)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1640</b>	% Solids: <b>83.1 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1741	KJC	11/11/2009 2021	21329
2	3050B	6010C	1	11/12/2009 2140	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.92		0.59	0.22	mg/kg	2
Barium	7440-39-3	6010C	17		1.5	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	0.016	J	0.12	0.012	mg/kg	1
Chromium	7440-47-3	6010C	4.0		0.29	0.059	mg/kg	1
Lead	7439-92-1	6010C	5.9		0.59	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.59	0.20	mg/kg	1
Silver	7440-22-4	6010C	ND		0.29	0.049	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-008**

 Description: **HA01MW15 (1-2)**

 Matrix: **Solid**

 Date Sampled: **11/05/2009 1055**

 % Solids: **86.8 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/12/2009 0849	DLB		21538	4.59

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		25	8.4	ug/kg	2
Benzene	71-43-2	8260B	ND		6.3	1.4	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.3	2.1	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.3	0.88	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.3	2.3	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		13	3.0	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.3	1.6	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.3	2.3	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.3	2.1	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.3	1.6	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.3	1.0	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.3	1.3	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.3	0.85	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.3	1.9	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.3	2.1	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.3	1.1	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.3	2.1	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.3	2.1	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.3	2.1	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.3	2.0	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.3	0.92	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.3	1.3	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.3	2.1	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.3	0.95	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.3	1.9	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.3	1.1	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.3	0.85	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.3	1.0	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.3	2.1	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		13	1.6	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.3	1.0	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.3	0.84	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.3	0.50	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	1.9	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.3	0.77	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.3	3.3	ug/kg	2
Styrene	100-42-5	8260B	ND		6.3	1.4	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.3	0.59	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.3	2.9	ug/kg	2
Toluene	108-88-3	8260B	ND		6.3	2.1	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.3	2.6	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.3	2.1	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.3	1.1	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.3	0.99	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

**Page: 20 of 119**

Level 1 Report v2.1

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-008</b>
Description: <b>HA01MW15 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1055</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/12/2009 0849	DLB		21538	4.59

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.3	2.4	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.3	1.9	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.3	1.1	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		6.3	3.6	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	53-142
Bromofluorobenzene		77	47-138
Toluene-d8		100	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-008</b>
Description: <b>HA01MW15 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1055</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/18/2009 1833	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.9	0.38	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.9	0.43	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.9	0.33	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.9	0.35	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.9	0.40	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.9	0.32	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.9	0.27	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.9	0.28	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.9	0.35	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.9	0.31	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.9	0.37	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.9	0.38	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.9	0.28	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.9	0.25	ug/kg	1
Endrin	72-20-8	8081B	ND		1.9	0.37	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.9	0.33	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.9	0.24	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.9	0.43	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.9	0.34	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.4	1.5	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		92	10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		94	58-123
Tetrachloro-m-xylene		71	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-008</b>
Description: <b>HA01MW15 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1055</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2202	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.028	J	0.096	0.0068	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-008</b>
Description: <b>HA01MW15 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1055</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1747	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
<b>Arsenic</b>	<b>7440-38-2</b>	<b>6010C</b>	<b>1.4</b>		<b>0.57</b>	<b>0.21</b>	<b>mg/kg</b>	<b>1</b>
<b>Barium</b>	<b>7440-39-3</b>	<b>6010C</b>	<b>13</b>		<b>1.5</b>	<b>0.10</b>	<b>mg/kg</b>	<b>1</b>
Cadmium	7440-43-9	6010C	ND		0.11	0.012	mg/kg	1
<b>Chromium</b>	<b>7440-47-3</b>	<b>6010C</b>	<b>6.8</b>		<b>0.29</b>	<b>0.058</b>	<b>mg/kg</b>	<b>1</b>
<b>Lead</b>	<b>7439-92-1</b>	<b>6010C</b>	<b>3.6</b>		<b>0.57</b>	<b>0.11</b>	<b>mg/kg</b>	<b>1</b>
Selenium	7782-49-2	6010C	ND		0.57	0.20	mg/kg	1
Silver	7440-22-4	6010C	ND		0.29	0.048	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-009**

 Description: **HA01MW15 (5-6)**

 Matrix: **Solid**

 Date Sampled: **11/05/2009 1135**

 % Solids: **86.7 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/17/2009 0542	RRH		21886	4.18

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		28	9.2	ug/kg	2
Benzene	71-43-2	8260B	ND		6.9	1.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.9	2.3	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.9	0.97	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.9	2.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		14	3.3	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.9	1.8	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.9	2.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.9	2.3	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.9	1.8	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.9	1.1	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.9	1.4	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.9	0.93	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.9	2.1	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.9	2.3	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.9	1.2	ug/kg	2
<b>1,2-Dichlorobenzene</b>	<b>95-50-1</b>	<b>8260B</b>	<b>3.6</b>	<b>J</b>	<b>6.9</b>	<b>2.3</b>	<b>ug/kg</b>	<b>2</b>
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.9	2.3	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.9	2.3	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.9	2.2	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.9	1.0	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.9	1.4	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.9	2.3	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.9	1.0	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.9	2.1	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.9	1.3	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.9	0.94	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.9	1.1	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.9	2.3	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		14	1.8	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.9	1.1	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.9	0.92	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.9	0.55	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	2.1	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.9	0.84	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.9	3.6	ug/kg	2
Styrene	100-42-5	8260B	ND		6.9	1.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.9	0.65	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.9	3.2	ug/kg	2
Toluene	108-88-3	8260B	ND		6.9	2.3	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.9	2.9	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.9	2.3	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.9	1.2	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.9	1.1	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-009</b>
Description: <b>HA01MW15 (5-6)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1135</b>	% Solids: <b>86.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/17/2009 0542	RRH		21886	4.18

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.9	2.6	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.9	2.1	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.9	1.2	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		6.9	4.0	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142
Bromofluorobenzene		78	47-138
Toluene-d8		106	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-009</b>
Description: <b>HA01MW15 (5-6)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1135</b>	% Solids: <b>86.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2204	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.015	J	0.094	0.0067	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-009</b>
Description: <b>HA01MW15 (5-6)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 1135</b>	% Solids: <b>86.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1805	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.72		0.56	0.21	mg/kg	1
Barium	7440-39-3	6010C	9.0		1.4	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	0.012	J	0.11	0.012	mg/kg	1
Chromium	7440-47-3	6010C	1.0		0.28	0.056	mg/kg	1
Lead	7439-92-1	6010C	1.8		0.56	0.10	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.56	0.19	mg/kg	1
Silver	7440-22-4	6010C	ND		0.28	0.047	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-010**

 Description: **HA01MW16 (1-2)**

 Matrix: **Solid**

 Date Sampled: **11/04/2009 1100**

 % Solids: **90.9 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 1047	DLB		21538	5.05

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		22	7.3	ug/kg	1
Benzene	71-43-2	8260B	ND		5.4	1.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.4	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.4	0.76	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.4	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		11	2.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.4	1.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.4	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.4	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.4	1.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.4	0.90	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.4	1.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.4	0.73	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.4	1.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.4	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.4	0.93	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.4	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.4	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.4	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.4	1.7	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.4	0.80	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.4	1.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.4	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.4	0.83	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.4	1.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.4	0.99	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.4	0.74	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.4	0.89	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.4	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	1.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.4	0.87	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.4	0.73	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.4	0.44	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	1.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.4	0.66	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.4	2.8	ug/kg	1
Styrene	100-42-5	8260B	ND		5.4	1.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.4	0.51	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.4	2.5	ug/kg	1
Toluene	108-88-3	8260B	ND		5.4	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.4	2.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.4	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.4	0.93	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.4	0.86	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-010</b>
Description: <b>HA01MW16 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1100</b>	% Solids: <b>90.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 1047	DLB		21538	5.05

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.4	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.4	1.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.4	0.94	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.4	3.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	53-142
Bromofluorobenzene		85	47-138
Toluene-d8		98	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-010</b>
Description: <b>HA01MW16 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1100</b>	% Solids: <b>90.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/18/2009 1849	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.8	0.37	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.8	0.42	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.8	0.33	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.8	0.35	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.8	0.39	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.8	0.31	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.8	0.26	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.8	0.27	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.8	0.35	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.8	0.30	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.8	0.36	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.8	0.37	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.8	0.27	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.8	0.25	ug/kg	1
Endrin	72-20-8	8081B	ND		1.8	0.36	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.8	0.33	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.8	0.24	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.8	0.42	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.8	0.34	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.3	1.5	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		90	9.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		103	58-123
Tetrachloro-m-xylene		76	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-010</b>
Description: <b>HA01MW16 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1100</b>	% Solids: <b>90.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2210	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.030	J	0.091	0.0065	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-010</b>
Description: <b>HA01MW16 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1100</b>	% Solids: <b>90.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1811	KJC	11/11/2009 2021	21329
2	3050B	6010C	1	11/12/2009 2146	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.57		0.53	0.20	mg/kg	2
Barium	7440-39-3	6010C	3.6		1.4	0.095	mg/kg	1
Cadmium	7440-43-9	6010C	0.017	J	0.11	0.011	mg/kg	1
Chromium	7440-47-3	6010C	3.0		0.26	0.053	mg/kg	1
Lead	7439-92-1	6010C	2.9		0.53	0.098	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.53	0.18	mg/kg	1
Silver	7440-22-4	6010C	0.20	J	0.26	0.044	mg/kg	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-011**

Description: **HA01MW16 (10-11)**

Matrix: **Solid**

Date Sampled: **11/04/2009 1142**

% Solids: **86.7 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 1110	DLB		21538	6.14

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		19	6.3	ug/kg	1
Benzene	71-43-2	8260B	ND		4.7	1.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.7	1.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.7	0.66	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.7	1.7	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		9.4	2.3	ug/kg	1
<b>Carbon disulfide</b>	<b>75-15-0</b>	<b>8260B</b>	<b>8.0</b>		<b>4.7</b>	<b>1.2</b>	<b>ug/kg</b>	<b>1</b>
Carbon tetrachloride	56-23-5	8260B	ND		4.7	1.7	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.7	1.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.7	1.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.7	0.78	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.7	0.94	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.7	0.63	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.7	1.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.7	1.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.7	0.80	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.7	1.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.7	1.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.7	1.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.7	1.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.7	0.69	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.7	0.94	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.7	1.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.7	0.71	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.7	1.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.7	0.85	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.7	0.64	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.7	0.77	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.7	1.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.4	1.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.7	0.75	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.7	0.63	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.7	0.38	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.4	1.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.7	0.57	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.7	2.4	ug/kg	1
Styrene	100-42-5	8260B	ND		4.7	1.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.7	0.44	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.7	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		4.7	1.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.7	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.7	1.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.7	0.80	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.7	0.74	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-011</b>
Description: <b>HA01MW16 (10-11)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1142</b>	% Solids: <b>86.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/12/2009 1110	DLB		21538	6.14

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.7	1.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.7	1.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.7	0.81	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		4.7	2.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		88	47-138
Toluene-d8		98	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-011</b>
Description: <b>HA01MW16 (10-11)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1142</b>	% Solids: <b>86.7 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2213	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.028	J	0.091	0.0065	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-011**

Description: **HA01MW16 (10-11)**

Matrix: **Solid**

Date Sampled: **11/04/2009 1142**

% Solids: **86.7 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1817	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
<b>Arsenic</b>	<b>7440-38-2</b>	<b>6010C</b>	<b>0.65</b>		<b>0.56</b>	<b>0.21</b>	<b>mg/kg</b>	<b>1</b>
<b>Barium</b>	<b>7440-39-3</b>	<b>6010C</b>	<b>25</b>		<b>1.4</b>	<b>0.10</b>	<b>mg/kg</b>	<b>1</b>
Cadmium	7440-43-9	6010C	ND		0.11	0.012	mg/kg	1
<b>Chromium</b>	<b>7440-47-3</b>	<b>6010C</b>	<b>6.3</b>		<b>0.28</b>	<b>0.056</b>	<b>mg/kg</b>	<b>1</b>
<b>Lead</b>	<b>7439-92-1</b>	<b>6010C</b>	<b>4.2</b>		<b>0.56</b>	<b>0.10</b>	<b>mg/kg</b>	<b>1</b>
Selenium	7782-49-2	6010C	ND		0.56	0.19	mg/kg	1
<b>Silver</b>	<b>7440-22-4</b>	<b>6010C</b>	<b>0.42</b>		<b>0.28</b>	<b>0.047</b>	<b>mg/kg</b>	<b>1</b>

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-012**

 Description: **HA01MW17 (1-2)**

 Matrix: **Solid**

 Date Sampled: **11/04/2009 0820**

 % Solids: **86.6 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/18/2009 1521	DLB		22080	4.70

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		25	8.2	ug/kg	2
Benzene	71-43-2	8260B	ND		6.1	1.4	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.1	2.1	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.1	0.86	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.1	2.2	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		12	2.9	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.1	1.6	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.1	2.2	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.1	2.1	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.1	1.6	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.1	1.0	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.1	1.2	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.1	0.83	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.1	1.8	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.1	2.1	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.1	1.0	ug/kg	2
<b>1,2-Dichlorobenzene</b>	<b>95-50-1</b>	<b>8260B</b>	<b>3.6</b>	<b>J</b>	<b>6.1</b>	<b>2.1</b>	<b>ug/kg</b>	<b>2</b>
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.1	2.1	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.1	2.1	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.1	2.0	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.1	0.90	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.1	1.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.1	2.1	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.1	0.93	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.1	1.8	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.1	1.1	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.1	0.84	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.1	1.0	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.1	2.1	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	1.6	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.1	0.98	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.1	0.82	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.1	0.49	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.8	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.1	0.75	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.1	3.2	ug/kg	2
Styrene	100-42-5	8260B	ND		6.1	1.4	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.1	0.58	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.1	2.8	ug/kg	2
<b>Toluene</b>	<b>108-88-3</b>	<b>8260B</b>	<b>13</b>		<b>6.1</b>	<b>2.1</b>	<b>ug/kg</b>	<b>2</b>
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.1	2.6	ug/kg	2
<b>1,2,4-Trichlorobenzene</b>	<b>120-82-1</b>	<b>8260B</b>	<b>2.4</b>	<b>J</b>	<b>6.1</b>	<b>2.1</b>	<b>ug/kg</b>	<b>2</b>
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.1	1.0	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.1	0.97	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-012</b>
Description: <b>HA01MW17 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0820</b>	% Solids: <b>86.6 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/18/2009 1521	DLB		22080	4.70

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.1	2.3	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.1	1.8	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.1	1.1	ug/kg	2
<b>Xylenes (total)</b>	<b>1330-20-7</b>	<b>8260B</b>	<b>12</b>		<b>6.1</b>	<b>3.6</b>	<b>ug/kg</b>	<b>2</b>

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	53-142
Bromofluorobenzene		59	47-138
Toluene-d8		70	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-012</b>
Description: <b>HA01MW17 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0820</b>	% Solids: <b>86.6 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/18/2009 1904	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.9	0.38	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.9	0.43	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.9	0.33	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.9	0.35	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.9	0.40	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.9	0.32	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.9	0.26	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.9	0.28	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.9	0.35	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.9	0.31	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.9	0.36	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.9	0.38	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.9	0.28	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.9	0.25	ug/kg	1
Endrin	72-20-8	8081B	ND		1.9	0.36	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.9	0.33	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.9	0.24	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.9	0.43	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.9	0.34	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.4	1.5	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		92	10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		92	58-123
Tetrachloro-m-xylene		62	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-012</b>
Description: <b>HA01MW17 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0820</b>	% Solids: <b>86.6 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2217	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.032	J	0.095	0.0068	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-012</b>
Description: <b>HA01MW17 (1-2)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0820</b>	% Solids: <b>86.6 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1823	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.73		0.57	0.21	mg/kg	1
Barium	7440-39-3	6010C	3.6		1.5	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	0.017	J	0.11	0.012	mg/kg	1
Chromium	7440-47-3	6010C	1.8		0.29	0.058	mg/kg	1
Lead	7439-92-1	6010C	2.3		0.57	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.57	0.20	mg/kg	1
Silver	7440-22-4	6010C	0.054	J	0.29	0.048	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-013**

 Description: **HA01MW17 (6-7)**

 Matrix: **Solid**

 Date Sampled: **11/04/2009 0845**

 % Solids: **85.9 11/07/2009 1710**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/18/2009 1458	DLB		22080	5.05

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>36</b>		<b>23</b>	<b>7.7</b>	<b>ug/kg</b>	<b>2</b>
Benzene	71-43-2	8260B	ND		5.8	1.3	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		5.8	2.0	ug/kg	2
Bromoform	75-25-2	8260B	ND		5.8	0.81	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.8	2.1	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		12	2.8	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		5.8	1.5	ug/kg	2
<b>Carbon tetrachloride</b>	<b>56-23-5</b>	<b>8260B</b>	<b>4.7</b>	<b>J</b>	<b>5.8</b>	<b>2.1</b>	<b>ug/kg</b>	<b>2</b>
Chlorobenzene	108-90-7	8260B	ND		5.8	2.0	ug/kg	2
Chloroethane	75-00-3	8260B	ND		5.8	1.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		5.8	0.96	ug/kg	2
<b>Chloromethane (Methyl chloride)</b>	<b>74-87-3</b>	<b>8260B</b>	<b>4.1</b>	<b>J</b>	<b>5.8</b>	<b>1.2</b>	<b>ug/kg</b>	<b>2</b>
Cyclohexane	110-82-7	8260B	ND		5.8	0.78	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.8	1.7	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		5.8	2.0	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.8	0.98	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.8	2.0	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.8	2.0	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.8	2.0	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.8	1.8	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.8	0.84	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.8	1.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.8	2.0	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.8	0.88	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.8	1.7	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.8	1.0	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.8	0.78	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.8	0.94	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		5.8	2.0	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	1.5	ug/kg	2
<b>Isopropylbenzene</b>	<b>98-82-8</b>	<b>8260B</b>	<b>3.9</b>	<b>J</b>	<b>5.8</b>	<b>0.92</b>	<b>ug/kg</b>	<b>2</b>
Methyl acetate	79-20-9	8260B	ND		5.8	0.77	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.8	0.46	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.7	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		5.8	0.70	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		5.8	3.0	ug/kg	2
Styrene	100-42-5	8260B	ND		5.8	1.3	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.8	0.54	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		5.8	2.7	ug/kg	2
<b>Toluene</b>	<b>108-88-3</b>	<b>8260B</b>	<b>2.2</b>	<b>J</b>	<b>5.8</b>	<b>2.0</b>	<b>ug/kg</b>	<b>2</b>
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.8	2.4	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.8	2.0	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.8	0.98	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.8	0.91	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

Shealy Environmental Services, Inc.

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**Page: 43 of 119**

Level 1 Report v2.1



# Volatile Organic Compounds by GC/MS

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-013</b>
Description: <b>HA01MW17 (6-7)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0845</b>	% Solids: <b>85.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/18/2009 1458	DLB		22080	5.05

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.8	2.2	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.8	1.7	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		5.8	0.99	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		5.8	3.3	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		96	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-013</b>
Description: <b>HA01MW17 (6-7)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0845</b>	% Solids: <b>85.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2219	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.023	J	0.094	0.0067	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-013</b>
Description: <b>HA01MW17 (6-7)</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 0845</b>	% Solids: <b>85.9 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	5	11/12/2009 2152	KJC	11/11/2009 2021	21329
2	3050B	6010C	5	11/13/2009 1451	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		2.9	1.1	mg/kg	1
Barium	7440-39-3	6010C	17		7.5	0.52	mg/kg	1
Cadmium	7440-43-9	6010C	0.083	J	0.58	0.060	mg/kg	1
Chromium	7440-47-3	6010C	9.3		1.4	0.29	mg/kg	1
Lead	7439-92-1	6010C	5.2		2.9	0.53	mg/kg	2
Selenium	7782-49-2	6010C	ND		2.9	1.0	mg/kg	1
Silver	7440-22-4	6010C	ND		1.4	0.24	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Inorganic non-metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-014</b>
Description: <b>H-10-HAA01</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1711</b>	% Solids: <b>84.0 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Ignitability) 1010A	1	11/10/2009 1629	PMM		
1		(pH) 9045D	1	11/09/2009 1545	BAN		21335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Ignitability (Pensky-Martens Closed-Cup)		1010A	>140				° F	1
pH		9045D	5.03	H	0.000	0.000	su	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# TCLP Volatiles

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-014**

Description: **H-10-HAA01**

Matrix: **Solid**

Date Sampled: **11/04/2009 1711**

% Solids: **84.0 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/5030B	8260B	10	11/17/2009 1055	DLB		21922	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		0.050	0.0020	mg/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		0.10	0.018	mg/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.050	0.0040	mg/L	1
Chlorobenzene	108-90-7	8260B	ND		0.050	0.0020	mg/L	1
Chloroform	67-66-3	8260B	ND		0.050	0.0030	mg/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.050	0.0030	mg/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.050	0.0050	mg/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.050	0.0040	mg/L	1
Trichloroethene	79-01-6	8260B	ND		0.050	0.0030	mg/L	1
Vinyl chloride	75-01-4	8260B	ND		0.010	0.0010	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# TCLP Pesticides

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-014</b>
Description: <b>H-10-HAA01</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/04/2009 1711</b>	% Solids: <b>84.0 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/3520C	8081B	1	11/17/2009 2300	ASB	11/13/2009 0006	21616	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.00050	0.00	mg/L	1
Chlordane	57-74-9	8081B	ND		0.0025	0.00	mg/L	1
Endrin	72-20-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor	76-44-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.00050	0.00	mg/L	1
Methoxychlor	72-43-5	8081B	ND		0.0020	0.00	mg/L	1
Toxaphene	8001-35-2	8081B	ND		0.0050	0.00	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		85	49-124
Tetrachloro-m-xylene		91	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# TCLP Metals

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-014**

Description: **H-10-HAA01**

Matrix: **Solid**

Date Sampled: **11/04/2009 1711**

% Solids: **84.0 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	11/11/2009 2309	BNW	11/11/2009 1900	21483	11/10/2009 1555
1	1311/3010A	6010C	10	11/12/2009 1854	KJC	11/11/2009 1900	21486	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.10	0.023	mg/L	1
<b>Barium</b>	<b>7440-39-3</b>	<b>6010C</b>	<b>0.15</b>	<b>J</b>	<b>0.25</b>	<b>0.023</b>	<b>mg/L</b>	<b>1</b>
Cadmium	7440-43-9	6010C	ND		0.020	0.0030	mg/L	1
Chromium	7440-47-3	6010C	ND		0.050	0.014	mg/L	1
Lead	7439-92-1	6010C	ND		0.10	0.017	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000032	mg/L	1
Selenium	7782-49-2	6010C	ND		0.10	0.032	mg/L	1
Silver	7440-22-4	6010C	ND		0.050	0.0090	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Inorganic non-metals

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-015</b>
Description: <b>H-11-HAA01</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 0855</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Ignitability) 1010A	1	11/10/2009 1629	PMM		
1		(pH) 9045D	1	11/09/2009 1545	BAN		21335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Ignitability (Pensky-Martens Closed-Cup)		1010A	>140				° F	1
pH		9045D	5.47	H	0.000	0.000	su	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# TCLP Volatiles

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-015**

Description: **H-11-HAA01**

Matrix: **Solid**

Date Sampled: **11/05/2009 0855**

% Solids: **86.8 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/5030B	8260B	10	11/17/2009 1116	DLB		21922	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		0.050	0.0020	mg/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		0.10	0.018	mg/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.050	0.0040	mg/L	1
Chlorobenzene	108-90-7	8260B	ND		0.050	0.0020	mg/L	1
Chloroform	67-66-3	8260B	ND		0.050	0.0030	mg/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.050	0.0030	mg/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.050	0.0050	mg/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.050	0.0040	mg/L	1
Trichloroethene	79-01-6	8260B	ND		0.050	0.0030	mg/L	1
Vinyl chloride	75-01-4	8260B	ND		0.010	0.0010	mg/L	1

Surrogate	Run 1		Acceptance Limits
	Q	% Recovery	
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# TCLP Pesticides

Client: <b>ARCADIS U.S., Inc.</b>	Laboratory ID: <b>KK07010-015</b>
Description: <b>H-11-HAA01</b>	Matrix: <b>Solid</b>
Date Sampled: <b>11/05/2009 0855</b>	% Solids: <b>86.8 11/07/2009 1710</b>
Date Received: <b>11/07/2009</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/3520C	8081B	1	11/17/2009 2316	ASB	11/13/2009 0006	21616	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.00050	0.00	mg/L	1
Chlordane	57-74-9	8081B	ND		0.0025	0.00	mg/L	1
Endrin	72-20-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor	76-44-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.00050	0.00	mg/L	1
Methoxychlor	72-43-5	8081B	ND		0.0020	0.00	mg/L	1
Toxaphene	8001-35-2	8081B	ND		0.0050	0.00	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		96	49-124
Tetrachloro-m-xylene		86	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# TCLP Metals

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-015**

Description: **H-11-HAA01**

Matrix: **Solid**

Date Sampled: **11/05/2009 0855**

% Solids: **86.8 11/07/2009 1710**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	11/11/2009 2311	BNW	11/11/2009 1900	21483	11/10/2009 1555
1	1311/3010A	6010C	10	11/12/2009 1904	KJC	11/11/2009 1900	21486	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.10	0.023	mg/L	1
<b>Barium</b>	<b>7440-39-3</b>	<b>6010C</b>	<b>0.12</b>	<b>J</b>	<b>0.25</b>	<b>0.023</b>	<b>mg/L</b>	<b>1</b>
Cadmium	7440-43-9	6010C	ND		0.020	0.0030	mg/L	1
Chromium	7440-47-3	6010C	ND		0.050	0.014	mg/L	1
<b>Lead</b>	<b>7439-92-1</b>	<b>6010C</b>	<b>0.018</b>	<b>J</b>	<b>0.10</b>	<b>0.017</b>	<b>mg/L</b>	<b>1</b>
Mercury	7439-97-6	7470A	ND		0.00020	0.000032	mg/L	1
Selenium	7782-49-2	6010C	ND		0.10	0.032	mg/L	1
Silver	7440-22-4	6010C	ND		0.050	0.0090	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

 Client: **ARCADIS U.S., Inc.**

 Laboratory ID: **KK07010-016**

 Description: **TRIP BLANK**

 Matrix: **Aqueous**

 Date Sampled: **11/07/2009**

 Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/17/2009 1726	DLB		21834

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>3.0</b>	<b>BJ</b>	<b>10</b>	<b>0.061</b>	<b>ug/L</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
<b>Carbon disulfide</b>	<b>75-15-0</b>	<b>8260B</b>	<b>0.50</b>	<b>B</b>	<b>0.50</b>	<b>0.097</b>	<b>ug/L</b>	<b>1</b>
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: **ARCADIS U.S., Inc.**

Laboratory ID: **KK07010-016**

Description: **TRIP BLANK**

Matrix: **Aqueous**

Date Sampled: **11/07/2009**

Date Received: **11/07/2009**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/17/2009 1726	DLB		21834

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		84	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21537-001

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/12/2009 0146
Benzene	ND		1	5.0	1.1	ug/kg	11/12/2009 0146
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Bromoform	ND		1	5.0	0.70	ug/kg	11/12/2009 0146
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/12/2009 0146
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/12/2009 0146
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/12/2009 0146
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/12/2009 0146
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Chloroethane	ND		1	5.0	1.3	ug/kg	11/12/2009 0146
Chloroform	ND		1	5.0	0.83	ug/kg	11/12/2009 0146
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/12/2009 0146
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/12/2009 0146
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/12/2009 0146
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/12/2009 0146
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/12/2009 0146
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/12/2009 0146
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/12/2009 0146
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/12/2009 0146
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/12/2009 0146
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/12/2009 0146
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
2-Hexanone	ND		1	10	1.3	ug/kg	11/12/2009 0146
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/12/2009 0146
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/12/2009 0146
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/12/2009 0146
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/12/2009 0146
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/12/2009 0146
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/12/2009 0146
Styrene	ND		1	5.0	1.1	ug/kg	11/12/2009 0146
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/12/2009 0146
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/12/2009 0146
Toluene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/12/2009 0146
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/12/2009 0146
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/12/2009 0146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21537-001

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/12/2009 0146
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/12/2009 0146
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/12/2009 0146
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	47-138				
1,2-Dichloroethane-d4		93	53-142				
Toluene-d8		102	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21537-002

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	94		1	94	42-149	11/12/2009 0035
Benzene	50	51		1	102	69-123	11/12/2009 0035
Bromodichloromethane	50	50		1	99	69-121	11/12/2009 0035
Bromoform	50	45		1	90	61-119	11/12/2009 0035
Bromomethane (Methyl bromide)	50	51		1	102	35-144	11/12/2009 0035
2-Butanone (MEK)	100	110		1	106	57-148	11/12/2009 0035
Carbon disulfide	50	58		1	116	58-122	11/12/2009 0035
Carbon tetrachloride	50	53		1	107	58-136	11/12/2009 0035
Chlorobenzene	50	50		1	100	59-129	11/12/2009 0035
Chloroethane	50	43		1	85	50-132	11/12/2009 0035
Chloroform	50	50		1	101	71-125	11/12/2009 0035
Chloromethane (Methyl chloride)	50	71	N	1	142	34-134	11/12/2009 0035
Cyclohexane	50	54		1	107	53-139	11/12/2009 0035
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	93	55-125	11/12/2009 0035
Dibromochloromethane	50	49		1	98	66-119	11/12/2009 0035
1,2-Dibromoethane (EDB)	50	48		1	96	74-124	11/12/2009 0035
1,3-Dichlorobenzene	50	52		1	103	51-134	11/12/2009 0035
1,2-Dichlorobenzene	50	50		1	101	57-131	11/12/2009 0035
1,4-Dichlorobenzene	50	51		1	102	52-133	11/12/2009 0035
Dichlorodifluoromethane	50	87	N	1	175	10-157	11/12/2009 0035
1,1-Dichloroethane	50	51		1	102	71-127	11/12/2009 0035
1,2-Dichloroethane	50	52		1	103	67-129	11/12/2009 0035
1,1-Dichloroethene	50	54		1	108	69-138	11/12/2009 0035
cis-1,2-Dichloroethene	50	51		1	103	70-122	11/12/2009 0035
trans-1,2-Dichloroethene	50	53		1	106	68-131	11/12/2009 0035
1,2-Dichloropropane	50	51		1	101	72-124	11/12/2009 0035
cis-1,3-Dichloropropene	50	51		1	101	70-126	11/12/2009 0035
trans-1,3-Dichloropropene	50	50		1	100	70-124	11/12/2009 0035
Ethylbenzene	50	52		1	104	59-128	11/12/2009 0035
2-Hexanone	100	99		1	99	54-137	11/12/2009 0035
Isopropylbenzene	50	52		1	105	50-136	11/12/2009 0035
Methyl acetate	50	60		1	119	59-137	11/12/2009 0035
Methyl tertiary butyl ether (MTBE)	50	51		1	103	72-122	11/12/2009 0035
4-Methyl-2-pentanone	100	100		1	101	60-134	11/12/2009 0035
Methylcyclohexane	50	55		1	110	41-144	11/12/2009 0035
Methylene chloride	50	49		1	97	77-129	11/12/2009 0035
Styrene	50	51		1	102	54-136	11/12/2009 0035
1,1,2,2-Tetrachloroethane	50	51		1	101	69-132	11/12/2009 0035
Tetrachloroethene	50	53		1	105	70-130	11/12/2009 0035
Toluene	50	52		1	103	61-129	11/12/2009 0035
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	49-136	11/12/2009 0035
1,2,4-Trichlorobenzene	50	52		1	104	34-145	11/12/2009 0035
1,1,2-Trichloroethane	50	49		1	98	55-128	11/12/2009 0035
1,1,1-Trichloroethane	50	52		1	104	63-128	11/12/2009 0035

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21537-002

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	62-126	11/12/2009 0035
Trichlorofluoromethane	50	57		1	114	45-138	11/12/2009 0035
Vinyl chloride	50	69	N	1	138	42-132	11/12/2009 0035
Xylenes (total)	100	100		1	103	58-128	11/12/2009 0035
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	47-138				
1,2-Dichloroethane-d4		88	53-142				
Toluene-d8		102	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21537-003

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	102	8.3	42-149	20	11/12/2009 0059
Benzene	50	52		1	104	2.0	69-123	20	11/12/2009 0059
Bromodichloromethane	50	51		1	103	3.7	69-121	20	11/12/2009 0059
Bromoform	50	47		1	95	5.4	61-119	20	11/12/2009 0059
Bromomethane (Methyl bromide)	50	52		1	104	1.7	35-144	20	11/12/2009 0059
2-Butanone (MEK)	100	120		1	115	8.9	57-148	20	11/12/2009 0059
Carbon disulfide	50	59		1	117	1.2	58-122	20	11/12/2009 0059
Carbon tetrachloride	50	54		1	109	1.8	58-136	20	11/12/2009 0059
Chlorobenzene	50	52		1	103	2.9	59-129	20	11/12/2009 0059
Chloroethane	50	48		1	95	11	50-132	20	11/12/2009 0059
Chloroform	50	52		1	104	2.8	71-125	20	11/12/2009 0059
Chloromethane (Methyl chloride)	50	69	N	1	137	3.7	34-134	20	11/12/2009 0059
Cyclohexane	50	54		1	109	1.5	53-139	20	11/12/2009 0059
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	101	7.5	55-125	20	11/12/2009 0059
Dibromochloromethane	50	51		1	102	4.4	66-119	20	11/12/2009 0059
1,2-Dibromoethane (EDB)	50	50		1	100	4.8	74-124	20	11/12/2009 0059
1,3-Dichlorobenzene	50	52		1	103	0.0078	51-134	20	11/12/2009 0059
1,2-Dichlorobenzene	50	50		1	101	0.49	57-131	20	11/12/2009 0059
1,4-Dichlorobenzene	50	51		1	102	0.069	52-133	20	11/12/2009 0059
Dichlorodifluoromethane	50	88	N	1	176	0.67	10-157	20	11/12/2009 0059
1,1-Dichloroethane	50	53		1	106	3.5	71-127	20	11/12/2009 0059
1,2-Dichloroethane	50	53		1	106	3.1	67-129	20	11/12/2009 0059
1,1-Dichloroethene	50	55		1	110	2.1	69-138	20	11/12/2009 0059
cis-1,2-Dichloroethene	50	53		1	106	2.9	70-122	20	11/12/2009 0059
trans-1,2-Dichloroethene	50	54		1	108	1.1	68-131	20	11/12/2009 0059
1,2-Dichloropropane	50	52		1	103	2.0	72-124	20	11/12/2009 0059
cis-1,3-Dichloropropene	50	53		1	105	3.8	70-126	20	11/12/2009 0059
trans-1,3-Dichloropropene	50	52		1	105	4.7	70-124	20	11/12/2009 0059
Ethylbenzene	50	52		1	105	0.70	59-128	20	11/12/2009 0059
2-Hexanone	100	110		1	107	7.7	54-137	20	11/12/2009 0059
Isopropylbenzene	50	53		1	106	0.74	50-136	20	11/12/2009 0059
Methyl acetate	50	64		1	128	7.4	59-137	20	11/12/2009 0059
Methyl tertiary butyl ether (MTBE)	50	54		1	107	4.3	72-122	20	11/12/2009 0059
4-Methyl-2-pentanone	100	110		1	108	6.6	60-134	20	11/12/2009 0059
Methylcyclohexane	50	55		1	110	0.0072	41-144	20	11/12/2009 0059
Methylene chloride	50	51		1	101	4.1	77-129	20	11/12/2009 0059
Styrene	50	53		1	106	3.6	54-136	20	11/12/2009 0059
1,1,2,2-Tetrachloroethane	50	52		1	104	3.0	69-132	20	11/12/2009 0059
Tetrachloroethene	50	53		1	107	1.7	70-130	20	11/12/2009 0059
Toluene	50	52		1	104	1.3	61-129	20	11/12/2009 0059
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	105	0.23	49-136	20	11/12/2009 0059
1,2,4-Trichlorobenzene	50	53		1	106	1.9	34-145	20	11/12/2009 0059
1,1,2-Trichloroethane	50	52		1	103	5.7	55-128	20	11/12/2009 0059
1,1,1-Trichloroethane	50	53		1	105	0.99	63-128	20	11/12/2009 0059

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21537-003

Matrix: Solid

Batch: 21537

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	53		1	105	0.48	62-126	20	11/12/2009 0059
Trichlorofluoromethane	50	56		1	113	0.56	45-138	20	11/12/2009 0059
Vinyl chloride	50	66		1	132	4.5	42-132	20	11/12/2009 0059
Xylenes (total)	100	110		1	106	2.8	58-128	20	11/12/2009 0059
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	47-138						
1,2-Dichloroethane-d4		89	53-142						
Toluene-d8		101	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21538-001

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/12/2009 0146
Benzene	ND		1	5.0	1.1	ug/kg	11/12/2009 0146
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Bromoform	ND		1	5.0	0.70	ug/kg	11/12/2009 0146
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/12/2009 0146
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/12/2009 0146
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/12/2009 0146
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/12/2009 0146
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Chloroethane	ND		1	5.0	1.3	ug/kg	11/12/2009 0146
Chloroform	ND		1	5.0	0.83	ug/kg	11/12/2009 0146
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/12/2009 0146
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/12/2009 0146
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/12/2009 0146
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/12/2009 0146
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/12/2009 0146
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/12/2009 0146
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/12/2009 0146
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/12/2009 0146
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/12/2009 0146
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/12/2009 0146
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
2-Hexanone	ND		1	10	1.3	ug/kg	11/12/2009 0146
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/12/2009 0146
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/12/2009 0146
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/12/2009 0146
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/12/2009 0146
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/12/2009 0146
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/12/2009 0146
Styrene	ND		1	5.0	1.1	ug/kg	11/12/2009 0146
1,1,1,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/12/2009 0146
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/12/2009 0146
Toluene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/12/2009 0146
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/12/2009 0146
1,1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/12/2009 0146
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/12/2009 0146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21538-001

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/12/2009 0146
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/12/2009 0146
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/12/2009 0146
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/12/2009 0146
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	47-138				
1,2-Dichloroethane-d4		93	53-142				
Toluene-d8		102	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21538-002

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	94		1	94	42-149	11/12/2009 0035
Benzene	50	51		1	102	69-123	11/12/2009 0035
Bromodichloromethane	50	50		1	99	69-121	11/12/2009 0035
Bromoform	50	45		1	90	61-119	11/12/2009 0035
Bromomethane (Methyl bromide)	50	51		1	102	35-144	11/12/2009 0035
2-Butanone (MEK)	100	110		1	106	57-148	11/12/2009 0035
Carbon disulfide	50	58		1	116	58-122	11/12/2009 0035
Carbon tetrachloride	50	53		1	107	58-136	11/12/2009 0035
Chlorobenzene	50	50		1	100	59-129	11/12/2009 0035
Chloroethane	50	43		1	85	50-132	11/12/2009 0035
Chloroform	50	50		1	101	71-125	11/12/2009 0035
Chloromethane (Methyl chloride)	50	71	N	1	142	34-134	11/12/2009 0035
Cyclohexane	50	54		1	107	53-139	11/12/2009 0035
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	93	55-125	11/12/2009 0035
Dibromochloromethane	50	49		1	98	66-119	11/12/2009 0035
1,2-Dibromoethane (EDB)	50	48		1	96	74-124	11/12/2009 0035
1,2-Dichlorobenzene	50	50		1	101	57-131	11/12/2009 0035
1,4-Dichlorobenzene	50	51		1	102	52-133	11/12/2009 0035
1,3-Dichlorobenzene	50	52		1	103	51-134	11/12/2009 0035
Dichlorodifluoromethane	50	87	N	1	175	10-157	11/12/2009 0035
1,1-Dichloroethane	50	51		1	102	71-127	11/12/2009 0035
1,2-Dichloroethane	50	52		1	103	67-129	11/12/2009 0035
1,1-Dichloroethene	50	54		1	108	69-138	11/12/2009 0035
cis-1,2-Dichloroethene	50	51		1	103	70-122	11/12/2009 0035
trans-1,2-Dichloroethene	50	53		1	106	68-131	11/12/2009 0035
1,2-Dichloropropane	50	51		1	101	72-124	11/12/2009 0035
trans-1,3-Dichloropropene	50	50		1	100	70-124	11/12/2009 0035
cis-1,3-Dichloropropene	50	51		1	101	70-126	11/12/2009 0035
Ethylbenzene	50	52		1	104	59-128	11/12/2009 0035
2-Hexanone	100	99		1	99	54-137	11/12/2009 0035
Isopropylbenzene	50	52		1	105	50-136	11/12/2009 0035
Methyl acetate	50	60		1	119	59-137	11/12/2009 0035
Methyl tertiary butyl ether (MTBE)	50	51		1	103	72-122	11/12/2009 0035
4-Methyl-2-pentanone	100	100		1	101	60-134	11/12/2009 0035
Methylcyclohexane	50	55		1	110	41-144	11/12/2009 0035
Methylene chloride	50	49		1	97	77-129	11/12/2009 0035
Styrene	50	51		1	102	54-136	11/12/2009 0035
1,1,2,2-Tetrachloroethane	50	51		1	101	69-132	11/12/2009 0035
Tetrachloroethene	50	53		1	105	70-130	11/12/2009 0035
Toluene	50	52		1	103	61-129	11/12/2009 0035
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	49-136	11/12/2009 0035
1,2,4-Trichlorobenzene	50	52		1	104	34-145	11/12/2009 0035
1,1,2-Trichloroethane	50	49		1	98	55-128	11/12/2009 0035
1,1,1-Trichloroethane	50	52		1	104	63-128	11/12/2009 0035

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21538-002

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	62-126	11/12/2009 0035
Trichlorofluoromethane	50	57		1	114	45-138	11/12/2009 0035
Vinyl chloride	50	69	N	1	138	42-132	11/12/2009 0035
Xylenes (total)	100	100		1	103	58-128	11/12/2009 0035
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	47-138				
1,2-Dichloroethane-d4		88	53-142				
Toluene-d8		102	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21538-003

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	102	8.3	42-149	20	11/12/2009 0059
Benzene	50	52		1	104	2.0	69-123	20	11/12/2009 0059
Bromodichloromethane	50	51		1	103	3.7	69-121	20	11/12/2009 0059
Bromoform	50	47		1	95	5.4	61-119	20	11/12/2009 0059
Bromomethane (Methyl bromide)	50	52		1	104	1.7	35-144	20	11/12/2009 0059
2-Butanone (MEK)	100	120		1	115	8.9	57-148	20	11/12/2009 0059
Carbon disulfide	50	59		1	117	1.2	58-122	20	11/12/2009 0059
Carbon tetrachloride	50	54		1	109	1.8	58-136	20	11/12/2009 0059
Chlorobenzene	50	52		1	103	2.9	59-129	20	11/12/2009 0059
Chloroethane	50	48		1	95	11	50-132	20	11/12/2009 0059
Chloroform	50	52		1	104	2.8	71-125	20	11/12/2009 0059
Chloromethane (Methyl chloride)	50	69	N	1	137	3.7	34-134	20	11/12/2009 0059
Cyclohexane	50	54		1	109	1.5	53-139	20	11/12/2009 0059
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	101	7.5	55-125	20	11/12/2009 0059
Dibromochloromethane	50	51		1	102	4.4	66-119	20	11/12/2009 0059
1,2-Dibromoethane (EDB)	50	50		1	100	4.8	74-124	20	11/12/2009 0059
1,2-Dichlorobenzene	50	50		1	101	0.49	57-131	20	11/12/2009 0059
1,4-Dichlorobenzene	50	51		1	102	0.069	52-133	20	11/12/2009 0059
1,3-Dichlorobenzene	50	52		1	103	0.0078	51-134	20	11/12/2009 0059
Dichlorodifluoromethane	50	88	N	1	176	0.67	10-157	20	11/12/2009 0059
1,1-Dichloroethane	50	53		1	106	3.5	71-127	20	11/12/2009 0059
1,2-Dichloroethane	50	53		1	106	3.1	67-129	20	11/12/2009 0059
1,1-Dichloroethene	50	55		1	110	2.1	69-138	20	11/12/2009 0059
cis-1,2-Dichloroethene	50	53		1	106	2.9	70-122	20	11/12/2009 0059
trans-1,2-Dichloroethene	50	54		1	108	1.1	68-131	20	11/12/2009 0059
1,2-Dichloropropane	50	52		1	103	2.0	72-124	20	11/12/2009 0059
trans-1,3-Dichloropropene	50	52		1	105	4.7	70-124	20	11/12/2009 0059
cis-1,3-Dichloropropene	50	53		1	105	3.8	70-126	20	11/12/2009 0059
Ethylbenzene	50	52		1	105	0.70	59-128	20	11/12/2009 0059
2-Hexanone	100	110		1	107	7.7	54-137	20	11/12/2009 0059
Isopropylbenzene	50	53		1	106	0.74	50-136	20	11/12/2009 0059
Methyl acetate	50	64		1	128	7.4	59-137	20	11/12/2009 0059
Methyl tertiary butyl ether (MTBE)	50	54		1	107	4.3	72-122	20	11/12/2009 0059
4-Methyl-2-pentanone	100	110		1	108	6.6	60-134	20	11/12/2009 0059
Methylcyclohexane	50	55		1	110	0.0072	41-144	20	11/12/2009 0059
Methylene chloride	50	51		1	101	4.1	77-129	20	11/12/2009 0059
Styrene	50	53		1	106	3.6	54-136	20	11/12/2009 0059
1,1,2,2-Tetrachloroethane	50	52		1	104	3.0	69-132	20	11/12/2009 0059
Tetrachloroethene	50	53		1	107	1.7	70-130	20	11/12/2009 0059
Toluene	50	52		1	104	1.3	61-129	20	11/12/2009 0059
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	105	0.23	49-136	20	11/12/2009 0059
1,2,4-Trichlorobenzene	50	53		1	106	1.9	34-145	20	11/12/2009 0059
1,1,2-Trichloroethane	50	52		1	103	5.7	55-128	20	11/12/2009 0059
1,1,1-Trichloroethane	50	53		1	105	0.99	63-128	20	11/12/2009 0059

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21538-003

Matrix: Solid

Batch: 21538

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	53		1	105	0.48	62-126	20	11/12/2009 0059
Trichlorofluoromethane	50	56		1	113	0.56	45-138	20	11/12/2009 0059
Vinyl chloride	50	66		1	132	4.5	42-132	20	11/12/2009 0059
Xylenes (total)	100	110		1	106	2.8	58-128	20	11/12/2009 0059
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	47-138						
1,2-Dichloroethane-d4		89	53-142						
Toluene-d8		101	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21834-001

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
<b>Acetone</b>	<b>1.4</b>	<b>J</b>	<b>1</b>	<b>10</b>	<b>0.061</b>	<b>ug/L</b>	<b>11/17/2009 1222</b>
Benzene	ND		1	0.50	0.027	ug/L	11/17/2009 1222
Bromodichloromethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Bromoform	ND		1	0.50	0.010	ug/L	11/17/2009 1222
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	11/17/2009 1222
2-Butanone (MEK)	ND		1	10	2.0	ug/L	11/17/2009 1222
<b>Carbon disulfide</b>	<b>0.18</b>	<b>J</b>	<b>1</b>	<b>0.50</b>	<b>0.097</b>	<b>ug/L</b>	<b>11/17/2009 1222</b>
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	11/17/2009 1222
Chlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloroethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloroform	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Cyclohexane	ND		1	0.50	0.30	ug/L	11/17/2009 1222
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	11/17/2009 1222
Dibromochloromethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	11/17/2009 1222
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	11/17/2009 1222
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	11/17/2009 1222
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	11/17/2009 1222
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	11/17/2009 1222
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	11/17/2009 1222
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	11/17/2009 1222
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	11/17/2009 1222
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	11/17/2009 1222
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	11/17/2009 1222
Ethylbenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
2-Hexanone	ND		1	10	0.27	ug/L	11/17/2009 1222
Isopropylbenzene	ND		1	0.50	0.029	ug/L	11/17/2009 1222
Methyl acetate	ND		1	1.0	0.30	ug/L	11/17/2009 1222
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	11/17/2009 1222
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	11/17/2009 1222
Methylcyclohexane	ND		1	5.0	0.95	ug/L	11/17/2009 1222
Methylene chloride	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Styrene	ND		1	0.50	0.015	ug/L	11/17/2009 1222
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	11/17/2009 1222
Tetrachloroethene	ND		1	0.50	0.014	ug/L	11/17/2009 1222
Toluene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	11/17/2009 1222
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	11/17/2009 1222
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	11/17/2009 1222

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21834-001

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	11/17/2009 1222
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	11/17/2009 1222
Vinyl chloride	ND		1	0.50	0.065	ug/L	11/17/2009 1222
Xylenes (total)	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		89	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21834-002

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	119	46-153	11/17/2009 1055
Benzene	50	44		1	88	70-130	11/17/2009 1055
Bromodichloromethane	50	44		1	88	70-130	11/17/2009 1055
Bromoform	50	42		1	83	70-130	11/17/2009 1055
Bromomethane (Methyl bromide)	50	55		1	109	60-140	11/17/2009 1055
2-Butanone (MEK)	100	96		1	96	60-140	11/17/2009 1055
Carbon disulfide	50	52		1	104	60-140	11/17/2009 1055
Carbon tetrachloride	50	49		1	98	70-130	11/17/2009 1055
Chlorobenzene	50	43		1	86	70-130	11/17/2009 1055
Chloroethane	50	42		1	83	42-163	11/17/2009 1055
Chloroform	50	47		1	94	70-130	11/17/2009 1055
Chloromethane (Methyl chloride)	50	43		1	86	20-158	11/17/2009 1055
Cyclohexane	50	46		1	93	70-130	11/17/2009 1055
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	101	70-130	11/17/2009 1055
Dibromochloromethane	50	46		1	91	70-130	11/17/2009 1055
1,2-Dibromoethane (EDB)	50	41		1	82	70-130	11/17/2009 1055
1,2-Dichlorobenzene	50	47		1	95	70-130	11/17/2009 1055
1,3-Dichlorobenzene	50	45		1	90	70-130	11/17/2009 1055
1,4-Dichlorobenzene	50	44		1	89	70-130	11/17/2009 1055
Dichlorodifluoromethane	50	36		1	73	60-140	11/17/2009 1055
1,2-Dichloroethane	50	45		1	90	70-130	11/17/2009 1055
1,1-Dichloroethane	50	45		1	90	70-130	11/17/2009 1055
cis-1,2-Dichloroethene	50	46		1	93	70-130	11/17/2009 1055
trans-1,2-Dichloroethene	50	47		1	93	70-130	11/17/2009 1055
1,1-Dichloroethene	50	47		1	94	70-130	11/17/2009 1055
1,2-Dichloropropane	50	44		1	88	70-130	11/17/2009 1055
trans-1,3-Dichloropropene	50	48		1	95	70-130	11/17/2009 1055
cis-1,3-Dichloropropene	50	43		1	86	70-130	11/17/2009 1055
Ethylbenzene	50	46		1	92	70-130	11/17/2009 1055
2-Hexanone	100	86		1	86	60-140	11/17/2009 1055
Isopropylbenzene	50	49		1	98	70-130	11/17/2009 1055
Methyl acetate	50	51		1	103	15-128	11/17/2009 1055
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	11/17/2009 1055
4-Methyl-2-pentanone	100	91		1	91	60-140	11/17/2009 1055
Methylcyclohexane	50	48		1	97	70-130	11/17/2009 1055
Methylene chloride	50	47		1	95	70-130	11/17/2009 1055
Styrene	50	46		1	92	70-130	11/17/2009 1055
1,1,2,2-Tetrachloroethane	50	46		1	92	70-130	11/17/2009 1055
Tetrachloroethene	50	45		1	91	70-130	11/17/2009 1055
Toluene	50	44		1	87	70-130	11/17/2009 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	45		1	91	70-130	11/17/2009 1055
1,2,4-Trichlorobenzene	50	62		1	125	70-130	11/17/2009 1055
1,1,2-Trichloroethane	50	39		1	78	70-130	11/17/2009 1055
1,1,1-Trichloroethane	50	49		1	99	70-130	11/17/2009 1055

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21834-002

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	45		1	89	70-130	11/17/2009 1055
Trichlorofluoromethane	50	46		1	93	60-140	11/17/2009 1055
Vinyl chloride	50	42		1	84	60-140	11/17/2009 1055
Xylenes (total)	100	95		1	95	70-130	11/17/2009 1055
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		91	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21834-003

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	110	7.1	46-153	20	11/17/2009 1117
Benzene	50	44		1	88	0.73	70-130	20	11/17/2009 1117
Bromodichloromethane	50	45		1	89	1.1	70-130	20	11/17/2009 1117
Bromoform	50	41		1	82	1.2	70-130	20	11/17/2009 1117
Bromomethane (Methyl bromide)	50	49		1	98	11	60-140	20	11/17/2009 1117
2-Butanone (MEK)	100	94		1	94	1.9	60-140	20	11/17/2009 1117
Carbon disulfide	50	49		1	99	5.6	60-140	20	11/17/2009 1117
Carbon tetrachloride	50	47		1	94	3.6	70-130	20	11/17/2009 1117
Chlorobenzene	50	43		1	86	0.63	70-130	20	11/17/2009 1117
Chloroethane	50	39		1	78	6.4	42-163	20	11/17/2009 1117
Chloroform	50	46		1	92	3.0	70-130	20	11/17/2009 1117
Chloromethane (Methyl chloride)	50	39		1	79	8.5	20-158	20	11/17/2009 1117
Cyclohexane	50	45		1	89	3.8	70-130	20	11/17/2009 1117
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	93	9.1	70-130	20	11/17/2009 1117
Dibromochloromethane	50	46		1	91	0.25	70-130	20	11/17/2009 1117
1,2-Dibromoethane (EDB)	50	42		1	84	2.4	70-130	20	11/17/2009 1117
1,2-Dichlorobenzene	50	46		1	92	2.6	70-130	20	11/17/2009 1117
1,3-Dichlorobenzene	50	45		1	90	0.30	70-130	20	11/17/2009 1117
1,4-Dichlorobenzene	50	45		1	89	0.83	70-130	20	11/17/2009 1117
Dichlorodifluoromethane	50	34		1	68	7.3	60-140	20	11/17/2009 1117
1,2-Dichloroethane	50	45		1	90	0.26	70-130	20	11/17/2009 1117
1,1-Dichloroethane	50	44		1	87	3.2	70-130	20	11/17/2009 1117
cis-1,2-Dichloroethene	50	44		1	89	4.1	70-130	20	11/17/2009 1117
trans-1,2-Dichloroethene	50	45		1	90	3.8	70-130	20	11/17/2009 1117
1,1-Dichloroethene	50	44		1	89	5.6	70-130	20	11/17/2009 1117
1,2-Dichloropropane	50	45		1	90	2.4	70-130	20	11/17/2009 1117
trans-1,3-Dichloropropene	50	48		1	97	1.6	70-130	20	11/17/2009 1117
cis-1,3-Dichloropropene	50	44		1	87	1.5	70-130	20	11/17/2009 1117
Ethylbenzene	50	46		1	92	0.87	70-130	20	11/17/2009 1117
2-Hexanone	100	87		1	87	0.98	60-140	20	11/17/2009 1117
Isopropylbenzene	50	48		1	95	2.6	70-130	20	11/17/2009 1117
Methyl acetate	50	49		1	98	4.5	15-128	20	11/17/2009 1117
Methyl tertiary butyl ether (MTBE)	50	48		1	96	4.1	70-130	20	11/17/2009 1117
4-Methyl-2-pentanone	100	90		1	90	1.6	60-140	20	11/17/2009 1117
Methylcyclohexane	50	47		1	95	1.9	70-130	20	11/17/2009 1117
Methylene chloride	50	44		1	88	7.7	70-130	20	11/17/2009 1117
Styrene	50	47		1	93	1.2	70-130	20	11/17/2009 1117
1,1,2,2-Tetrachloroethane	50	44		1	87	5.6	70-130	20	11/17/2009 1117
Tetrachloroethene	50	45		1	90	0.72	70-130	20	11/17/2009 1117
Toluene	50	45		1	90	2.8	70-130	20	11/17/2009 1117
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	42		1	83	8.6	70-130	20	11/17/2009 1117
1,2,4-Trichlorobenzene	50	59		1	118	5.9	70-130	20	11/17/2009 1117
1,1,2-Trichloroethane	50	40		1	80	2.4	70-130	20	11/17/2009 1117
1,1,1-Trichloroethane	50	47		1	94	4.7	70-130	20	11/17/2009 1117

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21834-003

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	46		1	91	2.6	70-130	20	11/17/2009 1117
Trichlorofluoromethane	50	46		1	92	1.0	60-140	20	11/17/2009 1117
Vinyl chloride	50	39		1	79	6.5	60-140	20	11/17/2009 1117
Xylenes (total)	100	93		1	93	1.6	70-130	20	11/17/2009 1117
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		89	70-130						
1,2-Dichloroethane-d4		85	70-130						
Toluene-d8		92	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21886-001

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/17/2009 0031
Benzene	ND		1	5.0	1.1	ug/kg	11/17/2009 0031
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
Bromoform	ND		1	5.0	0.70	ug/kg	11/17/2009 0031
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/17/2009 0031
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/17/2009 0031
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/17/2009 0031
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/17/2009 0031
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
Chloroethane	ND		1	5.0	1.3	ug/kg	11/17/2009 0031
Chloroform	ND		1	5.0	0.83	ug/kg	11/17/2009 0031
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/17/2009 0031
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/17/2009 0031
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/17/2009 0031
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/17/2009 0031
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/17/2009 0031
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/17/2009 0031
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/17/2009 0031
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/17/2009 0031
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/17/2009 0031
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/17/2009 0031
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/17/2009 0031
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/17/2009 0031
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
2-Hexanone	ND		1	10	1.3	ug/kg	11/17/2009 0031
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/17/2009 0031
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/17/2009 0031
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/17/2009 0031
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/17/2009 0031
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/17/2009 0031
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/17/2009 0031
Styrene	ND		1	5.0	1.1	ug/kg	11/17/2009 0031
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/17/2009 0031
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/17/2009 0031
Toluene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/17/2009 0031
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/17/2009 0031
1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/17/2009 0031
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/17/2009 0031

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21886-001

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/17/2009 0031
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/17/2009 0031
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/17/2009 0031
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/17/2009 0031
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	47-138				
1,2-Dichloroethane-d4		102	53-142				
Toluene-d8		112	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21886-002

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	110	42-149	11/16/2009 2321
Benzene	50	44		1	89	69-123	11/16/2009 2321
Bromodichloromethane	50	42		1	85	69-121	11/16/2009 2321
Bromoform	50	40		1	80	61-119	11/16/2009 2321
Bromomethane (Methyl bromide)	50	41		1	82	35-144	11/16/2009 2321
2-Butanone (MEK)	100	100		1	101	57-148	11/16/2009 2321
Carbon disulfide	50	49		1	97	58-122	11/16/2009 2321
Carbon tetrachloride	50	43		1	86	58-136	11/16/2009 2321
Chlorobenzene	50	44		1	88	59-129	11/16/2009 2321
Chloroethane	50	41		1	82	50-132	11/16/2009 2321
Chloroform	50	41		1	82	71-125	11/16/2009 2321
Chloromethane (Methyl chloride)	50	39		1	78	34-134	11/16/2009 2321
Cyclohexane	50	45		1	91	53-139	11/16/2009 2321
1,2-Dibromo-3-chloropropane (DBCP)	50	41		1	82	55-125	11/16/2009 2321
Dibromochloromethane	50	43		1	86	66-119	11/16/2009 2321
1,2-Dibromoethane (EDB)	50	42		1	83	74-124	11/16/2009 2321
1,2-Dichlorobenzene	50	41		1	82	57-131	11/16/2009 2321
1,4-Dichlorobenzene	50	42		1	85	52-133	11/16/2009 2321
1,3-Dichlorobenzene	50	43		1	86	51-134	11/16/2009 2321
Dichlorodifluoromethane	50	36		1	72	10-157	11/16/2009 2321
1,1-Dichloroethane	50	43		1	85	71-127	11/16/2009 2321
1,2-Dichloroethane	50	40		1	80	67-129	11/16/2009 2321
1,1-Dichloroethene	50	45		1	90	69-138	11/16/2009 2321
cis-1,2-Dichloroethene	50	43		1	85	70-122	11/16/2009 2321
trans-1,2-Dichloroethene	50	43		1	87	68-131	11/16/2009 2321
1,2-Dichloropropane	50	42		1	85	72-124	11/16/2009 2321
cis-1,3-Dichloropropene	50	43		1	86	70-126	11/16/2009 2321
trans-1,3-Dichloropropene	50	44		1	88	70-124	11/16/2009 2321
Ethylbenzene	50	46		1	92	59-128	11/16/2009 2321
2-Hexanone	100	93		1	93	54-137	11/16/2009 2321
Isopropylbenzene	50	47		1	94	50-136	11/16/2009 2321
Methyl acetate	50	47		1	94	59-137	11/16/2009 2321
Methyl tertiary butyl ether (MTBE)	50	40		1	81	72-122	11/16/2009 2321
4-Methyl-2-pentanone	100	85		1	85	60-134	11/16/2009 2321
Methylcyclohexane	50	46		1	92	41-144	11/16/2009 2321
Methylene chloride	50	40		1	80	77-129	11/16/2009 2321
Styrene	50	45		1	90	54-136	11/16/2009 2321
1,1,2,2-Tetrachloroethane	50	42		1	84	69-132	11/16/2009 2321
Tetrachloroethene	50	47		1	93	70-130	11/16/2009 2321
Toluene	50	44		1	88	61-129	11/16/2009 2321
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	85	49-136	11/16/2009 2321
1,2,4-Trichlorobenzene	50	41		1	82	34-145	11/16/2009 2321
1,1,2-Trichloroethane	50	42		1	84	55-128	11/16/2009 2321
1,1,1-Trichloroethane	50	43		1	86	63-128	11/16/2009 2321

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21886-002

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	91	62-126	11/16/2009 2321
Trichlorofluoromethane	50	42		1	84	45-138	11/16/2009 2321
Vinyl chloride	50	41		1	81	42-132	11/16/2009 2321
Xylenes (total)	100	90		1	90	58-128	11/16/2009 2321
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	47-138				
1,2-Dichloroethane-d4		86	53-142				
Toluene-d8		104	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21886-003

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	115	3.8	42-149	20	11/16/2009 2344
Benzene	50	49		1	99	11	69-123	20	11/16/2009 2344
Bromodichloromethane	50	48		1	96	13	69-121	20	11/16/2009 2344
Bromoform	50	44		1	88	9.0	61-119	20	11/16/2009 2344
Bromomethane (Methyl bromide)	50	46		1	92	12	35-144	20	11/16/2009 2344
2-Butanone (MEK)	100	100		1	104	2.8	57-148	20	11/16/2009 2344
Carbon disulfide	50	56		1	112	14	58-122	20	11/16/2009 2344
Carbon tetrachloride	50	51		1	103	17	58-136	20	11/16/2009 2344
Chlorobenzene	50	47		1	95	7.8	59-129	20	11/16/2009 2344
Chloroethane	50	48		1	96	15	50-132	20	11/16/2009 2344
Chloroform	50	48		1	95	15	71-125	20	11/16/2009 2344
Chloromethane (Methyl chloride)	50	44		1	88	12	34-134	20	11/16/2009 2344
Cyclohexane	50	51		1	101	11	53-139	20	11/16/2009 2344
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	89	8.9	55-125	20	11/16/2009 2344
Dibromochloromethane	50	48		1	95	10	66-119	20	11/16/2009 2344
1,2-Dibromoethane (EDB)	50	45		1	90	8.0	74-124	20	11/16/2009 2344
1,2-Dichlorobenzene	50	46		1	93	12	57-131	20	11/16/2009 2344
1,4-Dichlorobenzene	50	46		1	93	9.1	52-133	20	11/16/2009 2344
1,3-Dichlorobenzene	50	47		1	95	9.5	51-134	20	11/16/2009 2344
Dichlorodifluoromethane	50	42		1	83	15	10-157	20	11/16/2009 2344
1,1-Dichloroethane	50	49		1	98	14	71-127	20	11/16/2009 2344
1,2-Dichloroethane	50	48		1	96	18	67-129	20	11/16/2009 2344
1,1-Dichloroethene	50	51		1	102	13	69-138	20	11/16/2009 2344
cis-1,2-Dichloroethene	50	49		1	98	14	70-122	20	11/16/2009 2344
trans-1,2-Dichloroethene	50	50		1	100	14	68-131	20	11/16/2009 2344
1,2-Dichloropropane	50	48		1	96	13	72-124	20	11/16/2009 2344
cis-1,3-Dichloropropene	50	48		1	97	12	70-126	20	11/16/2009 2344
trans-1,3-Dichloropropene	50	48		1	95	8.0	70-124	20	11/16/2009 2344
Ethylbenzene	50	50		1	100	8.3	59-128	20	11/16/2009 2344
2-Hexanone	100	97		1	97	4.0	54-137	20	11/16/2009 2344
Isopropylbenzene	50	51		1	102	8.4	50-136	20	11/16/2009 2344
Methyl acetate	50	51		1	101	7.9	59-137	20	11/16/2009 2344
Methyl tertiary butyl ether (MTBE)	50	48		1	96	17	72-122	20	11/16/2009 2344
4-Methyl-2-pentanone	100	96		1	96	12	60-134	20	11/16/2009 2344
Methylcyclohexane	50	52		1	104	11	41-144	20	11/16/2009 2344
Methylene chloride	50	47		1	94	16	77-129	20	11/16/2009 2344
Styrene	50	49		1	99	9.6	54-136	20	11/16/2009 2344
1,1,2,2-Tetrachloroethane	50	47		1	94	11	69-132	20	11/16/2009 2344
Tetrachloroethene	50	50		1	99	6.3	70-130	20	11/16/2009 2344
Toluene	50	49		1	99	11	61-129	20	11/16/2009 2344
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	99	15	49-136	20	11/16/2009 2344
1,2,4-Trichlorobenzene	50	46		1	92	11	34-145	20	11/16/2009 2344
1,1,2-Trichloroethane	50	46		1	92	8.3	55-128	20	11/16/2009 2344
1,1,1-Trichloroethane	50	51		1	102	17	63-128	20	11/16/2009 2344

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21886-003

Matrix: Solid

Batch: 21886

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	50		1	100	8.9	62-126	20	11/16/2009 2344
Trichlorofluoromethane	50	50		1	99	16	45-138	20	11/16/2009 2344
Vinyl chloride	50	47		1	94	14	42-132	20	11/16/2009 2344
Xylenes (total)	100	98		1	98	7.6	58-128	20	11/16/2009 2344
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		103	47-138						
1,2-Dichloroethane-d4		92	53-142						
Toluene-d8		107	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Volatiles - MB

Sample ID: KQ21922-001

Matrix: Solid

Batch: 21922

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		10	0.050	0.0020	mg/L	11/17/2009 1013
2-Butanone (MEK)	ND		10	0.10	0.018	mg/L	11/17/2009 1013
Carbon tetrachloride	ND		10	0.050	0.0040	mg/L	11/17/2009 1013
Chlorobenzene	ND		10	0.050	0.0020	mg/L	11/17/2009 1013
Chloroform	ND		10	0.050	0.0030	mg/L	11/17/2009 1013
1,2-Dichloroethane	ND		10	0.050	0.0030	mg/L	11/17/2009 1013
1,1-Dichloroethene	ND		10	0.050	0.0050	mg/L	11/17/2009 1013
Tetrachloroethene	ND		10	0.050	0.0040	mg/L	11/17/2009 1013
Trichloroethene	ND		10	0.050	0.0030	mg/L	11/17/2009 1013
Vinyl chloride	ND		10	0.010	0.0010	mg/L	11/17/2009 1013
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Volatiles - LCS

Sample ID: KQ21922-002

Matrix: Solid

Batch: 21922

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	0.50	0.45		10	89	72-127	11/17/2009 0952
2-Butanone (MEK)	1.0	0.78		10	78	60-140	11/17/2009 0952
Carbon tetrachloride	0.50	0.41		10	83	37-166	11/17/2009 0952
Chlorobenzene	0.50	0.46		10	93	78-129	11/17/2009 0952
Chloroform	0.50	0.39		10	78	63-123	11/17/2009 0952
1,2-Dichloroethane	0.50	0.36		10	71	59-143	11/17/2009 0952
1,1-Dichloroethene	0.50	0.43		10	85	50-132	11/17/2009 0952
Tetrachloroethene	0.50	0.50		10	100	70-130	11/17/2009 0952
Trichloroethene	0.50	0.45		10	89	73-124	11/17/2009 0952
Vinyl chloride	0.50	0.34		10	68	29-159	11/17/2009 0952
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		87	70-130				
1,2-Dichloroethane-d4		81	70-130				
Toluene-d8		90	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# TCLP Volatiles - MS

Sample ID: KK07010-015MS

Matrix: Solid

Batch: 21922

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/10/2009 1555

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	ND	0.50	0.48		10	97	70-127	11/17/2009 1138
2-Butanone (MEK)	ND	1.0	0.88		10	88	60-140	11/17/2009 1138
Carbon tetrachloride	ND	0.50	0.44		10	88	37-166	11/17/2009 1138
Chlorobenzene	ND	0.50	0.47		10	94	78-129	11/17/2009 1138
Chloroform	ND	0.50	0.45		10	90	63-123	11/17/2009 1138
1,2-Dichloroethane	ND	0.50	0.42		10	85	59-143	11/17/2009 1138
1,1-Dichloroethene	ND	0.50	0.46		10	92	50-132	11/17/2009 1138
Tetrachloroethene	ND	0.50	0.47		10	94	70-130	11/17/2009 1138
Trichloroethene	ND	0.50	0.46		10	92	73-124	11/17/2009 1138
Vinyl chloride	ND	0.50	0.37		10	73	29-159	11/17/2009 1138
Surrogate	Q	% Rec	Acceptance Limit					
Bromofluorobenzene		91	70-130					
1,2-Dichloroethane-d4		88	70-130					
Toluene-d8		97	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22080-001

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/18/2009 1315
Benzene	ND		1	5.0	1.1	ug/kg	11/18/2009 1315
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
Bromoform	ND		1	5.0	0.70	ug/kg	11/18/2009 1315
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/18/2009 1315
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/18/2009 1315
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/18/2009 1315
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/18/2009 1315
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
Chloroethane	ND		1	5.0	1.3	ug/kg	11/18/2009 1315
Chloroform	ND		1	5.0	0.83	ug/kg	11/18/2009 1315
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/18/2009 1315
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/18/2009 1315
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/18/2009 1315
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/18/2009 1315
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/18/2009 1315
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/18/2009 1315
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/18/2009 1315
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/18/2009 1315
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/18/2009 1315
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/18/2009 1315
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/18/2009 1315
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/18/2009 1315
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
2-Hexanone	ND		1	10	1.3	ug/kg	11/18/2009 1315
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/18/2009 1315
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/18/2009 1315
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/18/2009 1315
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/18/2009 1315
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/18/2009 1315
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/18/2009 1315
Styrene	ND		1	5.0	1.1	ug/kg	11/18/2009 1315
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/18/2009 1315
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/18/2009 1315
Toluene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/18/2009 1315
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/18/2009 1315
1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/18/2009 1315
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/18/2009 1315

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22080-001

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/18/2009 1315
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/18/2009 1315
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/18/2009 1315
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/18/2009 1315
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	47-138				
1,2-Dichloroethane-d4		86	53-142				
Toluene-d8		100	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22080-002

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	65		1	65	42-149	11/18/2009 1025
Benzene	50	43		1	86	69-123	11/18/2009 1025
Bromodichloromethane	50	42		1	85	69-121	11/18/2009 1025
Bromoform	50	34		1	68	61-119	11/18/2009 1025
Bromomethane (Methyl bromide)	50	46		1	91	35-144	11/18/2009 1025
2-Butanone (MEK)	100	70		1	70	57-148	11/18/2009 1025
Carbon disulfide	50	49		1	98	58-122	11/18/2009 1025
Carbon tetrachloride	50	45		1	90	58-136	11/18/2009 1025
Chlorobenzene	50	39		1	79	59-129	11/18/2009 1025
Chloroethane	50	47		1	94	50-132	11/18/2009 1025
Chloroform	50	42		1	84	71-125	11/18/2009 1025
Chloromethane (Methyl chloride)	50	52		1	104	34-134	11/18/2009 1025
Cyclohexane	50	45		1	89	53-139	11/18/2009 1025
1,2-Dibromo-3-chloropropane (DBCP)	50	31		1	63	55-125	11/18/2009 1025
Dibromochloromethane	50	36		1	73	66-119	11/18/2009 1025
1,2-Dibromoethane (EDB)	50	35	N	1	70	74-124	11/18/2009 1025
1,4-Dichlorobenzene	50	37		1	74	52-133	11/18/2009 1025
1,3-Dichlorobenzene	50	37		1	75	51-134	11/18/2009 1025
1,2-Dichlorobenzene	50	36		1	73	57-131	11/18/2009 1025
Dichlorodifluoromethane	50	60		1	120	10-157	11/18/2009 1025
1,2-Dichloroethane	50	43		1	86	67-129	11/18/2009 1025
1,1-Dichloroethane	50	44		1	88	71-127	11/18/2009 1025
trans-1,2-Dichloroethene	50	44		1	88	68-131	11/18/2009 1025
cis-1,2-Dichloroethene	50	43		1	87	70-122	11/18/2009 1025
1,1-Dichloroethene	50	44		1	87	69-138	11/18/2009 1025
1,2-Dichloropropane	50	42		1	85	72-124	11/18/2009 1025
trans-1,3-Dichloropropene	50	41		1	82	70-124	11/18/2009 1025
cis-1,3-Dichloropropene	50	43		1	86	70-126	11/18/2009 1025
Ethylbenzene	50	42		1	83	59-128	11/18/2009 1025
2-Hexanone	100	66		1	66	54-137	11/18/2009 1025
Isopropylbenzene	50	40		1	80	50-136	11/18/2009 1025
Methyl acetate	50	38		1	77	59-137	11/18/2009 1025
Methyl tertiary butyl ether (MTBE)	50	42		1	84	72-122	11/18/2009 1025
4-Methyl-2-pentanone	100	71		1	71	60-134	11/18/2009 1025
Methylcyclohexane	50	43		1	87	41-144	11/18/2009 1025
Methylene chloride	50	42		1	84	77-129	11/18/2009 1025
Styrene	50	42		1	85	54-136	11/18/2009 1025
1,1,2,2-Tetrachloroethane	50	32	N	1	64	69-132	11/18/2009 1025
Tetrachloroethene	50	40		1	80	70-130	11/18/2009 1025
Toluene	50	44		1	88	61-129	11/18/2009 1025
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	42		1	85	49-136	11/18/2009 1025
1,2,4-Trichlorobenzene	50	36		1	72	34-145	11/18/2009 1025
1,1,2-Trichloroethane	50	37		1	74	55-128	11/18/2009 1025
1,1,1-Trichloroethane	50	44		1	89	63-128	11/18/2009 1025

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22080-002

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	42		1	84	62-126	11/18/2009 1025
Trichlorofluoromethane	50	48		1	95	45-138	11/18/2009 1025
Vinyl chloride	50	51		1	103	42-132	11/18/2009 1025
Xylenes (total)	100	83		1	83	58-128	11/18/2009 1025
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		80	47-138				
1,2-Dichloroethane-d4		71	53-142				
Toluene-d8		82	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22080-003

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	80	+	1	80	21	42-149	20	11/18/2009 1208
Benzene	50	45		1	90	5.0	69-123	20	11/18/2009 1208
Bromodichloromethane	50	46		1	91	7.4	69-121	20	11/18/2009 1208
Bromoform	50	38		1	77	12	61-119	20	11/18/2009 1208
Bromomethane (Methyl bromide)	50	49		1	98	6.7	35-144	20	11/18/2009 1208
2-Butanone (MEK)	100	82		1	82	16	57-148	20	11/18/2009 1208
Carbon disulfide	50	51		1	102	4.4	58-122	20	11/18/2009 1208
Carbon tetrachloride	50	46		1	93	2.9	58-136	20	11/18/2009 1208
Chlorobenzene	50	41		1	82	4.5	59-129	20	11/18/2009 1208
Chloroethane	50	49		1	99	5.5	50-132	20	11/18/2009 1208
Chloroform	50	45		1	90	6.7	71-125	20	11/18/2009 1208
Chloromethane (Methyl chloride)	50	58		1	116	11	34-134	20	11/18/2009 1208
Cyclohexane	50	46		1	91	2.3	53-139	20	11/18/2009 1208
1,2-Dibromo-3-chloropropane (DBCP)	50	37		1	75	17	55-125	20	11/18/2009 1208
Dibromochloromethane	50	40		1	80	9.8	66-119	20	11/18/2009 1208
1,2-Dibromoethane (EDB)	50	39		1	79	12	74-124	20	11/18/2009 1208
1,4-Dichlorobenzene	50	37		1	74	0.90	52-133	20	11/18/2009 1208
1,3-Dichlorobenzene	50	38		1	76	1.9	51-134	20	11/18/2009 1208
1,2-Dichlorobenzene	50	38		1	75	3.6	57-131	20	11/18/2009 1208
Dichlorodifluoromethane	50	62		1	124	3.3	10-157	20	11/18/2009 1208
1,2-Dichloroethane	50	47		1	93	8.0	67-129	20	11/18/2009 1208
1,1-Dichloroethane	50	47		1	93	6.0	71-127	20	11/18/2009 1208
trans-1,2-Dichloroethene	50	46		1	92	5.0	68-131	20	11/18/2009 1208
cis-1,2-Dichloroethene	50	46		1	92	5.9	70-122	20	11/18/2009 1208
1,1-Dichloroethene	50	46		1	92	5.5	69-138	20	11/18/2009 1208
1,2-Dichloropropane	50	45		1	91	6.8	72-124	20	11/18/2009 1208
trans-1,3-Dichloropropene	50	44		1	88	7.3	70-124	20	11/18/2009 1208
cis-1,3-Dichloropropene	50	46		1	92	6.3	70-126	20	11/18/2009 1208
Ethylbenzene	50	42		1	85	2.3	59-128	20	11/18/2009 1208
2-Hexanone	100	80		1	80	20	54-137	20	11/18/2009 1208
Isopropylbenzene	50	41		1	82	2.0	50-136	20	11/18/2009 1208
Methyl acetate	50	49	+	1	98	25	59-137	20	11/18/2009 1208
Methyl tertiary butyl ether (MTBE)	50	47		1	94	10	72-122	20	11/18/2009 1208
4-Methyl-2-pentanone	100	85		1	85	18	60-134	20	11/18/2009 1208
Methylcyclohexane	50	44		1	88	1.2	41-144	20	11/18/2009 1208
Methylene chloride	50	45		1	89	5.7	77-129	20	11/18/2009 1208
Styrene	50	44		1	89	4.7	54-136	20	11/18/2009 1208
1,1,2,2-Tetrachloroethane	50	38		1	75	15	69-132	20	11/18/2009 1208
Tetrachloroethene	50	41		1	82	3.5	70-130	20	11/18/2009 1208
Toluene	50	45		1	91	2.7	61-129	20	11/18/2009 1208
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	86	2.0	49-136	20	11/18/2009 1208
1,2,4-Trichlorobenzene	50	35		1	71	1.2	34-145	20	11/18/2009 1208
1,1,2-Trichloroethane	50	41		1	81	10	55-128	20	11/18/2009 1208
1,1,1-Trichloroethane	50	46		1	93	4.3	63-128	20	11/18/2009 1208

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22080-003

Matrix: Solid

Batch: 22080

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	44		1	88	4.7	62-126	20	11/18/2009 1208
Trichlorofluoromethane	50	50		1	99	4.4	45-138	20	11/18/2009 1208
Vinyl chloride	50	53		1	106	3.3	42-132	20	11/18/2009 1208
Xylenes (total)	100	86		1	86	3.7	58-128	20	11/18/2009 1208
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		78	47-138						
1,2-Dichloroethane-d4		71	53-142						
Toluene-d8		79	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ21368-001

Batch: 21368

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/11/2009 1404

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	67	10	ug/kg	11/12/2009 1952
2,4,5-Trichlorophenol	ND		1	67	9.3	ug/kg	11/12/2009 1952
2,4,6-Trichlorophenol	ND		1	67	9.8	ug/kg	11/12/2009 1952
2,4-Dichlorophenol	ND		1	67	10	ug/kg	11/12/2009 1952
2,4-Dimethylphenol	ND		1	67	12	ug/kg	11/12/2009 1952
2,4-Dinitrophenol	ND		1	330	110	ug/kg	11/12/2009 1952
2,4-Dinitrotoluene	ND		1	130	18	ug/kg	11/12/2009 1952
2,6-Dinitrotoluene	ND		1	130	17	ug/kg	11/12/2009 1952
2-Chloronaphthalene	ND		1	67	11	ug/kg	11/12/2009 1952
2-Chlorophenol	ND		1	67	9.2	ug/kg	11/12/2009 1952
2-Methylnaphthalene	ND		1	67	9.9	ug/kg	11/12/2009 1952
2-Methylphenol	ND		1	67	6.0	ug/kg	11/12/2009 1952
2-Nitroaniline	ND		1	130	23	ug/kg	11/12/2009 1952
2-Nitrophenol	ND		1	130	18	ug/kg	11/12/2009 1952
3 & 4-Methylphenol	ND		1	130	12	ug/kg	11/12/2009 1952
3,3'-Dichlorobenzidine	ND		1	330	36	ug/kg	11/12/2009 1952
3-Nitroaniline	ND		1	130	39	ug/kg	11/12/2009 1952
4,6-Dinitro-2-methylphenol	ND		1	330	130	ug/kg	11/12/2009 1952
4-Bromophenyl phenyl ether	ND		1	67	9.8	ug/kg	11/12/2009 1952
4-Chloro-3-methyl phenol	ND		1	67	8.4	ug/kg	11/12/2009 1952
4-Chloroaniline	ND		1	67	6.8	ug/kg	11/12/2009 1952
4-Chlorophenyl phenyl ether	ND		1	67	11	ug/kg	11/12/2009 1952
4-Nitroaniline	ND		1	130	19	ug/kg	11/12/2009 1952
4-Nitrophenol	ND		1	330	96	ug/kg	11/12/2009 1952
Acenaphthene	ND		1	67	11	ug/kg	11/12/2009 1952
Acenaphthylene	ND		1	67	10	ug/kg	11/12/2009 1952
Acetophenone	ND		1	67	18	ug/kg	11/12/2009 1952
Anthracene	ND		1	67	7.4	ug/kg	11/12/2009 1952
Atrazine	ND		1	67	17	ug/kg	11/12/2009 1952
Benzaldehyde	ND		1	67	17	ug/kg	11/12/2009 1952
Benzo(a)anthracene	ND		1	67	8.8	ug/kg	11/12/2009 1952
Benzo(a)pyrene	ND		1	67	9.3	ug/kg	11/12/2009 1952
Benzo(b)fluoranthene	ND		1	67	9.6	ug/kg	11/12/2009 1952
Benzo(g,h,i)perylene	ND		1	67	12	ug/kg	11/12/2009 1952
Benzo(k)fluoranthene	ND		1	67	9.5	ug/kg	11/12/2009 1952
bis(2-Chloroethoxy)methane	ND		1	67	10	ug/kg	11/12/2009 1952
bis(2-Chloroethyl)ether	ND		1	67	9.2	ug/kg	11/12/2009 1952
bis(2-Chloroisopropyl)ether	ND		1	67	11	ug/kg	11/12/2009 1952
bis(2-Ethylhexyl)phthalate	ND		1	67	22	ug/kg	11/12/2009 1952
Butyl benzyl phthalate	ND		1	130	44	ug/kg	11/12/2009 1952
Caprolactam	ND		1	67	17	ug/kg	11/12/2009 1952
Carbazole	ND		1	67	14	ug/kg	11/12/2009 1952
Chrysene	ND		1	67	11	ug/kg	11/12/2009 1952
Di-n-butyl phthalate	ND		1	67	22	ug/kg	11/12/2009 1952

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ21368-001

Matrix: Solid

Batch: 21368

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/11/2009 1404

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	67	32	ug/kg	11/12/2009 1952
Dibenzo(a,h)anthracene	ND		1	67	9.1	ug/kg	11/12/2009 1952
Dibenzofuran	ND		1	67	10	ug/kg	11/12/2009 1952
Diethylphthalate	ND		1	67	22	ug/kg	11/12/2009 1952
Dimethyl phthalate	ND		1	67	22	ug/kg	11/12/2009 1952
Fluoranthene	ND		1	67	11	ug/kg	11/12/2009 1952
Fluorene	ND		1	67	9.0	ug/kg	11/12/2009 1952
Hexachlorobenzene	ND		1	67	15	ug/kg	11/12/2009 1952
Hexachlorobutadiene	ND		1	67	11	ug/kg	11/12/2009 1952
Hexachlorocyclopentadiene	ND		1	330	25	ug/kg	11/12/2009 1952
Hexachloroethane	ND		1	67	8.9	ug/kg	11/12/2009 1952
Indeno(1,2,3-c,d)pyrene	ND		1	67	9.7	ug/kg	11/12/2009 1952
Isophorone	ND		1	67	7.4	ug/kg	11/12/2009 1952
N-Nitrosodi-n-propylamine	ND		1	67	13	ug/kg	11/12/2009 1952
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	8.3	ug/kg	11/12/2009 1952
Naphthalene	ND		1	67	10	ug/kg	11/12/2009 1952
Nitrobenzene	ND		1	67	5.4	ug/kg	11/12/2009 1952
Pentachlorophenol	ND		1	330	140	ug/kg	11/12/2009 1952
Phenanthrene	ND		1	67	9.0	ug/kg	11/12/2009 1952
Phenol	ND		1	67	9.1	ug/kg	11/12/2009 1952
Pyrene	ND		1	67	13	ug/kg	11/12/2009 1952

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		53	30-117
2-Fluorobiphenyl		53	33-102
2-Fluorophenol		53	28-104
Nitrobenzene-d5		52	22-109
Phenol-d5		56	27-103
Terphenyl-d14		72	41-120

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21368-002

Matrix: Solid

Batch: 21368

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/11/2009 1404

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	1300	990		1	74	30-130	11/12/2009 2011
2,4,6-Trichlorophenol	1300	900		1	67	30-130	11/12/2009 2011
2,4-Dichlorophenol	1300	880		1	66	30-130	11/12/2009 2011
2,4-Dimethylphenol	1300	880		1	66	30-130	11/12/2009 2011
2,4-Dinitrophenol	6700	4900		1	74	30-130	11/12/2009 2011
2,4-Dinitrotoluene	2700	2200		1	83	30-130	11/12/2009 2011
2,6-Dinitrotoluene	2700	2100		1	79	30-130	11/12/2009 2011
2-Chloronaphthalene	1300	870		1	66	30-130	11/12/2009 2011
2-Chlorophenol	1300	770		1	58	30-130	11/12/2009 2011
2-Methylnaphthalene	1300	820		1	61	30-130	11/12/2009 2011
2-Methylphenol	1300	1200		1	87	30-130	11/12/2009 2011
2-Nitroaniline	2700	2000		1	76	30-130	11/12/2009 2011
2-Nitrophenol	2700	1600		1	61	30-130	11/12/2009 2011
3 & 4-Methylphenol	2700	1700		1	64	30-130	11/12/2009 2011
3-Nitroaniline	2700	1900		1	70	30-130	11/12/2009 2011
4,6-Dinitro-2-methylphenol	6700	5700		1	85	30-130	11/12/2009 2011
4-Bromophenyl phenyl ether	1300	1100		1	79	30-130	11/12/2009 2011
4-Chloro-3-methyl phenol	1300	990		1	74	30-130	11/12/2009 2011
4-Chloroaniline	1300	450		1	34	10-130	11/12/2009 2011
4-Chlorophenyl phenyl ether	1300	1000		1	76	30-130	11/12/2009 2011
4-Nitroaniline	2700	2200		1	84	30-130	11/12/2009 2011
4-Nitrophenol	6700	4700		1	71	30-130	11/12/2009 2011
Acenaphthene	1300	960		1	72	30-130	11/12/2009 2011
Acenaphthylene	1300	870		1	65	30-130	11/12/2009 2011
Anthracene	1300	1100		1	81	30-130	11/12/2009 2011
Benzo(a)anthracene	1300	1100		1	81	30-130	11/12/2009 2011
Benzo(a)pyrene	1300	1400		1	105	30-130	11/12/2009 2011
Benzo(b)fluoranthene	1300	1200		1	90	30-130	11/12/2009 2011
Benzo(g,h,i)perylene	1300	1100		1	80	30-130	11/12/2009 2011
Benzo(k)fluoranthene	1300	1300		1	96	30-130	11/12/2009 2011
bis(2-Chloroethoxy)methane	1300	820		1	61	30-130	11/12/2009 2011
bis(2-Chloroethyl)ether	1300	710		1	53	30-130	11/12/2009 2011
bis(2-Chloroisopropyl)ether	1300	720		1	54	30-130	11/12/2009 2011
bis(2-Ethylhexyl)phthalate	1300	1200		1	93	30-130	11/12/2009 2011
Butyl benzyl phthalate	1300	1200		1	93	30-130	11/12/2009 2011
Carbazole	1300	1200		1	88	30-130	11/12/2009 2011
Chrysene	1300	1200		1	89	30-130	11/12/2009 2011
Di-n-butyl phthalate	1300	1200		1	88	30-130	11/12/2009 2011
Di-n-octylphthalate	1300	1500		1	109	30-130	11/12/2009 2011
Dibenzo(a,h)anthracene	1300	1100		1	82	30-130	11/12/2009 2011
Dibenzofuran	1300	960		1	72	30-130	11/12/2009 2011
Diethylphthalate	1300	1100		1	84	30-130	11/12/2009 2011
Dimethyl phthalate	1300	1000		1	77	30-130	11/12/2009 2011
Fluoranthene	1300	1100		1	84	30-130	11/12/2009 2011

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21368-002

Matrix: Solid

Batch: 21368

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/11/2009 1404

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	1300	1000		1	77	30-130	11/12/2009 2011
Hexachlorobenzene	1300	1100		1	80	30-130	11/12/2009 2011
Hexachlorobutadiene	1300	750		1	56	30-130	11/12/2009 2011
Hexachlorocyclopentadiene	6700	3800		1	57	30-130	11/12/2009 2011
Hexachloroethane	1300	710		1	53	30-130	11/12/2009 2011
Indeno(1,2,3-c,d)pyrene	1300	1100		1	83	30-130	11/12/2009 2011
N-Nitrosodiphenylamine (Diphenylamine)	1300	1100		1	83	30-130	11/12/2009 2011
Naphthalene	1300	760		1	57	30-130	11/12/2009 2011
Nitrobenzene	1300	830		1	62	30-130	11/12/2009 2011
Pentachlorophenol	6700	5200		1	78	30-130	11/12/2009 2011
Phenanthrene	1300	1100		1	81	30-130	11/12/2009 2011
Phenol	1300	810		1	61	30-130	11/12/2009 2011
Pyrene	1300	1200		1	87	30-130	11/12/2009 2011
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		87	30-117				
2-Fluorobiphenyl		67	33-102				
2-Fluorophenol		60	28-104				
Nitrobenzene-d5		63	22-109				
Phenol-d5		65	27-103				
Terphenyl-d14		81	41-120				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KK07010-003MS

Batch: 21368

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/11/2009 1404

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	1600	930		1	57	30-130	11/25/2009 1511
Acenaphthylene	ND	1600	890		1	55	30-130	11/25/2009 1511
Anthracene	ND	1600	1100		1	69	30-130	11/25/2009 1511
Benzo(a)anthracene	ND	1600	1200		1	71	30-130	11/25/2009 1511
Benzo(a)pyrene	ND	1600	1500		1	91	30-130	11/25/2009 1511
Benzo(b)fluoranthene	ND	1600	1100		1	70	30-130	11/25/2009 1511
Benzo(g,h,i)perylene	ND	1600	1300		1	77	30-130	11/25/2009 1511
Benzo(k)fluoranthene	ND	1600	1300		1	77	30-130	11/25/2009 1511
4-Bromophenyl phenyl ether	ND	1600	1100		1	68	30-130	11/25/2009 1511
Butyl benzyl phthalate	ND	1600	1300		1	80	30-130	11/25/2009 1511
Carbazole	ND	1600	1200		1	76	30-130	11/25/2009 1511
4-Chloro-3-methyl phenol	ND	1600	1000		1	62	30-130	11/25/2009 1511
4-Chloroaniline	ND	1600	410		1	25	10-130	11/25/2009 1511
bis(2-Chloroethoxy)methane	ND	1600	800		1	49	30-130	11/25/2009 1511
bis(2-Chloroethyl)ether	ND	1600	690		1	42	30-130	11/25/2009 1511
bis(2-Chloroisopropyl)ether	ND	1600	690		1	42	30-130	11/25/2009 1511
2-Chloronaphthalene	ND	1600	830		1	51	30-130	11/25/2009 1511
2-Chlorophenol	ND	1600	770		1	47	30-130	11/25/2009 1511
4-Chlorophenyl phenyl ether	ND	1600	1000		1	63	30-130	11/25/2009 1511
Chrysene	ND	1600	1200		1	75	30-130	11/25/2009 1511
Dibenzo(a,h)anthracene	ND	1600	1200		1	75	30-130	11/25/2009 1511
Dibenzofuran	ND	1600	950		1	58	30-130	11/25/2009 1511
2,4-Dichlorophenol	ND	1600	870		1	53	30-130	11/25/2009 1511
Diethylphthalate	ND	1600	1200		1	71	30-130	11/25/2009 1511
Dimethyl phthalate	ND	1600	1100		1	67	30-130	11/25/2009 1511
2,4-Dimethylphenol	ND	1600	830		1	51	30-130	11/25/2009 1511
Di-n-butyl phthalate	ND	1600	1300		1	82	30-130	11/25/2009 1511
4,6-Dinitro-2-methylphenol	ND	8200	5900		1	72	30-130	11/25/2009 1511
2,4-Dinitrophenol	ND	8200	4100		1	51	30-130	11/25/2009 1511
2,4-Dinitrotoluene	ND	3300	2400		1	72	30-130	11/25/2009 1511
2,6-Dinitrotoluene	ND	3300	2200		1	68	30-130	11/25/2009 1511
Di-n-octylphthalate	ND	1600	1200		1	75	30-130	11/25/2009 1511
bis(2-Ethylhexyl)phthalate	ND	1600	1300		1	82	30-130	11/25/2009 1511
Fluoranthene	ND	1600	1200		1	74	30-130	11/25/2009 1511
Fluorene	ND	1600	1000		1	63	30-130	11/25/2009 1511
Hexachlorobenzene	ND	1600	1100		1	67	30-130	11/25/2009 1511
Hexachlorobutadiene	ND	1600	700		1	43	30-130	11/25/2009 1511
Hexachlorocyclopentadiene	ND	8200	3300		1	40	30-130	11/25/2009 1511
Hexachloroethane	ND	1600	660		1	40	30-130	11/25/2009 1511
Indeno(1,2,3-c,d)pyrene	ND	1600	1300		1	77	30-130	11/25/2009 1511
2-Methylnaphthalene	ND	1600	770		1	47	30-130	11/25/2009 1511
2-Methylphenol	ND	1600	1100		1	67	30-130	11/25/2009 1511
3 & 4-Methylphenol	ND	3300	1600		1	48	30-130	11/25/2009 1511
Naphthalene	ND	1600	730		1	44	30-130	11/25/2009 1511

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KK07010-003MS

Matrix: Solid

Batch: 21368

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/11/2009 1404

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2-Nitroaniline	ND	3300	2200		1	66	30-130	11/25/2009 1511
3-Nitroaniline	ND	3300	2100		1	63	30-130	11/25/2009 1511
4-Nitroaniline	ND	3300	2300		1	71	30-130	11/25/2009 1511
Nitrobenzene	ND	1600	760		1	47	30-130	11/25/2009 1511
2-Nitrophenol	ND	3300	1500		1	46	30-130	11/25/2009 1511
4-Nitrophenol	ND	8200	5400		1	66	30-130	11/25/2009 1511
N-Nitrosodiphenylamine (Diphenylamine)	ND	1600	1200		1	73	30-130	11/25/2009 1511
Pentachlorophenol	ND	8200	5500		1	67	30-130	11/25/2009 1511
Phenanthrene	ND	1600	1100		1	68	30-130	11/25/2009 1511
Phenol	ND	1600	810		1	49	30-130	11/25/2009 1511
Pyrene	ND	1600	1200		1	72	30-130	11/25/2009 1511
2,4,5-Trichlorophenol	ND	1600	1100		1	65	30-130	11/25/2009 1511
2,4,6-Trichlorophenol	ND	1600	950		1	58	30-130	11/25/2009 1511
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		52	33-102					
2-Fluorophenol		49	28-104					
Nitrobenzene-d5		49	22-109					
Phenol-d5		54	27-103					
Terphenyl-d14		66	41-120					
2,4,6-Tribromophenol		77	30-117					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KK07010-003MD

Batch: 21368

Analytical Method: 8270D

Matrix: Solid

Prep Method: 3550C

Prep Date: 11/11/2009 1404

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	1600	1100	1		67	17	30-130	20	11/25/2009 1531
Acenaphthylene	ND	1600	1000	1		63	14	30-130	20	11/25/2009 1531
Anthracene	ND	1600	1300	1		82	19	30-130	20	11/25/2009 1531
Benzo(a)anthracene	ND	1600	1400	1		85	17	30-130	20	11/25/2009 1531
Benzo(a)pyrene	ND	1600	1800	1		107	16	30-130	20	11/25/2009 1531
Benzo(b)fluoranthene	ND	1600	1300	1		81	14	30-130	20	11/25/2009 1531
Benzo(g,h,i)perylene	ND	1600	1400	1		87	11	30-130	20	11/25/2009 1531
Benzo(k)fluoranthene	ND	1600	1500	1		94	19	30-130	20	11/25/2009 1531
4-Bromophenyl phenyl ether	ND	1600	1300	1		81	18	30-130	20	11/25/2009 1531
Butyl benzyl phthalate	ND	1600	1600	1		95	17	30-130	20	11/25/2009 1531
Carbazole	ND	1600	1400	1		88	14	30-130	20	11/25/2009 1531
4-Chloro-3-methyl phenol	ND	1600	1200	1		72	15	30-130	20	11/25/2009 1531
4-Chloroaniline	ND	1600	510	1		31	22	10-130	40	11/25/2009 1531
bis(2-Chloroethoxy)methane	ND	1600	910	1		55	13	30-130	20	11/25/2009 1531
bis(2-Chloroethyl)ether	ND	1600	790	1		48	13	30-130	20	11/25/2009 1531
bis(2-Chloroisopropyl)ether	ND	1600	770	1		47	11	30-130	20	11/25/2009 1531
2-Chloronaphthalene	ND	1600	970	1		59	15	30-130	20	11/25/2009 1531
2-Chlorophenol	ND	1600	870	1		53	12	30-130	20	11/25/2009 1531
4-Chlorophenyl phenyl ether	ND	1600	1200	1		74	16	30-130	20	11/25/2009 1531
Chrysene	ND	1600	1400	1		86	14	30-130	20	11/25/2009 1531
Dibenzo(a,h)anthracene	ND	1600	1400	1		87	15	30-130	20	11/25/2009 1531
Dibenzofuran	ND	1600	1100	1		69	17	30-130	20	11/25/2009 1531
2,4-Dichlorophenol	ND	1600	1000	1		62	15	30-130	20	11/25/2009 1531
Diethylphthalate	ND	1600	1300	1		80	12	30-130	20	11/25/2009 1531
Dimethyl phthalate	ND	1600	1300	1		77	13	30-130	20	11/25/2009 1531
2,4-Dimethylphenol	ND	1600	950	1		58	14	30-130	20	11/25/2009 1531
Di-n-butyl phthalate	ND	1600	1500	1		94	13	30-130	20	11/25/2009 1531
4,6-Dinitro-2-methylphenol	ND	8200	6400	1		78	8.7	30-130	20	11/25/2009 1531
2,4-Dinitrophenol	ND	8200	4000	1		49	3.3	30-130	20	11/25/2009 1531
2,4-Dinitrotoluene	ND	3300	2600	1		79	9.0	30-130	20	11/25/2009 1531
2,6-Dinitrotoluene	ND	3300	2600	1		78	14	30-130	20	11/25/2009 1531
Di-n-octylphthalate	ND	1600	1400	1		87	14	30-130	20	11/25/2009 1531
bis(2-Ethylhexyl)phthalate	ND	1600	1600	1		96	16	30-130	20	11/25/2009 1531
Fluoranthene	ND	1600	1400	1		86	15	30-130	20	11/25/2009 1531
Fluorene	ND	1600	1200	1		74	16	30-130	20	11/25/2009 1531
Hexachlorobenzene	ND	1600	1300	1		80	18	30-130	20	11/25/2009 1531
Hexachlorobutadiene	ND	1600	800	1		49	13	30-130	20	11/25/2009 1531
Hexachlorocyclopentadiene	ND	8200	4000	1		48	18	30-130	20	11/25/2009 1531
Hexachloroethane	ND	1600	750	1		46	13	30-130	20	11/25/2009 1531
Indeno(1,2,3-c,d)pyrene	ND	1600	1500	1		89	14	30-130	20	11/25/2009 1531
2-Methylnaphthalene	ND	1600	860	1		53	11	30-130	20	11/25/2009 1531
2-Methylphenol	ND	1600	1100	1		69	3.3	30-130	20	11/25/2009 1531
3 & 4-Methylphenol	ND	3300	1800	1		55	14	30-130	20	11/25/2009 1531
Naphthalene	ND	1600	810	1		49	11	30-130	20	11/25/2009 1531

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KK07010-003MD

Matrix: Solid

Batch: 21368

Prep Method: 3550C

Analytical Method: 8270D

Prep Date: 11/11/2009 1404

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
2-Nitroaniline	ND	3300	2500	1		77	16	30-130	20	11/25/2009 1531
3-Nitroaniline	ND	3300	2300	1		72	13	30-130	20	11/25/2009 1531
4-Nitroaniline	ND	3300	2600	1		78	9.8	30-130	20	11/25/2009 1531
Nitrobenzene	ND	1600	850	1		52	11	30-130	20	11/25/2009 1531
2-Nitrophenol	ND	3300	1700	1		52	13	30-130	20	11/25/2009 1531
4-Nitrophenol	ND	8200	6100	1		74	12	30-130	20	11/25/2009 1531
N-Nitrosodiphenylamine (Diphenylamine)	ND	1600	1400	1		85	16	30-130	20	11/25/2009 1531
Pentachlorophenol	ND	8200	6500	1		79	16	30-130	20	11/25/2009 1531
Phenanthrene	ND	1600	1300	1		81	17	30-130	20	11/25/2009 1531
Phenol	ND	1600	960	1		59	17	30-130	20	11/25/2009 1531
Pyrene	ND	1600	1400	1		86	18	30-130	20	11/25/2009 1531
2,4,5-Trichlorophenol	ND	1600	1300	1		80	20	30-130	20	11/25/2009 1531
2,4,6-Trichlorophenol	ND	1600	1100	1		70	19	30-130	20	11/25/2009 1531

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		56	33-102
2-Fluorophenol		58	28-104
Nitrobenzene-d5		50	22-109
Phenol-d5		59	27-103
Terphenyl-d14		72	41-120
2,4,6-Tribromophenol		85	30-117

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Pesticides - MB

Sample ID: KQ21616-001

Matrix: Solid

Batch: 21616

Prep Method: 1311/3520C

Analytical Method: 8081B

Prep Date: 11/13/2009 6

Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Chlordane	0.00	J	1	0.0025	0.00	mg/L	11/17/2009 2229
Endrin	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
gamma-BHC (Lindane)	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Heptachlor	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Heptachlor epoxide	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Methoxychlor	0.00	J	1	0.0020	0.00	mg/L	11/17/2009 2229
Toxaphene	0.00	J	1	0.0050	0.00	mg/L	11/17/2009 2229
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	49-124				
Tetrachloro-m-xylene		90	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# TCLP Pesticides - LCS

Sample ID: KQ21616-002

Matrix: Solid

Batch: 21616

Prep Method: 1311/3520C

Analytical Method: 8081B

Prep Date: 11/13/2009 6

Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Endrin	0.0080	0.010		1	129	70-130	11/17/2009 2244
gamma-BHC (Lindane)	0.0080	0.0097		1	121	70-130	11/17/2009 2244
Heptachlor	0.0080	0.0091		1	114	70-130	11/17/2009 2244
Heptachlor epoxide	0.0080	0.0087		1	109	70-130	11/17/2009 2244
Methoxychlor	0.0080	0.0088		1	110	70-130	11/17/2009 2244
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		82	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Organochlorine Pesticides by GC - MB

Sample ID: KQ21759-001

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	1.7	0.25	ug/kg	11/17/2009 1507
4,4'-DDE	ND		1	1.7	0.32	ug/kg	11/17/2009 1507
4,4'-DDT	ND		1	1.7	0.28	ug/kg	11/17/2009 1507
Aldrin	ND		1	1.7	0.34	ug/kg	11/17/2009 1507
alpha-BHC	ND		1	1.7	0.39	ug/kg	11/17/2009 1507
alpha-Chlordane	ND		1	1.7	0.29	ug/kg	11/17/2009 1507
beta-BHC	ND		1	1.7	0.30	ug/kg	11/17/2009 1507
delta-BHC	ND		1	1.7	0.32	ug/kg	11/17/2009 1507
Dieldrin	ND		1	1.7	0.33	ug/kg	11/17/2009 1507
Endosulfan I	ND		1	1.7	0.34	ug/kg	11/17/2009 1507
Endosulfan II	ND		1	1.7	0.25	ug/kg	11/17/2009 1507
Endosulfan sulfate	ND		1	1.7	0.23	ug/kg	11/17/2009 1507
Endrin	ND		1	1.7	0.33	ug/kg	11/17/2009 1507
Endrin aldehyde	ND		1	1.7	0.30	ug/kg	11/17/2009 1507
Endrin ketone	ND		1	1.7	0.22	ug/kg	11/17/2009 1507
gamma-BHC (Lindane)	ND		1	1.7	0.36	ug/kg	11/17/2009 1507
gamma-Chlordane	ND		1	1.7	0.24	ug/kg	11/17/2009 1507
Heptachlor	ND		1	1.7	0.39	ug/kg	11/17/2009 1507
Heptachlor epoxide	ND		1	1.7	0.31	ug/kg	11/17/2009 1507
Methoxychlor	ND		1	6.7	1.3	ug/kg	11/17/2009 1507
Toxaphene	ND		1	83	9.1	ug/kg	11/17/2009 1507
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		100	58-123				
Tetrachloro-m-xylene		89	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Organochlorine Pesticides by GC - LCS

Sample ID: KQ21759-002

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	17	20		1	116	50-130	11/17/2009 1523
4,4'-DDE	17	17		1	98	50-130	11/17/2009 1523
4,4'-DDT	17	20		1	115	50-130	11/17/2009 1523
Aldrin	17	17		1	99	50-130	11/17/2009 1523
alpha-BHC	17	19		1	115	50-130	11/17/2009 1523
alpha-Chlordane	17	17		1	97	50-130	11/17/2009 1523
beta-BHC	17	18		1	103	50-130	11/17/2009 1523
delta-BHC	17	20		1	117	50-130	11/17/2009 1523
Dieldrin	17	18		1	105	50-130	11/17/2009 1523
Endosulfan I	17	17		1	101	50-130	11/17/2009 1523
Endosulfan II	17	19		1	113	50-130	11/17/2009 1523
Endosulfan sulfate	17	18		1	104	50-130	11/17/2009 1523
Endrin	17	19		1	111	50-130	11/17/2009 1523
Endrin aldehyde	17	17		1	103	50-130	11/17/2009 1523
Endrin ketone	17	20		1	119	50-130	11/17/2009 1523
gamma-BHC (Lindane)	17	21		1	121	50-130	11/17/2009 1523
gamma-Chlordane	17	17		1	100	50-130	11/17/2009 1523
Heptachlor	17	18		1	106	50-130	11/17/2009 1523
Heptachlor epoxide	17	18		1	106	50-130	11/17/2009 1523
Methoxychlor	17	16		1	96	50-130	11/17/2009 1523
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		106	58-123				
Tetrachloro-m-xylene		94	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Organochlorine Pesticides by GC - MS

Sample ID: KK07010-006MS

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aldrin	ND	18	14		1	76	50-130	11/18/2009 1802
alpha-BHC	ND	18	15		1	85	50-130	11/18/2009 1802
beta-BHC	ND	18	14		1	80	50-130	11/18/2009 1802
delta-BHC	ND	18	16		1	88	50-130	11/18/2009 1802
gamma-BHC (Lindane)	ND	18	16		1	90	50-130	11/18/2009 1802
alpha-Chlordane	ND	18	14		1	79	50-130	11/18/2009 1802
gamma-Chlordane	ND	18	15		1	83	50-130	11/18/2009 1802
4,4'-DDD	ND	18	17		1	97	50-130	11/18/2009 1802
4,4'-DDE	ND	18	14		1	81	50-130	11/18/2009 1802
4,4'-DDT	ND	18	18		1	100	50-130	11/18/2009 1802
Dieldrin	ND	18	16		1	89	50-130	11/18/2009 1802
Endosulfan I	ND	18	15		1	82	50-130	11/18/2009 1802
Endosulfan II	ND	18	17		1	94	50-130	11/18/2009 1802
Endosulfan sulfate	ND	18	15		1	85	50-130	11/18/2009 1802
Endrin	ND	18	17		1	94	50-130	11/18/2009 1802
Endrin aldehyde	ND	18	15		1	83	50-130	11/18/2009 1802
Endrin ketone	ND	18	15		1	83	50-130	11/18/2009 1802
Heptachlor	ND	18	15		1	82	50-130	11/18/2009 1802
Heptachlor epoxide	ND	18	15		1	85	50-130	11/18/2009 1802
Methoxychlor	ND	18	16		1	88	50-130	11/18/2009 1802
Surrogate	Q	% Rec	Acceptance Limit					
Decachlorobiphenyl		92	58-123					
Tetrachloro-m-xylene		65	51-103					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Organochlorine Pesticides by GC - MSD

Sample ID: KK07010-006MD

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Aldrin	ND	18	16		1	89	17	50-130	30	11/18/2009 1817	
alpha-BHC	ND	18	18		1	101	18	50-130	30	11/18/2009 1817	
beta-BHC	ND	18	17		1	94	17	50-130	30	11/18/2009 1817	
delta-BHC	ND	18	19		1	104	17	50-130	30	11/18/2009 1817	
gamma-BHC (Lindane)	ND	18	19		1	108	18	50-130	30	11/18/2009 1817	
alpha-Chlordane	ND	18	17		1	92	15	50-130	30	11/18/2009 1817	
gamma-Chlordane	ND	18	17		1	95	15	50-130	30	11/18/2009 1817	
4,4'-DDD	ND	18	20		1	112	15	50-130	30	11/18/2009 1817	
4,4'-DDE	ND	18	17		1	93	15	50-130	30	11/18/2009 1817	
4,4'-DDT	ND	18	21		1	116	16	50-130	30	11/18/2009 1817	
Dieldrin	ND	18	19		1	105	18	50-130	30	11/18/2009 1817	
Endosulfan I	ND	18	17		1	95	15	50-130	30	11/18/2009 1817	
Endosulfan II	ND	18	20		1	109	16	50-130	30	11/18/2009 1817	
Endosulfan sulfate	ND	18	18		1	99	17	50-130	30	11/18/2009 1817	
Endrin	ND	18	20		1	109	15	50-130	30	11/18/2009 1817	
Endrin aldehyde	ND	18	18	+	1	100	200	50-130	30	11/18/2009 1817	
Endrin ketone	ND	18	17		1	96	15	50-130	30	11/18/2009 1817	
Heptachlor	ND	18	18		1	99	19	50-130	30	11/18/2009 1817	
Heptachlor epoxide	ND	18	18		1	99	16	50-130	30	11/18/2009 1817	
Methoxychlor	ND	18	19		1	104	18	50-130	30	11/18/2009 1817	
Surrogate	Q	% Rec	Acceptance Limit								
Decachlorobiphenyl		103	58-123								
Tetrachloro-m-xylene		79	51-103								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# RCRA Metals - MB

Sample ID: KQ21329-001

Batch: 21329

Analytical Method: 6010C

Matrix: Solid

Prep Method: 3050B

Prep Date: 11/11/2009 2021

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.50	0.19	mg/kg	11/12/2009 1654
Barium	ND		1	1.3	0.091	mg/kg	11/12/2009 1654
Cadmium	ND		1	0.10	0.011	mg/kg	11/12/2009 1654
Lead	ND		1	0.50	0.093	mg/kg	11/12/2009 1654
Selenium	ND		1	0.50	0.17	mg/kg	11/12/2009 1654
Silver	ND		1	0.25	0.042	mg/kg	11/12/2009 1654

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# RCRA Metals - LCS

Sample ID: KQ21329-002

Batch: 21329

Analytical Method: 6010C

Matrix: Solid

Prep Method: 3050B

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	250	260		1	106	80-120	11/12/2009 1700
Barium	500	500		1	100	80-120	11/12/2009 1700
Cadmium	50	51		1	102	80-120	11/12/2009 1700
Lead	250	260		1	106	80-120	11/12/2009 1700
Selenium	50	52		1	105	80-120	11/12/2009 1700
Silver	250	270		1	107	80-120	11/12/2009 1700

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# RCRA Metals - LCSD

Sample ID: KQ21329-003

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	250	270		1	107	1.6	80-120	20	11/12/2009 1706
Barium	500	510		1	102	2.2	80-120	20	11/12/2009 1706
Cadmium	50	52		1	104	1.7	80-120	20	11/12/2009 1706
Lead	250	270		1	106	0.77	80-120	20	11/12/2009 1706
Selenium	50	52		1	105	0.14	80-120	20	11/12/2009 1706
Silver	250	270		1	109	1.9	80-120	20	11/12/2009 1706

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# ICP-AES - MB

Sample ID: KQ21329-001

Batch: 21329

Analytical Method: 6010C

Matrix: Solid

Prep Method: 3050B

Prep Date: 11/11/2009 2021

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Chromium	ND		1	0.25	0.051	mg/kg	11/12/2009 1654

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# ICP-AES - LCS

Sample ID: KQ21329-002

Batch: 21329

Analytical Method: 6010C

Matrix: Solid

Prep Method: 3050B

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chromium	250	230		1	93	80-120	11/12/2009 1700

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# ICP-AES - LCSD

Sample ID: KQ21329-003

Batch: 21329

Analytical Method: 6010C

Matrix: Solid

Prep Method: 3050B

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Chromium	250	240		1	95	1.9	80-120	20	11/12/2009 1706

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - MB

Sample ID: KQ21486-001

Batch: 21486

Analytical Method: 6010C

Matrix: Solid

Prep Method: 1311/3010A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		10	0.10	0.023	mg/L	11/12/2009 1822
Barium	ND		10	0.25	0.023	mg/L	11/12/2009 1822
Cadmium	ND		10	0.020	0.0030	mg/L	11/12/2009 1822
Chromium	ND		10	0.050	0.014	mg/L	11/12/2009 1822
Lead	ND		10	0.10	0.017	mg/L	11/12/2009 1822
Selenium	ND		10	0.10	0.032	mg/L	11/12/2009 1822
Silver	ND		10	0.050	0.0090	mg/L	11/12/2009 1822

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - LCS

Sample ID: KQ21486-002

Matrix: Solid

Batch: 21486

Prep Method: 1311/3010A

Analytical Method: 6010C

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	5.0	5.0		10	101	80-120	11/12/2009 1826
Barium	10	11		10	113	80-120	11/12/2009 1826
Cadmium	1.0	1.1		10	109	80-120	11/12/2009 1826
Chromium	5.0	5.3		10	105	80-120	11/12/2009 1826
Lead	5.0	5.4		10	107	80-120	11/12/2009 1826
Selenium	1.0	1.1		10	107	80-120	11/12/2009 1826
Silver	5.0	5.3		10	106	80-120	11/12/2009 1826

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - LCSD

Sample ID: KQ21486-003

Matrix: Solid

Batch: 21486

Prep Method: 1311/3010A

Analytical Method: 6010C

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	5.0	5.1		10	101	0.79	80-120	20	11/12/2009 1830
Barium	10	11		10	110	2.9	80-120	20	11/12/2009 1830
Cadmium	1.0	1.1		10	109	0.15	80-120	20	11/12/2009 1830
Chromium	5.0	5.2		10	104	1.4	80-120	20	11/12/2009 1830
Lead	5.0	5.3		10	106	1.6	80-120	20	11/12/2009 1830
Selenium	1.0	1.0		10	102	5.3	80-120	20	11/12/2009 1830
Silver	5.0	5.4		10	108	2.0	80-120	20	11/12/2009 1830

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# CVAA - MB

Sample ID: KQ21345-001

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.083	0.0059	mg/kg	11/10/2009 2144

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 114 of 119  
Level 1 Report v2.1

# CVAA - LCS

Sample ID: KQ21345-002

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.86		1	103	85-115	11/10/2009 2146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# CVAA - LCSD

Sample ID: KQ21345-003

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.83	0.87		1	104	0.97	85-115	20	11/10/2009 2148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - MB

Sample ID: KQ21483-001

Batch: 21483

Analytical Method: 7470A

Matrix: Solid

Prep Method: 1311/7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00020	0.000032	mg/L	11/11/2009 2241

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - LCS

Sample ID: KQ21483-002

Batch: 21483

Analytical Method: 7470A

Matrix: Solid

Prep Method: 1311/7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0018		1	91	85-115	11/11/2009 2243

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# TCLP Metals - LCSD

Sample ID: KQ21483-003

Batch: 21483

Analytical Method: 7470A

Matrix: Solid

Prep Method: 1311/7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0020		1	100	9.4	85-115	20	11/11/2009 2251

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# SHEALY ENVIRONMENTAL SERVICES, INC.



## SHEALY Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

**Number 100487**

Client: **ARCADIS**  
 Address: **30 Patwood Dr., Suite 155**  
 City: **Greenville**  
 Project Name: **Ft. Stewart (HAA01)**  
 Project No.: **GPO8HAFS.HOIB**

Telephone No. / Fax No. / E-mail: **(803) 987-3900 / (803) 987-1609**  
 Website No.: **987-3900**  
 Quote No.: **1** of **2**  
 Analysis (Attach list if more than one is selected)

Sample ID / Description <small>(Containers for each sample may be combined on one line.)</small>	Date	Time	Matrix		No. of Containers by Preservative Type						Lot No. <b>KKO7010</b> <small>Remains / Container I.D.</small>	
			Agar	Water	SOB	SOB	SOB	SOB	SOB	SOB		SOB
HA01SB001 (8'-10')	11/3/09	1530	X		2							
HA01SB002 (6'-6.5')		1508	X		1							
HA01SB003 (8'-10')		1440	X		1							
HA01SB004 (2'-4')		1417	X		1							
HA01SB005 (0'-2')		1337	X		1							
HA01MW9 (1'-2')	11/4/09	1505	X		2							
HA01MW9 (9'-10')	11/4/09	1640	X		1							
HA01MW15 (1'-2')	11/5/09	1055	X		2							
HA01MW15 (5'-6')	11/5/09	1135	X		1							

Possible Hazard Identification:  
 Non-Hazard  Flammable  Skin Irritant  Poison  Unknown  
 Tuffy Around / Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify)

Sample Disposal:  Return to Client  Disposal by Lab  
 GC Requirements (Specify):

1. Requisitioned by: **Polyvoj** Date: **11/7/09** Time: **1027**  
 2. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Comments: **LAB USE ONLY**  
 Received on ice (Circle)  Yes  No **100 Pack**  
 Date: **11/2/09** Time: **1027**  
 Heated Temp: **5.6**

DISTRIBUTION: WHITE & YELLOW/Return to laboratory with Samples; PINK-Field/Client Copy  
 Document Number: F-40-012 Effective Date: 08-01-02



# Chain of Custody Record

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

**Number 100320**

Client: **ARCADIS**  
 Address: **30 Patwood Drive, Suite 155**  
 City: **Greenville SC 29615**  
 Project Name: **Ft. Stewart (HAA01)**  
 Project No.: **GP08 HAFS. HO1B**  
 Report to Contact: **Andrew Davis**  
 Sample's Signature: **Bobby Wolf**  
 Printed Name: **Bobby Wolf**  
 Telephone No. / Fax No. / E-mail: **(864) 987-3700 / (864) 987-1609**  
 Quote No. \_\_\_\_\_  
 Analysis (Attach list if more space is needed):  
 Metals  
 TCLP VOC  
 TCLP Metals  
 PH Cont.  
 Page: **2** of **2**

Sample ID / Description (Containers for each sample may be combined on one trip.)	P.O. No.	Date	Time	No. of Containers by Preservative Type							Analysis						
				Aqueous	SR	Aqueous	SR	HC	MSD	MSD							
HA01 MW16 (1'-2')		11/4/09	1100	G	X		2					X					
HA01 MW16 (10'-11')			1142	G	X		1					X					
HA01 MW17 (1'-2')			820	G	X		2					X					
HA01 MW17 (6'-7')			845	G	X		1					X					
H-10 - HAA01			1711	G	X		3					X	X				
H-11 - HAA01		11/5/09	855	G	X		3					X	X				
Trip Blank					X				2								

Passable Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify)  
 1. Relinquished by: **Bobby Wolf** Date: **11/7/09** Time: **1027**  
 2. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Comments:  
 1. Received by: \_\_\_\_\_ Date: **11/7/09** Time: **1027**  
 2. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Laboratory received by: **Bobby Wolf** Date: **11/7/09** Time: **1027**  
 LAB USE ONLY  
 Received on via (Circle):  Trip No. **516**  Pack  
 Note: All samples are retained for six weeks from receipt unless other arrangements are made.  
 GC Requirements (Specify):  
 Sample Disposal:  
 Return to Client  Disposed by Lab  
 Distribution: **WHITE & YELLOW** Return to laboratory with Sample(s); **PINK** Field Client Copy  
 Document Number: F-AD-012 Effective Date: 08-04-02

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 5

Page 1 of 1  
 Replaces Date: 09/22/05  
 Effective Date: 05/25/07

## Sample Receipt Checklist (SRC)

Client: ARCADIS Cooler Inspected by/date: DMP / 11/7/09 Lot #: KK07010

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt: <u>561</u> °C / °C / °C / °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input checked="" type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.			
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.			

DMP 11/7/09

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

Analytical data were evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), analytical method control criteria, the analytical laboratory Quality Assurance Control Limits, the Fort Stewart Military Reservation and Hunter Army Airfield Quality Assurance Project Plan (ARCADIS-2008), and professional judgment.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQUIS Data Qualification Module (DQM). DQM checks for the following parameters:

- √ Holding times and preservation;
- √ Blank contamination;
  - 1. Method blanks,
  - 2. Trip blanks,
  - 3. Equipment blanks;
- √ Matrix spike and Duplicate sample recovery;
- √ Matrix Spike and Matrix Spike Duplicate relative percent differences;
- √ Laboratory Control Sample and Duplicate recovery;
- √ Laboratory Control Sample and Duplicate relative percent differences;
- √ Surrogate recovery (organic analyses only); and
- √ Field duplicate relative percent difference.

Manual review was performed for the following items:

- √ Sample dilutions and reporting limits;
- √ Case Narratives; and
- √ Laboratory Duplicates

Data was generated by Shealy Environmental Services, Inc. – West Columbia, South Carolina. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in these SDGs are considered usable as reported.






HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the above guidance documents:

- UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.
- J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.
- U Not detected at the quantitative reporting limit

DQM RUN BY:	Rachelle Borne	12/28/09
REVIEW PERFORMED BY:	Rachelle Borne	12/28/09
SIGNATURE:		12/31/09
PEER REVIEW:	Dennis Capria	01/04/10



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

The following samples were included in this SDG:

<b>SDG</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Parent Sample</b>
KK07010	H-10-HAA01	11/4/2009	
KK07010	H-11-HAA01	11/5/2009	
KK07010	HA01MW15 (1-2)	11/5/2009	
KK07010	HA01MW15 (5-6)	11/5/2009	
KK07010	HA01MW16 (10-11)	11/4/2009	
KK07010	HA01MW16 (1-2)	11/4/2009	
KK07010	HA01MW17 (1-2)	11/4/2009	
KK07010	HA01MW17 (6-7)	11/4/2009	
KK07010	HA01MW9 (1-2)	11/4/2009	
KK07010	HA01MW9 (9-10)	11/4/2009	
KK07010	HA01SB001 (8-10)	11/3/2009	
KK07010	HA01SB002 (6-6.5)	11/3/2009	
KK07010	HA01SB003 (8-10)	11/3/2009	
KK07010	HA01SB004 (2-4)	11/3/2009	
KK07010	HA01SB005 (0-2)	11/3/2009	
KK07010	TRIP BLANK2(110709)	11/7/2009	



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

ANALYTICAL DATA PACKAGE DOCUMENTATION

**GENERAL INFORMATION**

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	
13. South Carolina Certification Number		X		X	

QA - quality assurance

The analytical report was complete with the following exceptions or notations.

Note: The laboratory reported values between the quantitative reporting limit and the method detection limit as estimated concentrations. The "J" qualifier was retained in this validation. Non-detect values are reported at the quantitative reporting limit.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

**VOLATILE ORGANIC COMPOUNDS and TCLP VOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment blanks	NA		NA	
C. Trip blanks		DQM	DQM	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R		DQM	DQM	
B. LCS duplicate (LCSD) %R		DQM		DQM
C. LCS/LCSD RPD		DQM		DQM
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery RPD - relative percent difference DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8260.

2. Some samples required dilutions due to elevated concentrations of target analytes.
- 3A. Acetone and carbon disulfide were detected in the method blank for batch 21834. The trip blank was the only sample analyzed in this analytical batch; therefore, qualification of the data is not warranted.
- 3C. Acetone and carbon disulfide were detected in the trip blank. The associated field samples were either non-detect or greater than five times the blank value for carbon disulfide or greater than ten times the blank value for acetone. Qualification of the data is not warranted.
5. The recoveries of chloromethane, dichlorodifluoromethane, and vinyl chloride were above the control limit in the LCS and/or the LCSD for batches 21537 and 21538. The associated field samples were non-detect for these compounds; therefore, qualification of the data is not warranted.  
  
The recoveries of 1,2-dibromomethane and 1,1,2,2-tetrachloroethane were below the control limit in the LCS for batch 22080. The RPDs for acetone and methyl acetate were above the control limit. The associated field samples are qualified as estimated for these compounds.
6. H-11-HAA01 was used as the MS for the TCLP fraction. The recoveries were acceptable.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

**SEMIVOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8270D.

3.      Some samples required dilutions due to elevated concentrations of target analytes. There were no elevated reporting limits for non-detect results.
  
6.      HA01SB003(8-10) was used for the MS/MSD. The recoveries and RPDs were acceptable.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

**PESTICIDES and TCLP PESTICIDES**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)		DQM		DQM
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8081.

6. HA01MW9(1-2) was used as the MS/MSD for the pesticide fraction. The RPD for Endrin aldehydes was above the control limit. The parent sample is qualified as estimated for this compound.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07010  
HAA-01**

**METALS and TCLP METALS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
5. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
6. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods 6010C and 7471B.

2.        Some samples required dilutions due to elevated concentrations of metals.

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Ft. Stewart (HAA01)

Project Number: GP08HAFS.H01B

Lot Number: KK07012

Date Completed: 11/19/2009



Nisreen Saikaly  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* KK07012 \*



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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: KK07012

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

## Pesticides

The sample results associated with a P qualifier have a relative percent difference (RPD) between the two dissimilar phase GC columns which exceeds 40%. In accordance with Section 7.10.4 of SW-846 method 8000B, the higher of the two results is reported. Due to disparity of the two results, it is likely that the reported results are biased high, or maybe a false positive.

## pH

As per method the holding time for pH analysis is 15 minutes from collection.

## Volatile Organic Compounds

The LCSD recovery for Chloromethane (Methyl chloride) was outside method control limits in batch 22074. The LCS results were within limits. The RPD for various analytes exceeded method control limits. However, all other QA/QC criteria for the LCS/LCSD were within acceptance criteria and method control limits. Therefore the associated sample results were reported and no corrective action was required.

The MS/MSD recoveries for many analytes in batch 22074 were outside acceptance criteria. All other QA/QC criteria for the batch were within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
ARCADIS U.S., Inc.  
Lot Number: KK07012

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HA01MW14 (1-2)	Solid	11/06/2009 0900	11/07/2009
002	HA01MW14 (3-4)	Solid	11/06/2009 0910	11/07/2009
003	HA01MW12 (1-2)	Solid	11/06/2009 1100	11/07/2009
004	HA01MW12 (3-4)	Solid	11/06/2009 1110	11/07/2009
005	H-13-HAA01	Solid	11/06/2009 1415	11/07/2009
006	H-14-HAA01	Solid	11/06/2009 1425	11/07/2009
007	TRIP BLANK	Aqueous	11/07/2009	11/07/2009

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(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KK07012

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	HA01MW14 (1-2)	Solid	4,4'-DDT	8081B	4.9		ug/kg	7
001	HA01MW14 (1-2)	Solid	Dieldrin	8081B	1.1	JP	ug/kg	7
001	HA01MW14 (1-2)	Solid	Mercury	7471B	0.013	J	mg/kg	8
001	HA01MW14 (1-2)	Solid	Arsenic	6010C	1.7		mg/kg	9
001	HA01MW14 (1-2)	Solid	Barium	6010C	25		mg/kg	9
001	HA01MW14 (1-2)	Solid	Cadmium	6010C	0.020	J	mg/kg	9
001	HA01MW14 (1-2)	Solid	Chromium	6010C	8.6		mg/kg	9
001	HA01MW14 (1-2)	Solid	Lead	6010C	6.8		mg/kg	9
002	HA01MW14 (3-4)	Solid	Mercury	7471B	0.018	J	mg/kg	12
002	HA01MW14 (3-4)	Solid	Arsenic	6010C	0.47	J	mg/kg	13
002	HA01MW14 (3-4)	Solid	Barium	6010C	3.1		mg/kg	13
002	HA01MW14 (3-4)	Solid	Cadmium	6010C	0.025	J	mg/kg	13
002	HA01MW14 (3-4)	Solid	Chromium	6010C	1.4		mg/kg	13
002	HA01MW14 (3-4)	Solid	Lead	6010C	2.0		mg/kg	13
002	HA01MW14 (3-4)	Solid	Silver	6010C	1.1		mg/kg	13
003	HA01MW12 (1-2)	Solid	Acetone	8260B	24	J	ug/kg	14
003	HA01MW12 (1-2)	Solid	Chloromethane (Methyl chloride)	8260B	6.9		ug/kg	14
003	HA01MW12 (1-2)	Solid	Mercury	7471B	0.038	J	mg/kg	17
003	HA01MW12 (1-2)	Solid	Arsenic	6010C	0.47	J	mg/kg	18
003	HA01MW12 (1-2)	Solid	Barium	6010C	4.3		mg/kg	18
003	HA01MW12 (1-2)	Solid	Cadmium	6010C	0.014	J	mg/kg	18
003	HA01MW12 (1-2)	Solid	Chromium	6010C	1.7		mg/kg	18
003	HA01MW12 (1-2)	Solid	Lead	6010C	4.2		mg/kg	18
004	HA01MW12 (3-4)	Solid	1,2-Dichlorobenzene	8260B	2.3	J	ug/kg	19
004	HA01MW12 (3-4)	Solid	2-Hexanone	8260B	1.5	J	ug/kg	19
004	HA01MW12 (3-4)	Solid	Mercury	7471B	0.027	J	mg/kg	21
004	HA01MW12 (3-4)	Solid	Arsenic	6010C	0.48	J	mg/kg	22
004	HA01MW12 (3-4)	Solid	Barium	6010C	6.3		mg/kg	22
004	HA01MW12 (3-4)	Solid	Chromium	6010C	2.2		mg/kg	22
004	HA01MW12 (3-4)	Solid	Lead	6010C	3.2		mg/kg	22
005	H-13-HAA01	Solid	Ignitability (Pensky-Martens Closed-	1010A	>140		° F	23
005	H-13-HAA01	Solid	Barium	6010C	0.094	J	mg/L	26
006	H-14-HAA01	Solid	Ignitability (Pensky-Martens Closed-	1010A	>140		° F	27
006	H-14-HAA01	Solid	Barium	6010C	0.090	J	mg/L	30
007	TRIP BLANK	Aqueous	Acetone	8260B	2.4	BJ	ug/L	31
007	TRIP BLANK	Aqueous	Carbon disulfide	8260B	0.66	B	ug/L	31

(36 detections)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-001
Description: HA01MW14 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 0900	% Solids: 92.5    11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 0131	DLB		22074	4.38

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		25	8.3	ug/kg	1
Benzene	71-43-2	8260B	ND		6.2	1.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.2	0.86	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.2	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		12	3.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.2	1.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.2	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.2	1.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.2	1.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.2	1.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.2	0.83	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.2	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.2	1.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.2	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.2	0.90	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.2	1.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.2	0.94	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.2	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.2	1.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.2	0.84	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.2	1.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	1.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.2	0.99	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.2	0.83	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.2	0.49	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.2	0.75	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.2	3.2	ug/kg	1
Styrene	100-42-5	8260B	ND		6.2	1.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.2	0.58	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.2	2.8	ug/kg	1
Toluene	108-88-3	8260B	ND		6.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.2	2.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.2	1.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.2	0.98	ug/kg	1

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-001
Description: HA01MW14 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 0900	% Solids: 92.5 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 0131	DLB		22074	4.38

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.2	2.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.2	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.2	1.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		6.2	3.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		74	53-142
Bromofluorobenzene		86	47-138
Toluene-d8		93	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-001
Description: HA01MW14 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 0900	% Solids: 92.5 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/19/2009 0337	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.8	0.36	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.8	0.41	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.8	0.32	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.8	0.34	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.8	0.38	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.8	0.31	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.8	0.25	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.8	0.26	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.8	0.34	ug/kg	1
4,4'-DDT	50-29-3	8081B	4.9		1.8	0.29	ug/kg	1
Dieldrin	60-57-1	8081B	1.1	JP	1.8	0.35	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.8	0.36	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.8	0.26	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.8	0.24	ug/kg	1
Endrin	72-20-8	8081B	ND		1.8	0.35	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.8	0.32	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.8	0.23	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.8	0.41	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.8	0.33	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.1	1.4	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		87	9.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		102	58-123
Tetrachloro-m-xylene		82	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-001
Description: HA01MW14 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 0900	% Solids: 92.5    11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2223	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.013	J	0.088	0.0063	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-001
Description: HA01MW14 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 0900	% Solids: 92.5 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1835	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	1.7		0.53	0.20	mg/kg	1
Barium	7440-39-3	6010C	25		1.4	0.096	mg/kg	1
Cadmium	7440-43-9	6010C	0.020	J	0.11	0.011	mg/kg	1
Chromium	7440-47-3	6010C	8.6		0.26	0.054	mg/kg	1
Lead	7439-92-1	6010C	6.8		0.53	0.098	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.53	0.18	mg/kg	1
Silver	7440-22-4	6010C	ND		0.26	0.044	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KK07012-002

Description: HA01MW14 (3-4)

Matrix: Solid

Date Sampled: 11/06/2009 0910

% Solids: 82.9 11/07/2009 1710

Date Received: 11/07/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/19/2009 0301	DLB		22074	5.13

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		24	7.9	ug/kg	2
Benzene	71-43-2	8260B	ND		5.9	1.3	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		5.9	2.0	ug/kg	2
Bromoform	75-25-2	8260B	ND		5.9	0.82	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.9	2.1	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		12	2.8	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		5.9	1.5	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		5.9	2.1	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		5.9	2.0	ug/kg	2
Chloroethane	75-00-3	8260B	ND		5.9	1.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		5.9	0.98	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.9	1.2	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		5.9	0.79	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.9	1.8	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		5.9	2.0	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.9	1.0	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.9	2.0	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.9	2.0	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.9	2.0	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.9	1.9	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.9	0.86	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.9	1.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.9	2.0	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.9	0.89	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.9	1.8	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.9	1.1	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.9	0.80	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.9	0.96	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		5.9	2.0	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	1.5	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		5.9	0.94	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		5.9	0.79	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.9	0.47	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.8	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		5.9	0.72	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		5.9	3.1	ug/kg	2
Styrene	100-42-5	8260B	ND		5.9	1.3	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.9	0.55	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		5.9	2.7	ug/kg	2
Toluene	108-88-3	8260B	ND		5.9	2.0	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.9	2.5	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.9	2.0	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.9	1.0	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.9	0.93	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-002
Description: HA01MW14 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 0910	% Solids: 82.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/19/2009 0301	DLB		22074	5.13

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.9	2.2	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.9	1.8	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		5.9	1.0	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		5.9	3.4	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	53-142
Bromofluorobenzene		68	47-138
Toluene-d8		85	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-002
Description: HA01MW14 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 0910	% Solids: 82.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2225	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.018	J	0.096	0.0068	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-002
Description: HA01MW14 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 0910	% Solids: 82.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1847	KJC	11/11/2009 2021	21329
2	3050B	6010C	1	11/12/2009 2158	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.47	J	0.60	0.23	mg/kg	2
Barium	7440-39-3	6010C	3.1		1.6	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	0.025	J	0.12	0.013	mg/kg	1
Chromium	7440-47-3	6010C	1.4		0.30	0.061	mg/kg	1
Lead	7439-92-1	6010C	2.0		0.60	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.60	0.21	mg/kg	1
Silver	7440-22-4	6010C	1.1		0.30	0.051	mg/kg	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KK07012-003

Description: HA01MW12 (1-2)

Matrix: Solid

Date Sampled: 11/06/2009 1100

% Solids: 85.9 11/07/2009 1710

Date Received: 11/07/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/19/2009 0324	DLB		22074	4.21

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	24	J	28	9.3	ug/kg	2
Benzene	71-43-2	8260B	ND		6.9	1.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.9	2.4	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.9	0.97	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.9	2.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		14	3.3	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.9	1.8	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.9	2.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.9	2.4	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.9	1.8	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.9	1.1	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	6.9		6.9	1.4	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.9	0.93	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.9	2.1	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.9	2.4	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.9	1.2	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.9	2.4	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.9	2.4	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.9	2.4	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.9	2.2	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.9	1.0	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.9	1.4	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.9	2.4	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.9	1.1	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.9	2.1	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.9	1.3	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.9	0.94	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.9	1.1	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.9	2.4	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		14	1.8	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.9	1.1	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.9	0.93	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.9	0.55	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	2.1	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.9	0.84	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.9	3.6	ug/kg	2
Styrene	100-42-5	8260B	ND		6.9	1.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.9	0.65	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.9	3.2	ug/kg	2
Toluene	108-88-3	8260B	ND		6.9	2.4	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.9	2.9	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.9	2.4	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.9	1.2	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.9	1.1	ug/kg	2

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-003
Description: HA01MW12 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 1100	% Solids: 85.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/19/2009 0324	DLB		22074	4.21

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.9	2.6	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.9	2.1	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.9	1.2	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		6.9	4.0	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	53-142
Bromofluorobenzene		66	47-138
Toluene-d8		86	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-003
Description: HA01MW12 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 1100	% Solids: 85.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	11/19/2009 0353	ASB	11/16/2009 1109	21759

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.9	0.38	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.9	0.44	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.9	0.34	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.9	0.36	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.9	0.40	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.9	0.33	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.9	0.27	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.9	0.28	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.9	0.36	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.9	0.31	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.9	0.37	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.9	0.38	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.9	0.28	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.9	0.26	ug/kg	1
Endrin	72-20-8	8081B	ND		1.9	0.37	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.9	0.34	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.9	0.25	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.9	0.44	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.9	0.35	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.5	1.5	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		93	10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		88	58-123
Tetrachloro-m-xylene		74	51-103

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-003
Description: HA01MW12 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 1100	% Solids: 85.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2227	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.038	J	0.095	0.0068	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-003
Description: HA01MW12 (1-2)	Matrix: Solid
Date Sampled: 11/06/2009 1100	% Solids: 85.9 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1853	KJC	11/11/2009 2021	21329
2	3050B	6010C	1	11/12/2009 2204	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.47	J	0.55	0.21	mg/kg	1
Barium	7440-39-3	6010C	4.3		1.4	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	0.014	J	0.11	0.012	mg/kg	1
Chromium	7440-47-3	6010C	1.7		0.28	0.056	mg/kg	1
Lead	7439-92-1	6010C	4.2		0.55	0.10	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.55	0.19	mg/kg	1
Silver	7440-22-4	6010C	ND		0.28	0.046	mg/kg	2

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-004
Description: HAO1MW12 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 1110	% Solids: 80.8 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 0239	DLB		22074	5.29

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		23	7.8	ug/kg	1
Benzene	71-43-2	8260B	ND		5.8	1.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.8	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.8	0.82	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.8	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		12	2.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.8	1.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.8	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.8	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.8	1.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.8	0.97	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.8	1.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.8	0.79	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.8	1.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.8	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.8	0.99	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	2.3	J	5.8	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.8	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.8	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.8	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.8	0.85	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.8	1.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.8	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.8	0.89	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.8	1.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.8	1.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.8	0.80	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.8	0.96	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.8	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	1.5	J	12	1.5	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.8	0.94	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.8	0.78	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.8	0.47	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.8	0.71	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.8	3.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.8	1.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.8	0.55	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.8	2.7	ug/kg	1
Toluene	108-88-3	8260B	ND		5.8	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.8	2.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.8	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.8	0.99	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.8	0.92	ug/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-004
Description: HAO1MW12 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 1110	% Solids: 80.8 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 0239	DLB		22074	5.29

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.8	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.8	1.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.8	1.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.8	3.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	53-142
Bromofluorobenzene		72	47-138
Toluene-d8		86	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-004
Description: HAO1MW12 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 1110	% Solids: 80.8 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/10/2009 2229	BNW	11/10/2009 2040	21345

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.027	J	0.10	0.0072	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-004
Description: HAO1MW12 (3-4)	Matrix: Solid
Date Sampled: 11/06/2009 1110	% Solids: 80.8 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/12/2009 1859	KJC	11/11/2009 2021	21329
2	3050B	6010C	1	11/12/2009 2222	KJC	11/11/2009 2021	21329

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.48	J	0.59	0.22	mg/kg	1
Barium	7440-39-3	6010C	6.3		1.5	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.12	0.012	mg/kg	1
Chromium	7440-47-3	6010C	2.2		0.30	0.060	mg/kg	1
Lead	7439-92-1	6010C	3.2		0.59	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.59	0.21	mg/kg	1
Silver	7440-22-4	6010C	ND		0.30	0.050	mg/kg	2

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Inorganic non-metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-005
Description: H-13-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1415	% Solids: 76.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Ignitability) 1010A	1	11/10/2009 1629	PMM		
1		(pH) 9045D	1	11/09/2009 1547	BAN		21335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Ignitability (Pensky-Martens Closed-Cup)		1010A	>140				° F	1
pH		9045D	6.3	H	0.000	0.000	su	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# TCLP Volatiles

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-005
Description: H-13-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1415	% Solids: 76.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/5030B	8260B	10	11/17/2009 1303	DLB		21924	11/13/2009 1820

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		0.050	0.0020	mg/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		0.10	0.018	mg/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.050	0.0040	mg/L	1
Chlorobenzene	108-90-7	8260B	ND		0.050	0.0020	mg/L	1
Chloroform	67-66-3	8260B	ND		0.050	0.0030	mg/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.050	0.0030	mg/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.050	0.0050	mg/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.050	0.0040	mg/L	1
Trichloroethene	79-01-6	8260B	ND		0.050	0.0030	mg/L	1
Vinyl chloride	75-01-4	8260B	ND		0.010	0.0010	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# TCLP Pesticides

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-005
Description: H-13-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1415	% Solids: 76.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/3520C	8081B	1	11/17/2009 2331	ASB	11/13/2009 0006	21616	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.00050	0.00	mg/L	1
Chlordane	57-74-9	8081B	ND		0.0025	0.00	mg/L	1
Endrin	72-20-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor	76-44-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.00050	0.00	mg/L	1
Methoxychlor	72-43-5	8081B	ND		0.0020	0.00	mg/L	1
Toxaphene	8001-35-2	8081B	ND		0.0050	0.00	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		98	49-124
Tetrachloro-m-xylene		83	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# TCLP Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-005
Description: H-13-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1415	% Solids: 76.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	11/11/2009 2314	BNW	11/11/2009 1900	21483	11/10/2009 1555
1	1311/3010A	6010C	10	11/12/2009 1908	KJC	11/11/2009 1900	21486	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.10	0.023	mg/L	1
Barium	7440-39-3	6010C	0.094	J	0.25	0.023	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.020	0.0030	mg/L	1
Chromium	7440-47-3	6010C	ND		0.050	0.014	mg/L	1
Lead	7439-92-1	6010C	ND		0.10	0.017	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000032	mg/L	1
Selenium	7782-49-2	6010C	ND		0.10	0.032	mg/L	1
Silver	7440-22-4	6010C	ND		0.050	0.0090	mg/L	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Inorganic non-metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-006
Description: H-14-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1425	% Solids: 79.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Ignitability) 1010A	1	11/10/2009 1629	PMM		
1		(pH) 9045D	1	11/09/2009 1547	BAN		21335

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Ignitability (Pensky-Martens Closed-Cup)		1010A	>140				° F	1
pH		9045D	6.17	H	0.000	0.000	su	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# TCLP Volatiles

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-006
Description: H-14-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1425	% Solids: 79.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/5030B	8260B	10	11/17/2009 1324	DLB		21924	11/13/2009 1820

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		0.050	0.0020	mg/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		0.10	0.018	mg/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.050	0.0040	mg/L	1
Chlorobenzene	108-90-7	8260B	ND		0.050	0.0020	mg/L	1
Chloroform	67-66-3	8260B	ND		0.050	0.0030	mg/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.050	0.0030	mg/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.050	0.0050	mg/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.050	0.0040	mg/L	1
Trichloroethene	79-01-6	8260B	ND		0.050	0.0030	mg/L	1
Vinyl chloride	75-01-4	8260B	ND		0.010	0.0010	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# TCLP Pesticides

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-006
Description: H-14-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1425	% Solids: 79.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/3520C	8081B	1	11/17/2009 2347	ASB	11/13/2009 0006	21616	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.00050	0.00	mg/L	1
Chlordane	57-74-9	8081B	ND		0.0025	0.00	mg/L	1
Endrin	72-20-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor	76-44-8	8081B	ND		0.00050	0.00	mg/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.00050	0.00	mg/L	1
Methoxychlor	72-43-5	8081B	ND		0.0020	0.00	mg/L	1
Toxaphene	8001-35-2	8081B	ND		0.0050	0.00	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		81	49-124
Tetrachloro-m-xylene		84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# TCLP Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK07012-006
Description: H-14-HAA01	Matrix: Solid
Date Sampled: 11/06/2009 1425	% Solids: 79.1 11/07/2009 1710
Date Received: 11/07/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/7470A	7470A	1	11/11/2009 2322	BNW	11/11/2009 1900	21483	11/10/2009 1555
1	1311/3010A	6010C	10	11/12/2009 1911	KJC	11/11/2009 1900	21486	11/10/2009 1555

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.10	0.023	mg/L	1
Barium	7440-39-3	6010C	0.090	J	0.25	0.023	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.020	0.0030	mg/L	1
Chromium	7440-47-3	6010C	ND		0.050	0.014	mg/L	1
Lead	7439-92-1	6010C	ND		0.10	0.017	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000032	mg/L	1
Selenium	7782-49-2	6010C	ND		0.10	0.032	mg/L	1
Silver	7440-22-4	6010C	ND		0.050	0.0090	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KK07012-007

Description: TRIP BLANK

Matrix: Aqueous

Date Sampled: 11/07/2009

Date Received: 11/07/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	11/17/2009 1833	DLB		21834		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	2.4	BJ	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	0.66	B	0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KK07012-007

Description: TRIP BLANK

Matrix: Aqueous

Date Sampled: 11/07/2009

Date Received: 11/07/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/17/2009 1833	DLB		21834			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		85	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## QC Summary



# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21834-001

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	1.4	J	1	10	0.061	ug/L	11/17/2009 1222
Benzene	ND		1	0.50	0.027	ug/L	11/17/2009 1222
Bromodichloromethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Bromoform	ND		1	0.50	0.010	ug/L	11/17/2009 1222
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	11/17/2009 1222
2-Butanone (MEK)	ND		1	10	2.0	ug/L	11/17/2009 1222
Carbon disulfide	0.18	J	1	0.50	0.097	ug/L	11/17/2009 1222
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	11/17/2009 1222
Chlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloroethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloroform	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Cyclohexane	ND		1	0.50	0.30	ug/L	11/17/2009 1222
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	11/17/2009 1222
Dibromochloromethane	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	11/17/2009 1222
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	11/17/2009 1222
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	11/17/2009 1222
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	11/17/2009 1222
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	11/17/2009 1222
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	11/17/2009 1222
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	11/17/2009 1222
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	11/17/2009 1222
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	11/17/2009 1222
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	11/17/2009 1222
Ethylbenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
2-Hexanone	ND		1	10	0.27	ug/L	11/17/2009 1222
Isopropylbenzene	ND		1	0.50	0.029	ug/L	11/17/2009 1222
Methyl acetate	ND		1	1.0	0.30	ug/L	11/17/2009 1222
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	11/17/2009 1222
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	11/17/2009 1222
Methylcyclohexane	ND		1	5.0	0.95	ug/L	11/17/2009 1222
Methylene chloride	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Styrene	ND		1	0.50	0.015	ug/L	11/17/2009 1222
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	11/17/2009 1222
Tetrachloroethene	ND		1	0.50	0.014	ug/L	11/17/2009 1222
Toluene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	11/17/2009 1222
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	11/17/2009 1222
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	11/17/2009 1222
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	11/17/2009 1222

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ21834-001

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	11/17/2009 1222
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	11/17/2009 1222
Vinyl chloride	ND		1	0.50	0.065	ug/L	11/17/2009 1222
Xylenes (total)	ND		1	0.50	0.17	ug/L	11/17/2009 1222
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		89	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21834-002

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	119	46-153	11/17/2009 1055
Benzene	50	44		1	88	70-130	11/17/2009 1055
Bromodichloromethane	50	44		1	88	70-130	11/17/2009 1055
Bromoform	50	42		1	83	70-130	11/17/2009 1055
Bromomethane (Methyl bromide)	50	55		1	109	60-140	11/17/2009 1055
2-Butanone (MEK)	100	96		1	96	60-140	11/17/2009 1055
Carbon disulfide	50	52		1	104	60-140	11/17/2009 1055
Carbon tetrachloride	50	49		1	98	70-130	11/17/2009 1055
Chlorobenzene	50	43		1	86	70-130	11/17/2009 1055
Chloroethane	50	42		1	83	42-163	11/17/2009 1055
Chloroform	50	47		1	94	70-130	11/17/2009 1055
Chloromethane (Methyl chloride)	50	43		1	86	20-158	11/17/2009 1055
Cyclohexane	50	46		1	93	70-130	11/17/2009 1055
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	101	70-130	11/17/2009 1055
Dibromochloromethane	50	46		1	91	70-130	11/17/2009 1055
1,2-Dibromoethane (EDB)	50	41		1	82	70-130	11/17/2009 1055
1,2-Dichlorobenzene	50	47		1	95	70-130	11/17/2009 1055
1,3-Dichlorobenzene	50	45		1	90	70-130	11/17/2009 1055
1,4-Dichlorobenzene	50	44		1	89	70-130	11/17/2009 1055
Dichlorodifluoromethane	50	36		1	73	60-140	11/17/2009 1055
1,2-Dichloroethane	50	45		1	90	70-130	11/17/2009 1055
1,1-Dichloroethane	50	45		1	90	70-130	11/17/2009 1055
cis-1,2-Dichloroethene	50	46		1	93	70-130	11/17/2009 1055
trans-1,2-Dichloroethene	50	47		1	93	70-130	11/17/2009 1055
1,1-Dichloroethene	50	47		1	94	70-130	11/17/2009 1055
1,2-Dichloropropane	50	44		1	88	70-130	11/17/2009 1055
trans-1,3-Dichloropropene	50	48		1	95	70-130	11/17/2009 1055
cis-1,3-Dichloropropene	50	43		1	86	70-130	11/17/2009 1055
Ethylbenzene	50	46		1	92	70-130	11/17/2009 1055
2-Hexanone	100	86		1	86	60-140	11/17/2009 1055
Isopropylbenzene	50	49		1	98	70-130	11/17/2009 1055
Methyl acetate	50	51		1	103	15-128	11/17/2009 1055
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	11/17/2009 1055
4-Methyl-2-pentanone	100	91		1	91	60-140	11/17/2009 1055
Methylcyclohexane	50	48		1	97	70-130	11/17/2009 1055
Methylene chloride	50	47		1	95	70-130	11/17/2009 1055
Styrene	50	46		1	92	70-130	11/17/2009 1055
1,1,2,2-Tetrachloroethane	50	46		1	92	70-130	11/17/2009 1055
Tetrachloroethene	50	45		1	91	70-130	11/17/2009 1055
Toluene	50	44		1	87	70-130	11/17/2009 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	45		1	91	70-130	11/17/2009 1055
1,2,4-Trichlorobenzene	50	62		1	125	70-130	11/17/2009 1055
1,1,2-Trichloroethane	50	39		1	78	70-130	11/17/2009 1055
1,1,1-Trichloroethane	50	49		1	99	70-130	11/17/2009 1055

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ21834-002

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	45		1	89	70-130	11/17/2009 1055
Trichlorofluoromethane	50	46		1	93	60-140	11/17/2009 1055
Vinyl chloride	50	42		1	84	60-140	11/17/2009 1055
Xylenes (total)	100	95		1	95	70-130	11/17/2009 1055
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		91	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21834-003

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	110	7.1	46-153	20	11/17/2009 1117
Benzene	50	44		1	88	0.73	70-130	20	11/17/2009 1117
Bromodichloromethane	50	45		1	89	1.1	70-130	20	11/17/2009 1117
Bromoform	50	41		1	82	1.2	70-130	20	11/17/2009 1117
Bromomethane (Methyl bromide)	50	49		1	98	11	60-140	20	11/17/2009 1117
2-Butanone (MEK)	100	94		1	94	1.9	60-140	20	11/17/2009 1117
Carbon disulfide	50	49		1	99	5.6	60-140	20	11/17/2009 1117
Carbon tetrachloride	50	47		1	94	3.6	70-130	20	11/17/2009 1117
Chlorobenzene	50	43		1	86	0.63	70-130	20	11/17/2009 1117
Chloroethane	50	39		1	78	6.4	42-163	20	11/17/2009 1117
Chloroform	50	46		1	92	3.0	70-130	20	11/17/2009 1117
Chloromethane (Methyl chloride)	50	39		1	79	8.5	20-158	20	11/17/2009 1117
Cyclohexane	50	45		1	89	3.8	70-130	20	11/17/2009 1117
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	93	9.1	70-130	20	11/17/2009 1117
Dibromochloromethane	50	46		1	91	0.25	70-130	20	11/17/2009 1117
1,2-Dibromoethane (EDB)	50	42		1	84	2.4	70-130	20	11/17/2009 1117
1,2-Dichlorobenzene	50	46		1	92	2.6	70-130	20	11/17/2009 1117
1,3-Dichlorobenzene	50	45		1	90	0.30	70-130	20	11/17/2009 1117
1,4-Dichlorobenzene	50	45		1	89	0.83	70-130	20	11/17/2009 1117
Dichlorodifluoromethane	50	34		1	68	7.3	60-140	20	11/17/2009 1117
1,2-Dichloroethane	50	45		1	90	0.26	70-130	20	11/17/2009 1117
1,1-Dichloroethane	50	44		1	87	3.2	70-130	20	11/17/2009 1117
cis-1,2-Dichloroethene	50	44		1	89	4.1	70-130	20	11/17/2009 1117
trans-1,2-Dichloroethene	50	45		1	90	3.8	70-130	20	11/17/2009 1117
1,1-Dichloroethene	50	44		1	89	5.6	70-130	20	11/17/2009 1117
1,2-Dichloropropane	50	45		1	90	2.4	70-130	20	11/17/2009 1117
trans-1,3-Dichloropropene	50	48		1	97	1.6	70-130	20	11/17/2009 1117
cis-1,3-Dichloropropene	50	44		1	87	1.5	70-130	20	11/17/2009 1117
Ethylbenzene	50	46		1	92	0.87	70-130	20	11/17/2009 1117
2-Hexanone	100	87		1	87	0.98	60-140	20	11/17/2009 1117
Isopropylbenzene	50	48		1	95	2.6	70-130	20	11/17/2009 1117
Methyl acetate	50	49		1	98	4.5	15-128	20	11/17/2009 1117
Methyl tertiary butyl ether (MTBE)	50	48		1	96	4.1	70-130	20	11/17/2009 1117
4-Methyl-2-pentanone	100	90		1	90	1.6	60-140	20	11/17/2009 1117
Methylcyclohexane	50	47		1	95	1.9	70-130	20	11/17/2009 1117
Methylene chloride	50	44		1	88	7.7	70-130	20	11/17/2009 1117
Styrene	50	47		1	93	1.2	70-130	20	11/17/2009 1117
1,1,2,2-Tetrachloroethane	50	44		1	87	5.6	70-130	20	11/17/2009 1117
Tetrachloroethene	50	45		1	90	0.72	70-130	20	11/17/2009 1117
Toluene	50	45		1	90	2.8	70-130	20	11/17/2009 1117
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	42		1	83	8.6	70-130	20	11/17/2009 1117
1,2,4-Trichlorobenzene	50	59		1	118	5.9	70-130	20	11/17/2009 1117
1,1,2-Trichloroethane	50	40		1	80	2.4	70-130	20	11/17/2009 1117
1,1,1-Trichloroethane	50	47		1	94	4.7	70-130	20	11/17/2009 1117

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ21834-003

Matrix: Aqueous

Batch: 21834

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	46		1	91	2.6	70-130	20	11/17/2009 1117
Trichlorofluoromethane	50	46		1	92	1.0	60-140	20	11/17/2009 1117
Vinyl chloride	50	39		1	79	6.5	60-140	20	11/17/2009 1117
Xylenes (total)	100	93		1	93	1.6	70-130	20	11/17/2009 1117
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		89	70-130						
1,2-Dichloroethane-d4		85	70-130						
Toluene-d8		92	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Volatiles - MB

Sample ID: KQ21924-001

Matrix: Solid

Batch: 21924

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/13/2009 1820

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		10	0.050	0.0020	mg/L	11/17/2009 1220
2-Butanone (MEK)	ND		10	0.10	0.018	mg/L	11/17/2009 1220
Carbon tetrachloride	ND		10	0.050	0.0040	mg/L	11/17/2009 1220
Chlorobenzene	ND		10	0.050	0.0020	mg/L	11/17/2009 1220
Chloroform	ND		10	0.050	0.0030	mg/L	11/17/2009 1220
1,2-Dichloroethane	ND		10	0.050	0.0030	mg/L	11/17/2009 1220
1,1-Dichloroethene	ND		10	0.050	0.0050	mg/L	11/17/2009 1220
Tetrachloroethene	ND		10	0.050	0.0040	mg/L	11/17/2009 1220
Trichloroethene	ND		10	0.050	0.0030	mg/L	11/17/2009 1220
Vinyl chloride	ND		10	0.010	0.0010	mg/L	11/17/2009 1220
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		90	70-130				
1,2-Dichloroethane-d4		88	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Volatiles - LCS

Sample ID: KQ21924-002

Matrix: Solid

Batch: 21924

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/13/2009 1820

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	0.50	0.46		10	92	72-127	11/17/2009 1159
2-Butanone (MEK)	1.0	0.85		10	85	60-140	11/17/2009 1159
Carbon tetrachloride	0.50	0.43		10	86	37-166	11/17/2009 1159
Chlorobenzene	0.50	0.45		10	91	78-129	11/17/2009 1159
Chloroform	0.50	0.42		10	85	63-123	11/17/2009 1159
1,2-Dichloroethane	0.50	0.40		10	79	59-143	11/17/2009 1159
1,1-Dichloroethene	0.50	0.44		10	88	50-132	11/17/2009 1159
Tetrachloroethene	0.50	0.46		10	92	70-130	11/17/2009 1159
Trichloroethene	0.50	0.44		10	88	73-124	11/17/2009 1159
Vinyl chloride	0.50	0.35		10	70	29-159	11/17/2009 1159
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		88	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		93	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# TCLP Volatiles - MS

Sample ID: KK07012-006MS

Matrix: Solid

Batch: 21924

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 11/13/2009 1820

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	ND	0.50	0.53		10	105	70-127	11/17/2009 1345
2-Butanone (MEK)	ND	1.0	0.98		10	98	60-140	11/17/2009 1345
Carbon tetrachloride	ND	0.50	0.49		10	97	37-166	11/17/2009 1345
Chlorobenzene	ND	0.50	0.52		10	104	78-129	11/17/2009 1345
Chloroform	ND	0.50	0.51		10	102	63-123	11/17/2009 1345
1,2-Dichloroethane	ND	0.50	0.48		10	96	59-143	11/17/2009 1345
1,1-Dichloroethene	ND	0.50	0.51		10	102	50-132	11/17/2009 1345
Tetrachloroethene	ND	0.50	0.49		10	98	70-130	11/17/2009 1345
Trichloroethene	ND	0.50	0.48		10	97	73-124	11/17/2009 1345
Vinyl chloride	ND	0.50	0.41		10	82	29-159	11/17/2009 1345
Surrogate	Q	% Rec	Acceptance Limit					
Bromofluorobenzene		104	70-130					
1,2-Dichloroethane-d4		106	70-130					
Toluene-d8		107	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22074-001

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/19/2009 0036
Benzene	ND		1	5.0	1.1	ug/kg	11/19/2009 0036
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
Bromoform	ND		1	5.0	0.70	ug/kg	11/19/2009 0036
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/19/2009 0036
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/19/2009 0036
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/19/2009 0036
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/19/2009 0036
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
Chloroethane	ND		1	5.0	1.3	ug/kg	11/19/2009 0036
Chloroform	ND		1	5.0	0.83	ug/kg	11/19/2009 0036
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/19/2009 0036
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/19/2009 0036
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/19/2009 0036
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/19/2009 0036
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/19/2009 0036
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/19/2009 0036
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/19/2009 0036
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/19/2009 0036
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/19/2009 0036
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/19/2009 0036
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/19/2009 0036
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/19/2009 0036
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
2-Hexanone	ND		1	10	1.3	ug/kg	11/19/2009 0036
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/19/2009 0036
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/19/2009 0036
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/19/2009 0036
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/19/2009 0036
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/19/2009 0036
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/19/2009 0036
Styrene	ND		1	5.0	1.1	ug/kg	11/19/2009 0036
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/19/2009 0036
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/19/2009 0036
Toluene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/19/2009 0036
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 0036
1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/19/2009 0036
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/19/2009 0036

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22074-001

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/19/2009 0036
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/19/2009 0036
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/19/2009 0036
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/19/2009 0036
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		91	47-138				
1,2-Dichloroethane-d4		82	53-142				
Toluene-d8		92	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22074-002

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	92		1	92	42-149	11/18/2009 2328
Benzene	50	44		1	88	69-123	11/18/2009 2328
Bromodichloromethane	50	43		1	86	69-121	11/18/2009 2328
Bromoform	50	39		1	78	61-119	11/18/2009 2328
Bromomethane (Methyl bromide)	50	44		1	88	35-144	11/18/2009 2328
2-Butanone (MEK)	100	94		1	94	57-148	11/18/2009 2328
Carbon disulfide	50	49		1	98	58-122	11/18/2009 2328
Carbon tetrachloride	50	45		1	90	58-136	11/18/2009 2328
Chlorobenzene	50	39		1	79	59-129	11/18/2009 2328
Chloroethane	50	46		1	92	50-132	11/18/2009 2328
Chloroform	50	41		1	83	71-125	11/18/2009 2328
Chloromethane (Methyl chloride)	50	57		1	113	34-134	11/18/2009 2328
Cyclohexane	50	45		1	90	53-139	11/18/2009 2328
1,2-Dibromo-3-chloropropane (DBCP)	50	44		1	87	55-125	11/18/2009 2328
Dibromochloromethane	50	39		1	77	66-119	11/18/2009 2328
1,2-Dibromoethane (EDB)	50	40		1	79	74-124	11/18/2009 2328
1,4-Dichlorobenzene	50	36		1	72	52-133	11/18/2009 2328
1,3-Dichlorobenzene	50	37		1	74	51-134	11/18/2009 2328
1,2-Dichlorobenzene	50	37		1	74	57-131	11/18/2009 2328
Dichlorodifluoromethane	50	60		1	121	10-157	11/18/2009 2328
1,2-Dichloroethane	50	43		1	87	67-129	11/18/2009 2328
1,1-Dichloroethane	50	42		1	85	71-127	11/18/2009 2328
trans-1,2-Dichloroethene	50	43		1	86	68-131	11/18/2009 2328
cis-1,2-Dichloroethene	50	42		1	85	70-122	11/18/2009 2328
1,1-Dichloroethene	50	44		1	88	69-138	11/18/2009 2328
1,2-Dichloropropane	50	42		1	85	72-124	11/18/2009 2328
trans-1,3-Dichloropropene	50	43		1	85	70-124	11/18/2009 2328
cis-1,3-Dichloropropene	50	43		1	87	70-126	11/18/2009 2328
Ethylbenzene	50	42		1	84	59-128	11/18/2009 2328
2-Hexanone	100	92		1	92	54-137	11/18/2009 2328
Isopropylbenzene	50	40		1	79	50-136	11/18/2009 2328
Methyl acetate	50	46		1	93	59-137	11/18/2009 2328
Methyl tertiary butyl ether (MTBE)	50	46		1	91	72-122	11/18/2009 2328
4-Methyl-2-pentanone	100	96		1	96	60-134	11/18/2009 2328
Methylcyclohexane	50	45		1	90	41-144	11/18/2009 2328
Methylene chloride	50	41		1	83	77-129	11/18/2009 2328
Styrene	50	44		1	87	54-136	11/18/2009 2328
1,1,2,2-Tetrachloroethane	50	38		1	76	69-132	11/18/2009 2328
Tetrachloroethene	50	41		1	82	70-130	11/18/2009 2328
Toluene	50	43		1	87	61-129	11/18/2009 2328
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	85	49-136	11/18/2009 2328
1,2,4-Trichlorobenzene	50	38		1	75	34-145	11/18/2009 2328
1,1,2-Trichloroethane	50	40		1	81	55-128	11/18/2009 2328
1,1,1-Trichloroethane	50	45		1	89	63-128	11/18/2009 2328

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22074-002

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	43		1	85	62-126	11/18/2009 2328
Trichlorofluoromethane	50	49		1	97	45-138	11/18/2009 2328
Vinyl chloride	50	52		1	105	42-132	11/18/2009 2328
Xylenes (total)	100	85		1	85	58-128	11/18/2009 2328
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		76	47-138				
1,2-Dichloroethane-d4		78	53-142				
Toluene-d8		77	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22074-003

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	102	11	42-149	20	11/18/2009 2351
Benzene	50	49		1	99	12	69-123	20	11/18/2009 2351
Bromodichloromethane	50	51		1	102	17	69-121	20	11/18/2009 2351
Bromoform	50	46		1	93	17	61-119	20	11/18/2009 2351
Bromomethane (Methyl bromide)	50	56	+	1	111	23	35-144	20	11/18/2009 2351
2-Butanone (MEK)	100	110		1	105	11	57-148	20	11/18/2009 2351
Carbon disulfide	50	58		1	115	17	58-122	20	11/18/2009 2351
Carbon tetrachloride	50	54		1	108	18	58-136	20	11/18/2009 2351
Chlorobenzene	50	48		1	96	20	59-129	20	11/18/2009 2351
Chloroethane	50	55		1	109	16	50-132	20	11/18/2009 2351
Chloroform	50	50		1	99	18	71-125	20	11/18/2009 2351
Chloromethane (Methyl chloride)	50	68	N	1	137	19	34-134	20	11/18/2009 2351
Cyclohexane	50	53		1	107	17	53-139	20	11/18/2009 2351
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	106	20	55-125	20	11/18/2009 2351
Dibromochloromethane	50	46		1	92	17	66-119	20	11/18/2009 2351
1,2-Dibromoethane (EDB)	50	48		1	97	20	74-124	20	11/18/2009 2351
1,4-Dichlorobenzene	50	45	+	1	90	21	52-133	20	11/18/2009 2351
1,3-Dichlorobenzene	50	46	+	1	91	21	51-134	20	11/18/2009 2351
1,2-Dichlorobenzene	50	46	+	1	92	22	57-131	20	11/18/2009 2351
Dichlorodifluoromethane	50	70		1	140	15	10-157	20	11/18/2009 2351
1,2-Dichloroethane	50	52		1	104	18	67-129	20	11/18/2009 2351
1,1-Dichloroethane	50	50		1	101	17	71-127	20	11/18/2009 2351
trans-1,2-Dichloroethene	50	51		1	102	17	68-131	20	11/18/2009 2351
cis-1,2-Dichloroethene	50	51		1	101	18	70-122	20	11/18/2009 2351
1,1-Dichloroethene	50	52		1	103	16	69-138	20	11/18/2009 2351
1,2-Dichloropropane	50	50		1	100	17	72-124	20	11/18/2009 2351
trans-1,3-Dichloropropene	50	51		1	101	17	70-124	20	11/18/2009 2351
cis-1,3-Dichloropropene	50	51		1	102	16	70-126	20	11/18/2009 2351
Ethylbenzene	50	51		1	102	18	59-128	20	11/18/2009 2351
2-Hexanone	100	110		1	107	15	54-137	20	11/18/2009 2351
Isopropylbenzene	50	49	+	1	99	22	50-136	20	11/18/2009 2351
Methyl acetate	50	55		1	110	17	59-137	20	11/18/2009 2351
Methyl tertiary butyl ether (MTBE)	50	54		1	109	17	72-122	20	11/18/2009 2351
4-Methyl-2-pentanone	100	110		1	112	16	60-134	20	11/18/2009 2351
Methylcyclohexane	50	53		1	105	16	41-144	20	11/18/2009 2351
Methylene chloride	50	50		1	99	18	77-129	20	11/18/2009 2351
Styrene	50	53		1	105	19	54-136	20	11/18/2009 2351
1,1,2,2-Tetrachloroethane	50	46		1	93	20	69-132	20	11/18/2009 2351
Tetrachloroethene	50	49		1	98	17	70-130	20	11/18/2009 2351
Toluene	50	52		1	103	17	61-129	20	11/18/2009 2351
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	100	16	49-136	20	11/18/2009 2351
1,2,4-Trichlorobenzene	50	46	+	1	93	21	34-145	20	11/18/2009 2351
1,1,2-Trichloroethane	50	48		1	97	18	55-128	20	11/18/2009 2351
1,1,1-Trichloroethane	50	54		1	109	20	63-128	20	11/18/2009 2351

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22074-003

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	50		1	101	17	62-126	20	11/18/2009 2351
Trichlorofluoromethane	50	56		1	112	14	45-138	20	11/18/2009 2351
Vinyl chloride	50	63		1	127	19	42-132	20	11/18/2009 2351
Xylenes (total)	100	100		1	102	19	58-128	20	11/18/2009 2351
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	47-138						
1,2-Dichloroethane-d4		86	53-142						
Toluene-d8		98	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: KK07012-004MS

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	88	100		1	117	42-149	11/19/2009 0753
Benzene	ND	44	41		1	92	69-123	11/19/2009 0753
Bromodichloromethane	ND	44	40		1	90	69-121	11/19/2009 0753
Bromoform	ND	44	29		1	65	61-119	11/19/2009 0753
Bromomethane (Methyl bromide)	ND	44	44		1	100	35-144	11/19/2009 0753
2-Butanone (MEK)	ND	88	80		1	91	57-148	11/19/2009 0753
Carbon disulfide	ND	44	45		1	103	58-122	11/19/2009 0753
Carbon tetrachloride	ND	44	40		1	91	58-136	11/19/2009 0753
Chlorobenzene	ND	44	32		1	73	59-129	11/19/2009 0753
Chloroethane	ND	44	46		1	105	50-132	11/19/2009 0753
Chloroform	ND	44	40		1	90	71-125	11/19/2009 0753
Chloromethane (Methyl chloride)	ND	44	62	N	1	141	34-134	11/19/2009 0753
Cyclohexane	ND	44	34		1	78	53-139	11/19/2009 0753
1,2-Dibromo-3-chloropropane (DBCP)	ND	44	34		1	77	55-125	11/19/2009 0753
Dibromochloromethane	ND	44	34		1	78	66-119	11/19/2009 0753
1,2-Dibromoethane (EDB)	ND	44	37		1	83	74-124	11/19/2009 0753
1,4-Dichlorobenzene	ND	44	25		1	58	52-133	11/19/2009 0753
1,3-Dichlorobenzene	ND	44	26		1	59	51-134	11/19/2009 0753
1,2-Dichlorobenzene	2.3	44	24	N	1	49	57-131	11/19/2009 0753
Dichlorodifluoromethane	ND	44	59		1	135	10-157	11/19/2009 0753
1,2-Dichloroethane	ND	44	42		1	95	67-129	11/19/2009 0753
1,1-Dichloroethane	ND	44	42		1	94	71-127	11/19/2009 0753
trans-1,2-Dichloroethene	ND	44	41		1	93	68-131	11/19/2009 0753
cis-1,2-Dichloroethene	ND	44	40		1	90	70-122	11/19/2009 0753
1,1-Dichloroethene	ND	44	41		1	92	69-138	11/19/2009 0753
1,2-Dichloropropane	ND	44	40		1	91	72-124	11/19/2009 0753
trans-1,3-Dichloropropene	ND	44	39		1	88	70-124	11/19/2009 0753
cis-1,3-Dichloropropene	ND	44	38		1	86	70-126	11/19/2009 0753
Ethylbenzene	ND	44	35		1	79	59-128	11/19/2009 0753
2-Hexanone	1.5	88	83		1	95	54-137	11/19/2009 0753
Isopropylbenzene	ND	44	41		1	94	50-136	11/19/2009 0753
Methyl acetate	ND	44	68	N	1	154	59-137	11/19/2009 0753
Methyl tertiary butyl ether (MTBE)	ND	44	45		1	101	72-122	11/19/2009 0753
4-Methyl-2-pentanone	ND	88	88		1	100	60-134	11/19/2009 0753
Methylcyclohexane	ND	44	26		1	59	41-144	11/19/2009 0753
Methylene chloride	ND	44	40		1	91	77-129	11/19/2009 0753
Styrene	ND	44	29		1	65	54-136	11/19/2009 0753
1,1,2,2-Tetrachloroethane	ND	44	40		1	91	69-132	11/19/2009 0753
Tetrachloroethene	ND	44	34		1	77	70-130	11/19/2009 0753
Toluene	ND	44	38		1	85	61-129	11/19/2009 0753
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	44	37		1	84	49-136	11/19/2009 0753
1,2,4-Trichlorobenzene	ND	44	9.6	N	1	22	34-145	11/19/2009 0753
1,1,2-Trichloroethane	ND	44	38		1	87	55-128	11/19/2009 0753
1,1,1-Trichloroethane	ND	44	42		1	96	63-128	11/19/2009 0753

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MS

Sample ID: KK07012-004MS

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	44	37		1	85	62-126	11/19/2009 0753
Trichlorofluoromethane	ND	44	47		1	106	45-138	11/19/2009 0753
Vinyl chloride	ND	44	57		1	129	42-132	11/19/2009 0753
Xylenes (total)	ND	88	66		1	75	58-128	11/19/2009 0753
Surrogate	Q	% Rec	Acceptance Limit					
Bromofluorobenzene		71	47-138					
1,2-Dichloroethane-d4		81	53-142					
Toluene-d8		85	68-124					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: KK07012-004MD

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	100	130		1	124	20	42-149	20	11/19/2009 0816
Benzene	ND	51	52	+	1	103	25	69-123	20	11/19/2009 0816
Bromodichloromethane	ND	51	44		1	86	9.7	69-121	20	11/19/2009 0816
Bromoform	ND	51	29	N	1	58	1.6	61-119	20	11/19/2009 0816
Bromomethane (Methyl bromide)	ND	51	58	+	1	114	27	35-144	20	11/19/2009 0816
2-Butanone (MEK)	ND	100	110	+	1	105	28	57-148	20	11/19/2009 0816
Carbon disulfide	ND	51	60	+	1	119	29	58-122	20	11/19/2009 0816
Carbon tetrachloride	ND	51	53	+	1	105	28	58-136	20	11/19/2009 0816
Chlorobenzene	ND	51	37		1	73	14	59-129	20	11/19/2009 0816
Chloroethane	ND	51	61	+	1	120	27	50-132	20	11/19/2009 0816
Chloroform	ND	51	48		1	94	18	71-125	20	11/19/2009 0816
Chloromethane (Methyl chloride)	ND	51	85	N,+	1	168	31	34-134	20	11/19/2009 0816
Cyclohexane	ND	51	48	+	1	95	33	53-139	20	11/19/2009 0816
1,2-Dibromo-3-chloropropane (DBCP)	ND	51	46	+	1	91	30	55-125	20	11/19/2009 0816
Dibromochloromethane	ND	51	35		1	68	1.3	66-119	20	11/19/2009 0816
1,2-Dibromoethane (EDB)	ND	51	39		1	78	7.1	74-124	20	11/19/2009 0816
1,4-Dichlorobenzene	ND	51	28		1	55	8.7	52-133	20	11/19/2009 0816
1,3-Dichlorobenzene	ND	51	29		1	57	9.7	51-134	20	11/19/2009 0816
1,2-Dichlorobenzene	2.3	51	28	N	1	52	17	57-131	20	11/19/2009 0816
Dichlorodifluoromethane	ND	51	92	N,+	1	180	42	10-157	20	11/19/2009 0816
1,2-Dichloroethane	ND	51	47		1	93	12	67-129	20	11/19/2009 0816
1,1-Dichloroethane	ND	51	52	+	1	103	23	71-127	20	11/19/2009 0816
trans-1,2-Dichloroethene	ND	51	53	+	1	103	25	68-131	20	11/19/2009 0816
cis-1,2-Dichloroethene	ND	51	47		1	93	17	70-122	20	11/19/2009 0816
1,1-Dichloroethene	ND	51	57	+	1	111	33	69-138	20	11/19/2009 0816
1,2-Dichloropropane	ND	51	48		1	94	17	72-124	20	11/19/2009 0816
trans-1,3-Dichloropropene	ND	51	40		1	79	3.9	70-124	20	11/19/2009 0816
cis-1,3-Dichloropropene	ND	51	42		1	83	10	70-126	20	11/19/2009 0816
Ethylbenzene	ND	51	42		1	83	19	59-128	20	11/19/2009 0816
2-Hexanone	1.5	100	100		1	100	20	54-137	20	11/19/2009 0816
Isopropylbenzene	ND	51	49		1	96	16	50-136	20	11/19/2009 0816
Methyl acetate	ND	51	79	N	1	155	14	59-137	20	11/19/2009 0816
Methyl tertiary butyl ether (MTBE)	ND	51	47		1	93	5.3	72-122	20	11/19/2009 0816
4-Methyl-2-pentanone	ND	100	110		1	106	20	60-134	20	11/19/2009 0816
Methylcyclohexane	ND	51	40	+	1	78	41	41-144	20	11/19/2009 0816
Methylene chloride	ND	51	46		1	90	13	77-129	20	11/19/2009 0816
Styrene	ND	51	32		1	63	11	54-136	20	11/19/2009 0816
1,1,2,2-Tetrachloroethane	ND	51	42		1	83	4.3	69-132	20	11/19/2009 0816
Tetrachloroethene	ND	51	43	+	1	85	24	70-130	20	11/19/2009 0816
Toluene	ND	51	47	+	1	93	23	61-129	20	11/19/2009 0816
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	52	+	1	102	34	49-136	20	11/19/2009 0816
1,2,4-Trichlorobenzene	ND	51	12	N,+	1	24	23	34-145	20	11/19/2009 0816
1,1,2-Trichloroethane	ND	51	42		1	83	8.8	55-128	20	11/19/2009 0816
1,1,1-Trichloroethane	ND	51	56	+	1	110	27	63-128	20	11/19/2009 0816

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: KK07012-004MD

Matrix: Solid

Batch: 22074

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	ND	51	48	+	1	95	25	62-126	20	11/19/2009 0816	
Trichlorofluoromethane	ND	51	64	+	1	127	32	45-138	20	11/19/2009 0816	
Vinyl chloride	ND	51	83	N,+	1	164	37	42-132	20	11/19/2009 0816	
Xylenes (total)	ND	100	81		1	80	20	58-128	20	11/19/2009 0816	
Surrogate	Q	% Rec	Acceptance Limit								
Bromofluorobenzene		82	47-138								
1,2-Dichloroethane-d4		96	53-142								
Toluene-d8		94	68-124								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Pesticides - MB

Sample ID: KQ21616-001

Matrix: Solid

Batch: 21616

Prep Method: 1311/3520C

Analytical Method: 8081B

Prep Date: 11/13/2009 6

Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Chlordane	0.00	J	1	0.0025	0.00	mg/L	11/17/2009 2229
Endrin	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
gamma-BHC (Lindane)	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Heptachlor	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Heptachlor epoxide	0.00	J	1	0.00050	0.00	mg/L	11/17/2009 2229
Methoxychlor	0.00	J	1	0.0020	0.00	mg/L	11/17/2009 2229
Toxaphene	0.00	J	1	0.0050	0.00	mg/L	11/17/2009 2229
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	49-124				
Tetrachloro-m-xylene		90	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Pesticides - LCS

Sample ID: KQ21616-002

Matrix: Solid

Batch: 21616

Prep Method: 1311/3520C

Analytical Method: 8081B

Prep Date: 11/13/2009 6

Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Endrin	0.0080	0.010		1	129	70-130	11/17/2009 2244
gamma-BHC (Lindane)	0.0080	0.0097		1	121	70-130	11/17/2009 2244
Heptachlor	0.0080	0.0091		1	114	70-130	11/17/2009 2244
Heptachlor epoxide	0.0080	0.0087		1	109	70-130	11/17/2009 2244
Methoxychlor	0.0080	0.0088		1	110	70-130	11/17/2009 2244
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		82	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Pesticides - MS

Sample ID: KK07012-006MS

Matrix: Solid

Batch: 21616

Prep Method: 1311/3520C

Analytical Method: 8081B

Prep Date: 11/13/2009 6

Leachate Date: 11/10/2009 1555

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
gamma-BHC (Lindane)	ND	0.010	0.0076	P	1	95	70-130	11/18/2009 0002
Endrin	ND	0.010	0.0080		1	100	70-130	11/18/2009 0002
Heptachlor	ND	0.010	0.0081		1	101	70-130	11/18/2009 0002
Heptachlor epoxide	ND	0.010	0.0070		1	88	70-130	11/18/2009 0002
Methoxychlor	ND	0.010	0.0096		1	120	70-130	11/18/2009 0002
Surrogate	Q	% Rec	Acceptance Limit					
Decachlorobiphenyl		94	49-124					
Tetrachloro-m-xylene		87	58-122					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ21759-001

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	1.7	0.25	ug/kg	11/17/2009 1507
4,4'-DDE	ND		1	1.7	0.32	ug/kg	11/17/2009 1507
4,4'-DDT	ND		1	1.7	0.28	ug/kg	11/17/2009 1507
Aldrin	ND		1	1.7	0.34	ug/kg	11/17/2009 1507
alpha-BHC	ND		1	1.7	0.39	ug/kg	11/17/2009 1507
alpha-Chlordane	ND		1	1.7	0.29	ug/kg	11/17/2009 1507
beta-BHC	ND		1	1.7	0.30	ug/kg	11/17/2009 1507
delta-BHC	ND		1	1.7	0.32	ug/kg	11/17/2009 1507
Dieldrin	ND		1	1.7	0.33	ug/kg	11/17/2009 1507
Endosulfan I	ND		1	1.7	0.34	ug/kg	11/17/2009 1507
Endosulfan II	ND		1	1.7	0.25	ug/kg	11/17/2009 1507
Endosulfan sulfate	ND		1	1.7	0.23	ug/kg	11/17/2009 1507
Endrin	ND		1	1.7	0.33	ug/kg	11/17/2009 1507
Endrin aldehyde	ND		1	1.7	0.30	ug/kg	11/17/2009 1507
Endrin ketone	ND		1	1.7	0.22	ug/kg	11/17/2009 1507
gamma-BHC (Lindane)	ND		1	1.7	0.36	ug/kg	11/17/2009 1507
gamma-Chlordane	ND		1	1.7	0.24	ug/kg	11/17/2009 1507
Heptachlor	ND		1	1.7	0.39	ug/kg	11/17/2009 1507
Heptachlor epoxide	ND		1	1.7	0.31	ug/kg	11/17/2009 1507
Methoxychlor	ND		1	6.7	1.3	ug/kg	11/17/2009 1507
Toxaphene	ND		1	83	9.1	ug/kg	11/17/2009 1507
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		100	58-123				
Tetrachloro-m-xylene		89	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: KQ21759-002

Matrix: Solid

Batch: 21759

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/16/2009 1109

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	17	20		1	116	50-130	11/17/2009 1523
4,4'-DDE	17	17		1	98	50-130	11/17/2009 1523
4,4'-DDT	17	20		1	115	50-130	11/17/2009 1523
Aldrin	17	17		1	99	50-130	11/17/2009 1523
alpha-BHC	17	19		1	115	50-130	11/17/2009 1523
alpha-Chlordane	17	17		1	97	50-130	11/17/2009 1523
beta-BHC	17	18		1	103	50-130	11/17/2009 1523
delta-BHC	17	20		1	117	50-130	11/17/2009 1523
Dieldrin	17	18		1	105	50-130	11/17/2009 1523
Endosulfan I	17	17		1	101	50-130	11/17/2009 1523
Endosulfan II	17	19		1	113	50-130	11/17/2009 1523
Endosulfan sulfate	17	18		1	104	50-130	11/17/2009 1523
Endrin	17	19		1	111	50-130	11/17/2009 1523
Endrin aldehyde	17	17		1	103	50-130	11/17/2009 1523
Endrin ketone	17	20		1	119	50-130	11/17/2009 1523
gamma-BHC (Lindane)	17	21		1	121	50-130	11/17/2009 1523
gamma-Chlordane	17	17		1	100	50-130	11/17/2009 1523
Heptachlor	17	18		1	106	50-130	11/17/2009 1523
Heptachlor epoxide	17	18		1	106	50-130	11/17/2009 1523
Methoxychlor	17	16		1	96	50-130	11/17/2009 1523
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		106	58-123				
Tetrachloro-m-xylene		94	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - MB

Sample ID: KQ21329-001

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.50	0.19	mg/kg	11/12/2009 1654
Barium	ND		1	1.3	0.091	mg/kg	11/12/2009 1654
Cadmium	ND		1	0.10	0.011	mg/kg	11/12/2009 1654
Chromium	ND		1	0.25	0.051	mg/kg	11/12/2009 1654
Lead	ND		1	0.50	0.093	mg/kg	11/12/2009 1654
Selenium	ND		1	0.50	0.17	mg/kg	11/12/2009 1654
Silver	ND		1	0.25	0.042	mg/kg	11/12/2009 1654

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ21329-002

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	250	260		1	106	80-120	11/12/2009 1700
Barium	500	500		1	100	80-120	11/12/2009 1700
Cadmium	50	51		1	102	80-120	11/12/2009 1700
Chromium	250	230		1	93	80-120	11/12/2009 1700
Lead	250	260		1	106	80-120	11/12/2009 1700
Selenium	50	52		1	105	80-120	11/12/2009 1700
Silver	250	270		1	107	80-120	11/12/2009 1700

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: KQ21329-003

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	250	270		1	107	1.6	80-120	20	11/12/2009 1706
Barium	500	510		1	102	2.2	80-120	20	11/12/2009 1706
Cadmium	50	52		1	104	1.7	80-120	20	11/12/2009 1706
Chromium	250	240		1	95	1.9	80-120	20	11/12/2009 1706
Lead	250	270		1	106	0.77	80-120	20	11/12/2009 1706
Selenium	50	52		1	105	0.14	80-120	20	11/12/2009 1706
Silver	250	270		1	109	1.9	80-120	20	11/12/2009 1706

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MS

Sample ID: KK07012-001MS

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	1.7	260	240		1	88	75-125	11/12/2009 1841
Barium	25	530	530		1	95	75-125	11/12/2009 1841
Cadmium	0.020	53	48		1	90	75-125	11/12/2009 1841
Chromium	8.6	260	240		1	87	75-125	11/12/2009 1841
Lead	6.8	260	260		1	94	75-125	11/12/2009 1841
Selenium	ND	53	46		1	86	75-125	11/12/2009 1841
Silver	ND	260	220		1	85	75-125	11/12/2009 1841

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MS

Sample ID: KK07012-004MS

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.48	300	280		1	93	75-125	11/12/2009 1916
Barium	6.3	600	600		1	99	75-125	11/12/2009 1916
Cadmium	ND	60	57		1	96	75-125	11/12/2009 1916
Chromium	2.2	300	280		1	92	75-125	11/12/2009 1916
Lead	3.2	300	300		1	99	75-125	11/12/2009 1916
Selenium	ND	60	55		1	91	75-125	11/12/2009 1916
Silver	ND	300	280		1	93	75-125	11/12/2009 2228

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MSD

Sample ID: KK07012-004MD

Matrix: Solid

Batch: 21329

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/11/2009 2021

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.48	280	260		1	93	3.0	75-125	20	11/12/2009 1922
Barium	6.3	570	570		1	100	1.5	75-125	20	11/12/2009 1922
Cadmium	ND	57	55		1	97	1.8	75-125	20	11/12/2009 1922
Chromium	2.2	280	260		1	92	2.0	75-125	20	11/12/2009 1922
Lead	3.2	280	290		1	101	0.99	75-125	20	11/12/2009 1922
Selenium	ND	57	51		1	91	3.5	75-125	20	11/12/2009 1922
Silver	ND	280	280		1	99	3.9	75-125	20	11/12/2009 2234

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Metals - MB

Sample ID: KQ21486-001

Matrix: Solid

Batch: 21486

Prep Method: 1311/3010A

Analytical Method: 6010C

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		10	0.10	0.023	mg/L	11/12/2009 1822
Barium	ND		10	0.25	0.023	mg/L	11/12/2009 1822
Cadmium	ND		10	0.020	0.0030	mg/L	11/12/2009 1822
Chromium	ND		10	0.050	0.014	mg/L	11/12/2009 1822
Lead	ND		10	0.10	0.017	mg/L	11/12/2009 1822
Selenium	ND		10	0.10	0.032	mg/L	11/12/2009 1822
Silver	ND		10	0.050	0.0090	mg/L	11/12/2009 1822

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Metals - LCS

Sample ID: KQ21486-002

Matrix: Solid

Batch: 21486

Prep Method: 1311/3010A

Analytical Method: 6010C

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	5.0	5.0		10	101	80-120	11/12/2009 1826
Barium	10	11		10	113	80-120	11/12/2009 1826
Cadmium	1.0	1.1		10	109	80-120	11/12/2009 1826
Chromium	5.0	5.3		10	105	80-120	11/12/2009 1826
Lead	5.0	5.4		10	107	80-120	11/12/2009 1826
Selenium	1.0	1.1		10	107	80-120	11/12/2009 1826
Silver	5.0	5.3		10	106	80-120	11/12/2009 1826

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# TCLP Metals - LCSD

Sample ID: KQ21486-003

Matrix: Solid

Batch: 21486

Prep Method: 1311/3010A

Analytical Method: 6010C

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	5.0	5.1		10	101	0.79	80-120	20	11/12/2009 1830
Barium	10	11		10	110	2.9	80-120	20	11/12/2009 1830
Cadmium	1.0	1.1		10	109	0.15	80-120	20	11/12/2009 1830
Chromium	5.0	5.2		10	104	1.4	80-120	20	11/12/2009 1830
Lead	5.0	5.3		10	106	1.6	80-120	20	11/12/2009 1830
Selenium	1.0	1.0		10	102	5.3	80-120	20	11/12/2009 1830
Silver	5.0	5.4		10	108	2.0	80-120	20	11/12/2009 1830

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ21345-001

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.083	0.0059	mg/kg	11/10/2009 2144

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: KQ21345-002

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.86		1	103	85-115	11/10/2009 2146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: KQ21345-003

Matrix: Solid

Batch: 21345

Prep Method: 7471B

Analytical Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.83	0.87		1	104	0.97	85-115	20	11/10/2009 2148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MS

Sample ID: KK07012-004MS

Matrix: Solid

Batch: 21345

Prep Method: 7471B

Analytical Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.027	0.92	1.1		1	112	85-115	11/10/2009 2231

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MSD

Sample ID: KK07012-004MD

Batch: 21345

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/10/2009 2040

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.027	1.0	1.1		1	105	1.9	85-115	20	11/10/2009 2233

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Metals - MB

Sample ID: KQ21483-001

Batch: 21483

Analytical Method: 7470A

Matrix: Solid

Prep Method: 1311/7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00020	0.000032	mg/L	11/11/2009 2241

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# TCLP Metals - LCS

Sample ID: KQ21483-002

Batch: 21483

Analytical Method: 7470A

Matrix: Solid

Prep Method: 1311/7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0018		1	91	85-115	11/11/2009 2243

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# TCLP Metals - LCSD

Sample ID: KQ21483-003

Matrix: Solid

Batch: 21483

Prep Method: 1311/7470A

Analytical Method: 7470A

Prep Date: 11/11/2009 1900 Leachate Date: 11/10/2009 1555

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0020		1	100	9.4	85-115	20	11/11/2009 2251

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 100488

Client: **ARCADIS**  
 Address: **30 Patzwood Dr., Suite 155**  
 City: **Greenville** State: **SC** Zip Code: **29615**  
 Project Name: **Ft. Stewart (HAA01)**  
 Project No: **G-PUG-HAFS-H01B**  
 Sample ID / Description: (Containers for each sample may be combined on one line.)

Report to Contact: **Andrew Davis**  
 Sampler's Signature: *Bobby Wolf*  
 Printed Name: **Bobby Wolf**

Telephone No. / Fax No. / E-mail: **(803) 987-3900 / (803) 987-1609**  
 Physical No.: \_\_\_\_\_  
 Analysis (Attach list if more space is needed):  
**VOCs Metals Pesticides TCLP VOCs TCLP Metals / Pesticides**

P.O. No.	Date	Time	Matrix	No. of Containers by Preservative Type	Analysis											
					VOCs	Metals	Pesticides	TCLP VOCs	TCLP Metals / Pesticides	PH Test	PH Temp	Lot No.	Remarks / Cooler I.D.			
HA01 MW 11 (1'-2')	11/6/04	900	G	2	X	X	X	X	X	X	X	X	X	X		
HA01 MW 14 (3'-4')	9/10		G	1	X	X	X	X	X	X	X	X	X	X		
HA01 MW 12 (1'-2')	11/00		G	2	X	X	X	X	X	X	X	X	X	X		
HA01 MW 12 (3'-4')	11/10		G	1	X	X	X	X	X	X	X	X	X	X		
HA01 MW 12 (3'-4') MS	11/15		G	1	X	X	X	X	X	X	X	X	X	X		
HA01 MW 12 (3'-4') MSD	11/20		G	1	X	X	X	X	X	X	X	X	X	X		
H-13-HAA01	14/18		G	3	X	X	X	X	X	X	X	X	X	X		
H-14-HAA01	14/25		G	3	X	X	X	X	X	X	X	X	X	X		
Trip Blank			X													

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown

Sample Disposal:  Return to Client  Disposal by Lab

QC Requirements (Specify): \_\_\_\_\_

Turn Around Time Required (Prior Lab approval required for expedited TAT): \_\_\_\_\_

Standard:  Standard  Rush (Specify): \_\_\_\_\_

1. Requisitioned by: *Bobby Wolf* Date: **11/7/04** Time: **1027**

2. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

3. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Comments: \_\_\_\_\_

1. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

2. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

3. Laboratory received by: *Bobby Wolf* Date: **11/7/04** Time: **1027**

LAB USE ONLY: Received on ice (Circle)  Yes  No Ice Pack: **5.3 °C**

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-012 Effective Date: 08 04 02

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC) <sup>MP 11/7/09</sup>

Client: ARCADIS Cooler Inspected by/date: DMP/1/7/09 Lot #: KK07012

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt: <u>531</u> °C / °C / °C / °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.			
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.			

**Corrective Action taken, if necessary:**  
 Was client notified: Yes  No  Did client respond: Yes  No   
 SESI employee: \_\_\_\_\_ Date of response: \_\_\_\_\_  
 Comments: \_\_\_\_\_

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

Analytical data were evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), analytical method control criteria, the analytical laboratory Quality Assurance Control Limits, the Fort Stewart Military Reservation and Hunter Army Airfield Quality Assurance Project Plan (ARCADIS-2008), and professional judgment.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQUIS Data Qualification Module (DQM). DQM checks for the following parameters:

- √ Holding times and preservation;
- √ Blank contamination;
  - 1. Method blanks,
  - 2. Trip blanks,
  - 3. Equipment blanks;
- √ Matrix spike and Duplicate sample recovery;
- √ Matrix Spike and Matrix Spike Duplicate relative percent differences;
- √ Laboratory Control Sample and Duplicate recovery;
- √ Laboratory Control Sample and Duplicate relative percent differences;
- √ Surrogate recovery (organic analyses only); and
- √ Field duplicate relative percent difference.

Manual review was performed for the following items:

- √ Sample dilutions and reporting limits;
- √ Case Narratives; and
- √ Laboratory Duplicates

Data was generated by Shealy Environmental Services, Inc. – West Columbia, South Carolina. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.


The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in these SDGs are considered usable as reported.



HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the above guidance documents:

- UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.
- J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.
- U Not detected at the quantitative reporting limit

DQM RUN BY:	Rachelle Borne	12/28/09
REVIEW PERFORMED BY:	Rachelle Borne	12/28/09
SIGNATURE:		12/31/09
PEER REVIEW:	Dennis Capria	01/04/10



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

The following samples were included in this SDG:

<b>SDG</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Parent Sample</b>
KK07012	H-13-HAA01	11/6/2009	
KK07012	H-14-HAA01	11/6/2009	
KK07012	HA01MW12 (1-2)	11/6/2009	
KK07012	HA01MW14 (1-2)	11/6/2009	
KK07012	HA01MW14 (3-4)	11/6/2009	
KK07012	HA01MW12 (3-4)	11/6/2009	
KK07012	TRIP BLANK1(110709)	11/7/2009	



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

ANALYTICAL DATA PACKAGE DOCUMENTATION

**GENERAL INFORMATION**

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	
13. South Carolina Certification Number		X		X	

QA - quality assurance

The analytical report was complete with the following exceptions or notations.

Note: The laboratory reported values between the quantitative reporting limit and the method detection limit as estimated concentrations. The "J" qualifier was retained in this validation. Non-detect values are reported at the quantitative reporting limit.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

**VOLATILE ORGANIC COMPOUNDS and TCLP VOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment blanks	NA		NA	
C. Trip blanks		DQM	DQM	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)	DQM		DQM	
A. LCS %R				
B. LCS duplicate (LCSD) %R		DQM		DQM
C. LCS/LCSD RPD		DQM		DQM
6. Matrix spike (MS)				
A. MS %R		DQM		DQM
B. MS duplicate (MSD) %R		DQM		DQM
C. MS/MSD precision (RPD)		DQM		DQM
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery RPD - relative percent difference DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8260.

- 3A. Acetone and carbon disulfide were detected in the method blank for batch 21834. The trip blank was the only sample analyzed in this analytical batch; therefore, qualification of the data is not warranted.
- 3C. Acetone and carbon disulfide were detected in the trip blank. The associated field samples were non-detect for carbon disulfide; therefore qualification is not warranted. The associated field samples are qualified as non-detect for acetone if the sample concentration is less than ten times the blank value.
- 5. The recovery of chloromethane was above the control limit in the LCSD for batch 22074. All detections of this compound in the associated field samples are qualified as estimated. The RPDs for several compounds were above the control limit. The associated field samples are qualified as estimated for these compounds. See the attached qualification summary for details of the qualifications.
- 6. HAO1MW12(3-4) was used for the MS/MSD. Several recoveries and RPDs were outside of the control limit. The parent sample only will be qualified as estimated for these deficiencies when applicable. See the attached qualification summary for details of the qualifications.

H-14-HAA01 was used for the MS/MSD for the TCLP fraction. The recoveries and RPDs were acceptable.



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

**PESTICIDES and TCLP PESTICIDES**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8081.

Note: The %D between the two GC columns for the Dieldrin result for sample HA01MW14(1-2) was above 40% and was flagged with a “P” by the laboratory. The dieldrin result for this sample was less than the reporting limit; therefore the “P” will be changed to a “U” to indicate that the results is non-detect.

6. H-14-HAA01 was used as the MS/MSD for the TCLP fraction. The recoveries and RPDs were acceptable.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK07012  
HAA-01**

**METALS and TCLP METALS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
5. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
6. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods 6010C and 7471B.

6.        HAO1MW12(3-4) was used as the MS/MSD for mercury and metals. The recoveries and RPDs were acceptable.

          HAO1MW14 was used as the MS for metals. The recoveries were acceptable.

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Fort Stewart (HAA01)

Project Number: GP08HAFS.H01B

Lot Number: KK16021

Date Completed: 12/01/2009

Date Revised: 12/22/2009



Nisreen Saikaly  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* KK16021 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: KK16021

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary ARCADIS U.S., Inc. Lot Number: KK16021

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HA01MW10 (1'-2')	Solid	11/09/2009 1425	11/16/2009
002	HA01MW10 (3'-4')	Solid	11/09/2009 1520	11/16/2009
003	HA01MW11 (1'-2')	Solid	11/09/2009 1642	11/16/2009
004	HA01MW11 (2-3')	Solid	11/09/2009 1700	11/16/2009
005	HA01MW13 (1'-2')	Solid	11/10/2009 1000	11/16/2009
006	HA01MW13 (4'-5')	Solid	11/09/2009 1035	11/16/2009
007	DI (110909)	Solid	11/09/2009	11/16/2009
008	HA01SB001 (8'-10')	Solid	11/10/2009 1105	11/16/2009

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(8 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KK16021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	HA01MW10 (1'-2')	Solid	Mercury	7471B	0.035	J	mg/kg	9
001	HA01MW10 (1'-2')	Solid	Arsenic	6010C	1.0		mg/kg	10
001	HA01MW10 (1'-2')	Solid	Barium	6010C	10		mg/kg	10
001	HA01MW10 (1'-2')	Solid	Chromium	6010C	2.0	B	mg/kg	10
001	HA01MW10 (1'-2')	Solid	Lead	6010C	6.0	B	mg/kg	10
002	HA01MW10 (3'-4')	Solid	Isopropylbenzene	8260B	8.4		ug/kg	11
002	HA01MW10 (3'-4')	Solid	Mercury	7471B	0.027	J	mg/kg	13
002	HA01MW10 (3'-4')	Solid	Arsenic	6010C	0.47	J	mg/kg	14
002	HA01MW10 (3'-4')	Solid	Barium	6010C	8.7		mg/kg	14
002	HA01MW10 (3'-4')	Solid	Chromium	6010C	2.3	B	mg/kg	14
002	HA01MW10 (3'-4')	Solid	Lead	6010C	2.2	B	mg/kg	14
002	HA01MW10 (3'-4')	Solid	Selenium	6010C	0.23	J	mg/kg	14
003	HA01MW11 (1'-2')	Solid	Mercury	7471B	0.025	J	mg/kg	18
003	HA01MW11 (1'-2')	Solid	Arsenic	6010C	0.30	J	mg/kg	19
003	HA01MW11 (1'-2')	Solid	Barium	6010C	8.2		mg/kg	19
003	HA01MW11 (1'-2')	Solid	Chromium	6010C	3.2	B	mg/kg	19
003	HA01MW11 (1'-2')	Solid	Lead	6010C	4.5	B	mg/kg	19
003	HA01MW11 (1'-2')	Solid	Silver	6010C	0.095	J	mg/kg	19
004	HA01MW11 (2-3')	Solid	Mercury	7471B	0.060	J	mg/kg	22
004	HA01MW11 (2-3')	Solid	Arsenic	6010C	0.46	J	mg/kg	23
004	HA01MW11 (2-3')	Solid	Barium	6010C	13		mg/kg	23
004	HA01MW11 (2-3')	Solid	Chromium	6010C	6.0	B	mg/kg	23
004	HA01MW11 (2-3')	Solid	Lead	6010C	6.5	B	mg/kg	23
004	HA01MW11 (2-3')	Solid	Silver	6010C	0.22	J	mg/kg	23
005	HA01MW13 (1'-2')	Solid	Arsenic	6010C	0.25	J	mg/kg	28
005	HA01MW13 (1'-2')	Solid	Barium	6010C	2.4		mg/kg	28
005	HA01MW13 (1'-2')	Solid	Chromium	6010C	0.91	B	mg/kg	28
005	HA01MW13 (1'-2')	Solid	Lead	6010C	2.1	B	mg/kg	28
006	HA01MW13 (4'-5')	Solid	Carbon tetrachloride	8260B	4.6	J	ug/kg	29
006	HA01MW13 (4'-5')	Solid	Mercury	7471B	0.042	J	mg/kg	31
006	HA01MW13 (4'-5')	Solid	Arsenic	6010C	0.29	J	mg/kg	32
006	HA01MW13 (4'-5')	Solid	Barium	6010C	23		mg/kg	32
006	HA01MW13 (4'-5')	Solid	Chromium	6010C	9.9	B	mg/kg	32
006	HA01MW13 (4'-5')	Solid	Lead	6010C	5.2	B	mg/kg	32
007	DI (110909)	Solid	Mercury	7471B	0.047	J	mg/kg	35
007	DI (110909)	Solid	Arsenic	6010C	0.48	J	mg/kg	36
007	DI (110909)	Solid	Barium	6010C	15		mg/kg	36
007	DI (110909)	Solid	Chromium	6010C	6.1	B	mg/kg	36
007	DI (110909)	Solid	Lead	6010C	8.5	B	mg/kg	36
007	DI (110909)	Solid	Selenium	6010C	0.38	J	mg/kg	36
007	DI (110909)	Solid	Silver	6010C	0.24	J	mg/kg	36
008	HA01SB001 (8'-10')	Solid	Arsenic	6010C	2.3		mg/kg	39
008	HA01SB001 (8'-10')	Solid	Barium	6010C	20		mg/kg	39
008	HA01SB001 (8'-10')	Solid	Chromium	6010C	6.9	B	mg/kg	39
008	HA01SB001 (8'-10')	Solid	Lead	6010C	4.2	B	mg/kg	39

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## Executive Summary (Continued)

Lot Number: KK16021

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Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
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(45 detections)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-001
Description: HA01MW10 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1425	% Solids: 84.2    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1712	DLB		22222	3.39

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		35	12	ug/kg	1
Benzene	71-43-2	8260B	ND		8.8	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		8.8	3.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		8.8	1.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		8.8	3.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		8.8	2.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		8.8	3.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		8.8	3.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		8.8	2.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		8.8	1.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		8.8	1.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		8.8	1.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		8.8	2.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		8.8	3.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		8.8	1.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		8.8	3.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		8.8	3.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		8.8	3.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		8.8	2.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		8.8	1.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		8.8	1.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		8.8	3.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		8.8	1.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		8.8	2.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		8.8	1.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		8.8	1.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		8.8	1.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		8.8	3.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		18	2.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		8.8	1.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		8.8	1.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		8.8	0.70	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		18	2.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		8.8	1.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		8.8	4.6	ug/kg	1
Styrene	100-42-5	8260B	ND		8.8	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		8.8	0.82	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		8.8	4.0	ug/kg	1
Toluene	108-88-3	8260B	ND		8.8	3.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		8.8	3.7	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		8.8	3.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		8.8	1.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		8.8	1.4	ug/kg	1

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-001
Description: HA01MW10 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1425	% Solids: 84.2 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1712	DLB		22222	3.39

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		8.8	3.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		8.8	2.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		8.8	1.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.8	5.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	53-142
Bromofluorobenzene		66	47-138
Toluene-d8		85	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-001
Description: HA01MW10 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1425	% Solids: 84.2 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	12/01/2009 0226	ASB	11/23/2009 1635	22297

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		2.0	0.40	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		2.0	0.46	ug/kg	1
beta-BHC	319-85-7	8081B	ND		2.0	0.36	ug/kg	1
delta-BHC	319-86-8	8081B	ND		2.0	0.38	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		2.0	0.43	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		2.0	0.34	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		2.0	0.28	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		2.0	0.30	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		2.0	0.38	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		2.0	0.33	ug/kg	1
Dieldrin	60-57-1	8081B	ND		2.0	0.39	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		2.0	0.40	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		2.0	0.30	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		2.0	0.27	ug/kg	1
Endrin	72-20-8	8081B	ND		2.0	0.39	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		2.0	0.36	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		2.0	0.26	ug/kg	1
Heptachlor	76-44-8	8081B	ND		2.0	0.46	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		2.0	0.37	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.9	1.6	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		98	11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		66	58-123
Tetrachloro-m-xylene		58	51-103

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-001
Description: HA01MW10 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1425	% Solids: 84.2    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1815	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.035	J	0.098	0.0070	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-001
Description: HA01MW10 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1425	% Solids: 84.2 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1737	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	1.0		0.58	0.22	mg/kg	1
Barium	7440-39-3	6010C	10		1.5	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.12	0.012	mg/kg	1
Chromium	7440-47-3	6010C	2.0	B	0.29	0.059	mg/kg	1
Lead	7439-92-1	6010C	6.0	B	0.58	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.58	0.20	mg/kg	1
Silver	7440-22-4	6010C	ND		0.29	0.049	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-002
Description: HA01MW10 (3'-4')	Matrix: Solid
Date Sampled: 11/09/2009 1520	% Solids: 76.4    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1743	DLB		22222	4.82

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		27	9.1	ug/kg	1
Benzene	71-43-2	8260B	ND		6.8	1.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.8	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.8	0.95	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.8	2.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		14	3.3	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.8	1.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.8	2.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.8	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.8	1.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.8	1.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.8	1.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.8	0.91	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.8	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.8	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.8	1.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.8	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.8	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.8	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.8	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.8	0.99	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.8	1.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.8	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.8	1.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.8	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.8	1.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.8	0.92	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.8	1.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.8	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	1.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	8.4		6.8	1.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.8	0.91	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.8	0.54	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	2.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.8	0.83	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.8	3.5	ug/kg	1
Styrene	100-42-5	8260B	ND		6.8	1.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.8	0.64	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.8	3.1	ug/kg	1
Toluene	108-88-3	8260B	ND		6.8	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.8	2.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.8	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.8	1.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.8	1.1	ug/kg	1

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-002
Description: HA01MW10 (3'-4')	Matrix: Solid
Date Sampled: 11/09/2009 1520	% Solids: 76.4 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1743	DLB		22222	4.82

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.8	2.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.8	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.8	1.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		6.8	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	53-142
Bromofluorobenzene		62	47-138
Toluene-d8		83	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-002
Description: HA01MW10 (3'-4')	Matrix: Solid
Date Sampled: 11/09/2009 1520	% Solids: 76.4 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1819	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.027	J	0.10	0.0074	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-002
Description: HA01MW10 (3'-4')	Matrix: Solid
Date Sampled: 11/09/2009 1520	% Solids: 76.4 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1801	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.47	J	0.65	0.24	mg/kg	1
Barium	7440-39-3	6010C	8.7		1.7	0.12	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.13	0.014	mg/kg	1
Chromium	7440-47-3	6010C	2.3	B	0.32	0.066	mg/kg	1
Lead	7439-92-1	6010C	2.2	B	0.65	0.12	mg/kg	1
Selenium	7782-49-2	6010C	0.23	J	0.65	0.23	mg/kg	1
Silver	7440-22-4	6010C	ND		0.32	0.055	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-003
Description: HA01MW11 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1642	% Solids: 80.0 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1806	DLB		22222	4.68

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		27	9.0	ug/kg	1
Benzene	71-43-2	8260B	ND		6.7	1.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.7	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.7	0.94	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.7	2.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		13	3.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.7	1.7	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.7	2.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.7	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.7	1.7	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.7	1.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.7	1.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.7	0.90	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.7	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.7	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.7	1.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.7	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.7	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.7	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.7	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.7	0.98	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.7	1.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.7	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.7	1.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.7	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.7	1.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.7	0.91	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.7	1.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.7	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	1.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.7	1.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.7	0.90	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.7	0.53	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	2.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.7	0.81	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.7	3.5	ug/kg	1
Styrene	100-42-5	8260B	ND		6.7	1.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.7	0.63	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.7	3.1	ug/kg	1
Toluene	108-88-3	8260B	ND		6.7	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.7	2.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.7	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.7	1.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.7	1.1	ug/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-003
Description: HA01MW11 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1642	% Solids: 80.0 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1806	DLB		22222	4.68

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.7	2.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.7	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.7	1.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		6.7	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	53-142
Bromofluorobenzene		74	47-138
Toluene-d8		93	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.

Laboratory ID: KK16021-003

Description: HA01MW11 (1'-2')

Matrix: Solid

Date Sampled: 11/09/2009 1642

% Solids: 80.0 11/16/2009 1940

Date Received: 11/16/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch				
1	3550C	8081B	1	12/01/2009 0241	ASB	11/23/2009 1635	22297				
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
Aldrin	309-00-2	8081B	ND		2.0	0.40	ug/kg	1			
alpha-BHC	319-84-6	8081B	ND		2.0	0.46	ug/kg	1			
beta-BHC	319-85-7	8081B	ND		2.0	0.35	ug/kg	1			
delta-BHC	319-86-8	8081B	ND		2.0	0.38	ug/kg	1			
gamma-BHC (Lindane)	58-89-9	8081B	ND		2.0	0.43	ug/kg	1			
alpha-Chlordane	5103-71-9	8081B	ND		2.0	0.34	ug/kg	1			
gamma-Chlordane	5103-74-2	8081B	ND		2.0	0.28	ug/kg	1			
4,4'-DDD	72-54-8	8081B	ND		2.0	0.30	ug/kg	1			
4,4'-DDE	72-55-9	8081B	ND		2.0	0.38	ug/kg	1			
4,4'-DDT	50-29-3	8081B	ND		2.0	0.33	ug/kg	1			
Dieldrin	60-57-1	8081B	ND		2.0	0.39	ug/kg	1			
Endosulfan I	959-98-8	8081B	ND		2.0	0.40	ug/kg	1			
Endosulfan II	33213-65-9	8081B	ND		2.0	0.30	ug/kg	1			
Endosulfan sulfate	1031-07-8	8081B	ND		2.0	0.27	ug/kg	1			
Endrin	72-20-8	8081B	ND		2.0	0.39	ug/kg	1			
Endrin aldehyde	7421-93-4	8081B	ND		2.0	0.35	ug/kg	1			
Endrin ketone	53494-70-5	8081B	ND		2.0	0.26	ug/kg	1			
Heptachlor	76-44-8	8081B	ND		2.0	0.46	ug/kg	1			
Heptachlor epoxide	1024-57-3	8081B	ND		2.0	0.37	ug/kg	1			
Methoxychlor	72-43-5	8081B	ND		7.9	1.6	ug/kg	1			
Toxaphene	8001-35-2	8081B	ND		98	11	ug/kg	1			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits								
Decachlorobiphenyl		89	58-123								
Tetrachloro-m-xylene		68	51-103								

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-003
Description: HA01MW11 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1642	% Solids: 80.0 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1822	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.025	J	0.099	0.0070	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-003
Description: HA01MW11 (1'-2')	Matrix: Solid
Date Sampled: 11/09/2009 1642	% Solids: 80.0 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1807	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.30	J	0.62	0.23	mg/kg	1
Barium	7440-39-3	6010C	8.2		1.6	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.12	0.013	mg/kg	1
Chromium	7440-47-3	6010C	3.2	B	0.31	0.063	mg/kg	1
Lead	7439-92-1	6010C	4.5	B	0.62	0.12	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.62	0.22	mg/kg	1
Silver	7440-22-4	6010C	0.095	J	0.31	0.052	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-004
Description: HA01MW11 (2-3')	Matrix: Solid
Date Sampled: 11/09/2009 1700	% Solids: 77.1 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1829	DLB		22222	5.55

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		23	7.8	ug/kg	1
Benzene	71-43-2	8260B	ND		5.8	1.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.8	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.8	0.82	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.8	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		12	2.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.8	1.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.8	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.8	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.8	1.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.8	0.97	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.8	1.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.8	0.79	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.8	1.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.8	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.8	0.99	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.8	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.8	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.8	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.8	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.8	0.85	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.8	1.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.8	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.8	0.89	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.8	1.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.8	1.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.8	0.79	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.8	0.96	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.8	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	1.5	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.8	0.94	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.8	0.78	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.8	0.47	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	1.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.8	0.71	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.8	3.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.8	1.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.8	0.55	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.8	2.7	ug/kg	1
Toluene	108-88-3	8260B	ND		5.8	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.8	2.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.8	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.8	0.99	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.8	0.92	ug/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-004
Description: HA01MW11 (2-3')	Matrix: Solid
Date Sampled: 11/09/2009 1700	% Solids: 77.1 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1829	DLB		22222	5.55

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.8	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.8	1.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.8	1.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.8	3.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		72	47-138
Toluene-d8		90	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-004
Description: HA01MW11 (2-3')	Matrix: Solid
Date Sampled: 11/09/2009 1700	% Solids: 77.1    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1829	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.060	J	0.11	0.0076	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-004
Description: HA01MW11 (2-3')	Matrix: Solid
Date Sampled: 11/09/2009 1700	% Solids: 77.1    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1813	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.46	J	0.63	0.24	mg/kg	1
Barium	7440-39-3	6010C	13		1.6	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.13	0.013	mg/kg	1
Chromium	7440-47-3	6010C	6.0	B	0.31	0.064	mg/kg	1
Lead	7439-92-1	6010C	6.5	B	0.63	0.12	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.63	0.22	mg/kg	1
Silver	7440-22-4	6010C	0.22	J	0.31	0.053	mg/kg	1

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-005
Description: HA01MW13 (1'-2')	Matrix: Solid
Date Sampled: 11/10/2009 1000	% Solids: 85.5 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1851	DLB		22222	4.24

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		28	9.2	ug/kg	1
Benzene	71-43-2	8260B	ND		6.9	1.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.9	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.9	0.97	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.9	2.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		14	3.3	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.9	1.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.9	2.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.9	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.9	1.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.9	1.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.9	1.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.9	0.93	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.9	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.9	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.9	1.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.9	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.9	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.9	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.9	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.9	1.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.9	1.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.9	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.9	1.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.9	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.9	1.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.9	0.94	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.9	1.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.9	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	1.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.9	1.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.9	0.92	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.9	0.55	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	2.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.9	0.84	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.9	3.6	ug/kg	1
Styrene	100-42-5	8260B	ND		6.9	1.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.9	0.65	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.9	3.2	ug/kg	1
Toluene	108-88-3	8260B	ND		6.9	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.9	2.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.9	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.9	1.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.9	1.1	ug/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-005
Description: HA01MW13 (1'-2')	Matrix: Solid
Date Sampled: 11/10/2009 1000	% Solids: 85.5 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 1851	DLB		22222	4.24

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.9	2.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.9	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.9	1.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		6.9	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	53-142
Bromofluorobenzene		96	47-138
Toluene-d8		98	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-005
Description: HA01MW13 (1'-2')	Matrix: Solid
Date Sampled: 11/10/2009 1000	% Solids: 85.5    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8081B	1	12/01/2009 0257	ASB	11/23/2009 1635	22297

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		1.8	0.37	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		1.8	0.42	ug/kg	1
beta-BHC	319-85-7	8081B	ND		1.8	0.32	ug/kg	1
delta-BHC	319-86-8	8081B	ND		1.8	0.34	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		1.8	0.39	ug/kg	1
alpha-Chlordane	5103-71-9	8081B	ND		1.8	0.31	ug/kg	1
gamma-Chlordane	5103-74-2	8081B	ND		1.8	0.26	ug/kg	1
4,4'-DDD	72-54-8	8081B	ND		1.8	0.27	ug/kg	1
4,4'-DDE	72-55-9	8081B	ND		1.8	0.34	ug/kg	1
4,4'-DDT	50-29-3	8081B	ND		1.8	0.30	ug/kg	1
Dieldrin	60-57-1	8081B	ND		1.8	0.36	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		1.8	0.37	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		1.8	0.27	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		1.8	0.25	ug/kg	1
Endrin	72-20-8	8081B	ND		1.8	0.36	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		1.8	0.32	ug/kg	1
Endrin ketone	53494-70-5	8081B	ND		1.8	0.24	ug/kg	1
Heptachlor	76-44-8	8081B	ND		1.8	0.42	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	ND		1.8	0.33	ug/kg	1
Methoxychlor	72-43-5	8081B	ND		7.2	1.4	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		89	9.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		90	58-123
Tetrachloro-m-xylene		61	51-103

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-005
Description: HA01MW13 (1'-2')	Matrix: Solid
Date Sampled: 11/10/2009 1000	% Solids: 85.5 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1831	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	ND		0.094	0.0067	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-005
Description: HA01MW13 (1'-2')	Matrix: Solid
Date Sampled: 11/10/2009 1000	% Solids: 85.5 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1819	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.25	J	0.57	0.22	mg/kg	1
Barium	7440-39-3	6010C	2.4		1.5	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.11	0.012	mg/kg	1
Chromium	7440-47-3	6010C	0.91	B	0.29	0.058	mg/kg	1
Lead	7439-92-1	6010C	2.1	B	0.57	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.57	0.20	mg/kg	1
Silver	7440-22-4	6010C	ND		0.29	0.048	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-006
Description: HA01MW13 (4'-5')	Matrix: Solid
Date Sampled: 11/09/2009 1035	% Solids: 87.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 2058	DLB		22222	5.06

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		22	7.5	ug/kg	1
Benzene	71-43-2	8260B	ND		5.6	1.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.6	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.6	0.79	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.6	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		11	2.7	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.6	1.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	4.6	J	5.6	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.6	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.6	1.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.6	0.93	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.6	1.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.6	0.76	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.6	1.7	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.6	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.6	0.96	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.6	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.6	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.6	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.6	1.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.6	0.82	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.6	1.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.6	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.6	0.85	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.6	1.7	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.6	1.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.6	0.76	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.6	0.92	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.6	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	1.5	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.6	0.90	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.6	0.75	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.6	0.45	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	1.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.6	0.69	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.6	2.9	ug/kg	1
Styrene	100-42-5	8260B	ND		5.6	1.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.6	0.53	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.6	2.6	ug/kg	1
Toluene	108-88-3	8260B	ND		5.6	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.6	2.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.6	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.6	0.96	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.6	0.89	ug/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-006
Description: HA01MW13 (4'-5')	Matrix: Solid
Date Sampled: 11/09/2009 1035	% Solids: 87.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 2058	DLB		22222	5.06

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.6	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.6	1.7	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.6	0.97	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.6	3.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		98	47-138
Toluene-d8		100	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-006
Description: HA01MW13 (4'-5')	Matrix: Solid
Date Sampled: 11/09/2009 1035	% Solids: 87.8    11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1834	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.042	J	0.092	0.0066	mg/kg	1

PQL = Practical quantitation limit                      B = Detected in the method blank                      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL                      J = Estimated result < PQL and ≥ MDL                      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"                      N = Recovery is out of criteria                      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-006
Description: HA01MW13 (4'-5')	Matrix: Solid
Date Sampled: 11/09/2009 1035	% Solids: 87.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1825	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.29	J	0.55	0.21	mg/kg	1
Barium	7440-39-3	6010C	23		1.4	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.11	0.012	mg/kg	1
Chromium	7440-47-3	6010C	9.9	B	0.28	0.056	mg/kg	1
Lead	7439-92-1	6010C	5.2	B	0.55	0.10	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.55	0.19	mg/kg	1
Silver	7440-22-4	6010C	ND		0.28	0.046	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KK16021-007

Description: DI (110909)

Matrix: Solid

Date Sampled: 11/09/2009

% Solids: 77.8 11/16/2009 1940

Date Received: 11/16/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 2120	DLB		22222	6.33

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.8	ug/kg	1
Benzene	71-43-2	8260B	ND		5.1	1.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.1	1.7	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.1	0.71	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.1	1.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.1	1.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.1	1.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.1	1.7	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.1	1.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.1	0.84	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.1	1.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.1	0.68	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.1	1.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.1	1.7	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.1	0.86	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.1	1.7	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.1	1.7	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.1	1.7	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.1	1.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.1	0.74	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.1	1.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.1	1.7	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.1	0.77	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.1	1.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.1	0.92	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.1	0.69	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.1	0.83	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.1	1.7	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	1.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.1	0.81	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.1	0.68	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.1	0.41	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	1.5	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.1	0.62	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.1	2.6	ug/kg	1
Styrene	100-42-5	8260B	ND		5.1	1.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.1	0.48	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.1	2.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.1	1.7	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.1	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.1	1.7	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.1	0.86	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.1	0.80	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-007
Description: DI (110909)	Matrix: Solid
Date Sampled: 11/09/2009	% Solids: 77.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 2120	DLB		22222	6.33

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.1	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.1	1.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.1	0.87	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.1	2.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	53-142
Bromofluorobenzene		73	47-138
Toluene-d8		89	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-007
Description: DI (110909)	Matrix: Solid
Date Sampled: 11/09/2009	% Solids: 77.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1836	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	0.047	J	0.11	0.0076	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-007
Description: DI (110909)	Matrix: Solid
Date Sampled: 11/09/2009	% Solids: 77.8 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1831	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.48	J	0.62	0.23	mg/kg	1
Barium	7440-39-3	6010C	15		1.6	0.11	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.12	0.013	mg/kg	1
Chromium	7440-47-3	6010C	6.1	B	0.31	0.063	mg/kg	1
Lead	7439-92-1	6010C	8.5	B	0.62	0.11	mg/kg	1
Selenium	7782-49-2	6010C	0.38	J	0.62	0.21	mg/kg	1
Silver	7440-22-4	6010C	0.24	J	0.31	0.052	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-008
Description: HA01SB001 (8'-10')	Matrix: Solid
Date Sampled: 11/10/2009 1105	% Solids: 84.9 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/19/2009 2143	DLB		24134	5.76

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Toluene	108-88-3	8260B	ND		5.1	1.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		86	47-138
Toluene-d8		90	68-124

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-008
Description: HA01SB001 (8'-10')	Matrix: Solid
Date Sampled: 11/10/2009 1105	% Solids: 84.9 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7471B	1	11/21/2009 1839	BNW	11/21/2009 1630	21918

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7471B	ND		0.095	0.0068	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KK16021-008
Description: HA01SB001 (8'-10')	Matrix: Solid
Date Sampled: 11/10/2009 1105	% Solids: 84.9 11/16/2009 1940
Date Received: 11/16/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010C	1	11/20/2009 1837	KJC	11/19/2009 1612	21917

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	2.3		0.58	0.22	mg/kg	1
Barium	7440-39-3	6010C	20		1.5	0.10	mg/kg	1
Cadmium	7440-43-9	6010C	ND		0.12	0.012	mg/kg	1
Chromium	7440-47-3	6010C	6.9	B	0.29	0.058	mg/kg	1
Lead	7439-92-1	6010C	4.2	B	0.58	0.11	mg/kg	1
Selenium	7782-49-2	6010C	ND		0.58	0.20	mg/kg	1
Silver	7440-22-4	6010C	ND		0.29	0.048	mg/kg	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22222-001

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/kg	11/19/2009 1521
Benzene	ND		1	5.0	1.1	ug/kg	11/19/2009 1521
Bromodichloromethane	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
Bromoform	ND		1	5.0	0.70	ug/kg	11/19/2009 1521
Bromomethane (Methyl bromide)	ND		1	5.0	1.8	ug/kg	11/19/2009 1521
2-Butanone (MEK)	ND		1	10	2.4	ug/kg	11/19/2009 1521
Carbon disulfide	ND		1	5.0	1.3	ug/kg	11/19/2009 1521
Carbon tetrachloride	ND		1	5.0	1.8	ug/kg	11/19/2009 1521
Chlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
Chloroethane	ND		1	5.0	1.3	ug/kg	11/19/2009 1521
Chloroform	ND		1	5.0	0.83	ug/kg	11/19/2009 1521
Chloromethane (Methyl chloride)	ND		1	5.0	1.0	ug/kg	11/19/2009 1521
Cyclohexane	ND		1	5.0	0.67	ug/kg	11/19/2009 1521
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	1.5	ug/kg	11/19/2009 1521
Dibromochloromethane	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,2-Dibromoethane (EDB)	ND		1	5.0	0.85	ug/kg	11/19/2009 1521
1,4-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,3-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,2-Dichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
Dichlorodifluoromethane	ND		1	5.0	1.6	ug/kg	11/19/2009 1521
1,2-Dichloroethane	ND		1	5.0	1.0	ug/kg	11/19/2009 1521
1,1-Dichloroethane	ND		1	5.0	0.73	ug/kg	11/19/2009 1521
trans-1,2-Dichloroethene	ND		1	5.0	1.5	ug/kg	11/19/2009 1521
cis-1,2-Dichloroethene	ND		1	5.0	0.76	ug/kg	11/19/2009 1521
1,1-Dichloroethene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,2-Dichloropropane	ND		1	5.0	0.91	ug/kg	11/19/2009 1521
trans-1,3-Dichloropropene	ND		1	5.0	0.82	ug/kg	11/19/2009 1521
cis-1,3-Dichloropropene	ND		1	5.0	0.68	ug/kg	11/19/2009 1521
Ethylbenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
2-Hexanone	ND		1	10	1.3	ug/kg	11/19/2009 1521
Isopropylbenzene	ND		1	5.0	0.80	ug/kg	11/19/2009 1521
Methyl acetate	ND		1	5.0	0.67	ug/kg	11/19/2009 1521
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/kg	11/19/2009 1521
4-Methyl-2-pentanone	ND		1	10	1.5	ug/kg	11/19/2009 1521
Methylcyclohexane	ND		1	5.0	0.61	ug/kg	11/19/2009 1521
Methylene chloride	ND		1	5.0	2.6	ug/kg	11/19/2009 1521
Styrene	ND		1	5.0	1.1	ug/kg	11/19/2009 1521
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.47	ug/kg	11/19/2009 1521
Tetrachloroethene	ND		1	5.0	2.3	ug/kg	11/19/2009 1521
Toluene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.1	ug/kg	11/19/2009 1521
1,2,4-Trichlorobenzene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
1,1,2-Trichloroethane	ND		1	5.0	0.79	ug/kg	11/19/2009 1521
1,1,1-Trichloroethane	ND		1	5.0	0.85	ug/kg	11/19/2009 1521

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ22222-001

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	1.9	ug/kg	11/19/2009 1521
Trichlorofluoromethane	ND		1	5.0	1.5	ug/kg	11/19/2009 1521
Vinyl chloride	ND		1	5.0	0.86	ug/kg	11/19/2009 1521
Xylenes (total)	ND		1	5.0	2.9	ug/kg	11/19/2009 1521
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	47-138				
1,2-Dichloroethane-d4		93	53-142				
Toluene-d8		99	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22222-002

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	80		1	80	42-149	11/19/2009 1350
Benzene	50	49		1	99	69-123	11/19/2009 1350
Bromodichloromethane	50	51		1	102	69-121	11/19/2009 1350
Bromoform	50	42		1	84	61-119	11/19/2009 1350
Bromomethane (Methyl bromide)	50	51		1	102	35-144	11/19/2009 1350
2-Butanone (MEK)	100	85		1	85	57-148	11/19/2009 1350
Carbon disulfide	50	55		1	109	58-122	11/19/2009 1350
Carbon tetrachloride	50	52		1	104	58-136	11/19/2009 1350
Chlorobenzene	50	47		1	94	59-129	11/19/2009 1350
Chloroethane	50	53		1	105	50-132	11/19/2009 1350
Chloroform	50	48		1	96	71-125	11/19/2009 1350
Chloromethane (Methyl chloride)	50	63		1	126	34-134	11/19/2009 1350
Cyclohexane	50	50		1	99	53-139	11/19/2009 1350
1,2-Dibromo-3-chloropropane (DBCP)	50	42		1	83	55-125	11/19/2009 1350
Dibromochloromethane	50	45		1	89	66-119	11/19/2009 1350
1,2-Dibromoethane (EDB)	50	43		1	87	74-124	11/19/2009 1350
1,4-Dichlorobenzene	50	45		1	90	52-133	11/19/2009 1350
1,3-Dichlorobenzene	50	46		1	91	51-134	11/19/2009 1350
1,2-Dichlorobenzene	50	44		1	89	57-131	11/19/2009 1350
Dichlorodifluoromethane	50	66		1	132	10-157	11/19/2009 1350
1,2-Dichloroethane	50	50		1	99	67-129	11/19/2009 1350
1,1-Dichloroethane	50	49		1	99	71-127	11/19/2009 1350
trans-1,2-Dichloroethene	50	49		1	98	68-131	11/19/2009 1350
cis-1,2-Dichloroethene	50	48		1	96	70-122	11/19/2009 1350
1,1-Dichloroethene	50	49		1	97	69-138	11/19/2009 1350
1,2-Dichloropropane	50	49		1	99	72-124	11/19/2009 1350
trans-1,3-Dichloropropene	50	49		1	97	70-124	11/19/2009 1350
cis-1,3-Dichloropropene	50	49		1	99	70-126	11/19/2009 1350
Ethylbenzene	50	50		1	99	59-128	11/19/2009 1350
2-Hexanone	100	86		1	86	54-137	11/19/2009 1350
Isopropylbenzene	50	48		1	96	50-136	11/19/2009 1350
Methyl acetate	50	46		1	92	59-137	11/19/2009 1350
Methyl tertiary butyl ether (MTBE)	50	49		1	97	72-122	11/19/2009 1350
4-Methyl-2-pentanone	100	91		1	91	60-134	11/19/2009 1350
Methylcyclohexane	50	51		1	102	41-144	11/19/2009 1350
Methylene chloride	50	47		1	94	77-129	11/19/2009 1350
Styrene	50	51		1	102	54-136	11/19/2009 1350
1,1,2,2-Tetrachloroethane	50	41		1	83	69-132	11/19/2009 1350
Tetrachloroethene	50	48		1	96	70-130	11/19/2009 1350
Toluene	50	50		1	99	61-129	11/19/2009 1350
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	48		1	96	49-136	11/19/2009 1350
1,2,4-Trichlorobenzene	50	44		1	88	34-145	11/19/2009 1350
1,1,2-Trichloroethane	50	45		1	90	55-128	11/19/2009 1350
1,1,1-Trichloroethane	50	51		1	103	63-128	11/19/2009 1350

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ22222-002

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	48		1	96	62-126	11/19/2009 1350
Trichlorofluoromethane	50	56		1	112	45-138	11/19/2009 1350
Vinyl chloride	50	57		1	115	42-132	11/19/2009 1350
Xylenes (total)	100	99		1	99	58-128	11/19/2009 1350
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	47-138				
1,2-Dichloroethane-d4		86	53-142				
Toluene-d8		95	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22222-003

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	81		1	81	2.1	42-149	20	11/19/2009 1413
Benzene	50	50		1	100	1.2	69-123	20	11/19/2009 1413
Bromodichloromethane	50	51		1	103	1.0	69-121	20	11/19/2009 1413
Bromoform	50	43		1	85	1.2	61-119	20	11/19/2009 1413
Bromomethane (Methyl bromide)	50	50		1	99	2.6	35-144	20	11/19/2009 1413
2-Butanone (MEK)	100	88		1	88	3.8	57-148	20	11/19/2009 1413
Carbon disulfide	50	55		1	110	0.55	58-122	20	11/19/2009 1413
Carbon tetrachloride	50	53		1	106	1.9	58-136	20	11/19/2009 1413
Chlorobenzene	50	47		1	95	0.40	59-129	20	11/19/2009 1413
Chloroethane	50	52		1	104	0.79	50-132	20	11/19/2009 1413
Chloroform	50	49		1	99	2.5	71-125	20	11/19/2009 1413
Chloromethane (Methyl chloride)	50	63		1	127	0.29	34-134	20	11/19/2009 1413
Cyclohexane	50	51		1	103	3.3	53-139	20	11/19/2009 1413
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	91	8.6	55-125	20	11/19/2009 1413
Dibromochloromethane	50	45		1	89	0.28	66-119	20	11/19/2009 1413
1,2-Dibromoethane (EDB)	50	44		1	88	1.0	74-124	20	11/19/2009 1413
1,4-Dichlorobenzene	50	44		1	88	1.7	52-133	20	11/19/2009 1413
1,3-Dichlorobenzene	50	45		1	91	0.74	51-134	20	11/19/2009 1413
1,2-Dichlorobenzene	50	44		1	88	0.48	57-131	20	11/19/2009 1413
Dichlorodifluoromethane	50	66		1	131	0.44	10-157	20	11/19/2009 1413
1,2-Dichloroethane	50	50		1	101	1.7	67-129	20	11/19/2009 1413
1,1-Dichloroethane	50	50		1	100	1.4	71-127	20	11/19/2009 1413
trans-1,2-Dichloroethene	50	50		1	99	0.97	68-131	20	11/19/2009 1413
cis-1,2-Dichloroethene	50	49		1	98	2.1	70-122	20	11/19/2009 1413
1,1-Dichloroethene	50	49		1	98	0.86	69-138	20	11/19/2009 1413
1,2-Dichloropropane	50	50		1	100	1.6	72-124	20	11/19/2009 1413
trans-1,3-Dichloropropene	50	48		1	96	1.4	70-124	20	11/19/2009 1413
cis-1,3-Dichloropropene	50	50		1	101	2.1	70-126	20	11/19/2009 1413
Ethylbenzene	50	49		1	99	0.45	59-128	20	11/19/2009 1413
2-Hexanone	100	90		1	90	4.0	54-137	20	11/19/2009 1413
Isopropylbenzene	50	48		1	97	1.2	50-136	20	11/19/2009 1413
Methyl acetate	50	49		1	99	6.5	59-137	20	11/19/2009 1413
Methyl tertiary butyl ether (MTBE)	50	49		1	99	1.4	72-122	20	11/19/2009 1413
4-Methyl-2-pentanone	100	96		1	96	5.5	60-134	20	11/19/2009 1413
Methylcyclohexane	50	52		1	103	0.84	41-144	20	11/19/2009 1413
Methylene chloride	50	47		1	95	1.0	77-129	20	11/19/2009 1413
Styrene	50	51		1	102	0.057	54-136	20	11/19/2009 1413
1,1,2,2-Tetrachloroethane	50	43		1	85	2.8	69-132	20	11/19/2009 1413
Tetrachloroethene	50	48		1	96	0.69	70-130	20	11/19/2009 1413
Toluene	50	51		1	101	2.4	61-129	20	11/19/2009 1413
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	48		1	96	0.43	49-136	20	11/19/2009 1413
1,2,4-Trichlorobenzene	50	44		1	89	1.0	34-145	20	11/19/2009 1413
1,1,2-Trichloroethane	50	45		1	91	0.20	55-128	20	11/19/2009 1413
1,1,1-Trichloroethane	50	53		1	106	2.6	63-128	20	11/19/2009 1413

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ22222-003

Matrix: Solid

Batch: 22222

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	50		1	100	3.2	62-126	20	11/19/2009 1413
Trichlorofluoromethane	50	55		1	111	1.3	45-138	20	11/19/2009 1413
Vinyl chloride	50	60		1	119	3.5	42-132	20	11/19/2009 1413
Xylenes (total)	100	99		1	99	0.39	58-128	20	11/19/2009 1413
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		96	47-138						
1,2-Dichloroethane-d4		87	53-142						
Toluene-d8		98	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24134-001

Matrix: Solid

Batch: 24134

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Toluene	ND		1	5.0	1.7	ug/kg	11/19/2009 1521
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	47-138				
1,2-Dichloroethane-d4		93	53-142				
Toluene-d8		99	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24134-002

Matrix: Solid

Batch: 24134

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Toluene	50	50		1	99	61-129	11/19/2009 1350
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene	95	47-138					
1,2-Dichloroethane-d4	86	53-142					
Toluene-d8	95	68-124					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24134-003

Matrix: Solid

Batch: 24134

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Toluene	50	51		1	101	2.4	61-129	20	11/19/2009 1413
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		96	47-138						
1,2-Dichloroethane-d4		87	53-142						
Toluene-d8		98	68-124						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ22297-001

Matrix: Solid

Batch: 22297

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/23/2009 1635

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	1.7	0.25	ug/kg	12/01/2009 0155
4,4'-DDE	ND		1	1.7	0.32	ug/kg	12/01/2009 0155
4,4'-DDT	ND		1	1.7	0.28	ug/kg	12/01/2009 0155
Aldrin	ND		1	1.7	0.34	ug/kg	12/01/2009 0155
alpha-BHC	ND		1	1.7	0.39	ug/kg	12/01/2009 0155
alpha-Chlordane	ND		1	1.7	0.29	ug/kg	12/01/2009 0155
beta-BHC	ND		1	1.7	0.30	ug/kg	12/01/2009 0155
delta-BHC	ND		1	1.7	0.32	ug/kg	12/01/2009 0155
Dieldrin	ND		1	1.7	0.33	ug/kg	12/01/2009 0155
Endosulfan I	ND		1	1.7	0.34	ug/kg	12/01/2009 0155
Endosulfan II	ND		1	1.7	0.25	ug/kg	12/01/2009 0155
Endosulfan sulfate	ND		1	1.7	0.23	ug/kg	12/01/2009 0155
Endrin	ND		1	1.7	0.33	ug/kg	12/01/2009 0155
Endrin aldehyde	ND		1	1.7	0.30	ug/kg	12/01/2009 0155
Endrin ketone	ND		1	1.7	0.22	ug/kg	12/01/2009 0155
gamma-BHC (Lindane)	ND		1	1.7	0.36	ug/kg	12/01/2009 0155
gamma-Chlordane	ND		1	1.7	0.24	ug/kg	12/01/2009 0155
Heptachlor	ND		1	1.7	0.39	ug/kg	12/01/2009 0155
Heptachlor epoxide	ND		1	1.7	0.31	ug/kg	12/01/2009 0155
Methoxychlor	ND		1	6.7	1.3	ug/kg	12/01/2009 0155
Toxaphene	ND		1	83	9.1	ug/kg	12/01/2009 0155
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		106	58-123				
Tetrachloro-m-xylene		90	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: KQ22297-002

Matrix: Solid

Batch: 22297

Prep Method: 3550C

Analytical Method: 8081B

Prep Date: 11/23/2009 1635

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	17	16		1	95	50-130	12/01/2009 0210
4,4'-DDE	17	16		1	92	50-130	12/01/2009 0210
4,4'-DDT	17	16		1	96	50-130	12/01/2009 0210
Aldrin	17	14		1	83	50-130	12/01/2009 0210
alpha-BHC	17	14		1	83	50-130	12/01/2009 0210
alpha-Chlordane	17	15		1	91	50-130	12/01/2009 0210
beta-BHC	17	13		1	78	50-130	12/01/2009 0210
delta-BHC	17	18		1	108	50-130	12/01/2009 0210
Dieldrin	17	16		1	94	50-130	12/01/2009 0210
Endosulfan I	17	15		1	88	50-130	12/01/2009 0210
Endosulfan II	17	17		1	100	50-130	12/01/2009 0210
Endosulfan sulfate	17	16		1	94	50-130	12/01/2009 0210
Endrin	17	16		1	93	50-130	12/01/2009 0210
Endrin aldehyde	17	18		1	103	50-130	12/01/2009 0210
Endrin ketone	17	16		1	97	50-130	12/01/2009 0210
gamma-BHC (Lindane)	17	14		1	85	50-130	12/01/2009 0210
gamma-Chlordane	17	17		1	102	50-130	12/01/2009 0210
Heptachlor	17	14		1	84	50-130	12/01/2009 0210
Heptachlor epoxide	17	14		1	85	50-130	12/01/2009 0210
Methoxychlor	17	15		1	89	50-130	12/01/2009 0210
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		105	58-123				
Tetrachloro-m-xylene		81	51-103				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: KQ21917-001

Matrix: Solid

Batch: 21917

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/19/2009 1612

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.50	0.19	mg/kg	11/20/2009 1650
Barium	ND		1	1.3	0.091	mg/kg	11/20/2009 1650
Cadmium	ND		1	0.10	0.011	mg/kg	11/20/2009 1650
Chromium	0.076	J	1	0.25	0.051	mg/kg	11/20/2009 1650
Lead	0.27	J	1	0.50	0.093	mg/kg	11/20/2009 1650
Selenium	ND		1	0.50	0.17	mg/kg	11/20/2009 1650
Silver	ND		1	0.25	0.042	mg/kg	11/20/2009 1650

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ21917-002

Matrix: Solid

Batch: 21917

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/19/2009 1612

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	250	230		1	94	80-120	11/20/2009 1656
Barium	500	480		1	96	80-120	11/20/2009 1656
Cadmium	50	47		1	95	80-120	11/20/2009 1656
Chromium	250	240		1	96	80-120	11/20/2009 1656
Lead	250	220		1	90	80-120	11/20/2009 1656
Selenium	50	50		1	100	80-120	11/20/2009 1656
Silver	250	240		1	98	80-120	11/20/2009 1656

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: KQ21917-003

Matrix: Solid

Batch: 21917

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/19/2009 1612

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	250	230		1	91	3.4	80-120	20	11/20/2009 1702
Barium	500	470		1	93	2.6	80-120	20	11/20/2009 1702
Cadmium	50	46		1	92	3.5	80-120	20	11/20/2009 1702
Chromium	250	230		1	93	3.3	80-120	20	11/20/2009 1702
Lead	250	220		1	86	3.6	80-120	20	11/20/2009 1702
Selenium	50	47		1	95	4.9	80-120	20	11/20/2009 1702
Silver	250	240		1	95	2.6	80-120	20	11/20/2009 1702

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - MS

Sample ID: KK16021-001MS

Matrix: Solid

Batch: 21917

Prep Method: 3050B

Analytical Method: 6010C

Prep Date: 11/19/2009 1612

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	1.0	300	270		1	92	75-125	11/20/2009 1743
Barium	10	590	570		1	94	75-125	11/20/2009 1743
Cadmium	ND	59	56		1	94	75-125	11/20/2009 1743
Chromium	2.0	300	280		1	96	75-125	11/20/2009 1743
Lead	6.0	300	270		1	88	75-125	11/20/2009 1743
Selenium	ND	59	58		1	98	75-125	11/20/2009 1743
Silver	ND	300	290		1	98	75-125	11/20/2009 1743

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ21918-001

Batch: 21918

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 11/21/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.083	0.0059	mg/kg	11/21/2009 1750

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCS

Sample ID: KQ21918-002

Matrix: Solid

Batch: 21918

Prep Method: 7471B

Analytical Method: 7471B

Prep Date: 11/21/2009 1630

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.83		1	99	85-115	11/21/2009 1752

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: KQ21918-003

Matrix: Solid

Batch: 21918

Prep Method: 7471B

Analytical Method: 7471B

Prep Date: 11/21/2009 1630

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.83	0.82		1	98	1.0	85-115	20	11/21/2009 1759

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MS

Sample ID: KK16021-001MS

Matrix: Solid

Batch: 21918

Prep Method: 7471B

Analytical Method: 7471B

Prep Date: 11/21/2009 1630

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.035	0.96	1.1		1	106	85-115	11/21/2009 1817

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# SHEALY ENVIRONMENTAL SERVICES, INC.



**SHEALY ENVIRONMENTAL SERVICES, INC.**

106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

**Number 100367**

Client: **ARCADIS**  
 Address: **30 Patwood Dr, Suite 155**  
 City: **Greenville** State: **SC** Zip Code: **29615**  
 Project Name: **Ft. Stewart (HAA01)**  
 Project No.: **GPO8 HAFS HOIB**

Report to Contact: **Andrew Davis**  
 Sampler's Signature: *Bobby Wolf*  
 Printed Name: **Bobby Wolf**

Telephone No. / Fax No. / E-mail: **(864) 987-3900 / (864) 987-1609**  
 Project No.: \_\_\_\_\_  
 Page: **1** of **1**

Analysis (Attach list if more space is needed.)

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	P.O. No.	Matrix		No. of Containers by Preservative Type							Remarks / Cooler I.D.		
				Agonous	Acidic	Types	MS204	MOR	HC	NRCH	505 KL				
HA01MW10 (1'-2')	11/9/09	1425	G	X		2									VOCs Metals Pesticides Lot No. <b>KK16021</b>
HA01MW10 (3'-4')	11/9/09	1520	G	X		1									
HA01MW11 (1'-2')	11/9/09	1642	G	X		2									
HA01MW11 (2'-3')	11/9/09	1700	G	X		1									
HA01MW13 (1'-2')	11/10/09	1000	G	X		2									
HA01MW13 (4'-5')	11/10/09	1035	G	X		1									
D1 (116909)	11/9/09		G	X		1									
HA01SB001 (8'-10')	11/10/09	1105	G	X		1									

Sample Disposal:  Return to Client  Disposal by Lab  
 Note: All samples are retained for six weeks from receipt unless other arrangements are made.

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify)

OC Requirements (Specify):

1. Requisitioned by	<i>Bobby Wolf</i>	Date	11/11/09	Time	1020
2. Requisitioned by		Date		Time	
3. Requisitioned by		Date		Time	

LAB USE ONLY  
 Received on box (Circle) Yes  No  Ice Pack   
 Date: **11/14/09** Time: **1020**  
 Receiver Temp: **5.8 °C**

Comments: \_\_\_\_\_  
 DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Arcadis Cooler Inspected by/date: ea 11/14/07 Lot #: KK16021

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt: <u>578</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	16. Were bubbles present: >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.			
Toxicity sample(s) _____ were received with: TRC >0.1 mg/L and were analyzed by method 330.5.			

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

Analytical data were evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (July 2002), analytical method control criteria, the analytical laboratory Quality Assurance Control Limits, the Fort Stewart Military Reservation and Hunter Army Airfield Quality Assurance Project Plan (ARCADIS-2008), and professional judgment.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQUIS Data Qualification Module (DQM). DQM checks for the following parameters:

- √ Holding times and preservation;
- √ Blank contamination;
  - 1. Method blanks,
  - 2. Trip blanks,
  - 3. Equipment blanks;
- √ Matrix spike and Duplicate sample recovery;
- √ Matrix Spike and Matrix Spike Duplicate relative percent differences;
- √ Laboratory Control Sample and Duplicate recovery;
- √ Laboratory Control Sample and Duplicate relative percent differences;
- √ Surrogate recovery (organic analyses only); and
- √ Field duplicate relative percent difference.

Manual review was performed for the following items:

- √ Sample dilutions and reporting limits;
- √ Case Narratives; and
- √ Laboratory Duplicates

Data was generated by Shealy Environmental Services, Inc. – West Columbia, South Carolina. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in these SDGs are considered usable as reported.






HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the above guidance documents:

- UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.
- J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.
- U Not detected at the quantitative reporting limit

DQM RUN BY:	Rachelle Borne	01/27/10
REVIEW PERFORMED BY:	Rachelle Borne	01/27/10
SIGNATURE:		01/29/10
PEER REVIEW:	Dennis Capria	2/2/10

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

The following samples were included in this SDG:

<b>SDG</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Parent Sample</b>
KK16021	DI (110909)	11/9/2009	HA01MW11 (2-3')
KK16021	HA01MW10 (1'-2')	11/9/2009	
KK16021	HA01MW10 (3'-4')	11/9/2009	
KK16021	HA01MW11 (1'-2')	11/9/2009	
KK16021	HA01MW11 (2-3')	11/9/2009	
KK16021	HA01MW13 (1'-2')	11/10/2009	
KK16021	HA01MW13 (4'-5')	11/9/2009	
KK16021	HA01SB001 (8'-10')	11/10/2009	



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

ANALYTICAL DATA PACKAGE DOCUMENTATION

**GENERAL INFORMATION**

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	
13. South Carolina Certification Number		X		X	

QA - quality assurance

The analytical report was complete with the following exceptions or notations.

Note: The laboratory reported values between the quantitative reporting limit and the method detection limit as estimated concentrations. The "J" qualifier was retained in this validation. Non-detect values are reported at the quantitative reporting limit.

All soils were reported on a dry weight basis.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

**VOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
C. Trip blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
6. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	DQM		DQM	

M – Manual Review %R - percent recovery RPD - relative percent difference DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8260B.

- Sample location DI(110909) was collected as a field duplicate of HA01MW-11(2-3). The RPDs were acceptable at non-detect.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

**ORGANOCHLORINE PESTICIDES**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review    %R - percent recovery    RPD - relative percent difference    DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8081B.

No qualification necessary.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: KK16021  
HAA-01**

**METALS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment blanks	NA		NA	
4. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
5. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
6. Field Duplicate precision (RPD)	DQM		DQM	

M – Manual Review      %R - percent recovery      RPD - relative percent difference      DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods 6010C and 7471B.

- 3A. Analytes chromium and lead were detected in the method blank. The associated field sample results were greater than five times the blank value; therefore, qualification of the data is not warranted.
- 5A. Sample location HA01MW10(1-2) was used as a site-specific MS. The recoveries were acceptable.
- 6. Sample location DI(110909) was collected as a field duplicate of HA01MW-11(2-3). The RPDs were acceptable at less than 40%.

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Hunter - HAA-01

Project Number: GP08HAFS.H01B.NALTM

Lot Number: KL17018

Date Completed: 01/09/2010



Nisreen Saikaly  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* KL17018 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

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## Case Narrative

### ARCADIS U.S., Inc.

Lot Number: KL17018

---

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

#### Semivolatile Organic Compounds

The surrogate recovery for Phenol-d5 i sample -001, MB and LCS was outside the acceptance limit in batch 24198. No sample remained for re-extraction. The LCS recovery for six analytes was slightly outside method control limits in batch 24198. As per method, it is statistically likely that a few analytes will be outside control limits; up to five analytes may marginally exceed the control limits. Therefore the associated sample results were reported and no corrective action was required.

The MS/MSD recoveries for many analytes in batch 24198 were outside acceptance criteria. All other QA/QC criteria for the batch were within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

#### Pesticides

As per method requirements, only one of the surrogates has to be within acceptance limits. The sample results are reported and no corrective action is required.



# SHEALY ENVIRONMENTAL SERVICES, INC.

---

## Sample Summary ARCADIS U.S., Inc. Lot Number: KL17018

---

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HAA01-MW-18 (121609)	Aqueous	12/16/2009 1348	12/17/2009
002	HMW-9 (121609)	Aqueous	12/16/2009 1710	12/17/2009
003	HMW-11 (121609)	Aqueous	12/16/2009 1408	12/17/2009
004	HMW-8 (121609)	Aqueous	12/16/2009 1225	12/17/2009
005	HMW-2 (121609)	Aqueous	12/16/2009 1105	12/17/2009
006	TB-03 (121609)	Aqueous	12/17/2009 0850	12/17/2009

---

(6 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KL17018

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	HAA01-MW-18 (121609)	Aqueous	Barium	6010C	0.011	J	mg/L	11

(1 detection)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-001

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0616	RRH		24457			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-001
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0616	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-001

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3520C	8270D	1	01/07/2010 2325	GLR	12/23/2009 1630	24198		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acenaphthene	83-32-9	8270D	ND		1.1	0.10	ug/L	1	
Acenaphthylene	208-96-8	8270D	ND		1.1	0.18	ug/L	1	
Acetophenone	98-86-2	8270D	ND		1.1	0.36	ug/L	1	
Anthracene	120-12-7	8270D	ND		1.1	0.15	ug/L	1	
Atrazine	1912-24-9	8270D	ND		1.1	0.22	ug/L	1	
Benzaldehyde	100-52-7	8270D	ND		5.6	1.1	ug/L	1	
Benzo(a)anthracene	56-55-3	8270D	ND		1.1	0.17	ug/L	1	
Benzo(a)pyrene	50-32-8	8270D	ND		1.1	0.18	ug/L	1	
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.1	0.22	ug/L	1	
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.1	0.26	ug/L	1	
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.1	0.13	ug/L	1	
1,1'-Biphenyl	92-52-4	8270D	ND		1.1	0.22	ug/L	1	
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.1	0.13	ug/L	1	
Butyl benzyl phthalate	85-68-7	8270D	ND		5.6	1.9	ug/L	1	
Caprolactam	105-60-2	8270D	ND		5.6	1.4	ug/L	1	
Carbazole	86-74-8	8270D	ND		1.1	0.28	ug/L	1	
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.1	0.25	ug/L	1	
4-Chloroaniline	106-47-8	8270D	ND		1.1	0.15	ug/L	1	
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.1	0.15	ug/L	1	
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.1	0.15	ug/L	1	
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.1	0.090	ug/L	1	
2-Chloronaphthalene	91-58-7	8270D	ND		1.1	0.13	ug/L	1	
2-Chlorophenol	95-57-8	8270D	ND		1.1	0.15	ug/L	1	
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.1	0.12	ug/L	1	
Chrysene	218-01-9	8270D	ND		1.1	0.13	ug/L	1	
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.1	0.15	ug/L	1	
Dibenzofuran	132-64-9	8270D	ND		1.1	0.18	ug/L	1	
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.6	0.91	ug/L	1	
2,4-Dichlorophenol	120-83-2	8270D	ND		1.1	0.17	ug/L	1	
Diethylphthalate	84-66-2	8270D	ND		5.6	1.9	ug/L	1	
Dimethyl phthalate	131-11-3	8270D	ND		5.6	1.9	ug/L	1	
2,4-Dimethylphenol	105-67-9	8270D	ND		1.1	0.35	ug/L	1	
Di-n-butyl phthalate	84-74-2	8270D	ND		5.6	1.9	ug/L	1	
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.6	1.7	ug/L	1	
2,4-Dinitrophenol	51-28-5	8270D	ND		5.6	0.28	ug/L	1	
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.2	0.51	ug/L	1	
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.2	0.45	ug/L	1	
Di-n-octylphthalate	117-84-0	8270D	ND		5.6	1.9	ug/L	1	
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.6	1.9	ug/L	1	
Fluoranthene	206-44-0	8270D	ND		1.1	0.24	ug/L	1	
Fluorene	86-73-7	8270D	ND		1.1	0.11	ug/L	1	
Hexachlorobenzene	118-74-1	8270D	ND		1.1	0.24	ug/L	1	
Hexachlorobutadiene	87-68-3	8270D	ND		1.1	0.10	ug/L	1	
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.6	0.26	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-001

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/07/2010 2325	GLR	12/23/2009 1630	24198			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Hexachloroethane	67-72-1	8270D	ND		1.1	0.12	ug/L	1		
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.1	0.26	ug/L	1		
Isophorone	78-59-1	8270D	ND		1.1	0.090	ug/L	1		
2-Methylnaphthalene	91-57-6	8270D	ND		1.1	0.090	ug/L	1		
2-Methylphenol	95-48-7	8270D	ND		1.1	0.19	ug/L	1		
3 & 4-Methylphenol	106-44-5	8270D	ND		2.2	0.64	ug/L	1		
Naphthalene	91-20-3	8270D	ND		1.1	0.079	ug/L	1		
2-Nitroaniline	88-74-4	8270D	ND		2.2	0.62	ug/L	1		
3-Nitroaniline	99-09-2	8270D	ND		2.2	0.87	ug/L	1		
4-Nitroaniline	100-01-6	8270D	ND		2.2	0.44	ug/L	1		
Nitrobenzene	98-95-3	8270D	ND		1.1	0.11	ug/L	1		
2-Nitrophenol	88-75-5	8270D	ND		2.2	0.30	ug/L	1		
4-Nitrophenol	100-02-7	8270D	ND		5.6	0.72	ug/L	1		
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.1	0.090	ug/L	1		
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.1	0.43	ug/L	1		
Pentachlorophenol	87-86-5	8270D	ND		5.6	0.61	ug/L	1		
Phenanthrene	85-01-8	8270D	ND		1.1	0.20	ug/L	1		
Phenol	108-95-2	8270D	ND		1.1	0.12	ug/L	1		
Pyrene	129-00-0	8270D	ND		1.1	0.18	ug/L	1		
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.1	0.20	ug/L	1		
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.1	0.25	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
2-Fluorobiphenyl		42	37-129							
2-Fluorophenol	N	22	24-127							
Nitrobenzene-d5		39	38-127							
Phenol-d5	N	13	28-128							
Terphenyl-d14		44	10-148							
2,4,6-Tribromophenol	N	37	41-144							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-001
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 1805	NCM	12/23/2009 1130	24171

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		73	49-124
Tetrachloro-m-xylene		84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-001
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/17/2009 2347	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-001
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/19/2009 2000	CDF	12/18/2009 1630	23888
2	3005A	6010C	1	12/21/2009 1742	KJC	12/18/2009 1630	23888

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.011	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	2

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-002

Description: HMW-9 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1710

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0638	RRH		24457			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-002
Description: HMW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1710	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0638	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-003

Description: HMW-11 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1408

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 0700	RRH		24457		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-003
Description: HMW-11 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1408	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0700	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-004

Description: HMW-8 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1225

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 0721	RRH		24457		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-004
Description: HMW-8 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1225	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0721	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-005

Description: HMW-2 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1105

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0744	RRH		24457			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-005
Description: HMW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1105	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0744	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17018-006

Description: TB-03 (121609)

Matrix: Aqueous

Date Sampled: 12/17/2009 0850

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 0805	RRH		24457		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17018-006
Description: TB-03 (121609)	Matrix: Aqueous
Date Sampled: 12/17/2009 0850	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0805	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24457-001

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 0236
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 0236
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 0236
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 0236
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 0236
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 0236
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 0236
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Cyclohexane	0.38	J	1	0.50	0.30	ug/L	12/29/2009 0236
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 0236
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 0236
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 0236
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 0236
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 0236
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 0236
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 0236
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 0236
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 0236
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 0236
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 0236
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 0236
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 0236
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 0236
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 0236
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 0236
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 0236
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 0236
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 0236
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 0236
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 0236
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 0236
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 0236

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24457-001

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 0236
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 0236
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 0236
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24457-002

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	46-153	12/29/2009 0023
Benzene	50	51		1	102	70-130	12/29/2009 0023
Bromodichloromethane	50	54		1	108	70-130	12/29/2009 0023
Bromoform	50	51		1	102	70-130	12/29/2009 0023
Bromomethane (Methyl bromide)	50	54		1	108	60-140	12/29/2009 0023
2-Butanone (MEK)	100	110		1	105	60-140	12/29/2009 0023
Carbon disulfide	50	54		1	109	60-140	12/29/2009 0023
Carbon tetrachloride	50	53		1	105	70-130	12/29/2009 0023
Chlorobenzene	50	53		1	105	70-130	12/29/2009 0023
Chloroethane	50	54		1	108	42-163	12/29/2009 0023
Chloroform	50	52		1	103	70-130	12/29/2009 0023
Chloromethane (Methyl chloride)	50	50		1	99	20-158	12/29/2009 0023
Cyclohexane	50	59		1	119	70-130	12/29/2009 0023
1,2-Dibromo-3-chloropropane (DBCP)	50	60		1	121	70-130	12/29/2009 0023
Dibromochloromethane	50	58		1	117	70-130	12/29/2009 0023
1,2-Dibromoethane (EDB)	50	54		1	109	70-130	12/29/2009 0023
1,4-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
1,2-Dichlorobenzene	50	53		1	106	70-130	12/29/2009 0023
1,3-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
Dichlorodifluoromethane	50	52		1	104	60-140	12/29/2009 0023
1,2-Dichloroethane	50	51		1	101	70-130	12/29/2009 0023
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 0023
cis-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,1-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
trans-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,2-Dichloropropane	50	51		1	102	70-130	12/29/2009 0023
cis-1,3-Dichloropropene	50	50		1	100	70-130	12/29/2009 0023
trans-1,3-Dichloropropene	50	51		1	102	70-130	12/29/2009 0023
Ethylbenzene	50	57		1	113	70-130	12/29/2009 0023
2-Hexanone	100	110		1	106	60-140	12/29/2009 0023
Isopropylbenzene	50	60		1	120	70-130	12/29/2009 0023
Methyl acetate	50	46		1	93	15-128	12/29/2009 0023
Methyl tertiary butyl ether (MTBE)	50	54		1	107	70-130	12/29/2009 0023
4-Methyl-2-pentanone	100	110		1	110	60-140	12/29/2009 0023
Methylcyclohexane	50	60		1	120	70-130	12/29/2009 0023
Methylene chloride	50	49		1	99	70-130	12/29/2009 0023
Styrene	50	60		1	119	70-130	12/29/2009 0023
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	12/29/2009 0023
Tetrachloroethene	50	54		1	107	70-130	12/29/2009 0023
Toluene	50	54		1	108	70-130	12/29/2009 0023
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	117	70-130	12/29/2009 0023
1,2,4-Trichlorobenzene	50	61		1	123	70-130	12/29/2009 0023
1,1,2-Trichloroethane	50	53		1	106	70-130	12/29/2009 0023
1,1,1-Trichloroethane	50	54		1	108	70-130	12/29/2009 0023

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24457-002

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 0023
Trichlorofluoromethane	50	50		1	101	60-140	12/29/2009 0023
Vinyl chloride	50	53		1	106	60-140	12/29/2009 0023
Xylenes (total)	100	110		1	115	70-130	12/29/2009 0023
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		97			70-130		
1,2-Dichloroethane-d4		98			70-130		
Toluene-d8		100			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24457-003

Batch: 24457

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	78	+	1	78	28	46-153	20	12/29/2009 0045
Benzene	50	49		1	99	2.8	70-130	20	12/29/2009 0045
Bromodichloromethane	50	52		1	104	3.7	70-130	20	12/29/2009 0045
Bromoform	50	49		1	98	4.3	70-130	20	12/29/2009 0045
Bromomethane (Methyl bromide)	50	51		1	102	6.2	60-140	20	12/29/2009 0045
2-Butanone (MEK)	100	100		1	101	3.8	60-140	20	12/29/2009 0045
Carbon disulfide	50	51		1	102	6.5	60-140	20	12/29/2009 0045
Carbon tetrachloride	50	51		1	101	4.1	70-130	20	12/29/2009 0045
Chlorobenzene	50	53		1	106	0.56	70-130	20	12/29/2009 0045
Chloroethane	50	51		1	102	6.1	42-163	20	12/29/2009 0045
Chloroform	50	49		1	98	5.2	70-130	20	12/29/2009 0045
Chloromethane (Methyl chloride)	50	49		1	98	1.7	20-158	20	12/29/2009 0045
Cyclohexane	50	57		1	114	3.6	70-130	20	12/29/2009 0045
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	17	70-130	20	12/29/2009 0045
Dibromochloromethane	50	57		1	114	2.0	70-130	20	12/29/2009 0045
1,2-Dibromoethane (EDB)	50	55		1	111	1.9	70-130	20	12/29/2009 0045
1,4-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
1,2-Dichlorobenzene	50	53		1	105	1.1	70-130	20	12/29/2009 0045
1,3-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
Dichlorodifluoromethane	50	50		1	100	3.6	60-140	20	12/29/2009 0045
1,2-Dichloroethane	50	48		1	96	5.2	70-130	20	12/29/2009 0045
1,1-Dichloroethane	50	48		1	95	5.8	70-130	20	12/29/2009 0045
cis-1,2-Dichloroethene	50	48		1	96	7.3	70-130	20	12/29/2009 0045
1,1-Dichloroethene	50	48		1	96	7.4	70-130	20	12/29/2009 0045
trans-1,2-Dichloroethene	50	49		1	99	4.6	70-130	20	12/29/2009 0045
1,2-Dichloropropane	50	51		1	102	0.23	70-130	20	12/29/2009 0045
cis-1,3-Dichloropropene	50	52		1	104	3.3	70-130	20	12/29/2009 0045
trans-1,3-Dichloropropene	50	52		1	104	2.4	70-130	20	12/29/2009 0045
Ethylbenzene	50	57		1	113	0.039	70-130	20	12/29/2009 0045
2-Hexanone	100	110		1	114	7.1	60-140	20	12/29/2009 0045
Isopropylbenzene	50	60		1	119	0.044	70-130	20	12/29/2009 0045
Methyl acetate	50	42		1	85	9.1	15-128	20	12/29/2009 0045
Methyl tertiary butyl ether (MTBE)	50	49		1	97	9.5	70-130	20	12/29/2009 0045
4-Methyl-2-pentanone	100	110		1	107	2.2	60-140	20	12/29/2009 0045
Methylcyclohexane	50	59		1	118	1.7	70-130	20	12/29/2009 0045
Methylene chloride	50	46		1	93	6.4	70-130	20	12/29/2009 0045
Styrene	50	59		1	118	0.64	70-130	20	12/29/2009 0045
1,1,2,2-Tetrachloroethane	50	52		1	104	3.9	70-130	20	12/29/2009 0045
Tetrachloroethene	50	53		1	106	0.60	70-130	20	12/29/2009 0045
Toluene	50	55		1	110	1.6	70-130	20	12/29/2009 0045
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	112	4.0	70-130	20	12/29/2009 0045
1,2,4-Trichlorobenzene	50	54		1	108	12	70-130	20	12/29/2009 0045
1,1,2-Trichloroethane	50	53		1	107	0.16	70-130	20	12/29/2009 0045
1,1,1-Trichloroethane	50	52		1	103	4.2	70-130	20	12/29/2009 0045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24457-003

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	3.2	70-130	20	12/29/2009 0045
Trichlorofluoromethane	50	48		1	96	5.5	60-140	20	12/29/2009 0045
Vinyl chloride	50	50		1	100	6.1	60-140	20	12/29/2009 0045
Xylenes (total)	100	110		1	112	2.1	70-130	20	12/29/2009 0045
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		93	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24198-001

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	1.0	0.20	ug/L	01/08/2010 0018
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	01/08/2010 0018
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	01/08/2010 0018
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	01/08/2010 0018
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	01/08/2010 0018
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	01/08/2010 0018
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	01/08/2010 0018
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	01/08/2010 0018
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
2-Chlorophenol	ND		1	1.0	0.13	ug/L	01/08/2010 0018
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	01/08/2010 0018
2-Methylphenol	ND		1	1.0	0.17	ug/L	01/08/2010 0018
2-Nitroaniline	ND		1	2.0	0.55	ug/L	01/08/2010 0018
2-Nitrophenol	ND		1	2.0	0.27	ug/L	01/08/2010 0018
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	01/08/2010 0018
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	01/08/2010 0018
3-Nitroaniline	ND		1	2.0	0.77	ug/L	01/08/2010 0018
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	01/08/2010 0018
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	01/08/2010 0018
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	01/08/2010 0018
4-Chloroaniline	ND		1	1.0	0.13	ug/L	01/08/2010 0018
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	01/08/2010 0018
4-Nitroaniline	ND		1	2.0	0.39	ug/L	01/08/2010 0018
4-Nitrophenol	ND		1	5.0	0.64	ug/L	01/08/2010 0018
Acenaphthene	ND		1	1.0	0.090	ug/L	01/08/2010 0018
Acenaphthylene	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Acetophenone	ND		1	1.0	0.32	ug/L	01/08/2010 0018
Anthracene	ND		1	1.0	0.13	ug/L	01/08/2010 0018
Atrazine	ND		1	1.0	0.20	ug/L	01/08/2010 0018
Benzaldehyde	ND		1	5.0	1.0	ug/L	01/08/2010 0018
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	01/08/2010 0018
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	01/08/2010 0018
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	01/08/2010 0018
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	01/08/2010 0018
bis(2-Chloroethyl)ether	ND		1	1.0	0.13	ug/L	01/08/2010 0018
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	01/08/2010 0018
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Caprolactam	ND		1	5.0	1.2	ug/L	01/08/2010 0018
Carbazole	ND		1	1.0	0.25	ug/L	01/08/2010 0018
Chrysene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24198-001

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	01/08/2010 0018
Dibenzofuran	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Diethylphthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Fluoranthene	ND		1	1.0	0.21	ug/L	01/08/2010 0018
Fluorene	ND		1	1.0	0.10	ug/L	01/08/2010 0018
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	01/08/2010 0018
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	01/08/2010 0018
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	01/08/2010 0018
Hexachloroethane	ND		1	1.0	0.11	ug/L	01/08/2010 0018
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	01/08/2010 0018
Isophorone	ND		1	1.0	0.080	ug/L	01/08/2010 0018
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	01/08/2010 0018
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	01/08/2010 0018
Naphthalene	ND		1	1.0	0.070	ug/L	01/08/2010 0018
Nitrobenzene	ND		1	1.0	0.10	ug/L	01/08/2010 0018
Pentachlorophenol	ND		1	5.0	0.54	ug/L	01/08/2010 0018
Phenanthrene	ND		1	1.0	0.18	ug/L	01/08/2010 0018
Phenol	ND		1	1.0	0.11	ug/L	01/08/2010 0018
Pyrene	ND		1	1.0	0.16	ug/L	01/08/2010 0018

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		55	41-144
2-Fluorobiphenyl		57	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5	N	23	28-128
Terphenyl-d14		46	10-148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24198-002

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	11		1	53	46-125	01/08/2010 0038
2,4,6-Trichlorophenol	20	9.2		1	46	36-123	01/08/2010 0038
2,4-Dichlorophenol	20	10		1	51	38-127	01/08/2010 0038
2,4-Dimethylphenol	20	7.9		1	39	36-110	01/08/2010 0038
2,4-Dinitrophenol	100	55		1	55	33-143	01/08/2010 0038
2,4-Dinitrotoluene	40	21	N	1	53	55-137	01/08/2010 0038
2,6-Dinitrotoluene	40	21	N	1	52	53-128	01/08/2010 0038
2-Chloronaphthalene	20	10		1	52	42-132	01/08/2010 0038
2-Chlorophenol	20	10		1	50	40-128	01/08/2010 0038
2-Methylnaphthalene	20	9.8		1	49	49-122	01/08/2010 0038
2-Methylphenol	20	9.9		1	50	33-122	01/08/2010 0038
2-Nitroaniline	40	21		1	51	48-126	01/08/2010 0038
2-Nitrophenol	40	20		1	51	44-131	01/08/2010 0038
3 & 4-Methylphenol	40	16	N	1	40	48-112	01/08/2010 0038
3-Nitroaniline	40	7.8	N	1	19	29-109	01/08/2010 0038
4,6-Dinitro-2-methylphenol	100	55		1	55	46-151	01/08/2010 0038
4-Bromophenyl phenyl ether	20	10		1	51	49-123	01/08/2010 0038
4-Chloro-3-methyl phenol	20	9.7		1	49	48-136	01/08/2010 0038
4-Chloroaniline	20	3.7		1	19	18-73	01/08/2010 0038
4-Chlorophenyl phenyl ether	20	10		1	51	34-124	01/08/2010 0038
4-Nitroaniline	40	20		1	49	42-154	01/08/2010 0038
4-Nitrophenol	100	30	N	1	30	43-145	01/08/2010 0038
Acenaphthene	20	10		1	51	51-130	01/08/2010 0038
Acenaphthylene	20	10		1	50	46-131	01/08/2010 0038
Anthracene	20	10		1	51	48-122	01/08/2010 0038
Benzo(a)anthracene	20	11		1	54	50-143	01/08/2010 0038
Benzo(a)pyrene	20	12		1	60	55-141	01/08/2010 0038
Benzo(b)fluoranthene	20	11		1	55	48-147	01/08/2010 0038
Benzo(g,h,i)perylene	20	10		1	52	48-139	01/08/2010 0038
Benzo(k)fluoranthene	20	10		1	52	48-148	01/08/2010 0038
bis(2-Chloroethoxy)methane	20	10		1	51	46-130	01/08/2010 0038
bis(2-Chloroethyl)ether	20	10		1	52	42-127	01/08/2010 0038
bis(2-Chloroisopropyl)ether	20	9.7		1	48	36-133	01/08/2010 0038
bis(2-Ethylhexyl)phthalate	20	11		1	57	40-141	01/08/2010 0038
Butyl benzyl phthalate	20	11		1	54	52-142	01/08/2010 0038
Carbazole	20	11		1	56	45-101	01/08/2010 0038
Chrysene	20	11		1	56	51-137	01/08/2010 0038
Di-n-butyl phthalate	20	11		1	55	50-134	01/08/2010 0038
Di-n-octylphthalate	20	11		1	57	50-136	01/08/2010 0038
Dibenzo(a,h)anthracene	20	10		1	52	48-139	01/08/2010 0038
Dibenzofuran	20	10		1	51	45-142	01/08/2010 0038
Diethylphthalate	20	11		1	53	48-124	01/08/2010 0038
Dimethyl phthalate	20	11		1	53	43-122	01/08/2010 0038
Fluoranthene	20	10		1	51	50-124	01/08/2010 0038

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24198-002

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	20	10		1	52	39-122	01/08/2010 0038
Hexachlorobenzene	20	10		1	52	46-125	01/08/2010 0038
Hexachlorobutadiene	20	10		1	50	38-121	01/08/2010 0038
Hexachlorocyclopentadiene	100	45		1	45	24-110	01/08/2010 0038
Hexachloroethane	20	10		1	50	32-109	01/08/2010 0038
Indeno(1,2,3-c,d)pyrene	20	10		1	52	49-146	01/08/2010 0038
Isophorone	20	11		1	53	43-118	01/08/2010 0038
N-Nitrosodi-n-propylamine	20	10		1	50	46-135	01/08/2010 0038
N-Nitrosodiphenylamine (Diphenylamine)	20	12		1	59	44-124	01/08/2010 0038
Naphthalene	20	10		1	50	45-118	01/08/2010 0038
Nitrobenzene	20	11		1	54	46-131	01/08/2010 0038
Pentachlorophenol	100	45		1	45	30-137	01/08/2010 0038
Phenanthrene	20	10		1	52	49-122	01/08/2010 0038
Phenol	20	5.4	N	1	27	35-118	01/08/2010 0038
Pyrene	20	11		1	53	50-130	01/08/2010 0038
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		53	41-144				
2-Fluorobiphenyl		54	37-129				
2-Fluorophenol		38	24-127				
Nitrobenzene-d5		55	38-127				
Phenol-d5	N	25	28-128				
Terphenyl-d14		47	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

## Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL17018-001MS

Batch: 24198

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	43	16		1	38	10-133	01/02/2010 1440
Acenaphthylene	ND	43	16		1	37	34-128	01/02/2010 1440
Anthracene	ND	43	16	N	1	38	48-122	01/02/2010 1440
Benzo(a)anthracene	ND	43	15	N	1	34	53-98	01/02/2010 1440
Benzo(a)pyrene	ND	43	21		1	48	11-160	01/02/2010 1440
Benzo(b)fluoranthene	ND	43	15		1	33	10-165	01/02/2010 1440
Benzo(g,h,i)perylene	ND	43	16	N	1	37	42-111	01/02/2010 1440
Benzo(k)fluoranthene	ND	43	23		1	53	13-175	01/02/2010 1440
4-Bromophenyl phenyl ether	ND	43	18	N	1	40	49-123	01/02/2010 1440
Butyl benzyl phthalate	ND	43	18	N	1	42	52-142	01/02/2010 1440
Carbazole	ND	43	18	N	1	41	45-101	01/02/2010 1440
4-Chloro-3-methyl phenol	ND	43	17	N	1	38	40-98	01/02/2010 1440
4-Chloroaniline	ND	43	ND	N	1	0.00	10-98	01/02/2010 1440
bis(2-Chloroethoxy)methane	ND	43	16	N	1	37	43-93	01/02/2010 1440
bis(2-Chloroethyl)ether	ND	43	17	N	1	38	41-88	01/02/2010 1440
bis(2-Chloroisopropyl)ether	ND	43	16		1	38	36-99	01/02/2010 1440
2-Chloronaphthalene	ND	43	13	N	1	30	40-89	01/02/2010 1440
2-Chlorophenol	ND	43	17		1	38	33-92	01/02/2010 1440
4-Chlorophenyl phenyl ether	ND	43	17		1	39	34-124	01/02/2010 1440
Chrysene	ND	43	20	N	1	46	51-107	01/02/2010 1440
Dibenzo(a,h)anthracene	ND	43	18	N	1	40	47-116	01/02/2010 1440
Dibenzofuran	ND	43	16	N	1	38	45-94	01/02/2010 1440
2,4-Dichlorophenol	ND	43	17		1	39	34-105	01/02/2010 1440
Diethylphthalate	ND	43	18	N	1	42	48-124	01/02/2010 1440
Dimethyl phthalate	ND	43	17	N	1	40	43-122	01/02/2010 1440
2,4-Dimethylphenol	ND	43	14	N	1	32	33-77	01/02/2010 1440
Di-n-butyl phthalate	ND	43	19	N	1	44	50-134	01/02/2010 1440
4,6-Dinitro-2-methylphenol	ND	220	89		1	41	33-118	01/02/2010 1440
2,4-Dinitrophenol	ND	220	79		1	36	19-119	01/02/2010 1440
2,4-Dinitrotoluene	ND	87	36	N	1	41	50-104	01/02/2010 1440
2,6-Dinitrotoluene	ND	87	37	N	1	43	53-128	01/02/2010 1440
Di-n-octylphthalate	ND	43	22		1	50	40-112	01/02/2010 1440
bis(2-Ethylhexyl)phthalate	ND	43	19		1	43	10-142	01/02/2010 1440
Fluoranthene	ND	43	18	N	1	40	50-124	01/02/2010 1440
Fluorene	ND	43	16	N	1	38	39-122	01/02/2010 1440
Hexachlorobenzene	ND	43	17	N	1	40	46-125	01/02/2010 1440
Hexachlorobutadiene	ND	43	15	N	1	35	42-94	01/02/2010 1440
Hexachlorocyclopentadiene	ND	220	58		1	27	14-89	01/02/2010 1440
Hexachloroethane	ND	43	16	N	1	36	39-86	01/02/2010 1440
Indeno(1,2,3-c,d)pyrene	ND	43	17	N	1	38	43-113	01/02/2010 1440
Isophorone	ND	43	17	N	1	40	42-84	01/02/2010 1440
2-Methylnaphthalene	ND	43	16	N	1	36	46-90	01/02/2010 1440
2-Methylphenol	ND	43	19		1	44	33-122	01/02/2010 1440
3 & 4-Methylphenol	ND	87	31		1	36	24-97	01/02/2010 1440

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL17018-001MS

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	ND	43	15	N	1	35	46-89	01/02/2010 1440
2-Nitroaniline	ND	87	35	N	1	41	48-126	01/02/2010 1440
3-Nitroaniline	ND	87	11		1	12	10-110	01/02/2010 1440
4-Nitroaniline	ND	87	32	N	1	37	41-99	01/02/2010 1440
Nitrobenzene	ND	43	18	N	1	41	44-91	01/02/2010 1440
2-Nitrophenol	ND	87	32		1	37	34-102	01/02/2010 1440
4-Nitrophenol	ND	220	73		1	33	29-122	01/02/2010 1440
N-Nitrosodi-n-propylamine	ND	43	19		1	43	41-96	01/02/2010 1440
N-Nitrosodiphenylamine (Diphenylamine)	ND	43	19		1	44	10-150	01/02/2010 1440
Pentachlorophenol	ND	220	76		1	35	32-110	01/02/2010 1440
Phenanthrene	ND	43	17	N	1	39	49-122	01/02/2010 1440
Phenol	ND	43	12	N	1	27	33-92	01/02/2010 1440
Pyrene	ND	43	17	N	1	38	50-130	01/02/2010 1440
2,4,5-Trichlorophenol	ND	43	18	N	1	42	46-125	01/02/2010 1440
2,4,6-Trichlorophenol	ND	43	16		1	37	36-123	01/02/2010 1440
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		79	37-129					
2-Fluorophenol		69	24-127					
Nitrobenzene-d5		85	38-127					
Phenol-d5		57	28-128					
Terphenyl-d14		70	10-148					
2,4,6-Tribromophenol		83	41-144					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL17018-001MD

Batch: 24198

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	43	18		1	42	11	10-133	40	01/02/2010 1500
Acenaphthylene	ND	43	18		1	42	11	34-128	40	01/02/2010 1500
Anthracene	ND	43	19	N	1	43	12	48-122	40	01/02/2010 1500
Benzo(a)anthracene	ND	43	17	N	1	38	10	53-98	40	01/02/2010 1500
Benzo(a)pyrene	ND	43	24		1	55	13	11-160	40	01/02/2010 1500
Benzo(b)fluoranthene	ND	43	16		1	37	9.8	10-165	40	01/02/2010 1500
Benzo(g,h,i)perylene	ND	43	19		1	43	14	42-111	40	01/02/2010 1500
Benzo(k)fluoranthene	ND	43	27		1	61	14	13-175	40	01/02/2010 1500
4-Bromophenyl phenyl ether	ND	43	20	N	1	45	11	49-123	40	01/02/2010 1500
Butyl benzyl phthalate	ND	43	20	N	1	46	9.4	52-142	40	01/02/2010 1500
Carbazole	ND	43	20		1	46	12	45-101	40	01/02/2010 1500
4-Chloro-3-methyl phenol	ND	43	20		1	45	16	40-98	40	01/02/2010 1500
4-Chloroaniline	ND	43	ND	N	1	0.00	0.00	10-98	40	01/02/2010 1500
bis(2-Chloroethoxy)methane	ND	43	18	N	1	42	15	43-93	40	01/02/2010 1500
bis(2-Chloroethyl)ether	ND	43	19		1	43	12	41-88	40	01/02/2010 1500
bis(2-Chloroisopropyl)ether	ND	43	19		1	43	14	36-99	40	01/02/2010 1500
2-Chloronaphthalene	ND	43	14	N	1	32	8.4	40-89	40	01/02/2010 1500
2-Chlorophenol	ND	43	19		1	44	13	33-92	40	01/02/2010 1500
4-Chlorophenyl phenyl ether	ND	43	19		1	44	11	34-124	40	01/02/2010 1500
Chrysene	ND	43	22	N	1	50	8.8	51-107	40	01/02/2010 1500
Dibenzo(a,h)anthracene	ND	43	20	N	1	46	14	47-116	40	01/02/2010 1500
Dibenzofuran	ND	43	18	N	1	42	11	45-94	40	01/02/2010 1500
2,4-Dichlorophenol	ND	43	20		1	45	15	34-105	40	01/02/2010 1500
Diethylphthalate	ND	43	21	N	1	47	12	48-124	40	01/02/2010 1500
Dimethyl phthalate	ND	43	20		1	46	15	43-122	40	01/02/2010 1500
2,4-Dimethylphenol	ND	43	16		1	37	15	33-77	40	01/02/2010 1500
Di-n-butyl phthalate	ND	43	21	N	1	49	10	50-134	40	01/02/2010 1500
4,6-Dinitro-2-methylphenol	ND	220	100		1	47	13	33-118	40	01/02/2010 1500
2,4-Dinitrophenol	ND	220	87		1	40	8.8	19-119	40	01/02/2010 1500
2,4-Dinitrotoluene	ND	87	40	N	1	46	12	50-104	40	01/02/2010 1500
2,6-Dinitrotoluene	ND	87	42	N	1	48	13	53-128	40	01/02/2010 1500
Di-n-octylphthalate	ND	43	25		1	58	13	40-112	40	01/02/2010 1500
bis(2-Ethylhexyl)phthalate	ND	43	21		1	47	9.1	10-142	40	01/02/2010 1500
Fluoranthene	ND	43	19	N	1	45	9.8	50-124	40	01/02/2010 1500
Fluorene	ND	43	19		1	43	13	39-122	40	01/02/2010 1500
Hexachlorobenzene	ND	43	19	N	1	44	9.6	46-125	40	01/02/2010 1500
Hexachlorobutadiene	ND	43	17	N	1	39	10	42-94	40	01/02/2010 1500
Hexachlorocyclopentadiene	ND	220	62		1	28	5.6	14-89	40	01/02/2010 1500
Hexachloroethane	ND	43	18		1	41	13	39-86	40	01/02/2010 1500
Indeno(1,2,3-c,d)pyrene	ND	43	20		1	45	16	43-113	40	01/02/2010 1500
Isophorone	ND	43	20		1	47	15	42-84	40	01/02/2010 1500
2-Methylnaphthalene	ND	43	18	N	1	40	12	46-90	40	01/02/2010 1500
2-Methylphenol	ND	43	23		1	53	19	33-122	40	01/02/2010 1500
3 & 4-Methylphenol	ND	87	38		1	44	20	24-97	40	01/02/2010 1500

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL17018-001MD

Matrix: Aqueous

Batch: 24198

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Naphthalene	ND	43	17	N	1	40	12	46-89	40	01/02/2010 1500	
2-Nitroaniline	ND	87	40	N	1	46	13	48-126	40	01/02/2010 1500	
3-Nitroaniline	ND	87	12		1	14	13	10-110	40	01/02/2010 1500	
4-Nitroaniline	ND	87	35		1	41	10	41-99	40	01/02/2010 1500	
Nitrobenzene	ND	43	20		1	46	13	44-91	40	01/02/2010 1500	
2-Nitrophenol	ND	87	37		1	42	13	34-102	40	01/02/2010 1500	
4-Nitrophenol	ND	220	84		1	39	15	29-122	40	01/02/2010 1500	
N-Nitrosodi-n-propylamine	ND	43	22		1	50	15	41-96	40	01/02/2010 1500	
N-Nitrosodiphenylamine (Diphenylamine)	ND	43	21		1	49	10	10-150	40	01/02/2010 1500	
Pentachlorophenol	ND	220	86		1	40	12	32-110	40	01/02/2010 1500	
Phenanthrene	ND	43	19	N	1	44	10	49-122	40	01/02/2010 1500	
Phenol	ND	43	14		1	33	17	33-92	40	01/02/2010 1500	
Pyrene	ND	43	19	N	1	43	12	50-130	40	01/02/2010 1500	
2,4,5-Trichlorophenol	ND	43	20		1	47	12	46-125	40	01/02/2010 1500	
2,4,6-Trichlorophenol	ND	43	18		1	42	13	36-123	40	01/02/2010 1500	
Surrogate	Q	% Rec	Acceptance Limit								
2-Fluorobiphenyl		87	37-129								
2-Fluorophenol		80	24-127								
Nitrobenzene-d5		99	38-127								
Phenol-d5		67	28-128								
Terphenyl-d14		76	10-148								
2,4,6-Tribromophenol		95	41-144								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ24171-001

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 1726
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 1726
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 1726
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 1726
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 1726
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 1726
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 1726
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl	N	30	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: KQ24171-002

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.49		1	98	70-130	12/31/2009 1745
4,4'-DDE	0.50	0.47		1	93	70-130	12/31/2009 1745
4,4'-DDT	0.50	0.49		1	98	70-130	12/31/2009 1745
Aldrin	0.50	0.44		1	88	70-130	12/31/2009 1745
alpha-BHC	0.50	0.45		1	90	70-130	12/31/2009 1745
beta-BHC	0.50	0.44		1	88	70-130	12/31/2009 1745
delta-BHC	0.50	0.47		1	95	70-130	12/31/2009 1745
Dieldrin	0.50	0.48		1	95	70-130	12/31/2009 1745
Endosulfan I	0.50	0.45		1	91	70-130	12/31/2009 1745
Endosulfan II	0.50	0.48		1	96	70-130	12/31/2009 1745
Endosulfan sulfate	0.50	0.48		1	96	70-130	12/31/2009 1745
Endrin	0.50	0.49		1	99	70-130	12/31/2009 1745
Endrin aldehyde	0.50	0.49		1	98	70-130	12/31/2009 1745
gamma-BHC (Lindane)	0.50	0.45		1	91	70-130	12/31/2009 1745
gamma-Chlordane	0.50	0.46		1	92	70-130	12/31/2009 1745
Heptachlor	0.50	0.45		1	91	70-130	12/31/2009 1745
Heptachlor epoxide	0.50	0.45		1	89	70-130	12/31/2009 1745
Methoxychlor	0.50	0.59		1	119	70-130	12/31/2009 1745
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		70	49-124				
Tetrachloro-m-xylene		90	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MS

Sample ID: KL17018-001MS

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aldrin	ND	1.1	0.91		1	82	70-130	12/31/2009 1825
alpha-BHC	ND	1.1	0.94		1	84	70-130	12/31/2009 1825
beta-BHC	ND	1.1	0.91		1	82	70-130	12/31/2009 1825
delta-BHC	ND	1.1	1.0		1	90	70-130	12/31/2009 1825
gamma-BHC (Lindane)	ND	1.1	0.94		1	85	70-130	12/31/2009 1825
gamma-Chlordane	ND	1.1	0.95		1	85	70-130	12/31/2009 1825
4,4'-DDD	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
4,4'-DDE	ND	1.1	0.96		1	86	70-130	12/31/2009 1825
4,4'-DDT	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
Dieldrin	ND	1.1	0.99		1	89	70-130	12/31/2009 1825
Endosulfan I	ND	1.1	0.92		1	83	70-130	12/31/2009 1825
Endosulfan II	ND	1.1	1.0		1	91	70-130	12/31/2009 1825
Endosulfan sulfate	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
Endrin	ND	1.1	1.1		1	95	70-130	12/31/2009 1825
Endrin aldehyde	ND	1.1	1.0		1	94	70-130	12/31/2009 1825
Heptachlor	ND	1.1	0.95		1	85	70-130	12/31/2009 1825
Heptachlor epoxide	ND	1.1	0.92		1	83	70-130	12/31/2009 1825
Methoxychlor	ND	1.1	1.3		1	116	70-130	12/31/2009 1825
Surrogate	Q	% Rec	Acceptance Limit					
Decachlorobiphenyl		77	49-124					
Tetrachloro-m-xylene		83	58-122					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MSD

Sample ID: KL17018-001MD

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Aldrin	ND	1.1	0.96	1		86	4.6	70-130	30	12/31/2009 1845	
alpha-BHC	ND	1.1	0.98	1		89	4.8	70-130	30	12/31/2009 1845	
beta-BHC	ND	1.1	0.94	1		85	3.8	70-130	30	12/31/2009 1845	
delta-BHC	ND	1.1	1.0	1		94	4.6	70-130	30	12/31/2009 1845	
gamma-BHC (Lindane)	ND	1.1	0.99	1		89	4.7	70-130	30	12/31/2009 1845	
gamma-Chlordane	ND	1.1	0.98	1		88	3.8	70-130	30	12/31/2009 1845	
4,4'-DDD	ND	1.1	1.1	1		95	3.0	70-130	30	12/31/2009 1845	
4,4'-DDE	ND	1.1	0.99	1		89	3.1	70-130	30	12/31/2009 1845	
4,4'-DDT	ND	1.1	1.0	1		93	1.1	70-130	30	12/31/2009 1845	
Dieldrin	ND	1.1	1.0	1		93	3.9	70-130	30	12/31/2009 1845	
Endosulfan I	ND	1.1	0.96	1		87	4.1	70-130	30	12/31/2009 1845	
Endosulfan II	ND	1.1	1.0	1		94	2.8	70-130	30	12/31/2009 1845	
Endosulfan sulfate	ND	1.1	1.0	1		94	1.5	70-130	30	12/31/2009 1845	
Endrin	ND	1.1	1.1	1		97	2.5	70-130	30	12/31/2009 1845	
Endrin aldehyde	ND	1.1	1.1	1		96	2.5	70-130	30	12/31/2009 1845	
Heptachlor	ND	1.1	0.99	1		89	4.5	70-130	30	12/31/2009 1845	
Heptachlor epoxide	ND	1.1	0.96	1		87	4.0	70-130	30	12/31/2009 1845	
Methoxychlor	ND	1.1	1.3	1		115	0.14	70-130	30	12/31/2009 1845	
Surrogate	Q	% Rec	Acceptance Limit								
Decachlorobiphenyl		78	49-124								
Tetrachloro-m-xylene		86	58-122								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: KQ23888-001

Matrix: Aqueous

Batch: 23888

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/19/2009 1830
Barium	ND		1	0.025	0.0075	mg/L	12/19/2009 1830
Cadmium	ND		1	0.0020	0.00060	mg/L	12/19/2009 1830
Chromium	ND		1	0.0050	0.0021	mg/L	12/19/2009 1830
Lead	ND		1	0.010	0.0019	mg/L	12/19/2009 1830
Selenium	ND		1	0.010	0.0026	mg/L	12/19/2009 1830
Silver	0.0014	J	1	0.0050	0.00040	mg/L	12/21/2009 1725

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ23888-002

Matrix: Aqueous

Batch: 23888

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.43		1	107	80-120	12/19/2009 1834
Barium	2.0	2.1		1	104	80-120	12/19/2009 1834
Cadmium	0.40	0.41		1	103	80-120	12/19/2009 1834
Chromium	2.0	1.9		1	96	80-120	12/19/2009 1834
Lead	0.40	0.43		1	107	80-120	12/19/2009 1834
Selenium	0.40	0.44		1	109	80-120	12/19/2009 1834
Silver	0.40	0.40		1	101	80-120	12/21/2009 1731

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - LCSD

Sample ID: KQ23888-003

Matrix: Aqueous

Batch: 23888

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.43		1	107	0.52	80-120	20	12/19/2009 1838
Barium	2.0	2.1		1	105	0.74	80-120	20	12/19/2009 1838
Cadmium	0.40	0.42		1	104	1.1	80-120	20	12/19/2009 1838
Chromium	2.0	1.9		1	96	0.30	80-120	20	12/19/2009 1838
Lead	0.40	0.43		1	107	0.0012	80-120	20	12/19/2009 1838
Selenium	0.40	0.44		1	110	1.3	80-120	20	12/19/2009 1838
Silver	0.40	0.40		1	101	0.20	80-120	20	12/21/2009 1736

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ23801-001

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/17/2009 2311

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: KQ23801-002

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	97	85-115	12/17/2009 2313

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCSD

Sample ID: KQ23801-003

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0018		1	88	9.7	85-115	20	12/17/2009 2316

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 102699

1/19/04

Telephone No. / Fax No. / E-mail: 804-987-3900  
Waybill No. \_\_\_\_\_  
Quote No. 12/10/03  
Page 1 of 1

Report to Contact: Janet Christy  
Samplet's Signature: *Janet Christy*  
Printed Name: Janet Christy

Client: ALCADIS  
Address: 2849 Paces Ferry Rd  
City: Atlanta, GA 30339  
Project Name: Hunter - HAA-01  
Project No.: GPOBHAFS, HOIB, NALTM

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix	No. of Containers by Preservative Type						Lot No. Remarks / Cooler ID
				MSO4	HCN	HCN	HCN	HCN	HCN	
HAA01-MW-18 (121609)	12/16/03	1348	Water	4	1	3				100% Meq's Residuals SYPCS
HMW-9 (121609)		1710								
HMW-11 (121609)		1408								
HMW-8 (121609)		1225								
HMW-2 (121609)		1105								
TB-03 (121609)										

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify):  
 1. Relinquished by: *Janet Christy* Date: 12/16/03 Time: 1900  
 2. Relinquished by: *Janet Christy* Date: 12/17/03 Time: 0850  
 3. Relinquished by: *Janet Christy* Date: 12/17/03 Time: 0850

QC Requirements (Specify):  
 1. Received by: *Fedex* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 2. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Laboratory received by: *Janet Christy* Date: 12/17/03 Time: 0850  
 LAB USE ONLY  
 Received on ice (Circle)  No  Ice Pack  No  Ice Pack  No  Ice Pack  No  
 Receipt Temp: 4.5 °C

DISTRIBUTION: WHITE & YELLOW: Return to laboratory with Samples; PINK: Field/Client Copy  
 Document Number: FAD-012 Effective Date: 08/04/02

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/23/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Aveads Cooler Inspected by/date: etc P/17/09 Lot #: KL17018

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt <u>Yes</u> °C <u>  </u> / °C <u>  </u> / °C <u>  </u> / °C <u>  </u> / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: <u>  </u> . (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) <u>  </u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>  </u> (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) <u>  </u>		
Sample(s) <u>  </u> were received with bubbles >6 mm in diameter.		
Sample(s) <u>  </u> were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		
Toxicity sample(s) <u>  </u> were received with TRC >0.1 mg/L and were analyzed by method 330.5.		

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee:   

Date of response:   

Comments:

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Hunter- HAA-01

Project Number: GP08HAFS.H01B.NALTM

Lot Number: KL17024

Date Completed: 01/07/2010

Date Revised: 01/21/2010



Nisreen Saikaly  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* KL17024 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

## Case Narrative ARCADIS U.S., Inc. Lot Number: KL17024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

This report was combined from KL17024, KL17018 and KL17031 as per client request.

### Pesticides

The sample results associated with a P qualifier have a relative percent difference (RPD) between the two dissimilar phase GC columns which exceeds 40%. In accordance with Section 7.10.4 of SW-846 method 8000B, the higher of the two results is reported. Due to disparity of the two results, it is likely that the reported results are biased high, or maybe a false positive.

Aldrin is reported at a 10X dilution for sample -001 due to a P-flag hit in the original run.

The initial run of sample -001 had surrogate failures, the 10X run had surrogate failures. The sample was re-extracted out of holding time, the re-extracted results had surrogate failures. This confirms a matrix interference. All runs are reported.

The initial run of samples -002 and -005 had surrogate failures associated with the method blank. The sample was re-extracted out of holding time. All runs are reported.

The initial run of samples -003 and -004 had surrogate failures. The sample was re-extracted out of holding time, the re-extracted results had surrogate failures. This confirms a matrix interference. All runs are reported.

Samples -007 to 011 were analyzed within holding time, however the method blank associated with these samples (batch 24171) had Decachlorobiphenyl below the recovery limits. All samples were re-extracted outside the holding time. All runs are reported.

The LCS recovery for Endrin aldehyde was outside method control limits in batch 24660. This run was used for verification only. Therefore the associated sample results were reported and no corrective action was required.

The LCSD of batch 24638 was spilled in extractions while it was being brought up to volume. The LCSD results are reported.

As per method requirements, only one of the surrogates has to be within acceptance limits. The sample results are reported and no corrective action is required.

### Volatile Organic Compounds

The LCSD recovery for Trichlorofluoromethane was outside method control limits in batch 23958. The LCS results were within limits. Therefore the associated sample results were reported and no corrective action was required.

### Semivolatile Organic Compounds

The surrogate recovery for Phenol-d5 in sample -013, MB and LCS was outside the acceptance limit in batch 24198. No sample remained for re-extraction. The LCS recovery for six analytes was slightly outside method control limits in batch 24198. As per method, it is statistically likely that a few analytes will be outside control limits; up to five analytes may marginally exceed the control limits. Therefore the associated sample results



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: KL17024

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were reported and no corrective action was required.

The MS/MSD recoveries for many analytes in batch 24198 were outside acceptance criteria. All other QA/QC criteria for the batch were within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary ARCADIS U.S., Inc. Lot Number: KL17024

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HAA01-MW-14 (121609)	Aqueous	12/16/2009 1125	12/17/2009
002	HAA01-MW-14D (121609)	Aqueous	12/16/2009 0905	12/17/2009
003	HAA01-MW-13 (121609)	Aqueous	12/16/2009 1655	12/17/2009
004	COE-MW-08 (121609)	Aqueous	12/16/2009 1520	12/17/2009
005	COE-MW-07 (121609)	Aqueous	12/16/2009 1250	12/17/2009
006	TB-01 (121609)	Aqueous	12/16/2009 0900	12/17/2009
007	HAA01-MW-9 (121609)	Aqueous	12/16/2009 1650	01/18/2010
008	COE-MW-2 (121609)	Aqueous	12/16/2009 1525	01/18/2010
009	COE-MW-3 (121609)	Aqueous	12/16/2009 1210	01/18/2010
010	COE-MW-1 (121609)	Aqueous	12/16/2009 1045	01/18/2010
011	HMW-14R (121609)	Aqueous	12/16/2009 0935	01/18/2010
012	TB-02(121609)	Aqueous	12/16/2009 0930	01/18/2010
013	HAA01-MW-18 (121609)	Aqueous	12/16/2009 1348	01/18/2010
014	HMW-9 (121609)	Aqueous	12/16/2009 1710	01/18/2010
015	HMW-11 (121609)	Aqueous	12/16/2009 1408	01/18/2010
016	HMW-8 (121609)	Aqueous	12/16/2009 1225	01/18/2010
017	HMW-2 (121609)	Aqueous	12/16/2009 1105	01/18/2010
018	TB-03 (121609)	Aqueous	12/16/2009	01/18/2010

(18 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KL17024

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	HAA01-MW-14 (121609)	Aqueous	Toluene	8260B	240		ug/L	7
001	HAA01-MW-14 (121609)	Aqueous	Endrin aldehyde	8081B	0.031	P	ug/L	9
001	HAA01-MW-14 (121609)	Aqueous	Aldrin	8081B	8.4	PH	ug/L	9
001	HAA01-MW-14 (121609)	Aqueous	Endrin aldehyde	8081B	0.030	H	ug/L	10
001	HAA01-MW-14 (121609)	Aqueous	Mercury	7470A	0.000082	J	mg/L	11
001	HAA01-MW-14 (121609)	Aqueous	Barium	6010C	0.067		mg/L	12
001	HAA01-MW-14 (121609)	Aqueous	Chromium	6010C	0.0092		mg/L	12
002	HAA01-MW-14D (121609)	Aqueous	Acetone	8260B	2.4	J	ug/L	13
002	HAA01-MW-14D (121609)	Aqueous	Carbon disulfide	8260B	0.11	J	ug/L	13
002	HAA01-MW-14D (121609)	Aqueous	Barium	6010C	0.010	J	mg/L	18
002	HAA01-MW-14D (121609)	Aqueous	Silver	6010C	0.0011	J	mg/L	18
003	HAA01-MW-13 (121609)	Aqueous	Acetone	8260B	16		ug/L	19
003	HAA01-MW-13 (121609)	Aqueous	Carbon disulfide	8260B	0.73		ug/L	19
003	HAA01-MW-13 (121609)	Aqueous	Barium	6010C	0.12		mg/L	24
003	HAA01-MW-13 (121609)	Aqueous	Chromium	6010C	0.0045	J	mg/L	24
004	COE-MW-08 (121609)	Aqueous	Acetone	8260B	5.6	J	ug/L	25
004	COE-MW-08 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	16		ug/L	25
004	COE-MW-08 (121609)	Aqueous	Barium	6010C	0.12		mg/L	30
005	COE-MW-07 (121609)	Aqueous	Acetone	8260B	2.2	J	ug/L	31
005	COE-MW-07 (121609)	Aqueous	Benzene	8260B	1.1		ug/L	31
005	COE-MW-07 (121609)	Aqueous	Carbon disulfide	8260B	0.11	J	ug/L	31
005	COE-MW-07 (121609)	Aqueous	trans-1,2-Dichloroethene	8260B	8.9		ug/L	31
005	COE-MW-07 (121609)	Aqueous	1,1-Dichloroethene	8260B	5.8		ug/L	31
005	COE-MW-07 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	1600		ug/L	31
005	COE-MW-07 (121609)	Aqueous	2-Hexanone	8260B	0.42	J	ug/L	31
005	COE-MW-07 (121609)	Aqueous	Trichloroethene	8260B	0.59		ug/L	32
005	COE-MW-07 (121609)	Aqueous	Barium	6010C	0.042		mg/L	36
005	COE-MW-07 (121609)	Aqueous	Silver	6010C	0.00090	J	mg/L	36
006	TB-01 (121609)	Aqueous	Acetone	8260B	6.1	J	ug/L	37
006	TB-01 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	1.2	J	ug/L	37
007	HAA01-MW-9 (121609)	Aqueous	Aldrin	8081B	1.0	P	ug/L	41
007	HAA01-MW-9 (121609)	Aqueous	4,4'-DDE	8081B	0.012	JP	ug/L	41
007	HAA01-MW-9 (121609)	Aqueous	Endrin aldehyde	8081B	0.013	JP	ug/L	41
007	HAA01-MW-9 (121609)	Aqueous	Arsenic	6010C	0.0048	J	mg/L	43
007	HAA01-MW-9 (121609)	Aqueous	Barium	6010C	0.10		mg/L	43
008	COE-MW-2 (121609)	Aqueous	Benzene	8260B	2.5		ug/L	44
008	COE-MW-2 (121609)	Aqueous	trans-1,2-Dichloroethene	8260B	4.5		ug/L	44
008	COE-MW-2 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	130		ug/L	44
008	COE-MW-2 (121609)	Aqueous	Vinyl chloride	8260B	1.8		ug/L	45
008	COE-MW-2 (121609)	Aqueous	Aldrin	8081B	0.66	P	ug/L	46
008	COE-MW-2 (121609)	Aqueous	4,4'-DDT	8081B	0.21	PH	ug/L	47
008	COE-MW-2 (121609)	Aqueous	Barium	6010C	0.042		mg/L	49
008	COE-MW-2 (121609)	Aqueous	Cadmium	6010C	0.00095	J	mg/L	49
008	COE-MW-2 (121609)	Aqueous	Silver	6010C	0.0030	J	mg/L	49
009	COE-MW-3 (121609)	Aqueous	Benzene	8260B	11		ug/L	50

## Executive Summary (Continued)

Lot Number: KL17024

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
009	COE-MW-3 (121609)	Aqueous	trans-1,2-Dichloroethene	8260B	230		ug/L	50
009	COE-MW-3 (121609)	Aqueous	1,1-Dichloroethene	8260B	6.4		ug/L	50
009	COE-MW-3 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	7800		ug/L	50
009	COE-MW-3 (121609)	Aqueous	Toluene	8260B	42		ug/L	50
009	COE-MW-3 (121609)	Aqueous	Vinyl chloride	8260B	1000		ug/L	51
009	COE-MW-3 (121609)	Aqueous	Aldrin	8081B	0.22	P	ug/L	52
009	COE-MW-3 (121609)	Aqueous	Aldrin	8081B	0.012	JPH	ug/L	53
009	COE-MW-3 (121609)	Aqueous	Barium	6010C	0.094		mg/L	55
010	COE-MW-1 (121609)	Aqueous	Acetone	8260B	13		ug/L	56
010	COE-MW-1 (121609)	Aqueous	Benzene	8260B	1.3		ug/L	56
010	COE-MW-1 (121609)	Aqueous	trans-1,2-Dichloroethene	8260B	6.8		ug/L	56
010	COE-MW-1 (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	92		ug/L	56
010	COE-MW-1 (121609)	Aqueous	Toluene	8260B	0.87		ug/L	56
010	COE-MW-1 (121609)	Aqueous	Xylenes (total)	8260B	2.6		ug/L	57
010	COE-MW-1 (121609)	Aqueous	Aldrin	8081B	2.7	P	ug/L	58
010	COE-MW-1 (121609)	Aqueous	Endrin aldehyde	8081B	0.014	J	ug/L	58
010	COE-MW-1 (121609)	Aqueous	Aldrin	8081B	4.6	P	ug/L	59
010	COE-MW-1 (121609)	Aqueous	4,4'-DDT	8081B	0.43	PH	ug/L	60
010	COE-MW-1 (121609)	Aqueous	Mercury	7470A	0.000057	J	mg/L	61
010	COE-MW-1 (121609)	Aqueous	Barium	6010C	0.13		mg/L	62
011	HMW-14R (121609)	Aqueous	Benzene	8260B	0.21	J	ug/L	63
011	HMW-14R (121609)	Aqueous	trans-1,2-Dichloroethene	8260B	17		ug/L	63
011	HMW-14R (121609)	Aqueous	cis-1,2-Dichloroethene	8260B	310		ug/L	63
011	HMW-14R (121609)	Aqueous	Trichloroethene	8260B	1.5		ug/L	64
011	HMW-14R (121609)	Aqueous	Vinyl chloride	8260B	1.3		ug/L	64
011	HMW-14R (121609)	Aqueous	Aldrin	8081B	0.41	P	ug/L	65
011	HMW-14R (121609)	Aqueous	Endrin aldehyde	8081B	0.0066	JP	ug/L	65
011	HMW-14R (121609)	Aqueous	4,4'-DDT	8081B	0.18	PH	ug/L	66
011	HMW-14R (121609)	Aqueous	Barium	6010C	0.048		mg/L	68
011	HMW-14R (121609)	Aqueous	Chromium	6010C	0.0022	J	mg/L	68
013	HAA01-MW-18 (121609)	Aqueous	Barium	6010C	0.011	J	mg/L	77

(76 detections)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-001

Description: HAA01-MW-14 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1125

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0827	RRH		24457			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	240		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-001
Description: HAA01-MW-14 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1125	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0827	RRH		24457

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-001
Description: HAA01-MW-14 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1125	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 1944	NCM	12/23/2009 1130	24171
2	3520C	8081B	10	01/06/2010 2045	NCM	12/23/2009 1130	24171
3	3520C	8081B	1	01/06/2010 0256	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.25	0.020	ug/L	2
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	0.031	P	0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits	Q	Run 3 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	38	49-124	N	42	49-124	HN	21	49-124
Tetrachloro-m-xylene	N	53	58-122	N	57	58-122	H	63	58-122

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 1944	NCM	12/23/2009 1130	24171
2	3520C	8081B	10	01/06/2010 2045	NCM	12/23/2009 1130	24171
3	3520C	8081B	1	01/06/2010 0256	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	8.4	PH	0.025	0.0020	ug/L	3
alpha-BHC	319-84-6	8081B	ND	H	0.025	0.0030	ug/L	3
beta-BHC	319-85-7	8081B	ND	H	0.025	0.019	ug/L	3
delta-BHC	319-86-8	8081B	ND	H	0.025	0.0081	ug/L	3
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.025	0.0051	ug/L	3
alpha-Chlordane	5103-71-9	8081B	ND	H	0.025	0.0030	ug/L	3
gamma-Chlordane	5103-74-2	8081B	ND	H	0.025	0.0030	ug/L	3
4,4'-DDD	72-54-8	8081B	ND	H	0.025	0.0061	ug/L	3
4,4'-DDE	72-55-9	8081B	ND	H	0.025	0.0061	ug/L	3
4,4'-DDT	50-29-3	8081B	ND	H	0.025	0.0030	ug/L	3

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-001
Description: HAA01-MW-14 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1125	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 1944	NCM	12/23/2009 1130	24171
2	3520C	8081B	10	01/06/2010 2045	NCM	12/23/2009 1130	24171
3	3520C	8081B	1	01/06/2010 0256	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dieldrin	60-57-1	8081B	ND	H	0.025	0.0040	ug/L	3
Endosulfan I	959-98-8	8081B	ND	H	0.025	0.0061	ug/L	3
Endosulfan II	33213-65-9	8081B	ND	H	0.025	0.024	ug/L	3
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.025	0.0030	ug/L	3
Endrin	72-20-8	8081B	ND	H	0.025	0.0051	ug/L	3
Endrin aldehyde	7421-93-4	8081B	0.030	H	0.025	0.0030	ug/L	3
Endrin ketone	53494-70-5	8081B	ND	H	0.025	0.0040	ug/L	3
Heptachlor	76-44-8	8081B	ND	H	0.025	0.020	ug/L	3
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.025	0.0030	ug/L	3
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	3
Toxaphene	8001-35-2	8081B	ND	H	0.25	0.030	ug/L	3

Surrogate	Q	Run 1		Q	Run 2		Q	Run 3	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
Decachlorobiphenyl	N	38	49-124	N	42	49-124	HN	21	49-124
Tetrachloro-m-xylene	N	53	58-122	N	57	58-122	H	63	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-001
Description: HAA01-MW-14 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1125	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/17/2009 2359	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	0.000082	J	0.00010	0.000053	mg/L	1

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		N = Recovery is out of criteria
		H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-001

Description: HAA01-MW-14 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1125

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/29/2009 2309	CDF	12/22/2009 1500	24095
2	3005A	6010C	1	12/30/2009 2225	KJC	12/22/2009 1500	24095
3	3005A	6010C	1	01/04/2010 1709	CDF	12/22/2009 1500	24095

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.067		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0092		0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-002

Description: HAA01-MW-14D (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 0905

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0145	RRH		24460		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	2.4	J	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	0.11	J	0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-002
Description: HAA01-MW-14D (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0905	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0145	RRH		24460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-002
Description: HAA01-MW-14D (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0905	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2004	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0315	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		84	49-124	H	92	49-124
Tetrachloro-m-xylene		83	58-122	H	81	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-002
Description: HAA01-MW-14D (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0905	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2004	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0315	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.025	0.0020	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.025	0.0030	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.025	0.019	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.025	0.0081	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.025	0.0051	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.025	0.0030	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.025	0.0030	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.025	0.0030	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.025	0.0040	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.025	0.0061	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.025	0.024	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.025	0.0051	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.025	0.0040	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.025	0.020	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.025	0.0030	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.25	0.030	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		84	49-124	H	92	49-124
Tetrachloro-m-xylene		83	58-122	H	81	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-002
Description: HAA01-MW-14D (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0905	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0002	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-002

Description: HAA01-MW-14D (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 0905

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/29/2009 2315	CDF	12/22/2009 1500	24095
2	3005A	6010C	1	12/30/2009 2231	KJC	12/22/2009 1500	24095
3	3005A	6010C	1	01/04/2010 1713	CDF	12/22/2009 1500	24095

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.010	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0011	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-003

Description: HAA01-MW-13 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1655

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 2352	RRH		24460			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	16		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	0.73		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-003
Description: HAA01-MW-13 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1655	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 2352	RRH		24460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-003
Description: HAA01-MW-13 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1655	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2023	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0335	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	29	49-124	HN	32	49-124
Tetrachloro-m-xylene	N	53	58-122	H	80	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-003
Description: HAA01-MW-13 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1655	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2023	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0335	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.025	0.0020	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.025	0.0030	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.025	0.019	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.025	0.0081	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.025	0.0051	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.025	0.0030	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.025	0.0030	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.025	0.0030	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.025	0.0040	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.025	0.0061	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.025	0.024	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.025	0.0051	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.025	0.0040	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.025	0.020	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.025	0.0030	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.25	0.030	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	29	49-124	HN	32	49-124
Tetrachloro-m-xylene	N	53	58-122	H	80	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-003
Description: HAA01-MW-13 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1655	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0004	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-003

Description: HAA01-MW-13 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1655

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/29/2009 2321	CDF	12/22/2009 1500	24095
2	3005A	6010C	1	12/30/2009 2237	KJC	12/22/2009 1500	24095
3	3005A	6010C	1	01/04/2010 1717	CDF	12/22/2009 1500	24095

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.12		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0045	J	0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-004

Description: COE-MW-08 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1520

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0014	RRH		24460			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	5.6	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	16		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-004
Description: COE-MW-08 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1520	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0014	RRH		24460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-004
Description: COE-MW-08 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1520	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2043	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0355	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0080	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0050	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0060	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0060	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0060	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0050	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	37	49-124	HN	23	49-124
Tetrachloro-m-xylene		84	58-122	HN	51	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-004

Description: COE-MW-08 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1520

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2043	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0355	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.025	0.0020	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.025	0.0030	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.025	0.019	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.025	0.0081	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.025	0.0051	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.025	0.0030	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.025	0.0030	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.025	0.0030	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.025	0.0040	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.025	0.0061	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.025	0.024	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.025	0.0051	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.025	0.0040	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.025	0.020	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.025	0.0030	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.25	0.030	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	37	49-124	HN	23	49-124
Tetrachloro-m-xylene		84	58-122	HN	51	58-122

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-004
Description: COE-MW-08 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1520	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0012	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-004

Description: COE-MW-08 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1520

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/29/2009 2327	CDF	12/22/2009 1500	24095
2	3005A	6010C	1	12/30/2009 2243	KJC	12/22/2009 1500	24095
3	3005A	6010C	1	01/04/2010 1721	CDF	12/22/2009 1500	24095

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.12		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-005

Description: COE-MW-07 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1250

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0036	RRH		24460
2	5030B	8260B	5	12/30/2009 2301	RRH		24539

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.2	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	1.1		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.11	J	0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	8.9		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	5.8		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1600		2.5	0.44	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	0.42	J	10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-005
Description: COE-MW-07 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1250	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0036	RRH		24460
2	5030B	8260B	5	12/30/2009 2301	RRH		24539

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1
Trichloroethene	79-01-6	8260B	0.59		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		105	70-130
Bromofluorobenzene		94	70-130		101	70-130
Toluene-d8		100	70-130		102	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-005
Description: COE-MW-07 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1250	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2103	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0415	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0080	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0050	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0060	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0060	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0060	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0050	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		50	49-124	H	89	49-124
Tetrachloro-m-xylene		82	58-122	H	72	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-005
Description: COE-MW-07 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1250	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2103	NCM	12/23/2009 1130	24171
2	3520C	8081B	1	01/06/2010 0415	NCM	01/04/2010 2121	24660

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.025	0.0020	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.025	0.0030	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.025	0.019	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.025	0.0081	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.025	0.0051	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.025	0.0030	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.025	0.0030	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.025	0.0061	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.025	0.0030	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.025	0.0040	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.025	0.0061	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.025	0.024	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.025	0.0051	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.025	0.0030	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.025	0.0040	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.025	0.020	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.025	0.0030	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.25	0.030	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		50	49-124	H	89	49-124
Tetrachloro-m-xylene		82	58-122	H	72	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-005
Description: COE-MW-07 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1250	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0014	BNW	12/17/2009 2030	23801

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		N = Recovery is out of criteria
		H = Out of holding time

## RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-005

Description: COE-MW-07 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1250

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/29/2009 2333	CDF	12/22/2009 1500	24095
2	3005A	6010C	1	12/30/2009 2249	KJC	12/22/2009 1500	24095
3	3005A	6010C	1	01/04/2010 1725	CDF	12/22/2009 1500	24095

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.042		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.00090	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-006

Description: TB-01 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 0900

Date Received: 12/17/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	5	12/30/2009 0733	RRH		24460			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	6.1	J	50	0.31	ug/L	1		
Benzene	71-43-2	8260B	ND		2.5	0.14	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		2.5	0.85	ug/L	1		
Bromoform	75-25-2	8260B	ND		2.5	0.051	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.5	1.0	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		2.5	0.49	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		2.5	0.43	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		2.5	0.85	ug/L	1		
Chloroethane	75-00-3	8260B	ND		2.5	0.85	ug/L	1		
Chloroform	67-66-3	8260B	ND		2.5	0.85	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.5	0.87	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		2.5	1.5	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		2.5	0.35	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		2.5	0.85	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		2.5	0.31	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		2.5	0.85	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		2.5	0.85	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		2.5	0.85	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		2.5	0.35	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		2.5	0.27	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		2.5	0.12	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		2.5	0.40	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		2.5	0.47	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	1.2	J	2.5	0.44	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		2.5	0.41	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		2.5	0.90	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		2.5	0.45	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		2.5	0.85	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		50	1.4	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		2.5	0.14	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		5.0	1.5	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2.5	0.095	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.6	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		25	4.8	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		2.5	0.85	ug/L	1		
Styrene	100-42-5	8260B	ND		2.5	0.075	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		2.5	0.065	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		2.5	0.072	ug/L	1		
Toluene	108-88-3	8260B	ND		2.5	0.85	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		2.5	1.5	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		2.5	0.85	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		2.5	0.14	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		2.5	0.16	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-006
Description: TB-01 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0900	
Date Received: 12/17/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	12/30/2009 0733	RRH		24460

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		2.5	0.12	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.5	0.25	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.5	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		2.5	0.85	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-007

Description: HAA01-MW-9 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1650

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/18/2009 1425	DLB		25653			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-007
Description: HAA01-MW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1425	DLB		25653

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		114	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-007
Description: HAA01-MW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2123	NCM	12/23/2009 1130	25659
2	3520C	8081B	2	01/05/2010 1536	NCM	12/23/2009 1130	25659

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	1.0	P	0.053	0.0042	ug/L	2
alpha-BHC	319-84-6	8081B	ND		0.026	0.0032	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.026	0.020	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.026	0.0084	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.026	0.0053	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.026	0.0032	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.026	0.0032	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.026	0.0063	ug/L	1
4,4'-DDE	72-55-9	8081B	0.012	JP	0.026	0.0063	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.026	0.0032	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.026	0.0042	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.026	0.0063	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.026	0.025	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.026	0.0032	ug/L	1
Endrin	72-20-8	8081B	ND		0.026	0.0053	ug/L	1
Endrin aldehyde	7421-93-4	8081B	0.013	JP	0.026	0.0032	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.026	0.0042	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.026	0.021	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.026	0.0032	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.015	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.26	0.032	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		77	49-124		77	49-124
Tetrachloro-m-xylene		77	58-122		79	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-007
Description: HAA01-MW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0026	BNW	12/17/2009 2030	25661

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-007
Description: HAA01-MW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0037	CDF	12/22/2009 1500	25665
2	3005A	6010C	1	12/30/2009 2354	KJC	12/22/2009 1500	25665

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.0048	J	0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.10		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	2
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		N = Recovery is out of criteria
		H = Out of holding time

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# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-008

Description: COE-MW-2 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1525

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1552	DLB		25653
2	5030B	8260B	1	12/29/2009 1535	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	2.5		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	4.5		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	130		0.50	0.087	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-008
Description: COE-MW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1525	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1552	DLB		25653
2	5030B	8260B	1	12/29/2009 1535	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	1.8		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	70-130		95	70-130
Bromofluorobenzene		115	70-130		92	70-130
Toluene-d8		116	70-130		102	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-008
Description: COE-MW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1525	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2142	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0459	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	0.66	P	0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		64	49-124	H	73	49-124
Tetrachloro-m-xylene		79	58-122	H	87	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-008
Description: COE-MW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1525	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2142	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0459	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.027	0.0022	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.027	0.0033	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.027	0.021	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.027	0.0088	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.027	0.0055	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.027	0.0033	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.027	0.0033	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.027	0.0066	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.027	0.0066	ug/L	2
4,4'-DDT	50-29-3	8081B	0.21	PH	0.027	0.0033	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.027	0.0044	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.027	0.0066	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.027	0.026	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.027	0.0033	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.027	0.0055	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.027	0.0033	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.027	0.0044	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.027	0.022	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.027	0.0033	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.11	0.015	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.27	0.033	ug/L	2

Surrogate	Run 1			Run 2		
	Q	% Recovery	Acceptance Limits	Q	% Recovery	Acceptance Limits
Decachlorobiphenyl		64	49-124	H	73	49-124
Tetrachloro-m-xylene		79	58-122	H	87	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-008
Description: COE-MW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1525	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0047	BNW	12/17/2009 2030	25663

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-008
Description: COE-MW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1525	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0043	CDF	12/22/2009 1500	25665
2	3005A	6010C	1	12/31/2009 0000	KJC	12/22/2009 1500	25665

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.042		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	0.00095	J	0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	2
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0030	J	0.0050	0.00040	mg/L	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-009

Description: COE-MW-3 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1210

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	12/18/2009 1509	DLB		25653
2	5030B	8260B	50	12/29/2009 1725	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		50	0.31	ug/L	1
Benzene	71-43-2	8260B	11		2.5	0.14	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		2.5	0.85	ug/L	1
Bromoform	75-25-2	8260B	ND		2.5	0.051	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.5	1.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		2.5	0.49	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		2.5	0.43	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.5	0.85	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.5	0.85	ug/L	1
Chloroform	67-66-3	8260B	ND		2.5	0.85	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.5	0.87	ug/L	1
Cyclohexane	110-82-7	8260B	ND		2.5	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		2.5	0.35	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		2.5	0.85	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		2.5	0.31	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		2.5	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		2.5	0.85	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		2.5	0.85	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.5	0.35	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		2.5	0.27	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		2.5	0.12	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	230		2.5	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	6.4		2.5	0.47	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	7800		25	4.4	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		2.5	0.41	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		2.5	0.90	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		2.5	0.45	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		2.5	0.85	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.4	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		2.5	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	1.5	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2.5	0.095	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.6	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	4.8	ug/L	1
Methylene chloride	75-09-2	8260B	ND		2.5	0.85	ug/L	1
Styrene	100-42-5	8260B	ND		2.5	0.075	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		2.5	0.065	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		2.5	0.072	ug/L	1
Toluene	108-88-3	8260B	42		2.5	0.85	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		2.5	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		2.5	0.85	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		2.5	0.14	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-009
Description: COE-MW-3 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1210	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	12/18/2009 1509	DLB		25653
2	5030B	8260B	50	12/29/2009 1725	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		2.5	0.16	ug/L	1
Trichloroethene	79-01-6	8260B	ND		2.5	0.12	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.5	0.25	ug/L	1
Vinyl chloride	75-01-4	8260B	1000		2.5	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		2.5	0.85	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		114	70-130		98	70-130
Bromofluorobenzene		116	70-130		91	70-130
Toluene-d8		116	70-130		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-009
Description: COE-MW-3 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1210	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2202	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0514	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	0.22	P	0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	41	49-124	H	49	49-124
Tetrachloro-m-xylene		67	58-122	H	83	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-009
Description: COE-MW-3 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1210	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2202	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0514	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	0.012	JPH	0.026	0.0021	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.026	0.0031	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.026	0.020	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.026	0.0083	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.026	0.0052	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.026	0.0031	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.026	0.0031	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.026	0.0063	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.026	0.0063	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.026	0.0031	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.026	0.0042	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.026	0.0063	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.026	0.025	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.026	0.0031	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.026	0.0052	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.026	0.0031	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.026	0.0042	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.026	0.021	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.026	0.0031	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.015	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.26	0.031	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	41	49-124	H	49	49-124
Tetrachloro-m-xylene		67	58-122	H	83	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-009
Description: COE-MW-3 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1210	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0050	BNW	12/17/2009 2030	25663

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-009
Description: COE-MW-3 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1210	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0049	CDF	12/22/2009 1500	25665
2	3005A	6010C	1	12/31/2009 0006	KJC	12/22/2009 1500	25665

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.094		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	2
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		N = Recovery is out of criteria
		H = Out of holding time

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# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-010

Description: COE-MW-1 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1045

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 1936	RRH		25654			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	13		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	1.3		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	6.8		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	92		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	0.87		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 1936	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	2.6		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2222	NCM	12/23/2009 1130	25659
2	3520C	8081B	5	01/05/2010 1556	NCM	12/23/2009 1130	25659
3	3520C	8081B	1	01/06/2010 0530	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	2.7	P	0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	0.014	J	0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1		Q	Run 2		Q	Run 3	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
Decachlorobiphenyl		62	49-124		65	49-124	HN	45	49-124
Tetrachloro-m-xylene		78	58-122		84	58-122	H	84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2222	NCM	12/23/2009 1130	25659
2	3520C	8081B	5	01/05/2010 1556	NCM	12/23/2009 1130	25659
3	3520C	8081B	1	01/06/2010 0530	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	4.6	P	0.14	0.011	ug/L	2
alpha-BHC	319-84-6	8081B	ND		0.14	0.017	ug/L	2
beta-BHC	319-85-7	8081B	ND		0.14	0.11	ug/L	2
delta-BHC	319-86-8	8081B	ND		0.14	0.044	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.14	0.028	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND		0.14	0.017	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND		0.14	0.017	ug/L	2
4,4'-DDD	72-54-8	8081B	ND		0.14	0.033	ug/L	2
4,4'-DDE	72-55-9	8081B	ND		0.14	0.033	ug/L	2
4,4'-DDT	50-29-3	8081B	ND		0.14	0.017	ug/L	2
Dieldrin	60-57-1	8081B	ND		0.14	0.022	ug/L	2
Endosulfan I	959-98-8	8081B	ND		0.14	0.033	ug/L	2
Endosulfan II	33213-65-9	8081B	ND		0.14	0.13	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND		0.14	0.017	ug/L	2
Endrin	72-20-8	8081B	ND		0.14	0.028	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND		0.14	0.017	ug/L	2
Endrin ketone	53494-70-5	8081B	ND		0.14	0.022	ug/L	2
Heptachlor	76-44-8	8081B	ND		0.14	0.11	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND		0.14	0.017	ug/L	2
Methoxychlor	72-43-5	8081B	ND		0.56	0.078	ug/L	2
Toxaphene	8001-35-2	8081B	ND		1.4	0.17	ug/L	2

Surrogate	Q	Run 1		Q	Run 2		Q	Run 3	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
Decachlorobiphenyl		62	49-124		65	49-124	HN	45	49-124
Tetrachloro-m-xylene		78	58-122		84	58-122	H	84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2222	NCM	12/23/2009 1130	25659
2	3520C	8081B	5	01/05/2010 1556	NCM	12/23/2009 1130	25659
3	3520C	8081B	1	01/06/2010 0530	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.027	0.0022	ug/L	3
alpha-BHC	319-84-6	8081B	ND	H	0.027	0.0033	ug/L	3
beta-BHC	319-85-7	8081B	ND	H	0.027	0.021	ug/L	3
delta-BHC	319-86-8	8081B	ND	H	0.027	0.0087	ug/L	3
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.027	0.0054	ug/L	3
alpha-Chlordane	5103-71-9	8081B	ND	H	0.027	0.0033	ug/L	3
gamma-Chlordane	5103-74-2	8081B	ND	H	0.027	0.0033	ug/L	3
4,4'-DDD	72-54-8	8081B	ND	H	0.027	0.0065	ug/L	3
4,4'-DDE	72-55-9	8081B	ND	H	0.027	0.0065	ug/L	3
4,4'-DDT	50-29-3	8081B	0.43	PH	0.027	0.0033	ug/L	3
Dieldrin	60-57-1	8081B	ND	H	0.027	0.0043	ug/L	3
Endosulfan I	959-98-8	8081B	ND	H	0.027	0.0065	ug/L	3
Endosulfan II	33213-65-9	8081B	ND	H	0.027	0.026	ug/L	3
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.027	0.0033	ug/L	3
Endrin	72-20-8	8081B	ND	H	0.027	0.0054	ug/L	3
Endrin aldehyde	7421-93-4	8081B	ND	H	0.027	0.0033	ug/L	3
Endrin ketone	53494-70-5	8081B	ND	H	0.027	0.0043	ug/L	3
Heptachlor	76-44-8	8081B	ND	H	0.027	0.022	ug/L	3
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.027	0.0033	ug/L	3
Methoxychlor	72-43-5	8081B	ND	H	0.11	0.015	ug/L	3
Toxaphene	8001-35-2	8081B	ND	H	0.27	0.033	ug/L	3

Surrogate	Q	Run 1		Q	Run 2		Q	Run 3	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
Decachlorobiphenyl		62	49-124		65	49-124	HN	45	49-124
Tetrachloro-m-xylene		78	58-122		84	58-122	H	84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0053	BNW	12/17/2009 2030	25663

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	0.000057	J	0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-010
Description: COE-MW-1 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1045	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0054	CDF	12/22/2009 1500	25665
2	3005A	6010C	1	12/31/2009 0012	KJC	12/22/2009 1500	25665

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.13		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	2
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1531	DLB		25653
2	5030B	8260B	1	12/29/2009 1557	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	0.21	J	0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	17		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	310		0.50	0.087	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1531	DLB		25653
2	5030B	8260B	1	12/29/2009 1557	RRH		25654

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1
Trichloroethene	79-01-6	8260B	1.5		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	1.3		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		114	70-130		94	70-130
Bromofluorobenzene		116	70-130		89	70-130
Toluene-d8		116	70-130		97	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2242	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0546	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	0.41	P	0.027	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.027	0.0032	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.027	0.020	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.027	0.0086	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.027	0.0054	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.027	0.0032	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.027	0.0032	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.027	0.0065	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.027	0.0065	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.027	0.0032	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.027	0.0043	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.027	0.0065	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.027	0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.027	0.0032	ug/L	1
Endrin	72-20-8	8081B	ND		0.027	0.0054	ug/L	1
Endrin aldehyde	7421-93-4	8081B	0.0066	JP	0.027	0.0032	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.027	0.0043	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.027	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.027	0.0032	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.015	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.27	0.032	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl		54	49-124	H	64	49-124
Tetrachloro-m-xylene		73	58-122	H	80	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 2242	NCM	12/23/2009 1130	25659
2	3520C	8081B	1	01/06/2010 0546	ASB	01/04/2010 1738	25657

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.027	0.0022	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.027	0.0033	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.027	0.021	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.027	0.0087	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.027	0.0054	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.027	0.0033	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.027	0.0033	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.027	0.0065	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.027	0.0065	ug/L	2
4,4'-DDT	50-29-3	8081B	0.18	PH	0.027	0.0033	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.027	0.0043	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.027	0.0065	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.027	0.026	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.027	0.0033	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.027	0.0054	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.027	0.0033	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.027	0.0043	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.027	0.022	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.027	0.0033	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.11	0.015	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.27	0.033	ug/L	2

Surrogate	Q	Run 1		Q	Run 2	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
Decachlorobiphenyl		54	49-124	H	64	49-124
Tetrachloro-m-xylene		73	58-122	H	80	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/18/2009 0055	BNW	12/17/2009 2030	25663

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-011
Description: HMW-14R (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0935	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0251	CDF	12/22/2009 1500	25666
2	3005A	6010C	1	12/31/2009 0059	KJC	12/22/2009 1500	25666

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.048		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0022	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-012

Description: TB-02(121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 0930

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/18/2009 1447	DLB		25653		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-012
Description: TB-02(121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 0930	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/18/2009 1447	DLB		25653

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		115	70-130
Toluene-d8		116	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-013

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0616	RRH		25655			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-013
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0616	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-013

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/07/2010 2325	GLR	12/23/2009 1630	25668			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.1	0.10	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.1	0.18	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.1	0.36	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.1	0.15	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.1	0.22	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.6	1.1	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.1	0.17	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.1	0.18	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.1	0.22	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.1	0.26	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.1	0.13	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.1	0.22	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.1	0.13	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.6	1.9	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.6	1.4	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.1	0.28	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.1	0.25	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.1	0.15	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.1	0.15	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.1	0.15	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.1	0.090	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.1	0.13	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.1	0.15	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.1	0.12	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.1	0.13	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.1	0.15	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.1	0.18	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.6	0.91	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.1	0.17	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.6	1.9	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.6	1.9	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.1	0.35	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.6	1.9	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.6	1.7	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.6	0.28	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.2	0.51	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.2	0.45	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.6	1.9	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.6	1.9	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.1	0.24	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.1	0.11	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.1	0.24	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.1	0.10	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.6	0.26	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-013

Description: HAA01-MW-18 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1348

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/07/2010 2325	GLR	12/23/2009 1630	25668			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Hexachloroethane	67-72-1	8270D	ND		1.1	0.12	ug/L	1		
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.1	0.26	ug/L	1		
Isophorone	78-59-1	8270D	ND		1.1	0.090	ug/L	1		
2-Methylnaphthalene	91-57-6	8270D	ND		1.1	0.090	ug/L	1		
2-Methylphenol	95-48-7	8270D	ND		1.1	0.19	ug/L	1		
3 & 4-Methylphenol	106-44-5	8270D	ND		2.2	0.64	ug/L	1		
Naphthalene	91-20-3	8270D	ND		1.1	0.079	ug/L	1		
2-Nitroaniline	88-74-4	8270D	ND		2.2	0.62	ug/L	1		
3-Nitroaniline	99-09-2	8270D	ND		2.2	0.87	ug/L	1		
4-Nitroaniline	100-01-6	8270D	ND		2.2	0.44	ug/L	1		
Nitrobenzene	98-95-3	8270D	ND		1.1	0.11	ug/L	1		
2-Nitrophenol	88-75-5	8270D	ND		2.2	0.30	ug/L	1		
4-Nitrophenol	100-02-7	8270D	ND		5.6	0.72	ug/L	1		
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.1	0.090	ug/L	1		
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.1	0.43	ug/L	1		
Pentachlorophenol	87-86-5	8270D	ND		5.6	0.61	ug/L	1		
Phenanthrene	85-01-8	8270D	ND		1.1	0.20	ug/L	1		
Phenol	108-95-2	8270D	ND		1.1	0.12	ug/L	1		
Pyrene	129-00-0	8270D	ND		1.1	0.18	ug/L	1		
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.1	0.20	ug/L	1		
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.1	0.25	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
2-Fluorobiphenyl		42	37-129							
2-Fluorophenol	N	22	24-127							
Nitrobenzene-d5		39	38-127							
Phenol-d5	N	13	28-128							
Terphenyl-d14		44	10-148							
2,4,6-Tribromophenol	N	37	41-144							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-013
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	12/31/2009 1805	NCM	12/23/2009 1130	25659

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		73	49-124
Tetrachloro-m-xylene		84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-013
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/17/2009 2347	BNW	12/17/2009 2030	25661

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-013
Description: HAA01-MW-18 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1348	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/19/2009 2000	CDF	12/18/2009 1630	25667
2	3005A	6010C	1	12/21/2009 1742	KJC	12/18/2009 1630	25667

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.011	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	2

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-014

Description: HMW-9 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1710

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0638	RRH		25655			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-014
Description: HMW-9 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1710	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0638	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-015

Description: HMW-11 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1408

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 0700	RRH		25655		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-015
Description: HMW-11 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1408	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0700	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-016

Description: HMW-8 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1225

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 0721	RRH		25655		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-016
Description: HMW-8 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1225	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0721	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-017

Description: HMW-2 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009 1105

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0744	RRH		25655			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-017
Description: HMW-2 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009 1105	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0744	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL17024-018

Description: TB-03 (121609)

Matrix: Aqueous

Date Sampled: 12/16/2009

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 0805	RRH		25655			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL17024-018
Description: TB-03 (121609)	Matrix: Aqueous
Date Sampled: 12/16/2009	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 0805	RRH		25655

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24457-001

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 0236
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 0236
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 0236
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 0236
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 0236
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 0236
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 0236
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Cyclohexane	0.38	J	1	0.50	0.30	ug/L	12/29/2009 0236
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 0236
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 0236
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 0236
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 0236
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 0236
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 0236
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 0236
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 0236
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 0236
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 0236
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 0236
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 0236
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 0236
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 0236
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 0236
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 0236
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 0236
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 0236
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 0236
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 0236
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 0236
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 0236
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 0236

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24457-001

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 0236
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 0236
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 0236
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24457-002

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	46-153	12/29/2009 0023
Benzene	50	51		1	102	70-130	12/29/2009 0023
Bromodichloromethane	50	54		1	108	70-130	12/29/2009 0023
Bromoform	50	51		1	102	70-130	12/29/2009 0023
Bromomethane (Methyl bromide)	50	54		1	108	60-140	12/29/2009 0023
2-Butanone (MEK)	100	110		1	105	60-140	12/29/2009 0023
Carbon disulfide	50	54		1	109	60-140	12/29/2009 0023
Carbon tetrachloride	50	53		1	105	70-130	12/29/2009 0023
Chlorobenzene	50	53		1	105	70-130	12/29/2009 0023
Chloroethane	50	54		1	108	42-163	12/29/2009 0023
Chloroform	50	52		1	103	70-130	12/29/2009 0023
Chloromethane (Methyl chloride)	50	50		1	99	20-158	12/29/2009 0023
Cyclohexane	50	59		1	119	70-130	12/29/2009 0023
1,2-Dibromo-3-chloropropane (DBCP)	50	60		1	121	70-130	12/29/2009 0023
Dibromochloromethane	50	58		1	117	70-130	12/29/2009 0023
1,2-Dibromoethane (EDB)	50	54		1	109	70-130	12/29/2009 0023
1,4-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
1,2-Dichlorobenzene	50	53		1	106	70-130	12/29/2009 0023
1,3-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
Dichlorodifluoromethane	50	52		1	104	60-140	12/29/2009 0023
1,2-Dichloroethane	50	51		1	101	70-130	12/29/2009 0023
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 0023
cis-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,1-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
trans-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,2-Dichloropropane	50	51		1	102	70-130	12/29/2009 0023
cis-1,3-Dichloropropene	50	50		1	100	70-130	12/29/2009 0023
trans-1,3-Dichloropropene	50	51		1	102	70-130	12/29/2009 0023
Ethylbenzene	50	57		1	113	70-130	12/29/2009 0023
2-Hexanone	100	110		1	106	60-140	12/29/2009 0023
Isopropylbenzene	50	60		1	120	70-130	12/29/2009 0023
Methyl acetate	50	46		1	93	15-128	12/29/2009 0023
Methyl tertiary butyl ether (MTBE)	50	54		1	107	70-130	12/29/2009 0023
4-Methyl-2-pentanone	100	110		1	110	60-140	12/29/2009 0023
Methylcyclohexane	50	60		1	120	70-130	12/29/2009 0023
Methylene chloride	50	49		1	99	70-130	12/29/2009 0023
Styrene	50	60		1	119	70-130	12/29/2009 0023
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	12/29/2009 0023
Tetrachloroethene	50	54		1	107	70-130	12/29/2009 0023
Toluene	50	54		1	108	70-130	12/29/2009 0023
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	117	70-130	12/29/2009 0023
1,2,4-Trichlorobenzene	50	61		1	123	70-130	12/29/2009 0023
1,1,2-Trichloroethane	50	53		1	106	70-130	12/29/2009 0023
1,1,1-Trichloroethane	50	54		1	108	70-130	12/29/2009 0023

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24457-002

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 0023
Trichlorofluoromethane	50	50		1	101	60-140	12/29/2009 0023
Vinyl chloride	50	53		1	106	60-140	12/29/2009 0023
Xylenes (total)	100	110		1	115	70-130	12/29/2009 0023
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		97			70-130		
1,2-Dichloroethane-d4		98			70-130		
Toluene-d8		100			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24457-003

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	78	+	1	78	28	46-153	20	12/29/2009 0045
Benzene	50	49		1	99	2.8	70-130	20	12/29/2009 0045
Bromodichloromethane	50	52		1	104	3.7	70-130	20	12/29/2009 0045
Bromoform	50	49		1	98	4.3	70-130	20	12/29/2009 0045
Bromomethane (Methyl bromide)	50	51		1	102	6.2	60-140	20	12/29/2009 0045
2-Butanone (MEK)	100	100		1	101	3.8	60-140	20	12/29/2009 0045
Carbon disulfide	50	51		1	102	6.5	60-140	20	12/29/2009 0045
Carbon tetrachloride	50	51		1	101	4.1	70-130	20	12/29/2009 0045
Chlorobenzene	50	53		1	106	0.56	70-130	20	12/29/2009 0045
Chloroethane	50	51		1	102	6.1	42-163	20	12/29/2009 0045
Chloroform	50	49		1	98	5.2	70-130	20	12/29/2009 0045
Chloromethane (Methyl chloride)	50	49		1	98	1.7	20-158	20	12/29/2009 0045
Cyclohexane	50	57		1	114	3.6	70-130	20	12/29/2009 0045
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	17	70-130	20	12/29/2009 0045
Dibromochloromethane	50	57		1	114	2.0	70-130	20	12/29/2009 0045
1,2-Dibromoethane (EDB)	50	55		1	111	1.9	70-130	20	12/29/2009 0045
1,4-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
1,2-Dichlorobenzene	50	53		1	105	1.1	70-130	20	12/29/2009 0045
1,3-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
Dichlorodifluoromethane	50	50		1	100	3.6	60-140	20	12/29/2009 0045
1,2-Dichloroethane	50	48		1	96	5.2	70-130	20	12/29/2009 0045
1,1-Dichloroethane	50	48		1	95	5.8	70-130	20	12/29/2009 0045
cis-1,2-Dichloroethene	50	48		1	96	7.3	70-130	20	12/29/2009 0045
1,1-Dichloroethene	50	48		1	96	7.4	70-130	20	12/29/2009 0045
trans-1,2-Dichloroethene	50	49		1	99	4.6	70-130	20	12/29/2009 0045
1,2-Dichloropropane	50	51		1	102	0.23	70-130	20	12/29/2009 0045
cis-1,3-Dichloropropene	50	52		1	104	3.3	70-130	20	12/29/2009 0045
trans-1,3-Dichloropropene	50	52		1	104	2.4	70-130	20	12/29/2009 0045
Ethylbenzene	50	57		1	113	0.039	70-130	20	12/29/2009 0045
2-Hexanone	100	110		1	114	7.1	60-140	20	12/29/2009 0045
Isopropylbenzene	50	60		1	119	0.044	70-130	20	12/29/2009 0045
Methyl acetate	50	42		1	85	9.1	15-128	20	12/29/2009 0045
Methyl tertiary butyl ether (MTBE)	50	49		1	97	9.5	70-130	20	12/29/2009 0045
4-Methyl-2-pentanone	100	110		1	107	2.2	60-140	20	12/29/2009 0045
Methylcyclohexane	50	59		1	118	1.7	70-130	20	12/29/2009 0045
Methylene chloride	50	46		1	93	6.4	70-130	20	12/29/2009 0045
Styrene	50	59		1	118	0.64	70-130	20	12/29/2009 0045
1,1,2,2-Tetrachloroethane	50	52		1	104	3.9	70-130	20	12/29/2009 0045
Tetrachloroethene	50	53		1	106	0.60	70-130	20	12/29/2009 0045
Toluene	50	55		1	110	1.6	70-130	20	12/29/2009 0045
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	112	4.0	70-130	20	12/29/2009 0045
1,2,4-Trichlorobenzene	50	54		1	108	12	70-130	20	12/29/2009 0045
1,1,2-Trichloroethane	50	53		1	107	0.16	70-130	20	12/29/2009 0045
1,1,1-Trichloroethane	50	52		1	103	4.2	70-130	20	12/29/2009 0045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24457-003

Matrix: Aqueous

Batch: 24457

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	3.2	70-130	20	12/29/2009 0045
Trichlorofluoromethane	50	48		1	96	5.5	60-140	20	12/29/2009 0045
Vinyl chloride	50	50		1	100	6.1	60-140	20	12/29/2009 0045
Xylenes (total)	100	110		1	112	2.1	70-130	20	12/29/2009 0045
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		93	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24460-001

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2253
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2253
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2253
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2253
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2253
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2253
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2253
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2253
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2253
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2253
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2253
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2253
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 2253
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2253
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2253
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2253
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2253
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2253
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2253
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2253
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2253
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2253
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2253
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2253
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2253
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2253
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2253
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2253
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2253

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24460-001

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2253
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2253
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2253
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24460-002

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	117	46-153	12/29/2009 2125
Benzene	50	50		1	99	70-130	12/29/2009 2125
Bromodichloromethane	50	52		1	105	70-130	12/29/2009 2125
Bromoform	50	40		1	80	70-130	12/29/2009 2125
Bromomethane (Methyl bromide)	50	55		1	109	60-140	12/29/2009 2125
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2125
Carbon disulfide	50	51		1	102	60-140	12/29/2009 2125
Carbon tetrachloride	50	50		1	100	70-130	12/29/2009 2125
Chlorobenzene	50	53		1	105	70-130	12/29/2009 2125
Chloroethane	50	54		1	108	42-163	12/29/2009 2125
Chloroform	50	50		1	101	70-130	12/29/2009 2125
Chloromethane (Methyl chloride)	50	49		1	98	20-158	12/29/2009 2125
Cyclohexane	50	56		1	112	70-130	12/29/2009 2125
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	12/29/2009 2125
Dibromochloromethane	50	54		1	108	70-130	12/29/2009 2125
1,2-Dibromoethane (EDB)	50	53		1	106	70-130	12/29/2009 2125
1,4-Dichlorobenzene	50	54		1	108	70-130	12/29/2009 2125
1,2-Dichlorobenzene	50	52		1	104	70-130	12/29/2009 2125
1,3-Dichlorobenzene	50	54		1	108	70-130	12/29/2009 2125
Dichlorodifluoromethane	50	48		1	96	60-140	12/29/2009 2125
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2125
1,1-Dichloroethane	50	50		1	100	70-130	12/29/2009 2125
cis-1,2-Dichloroethene	50	50		1	101	70-130	12/29/2009 2125
1,1-Dichloroethene	50	49		1	99	70-130	12/29/2009 2125
trans-1,2-Dichloroethene	50	51		1	102	70-130	12/29/2009 2125
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2125
cis-1,3-Dichloropropene	50	49		1	98	70-130	12/29/2009 2125
trans-1,3-Dichloropropene	50	48		1	96	70-130	12/29/2009 2125
Ethylbenzene	50	55		1	110	70-130	12/29/2009 2125
2-Hexanone	100	100		1	102	60-140	12/29/2009 2125
Isopropylbenzene	50	59		1	118	70-130	12/29/2009 2125
Methyl acetate	50	47		1	94	15-128	12/29/2009 2125
Methyl tertiary butyl ether (MTBE)	50	53		1	106	70-130	12/29/2009 2125
4-Methyl-2-pentanone	100	100		1	103	60-140	12/29/2009 2125
Methylcyclohexane	50	55		1	111	70-130	12/29/2009 2125
Methylene chloride	50	49		1	98	70-130	12/29/2009 2125
Styrene	50	58		1	117	70-130	12/29/2009 2125
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	12/29/2009 2125
Tetrachloroethene	50	53		1	105	70-130	12/29/2009 2125
Toluene	50	54		1	108	70-130	12/29/2009 2125
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	109	70-130	12/29/2009 2125
1,2,4-Trichlorobenzene	50	60		1	121	70-130	12/29/2009 2125
1,1,2-Trichloroethane	50	53		1	105	70-130	12/29/2009 2125
1,1,1-Trichloroethane	50	53		1	107	70-130	12/29/2009 2125

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24460-002

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	103	70-130	12/29/2009 2125
Trichlorofluoromethane	50	45		1	90	60-140	12/29/2009 2125
Vinyl chloride	50	50		1	100	60-140	12/29/2009 2125
Xylenes (total)	100	110		1	112	70-130	12/29/2009 2125
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24460-003

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	103	13	46-153	20	12/29/2009 2147
Benzene	50	45		1	90	9.6	70-130	20	12/29/2009 2147
Bromodichloromethane	50	48		1	96	8.7	70-130	20	12/29/2009 2147
Bromoform	50	36		1	72	10	70-130	20	12/29/2009 2147
Bromomethane (Methyl bromide)	50	49		1	98	10	60-140	20	12/29/2009 2147
2-Butanone (MEK)	100	99		1	99	9.3	60-140	20	12/29/2009 2147
Carbon disulfide	50	45		1	91	12	60-140	20	12/29/2009 2147
Carbon tetrachloride	50	44		1	89	12	70-130	20	12/29/2009 2147
Chlorobenzene	50	49		1	98	6.6	70-130	20	12/29/2009 2147
Chloroethane	50	49		1	97	11	42-163	20	12/29/2009 2147
Chloroform	50	45		1	91	10	70-130	20	12/29/2009 2147
Chloromethane (Methyl chloride)	50	44		1	88	11	20-158	20	12/29/2009 2147
Cyclohexane	50	50		1	100	11	70-130	20	12/29/2009 2147
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	15	70-130	20	12/29/2009 2147
Dibromochloromethane	50	49		1	97	10	70-130	20	12/29/2009 2147
1,2-Dibromoethane (EDB)	50	50		1	99	6.5	70-130	20	12/29/2009 2147
1,4-Dichlorobenzene	50	51		1	102	5.2	70-130	20	12/29/2009 2147
1,2-Dichlorobenzene	50	50		1	100	3.9	70-130	20	12/29/2009 2147
1,3-Dichlorobenzene	50	51		1	102	5.2	70-130	20	12/29/2009 2147
Dichlorodifluoromethane	50	43		1	86	10	60-140	20	12/29/2009 2147
1,2-Dichloroethane	50	47		1	94	7.2	70-130	20	12/29/2009 2147
1,1-Dichloroethane	50	44		1	88	13	70-130	20	12/29/2009 2147
cis-1,2-Dichloroethene	50	45		1	90	11	70-130	20	12/29/2009 2147
1,1-Dichloroethene	50	44		1	87	12	70-130	20	12/29/2009 2147
trans-1,2-Dichloroethene	50	45		1	91	12	70-130	20	12/29/2009 2147
1,2-Dichloropropane	50	48		1	96	7.3	70-130	20	12/29/2009 2147
cis-1,3-Dichloropropene	50	46		1	91	6.8	70-130	20	12/29/2009 2147
trans-1,3-Dichloropropene	50	45		1	90	6.6	70-130	20	12/29/2009 2147
Ethylbenzene	50	52		1	105	4.9	70-130	20	12/29/2009 2147
2-Hexanone	100	98		1	98	3.6	60-140	20	12/29/2009 2147
Isopropylbenzene	50	56		1	113	4.8	70-130	20	12/29/2009 2147
Methyl acetate	50	41		1	83	13	15-128	20	12/29/2009 2147
Methyl tertiary butyl ether (MTBE)	50	47		1	94	13	70-130	20	12/29/2009 2147
4-Methyl-2-pentanone	100	96		1	96	7.4	60-140	20	12/29/2009 2147
Methylcyclohexane	50	51		1	101	8.9	70-130	20	12/29/2009 2147
Methylene chloride	50	44		1	88	11	70-130	20	12/29/2009 2147
Styrene	50	55		1	111	5.4	70-130	20	12/29/2009 2147
1,1,2,2-Tetrachloroethane	50	50		1	99	6.3	70-130	20	12/29/2009 2147
Tetrachloroethene	50	49		1	98	7.2	70-130	20	12/29/2009 2147
Toluene	50	51		1	102	5.9	70-130	20	12/29/2009 2147
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	7.2	70-130	20	12/29/2009 2147
1,2,4-Trichlorobenzene	50	54		1	107	11	70-130	20	12/29/2009 2147
1,1,2-Trichloroethane	50	50		1	100	4.7	70-130	20	12/29/2009 2147
1,1,1-Trichloroethane	50	48		1	96	10	70-130	20	12/29/2009 2147

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24460-003

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	47		1	94	8.2	70-130	20	12/29/2009 2147
Trichlorofluoromethane	50	42		1	85	6.6	60-140	20	12/29/2009 2147
Vinyl chloride	50	45		1	90	11	60-140	20	12/29/2009 2147
Xylenes (total)	100	110		1	105	6.5	70-130	20	12/29/2009 2147
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		94	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24539-001

Matrix: Aqueous

Batch: 24539

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/30/2009 2122
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24539-002

Matrix: Aqueous

Batch: 24539

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
cis-1,2-Dichloroethene	50	48		1	96	70-130	12/30/2009 1958
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24539-003

Matrix: Aqueous

Batch: 24539

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
cis-1,2-Dichloroethene	50	48		1	96	0.25	70-130	20	12/30/2009 2019
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		101	70-130						
1,2-Dichloroethane-d4		97	70-130						
Toluene-d8		99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25653-001

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/18/2009 1102
Benzene	ND		1	0.50	0.027	ug/L	12/18/2009 1102
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Bromoform	ND		1	0.50	0.010	ug/L	12/18/2009 1102
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/18/2009 1102
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/18/2009 1102
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/18/2009 1102
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/18/2009 1102
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Chloroethane	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Chloroform	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Cyclohexane	ND		1	0.50	0.30	ug/L	12/18/2009 1102
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/18/2009 1102
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/18/2009 1102
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/18/2009 1102
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/18/2009 1102
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/18/2009 1102
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/18/2009 1102
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/18/2009 1102
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/18/2009 1102
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/18/2009 1102
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/18/2009 1102
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/18/2009 1102
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/18/2009 1102
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
2-Hexanone	ND		1	10	0.27	ug/L	12/18/2009 1102
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/18/2009 1102
Methyl acetate	ND		1	1.0	0.30	ug/L	12/18/2009 1102
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/18/2009 1102
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/18/2009 1102
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/18/2009 1102
Methylene chloride	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Styrene	ND		1	0.50	0.015	ug/L	12/18/2009 1102
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/18/2009 1102
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/18/2009 1102
Toluene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/18/2009 1102
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/18/2009 1102
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/18/2009 1102
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/18/2009 1102

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25653-001

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/18/2009 1102
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/18/2009 1102
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/18/2009 1102
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/18/2009 1102
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		114	70-130				
1,2-Dichloroethane-d4		114	70-130				
Toluene-d8		115	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25653-002

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	110	46-153	12/18/2009 0933
Benzene	50	50		1	101	70-130	12/18/2009 0933
Bromodichloromethane	50	53		1	107	70-130	12/18/2009 0933
Bromoform	50	55		1	111	70-130	12/18/2009 0933
Bromomethane (Methyl bromide)	50	49		1	99	60-140	12/18/2009 0933
2-Butanone (MEK)	100	100		1	100	60-140	12/18/2009 0933
Carbon disulfide	50	52		1	104	60-140	12/18/2009 0933
Carbon tetrachloride	50	58		1	116	70-130	12/18/2009 0933
Chlorobenzene	50	52		1	103	70-130	12/18/2009 0933
Chloroethane	50	56		1	111	42-163	12/18/2009 0933
Chloroform	50	50		1	100	70-130	12/18/2009 0933
Chloromethane (Methyl chloride)	50	52		1	104	20-158	12/18/2009 0933
Cyclohexane	50	56		1	113	70-130	12/18/2009 0933
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	12/18/2009 0933
Dibromochloromethane	50	55		1	110	70-130	12/18/2009 0933
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	12/18/2009 0933
1,4-Dichlorobenzene	50	61		1	122	70-130	12/18/2009 0933
1,2-Dichlorobenzene	50	63		1	126	70-130	12/18/2009 0933
1,3-Dichlorobenzene	50	60		1	121	70-130	12/18/2009 0933
Dichlorodifluoromethane	50	60		1	121	60-140	12/18/2009 0933
1,2-Dichloroethane	50	50		1	101	70-130	12/18/2009 0933
1,1-Dichloroethane	50	50		1	101	70-130	12/18/2009 0933
cis-1,2-Dichloroethene	50	51		1	102	70-130	12/18/2009 0933
1,1-Dichloroethene	50	54		1	109	70-130	12/18/2009 0933
trans-1,2-Dichloroethene	50	52		1	104	70-130	12/18/2009 0933
1,2-Dichloropropane	50	52		1	104	70-130	12/18/2009 0933
cis-1,3-Dichloropropene	50	55		1	109	70-130	12/18/2009 0933
trans-1,3-Dichloropropene	50	56		1	112	70-130	12/18/2009 0933
Ethylbenzene	50	53		1	106	70-130	12/18/2009 0933
2-Hexanone	100	99		1	99	60-140	12/18/2009 0933
Isopropylbenzene	50	54		1	107	70-130	12/18/2009 0933
Methyl acetate	50	47		1	94	15-128	12/18/2009 0933
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	12/18/2009 0933
4-Methyl-2-pentanone	100	85		1	85	60-140	12/18/2009 0933
Methylcyclohexane	50	57		1	114	70-130	12/18/2009 0933
Methylene chloride	50	56		1	113	70-130	12/18/2009 0933
Styrene	50	55		1	109	70-130	12/18/2009 0933
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	12/18/2009 0933
Tetrachloroethene	50	56		1	111	70-130	12/18/2009 0933
Toluene	50	51		1	102	70-130	12/18/2009 0933
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	100	70-130	12/18/2009 0933
1,2,4-Trichlorobenzene	50	62		1	124	70-130	12/18/2009 0933
1,1,2-Trichloroethane	50	53		1	105	70-130	12/18/2009 0933
1,1,1-Trichloroethane	50	56		1	111	70-130	12/18/2009 0933

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25653-002

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	104	70-130	12/18/2009 0933
Trichlorofluoromethane	50	50		1	99	60-140	12/18/2009 0933
Vinyl chloride	50	58		1	116	60-140	12/18/2009 0933
Xylenes (total)	100	110		1	107	70-130	12/18/2009 0933
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		117			70-130		
1,2-Dichloroethane-d4		110			70-130		
Toluene-d8		117			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25653-003

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	111	1.1	46-153	20	12/18/2009 0954
Benzene	50	50		1	101	0.23	70-130	20	12/18/2009 0954
Bromodichloromethane	50	53		1	107	0.017	70-130	20	12/18/2009 0954
Bromoform	50	59		1	118	6.4	70-130	20	12/18/2009 0954
Bromomethane (Methyl bromide)	50	51		1	102	3.0	60-140	20	12/18/2009 0954
2-Butanone (MEK)	100	100		1	104	3.9	60-140	20	12/18/2009 0954
Carbon disulfide	50	51		1	102	2.0	60-140	20	12/18/2009 0954
Carbon tetrachloride	50	57		1	114	1.7	70-130	20	12/18/2009 0954
Chlorobenzene	50	52		1	103	0.14	70-130	20	12/18/2009 0954
Chloroethane	50	55		1	110	1.3	42-163	20	12/18/2009 0954
Chloroform	50	49		1	99	1.6	70-130	20	12/18/2009 0954
Chloromethane (Methyl chloride)	50	51		1	103	0.94	20-158	20	12/18/2009 0954
Cyclohexane	50	55		1	109	3.1	70-130	20	12/18/2009 0954
1,2-Dibromo-3-chloropropane (DBCP)	50	52		1	104	4.7	70-130	20	12/18/2009 0954
Dibromochloromethane	50	57		1	114	2.9	70-130	20	12/18/2009 0954
1,2-Dibromoethane (EDB)	50	53		1	107	2.5	70-130	20	12/18/2009 0954
1,4-Dichlorobenzene	50	60		1	119	2.3	70-130	20	12/18/2009 0954
1,2-Dichlorobenzene	50	61		1	123	2.3	70-130	20	12/18/2009 0954
1,3-Dichlorobenzene	50	60		1	120	0.99	70-130	20	12/18/2009 0954
Dichlorodifluoromethane	50	58		1	116	3.9	60-140	20	12/18/2009 0954
1,2-Dichloroethane	50	50		1	99	1.4	70-130	20	12/18/2009 0954
1,1-Dichloroethane	50	50		1	99	1.7	70-130	20	12/18/2009 0954
cis-1,2-Dichloroethene	50	50		1	99	2.3	70-130	20	12/18/2009 0954
1,1-Dichloroethene	50	56		1	112	2.6	70-130	20	12/18/2009 0954
trans-1,2-Dichloroethene	50	51		1	102	1.1	70-130	20	12/18/2009 0954
1,2-Dichloropropane	50	51		1	102	1.1	70-130	20	12/18/2009 0954
cis-1,3-Dichloropropene	50	55		1	111	1.4	70-130	20	12/18/2009 0954
trans-1,3-Dichloropropene	50	57		1	114	2.2	70-130	20	12/18/2009 0954
Ethylbenzene	50	52		1	104	1.1	70-130	20	12/18/2009 0954
2-Hexanone	100	100		1	105	5.8	60-140	20	12/18/2009 0954
Isopropylbenzene	50	52		1	104	2.6	70-130	20	12/18/2009 0954
Methyl acetate	50	48		1	95	1.3	15-128	20	12/18/2009 0954
Methyl tertiary butyl ether (MTBE)	50	50		1	100	0.25	70-130	20	12/18/2009 0954
4-Methyl-2-pentanone	100	89		1	89	4.3	60-140	20	12/18/2009 0954
Methylcyclohexane	50	56		1	113	1.2	70-130	20	12/18/2009 0954
Methylene chloride	50	56		1	111	1.3	70-130	20	12/18/2009 0954
Styrene	50	54		1	109	0.49	70-130	20	12/18/2009 0954
1,1,2,2-Tetrachloroethane	50	53		1	107	2.8	70-130	20	12/18/2009 0954
Tetrachloroethene	50	56		1	112	0.61	70-130	20	12/18/2009 0954
Toluene	50	51		1	101	0.55	70-130	20	12/18/2009 0954
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	98	2.7	70-130	20	12/18/2009 0954
1,2,4-Trichlorobenzene	50	61		1	123	0.81	70-130	20	12/18/2009 0954
1,1,2-Trichloroethane	50	53		1	106	1.0	70-130	20	12/18/2009 0954
1,1,1-Trichloroethane	50	54		1	109	2.3	70-130	20	12/18/2009 0954

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25653-003

Matrix: Aqueous

Batch: 25653

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	53		1	106	1.3	70-130	20	12/18/2009 0954
Trichlorofluoromethane	50	71	N,+	1	143	36	60-140	20	12/18/2009 0954
Vinyl chloride	50	57		1	114	1.0	60-140	20	12/18/2009 0954
Xylenes (total)	100	100		1	105	2.1	70-130	20	12/18/2009 0954
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		116	70-130						
1,2-Dichloroethane-d4		108	70-130						
Toluene-d8		116	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25654-001

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 1225
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 1225
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 1225
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 1225
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 1225
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 1225
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 1225
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 1225
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 1225
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 1225
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 1225
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 1225
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 1225
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 1225
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 1225
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 1225
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 1225
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 1225
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 1225
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 1225
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 1225
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 1225
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 1225
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 1225
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 1225
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 1225
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 1225
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 1225
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 1225
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 1225
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 1225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25654-001

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 1225
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 1225
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 1225
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		93	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25654-002

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	118	46-153	12/29/2009 1057
Benzene	50	49		1	98	70-130	12/29/2009 1057
Bromodichloromethane	50	53		1	106	70-130	12/29/2009 1057
Bromoform	50	44		1	88	70-130	12/29/2009 1057
Bromomethane (Methyl bromide)	50	53		1	107	60-140	12/29/2009 1057
2-Butanone (MEK)	100	110		1	112	60-140	12/29/2009 1057
Carbon disulfide	50	55		1	109	60-140	12/29/2009 1057
Carbon tetrachloride	50	51		1	102	70-130	12/29/2009 1057
Chlorobenzene	50	52		1	104	70-130	12/29/2009 1057
Chloroethane	50	52		1	103	42-163	12/29/2009 1057
Chloroform	50	49		1	99	70-130	12/29/2009 1057
Chloromethane (Methyl chloride)	50	48		1	95	20-158	12/29/2009 1057
Cyclohexane	50	54		1	107	70-130	12/29/2009 1057
1,2-Dibromo-3-chloropropane (DBCP)	50	56		1	111	70-130	12/29/2009 1057
Dibromochloromethane	50	54		1	108	70-130	12/29/2009 1057
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	12/29/2009 1057
1,4-Dichlorobenzene	50	51		1	102	70-130	12/29/2009 1057
1,2-Dichlorobenzene	50	54		1	107	70-130	12/29/2009 1057
1,3-Dichlorobenzene	50	54		1	107	70-130	12/29/2009 1057
Dichlorodifluoromethane	50	48		1	95	60-140	12/29/2009 1057
1,2-Dichloroethane	50	51		1	102	70-130	12/29/2009 1057
1,1-Dichloroethane	50	48		1	96	70-130	12/29/2009 1057
cis-1,2-Dichloroethene	50	49		1	99	70-130	12/29/2009 1057
1,1-Dichloroethene	50	48		1	97	70-130	12/29/2009 1057
trans-1,2-Dichloroethene	50	49		1	99	70-130	12/29/2009 1057
1,2-Dichloropropane	50	50		1	100	70-130	12/29/2009 1057
cis-1,3-Dichloropropene	50	55		1	109	70-130	12/29/2009 1057
trans-1,3-Dichloropropene	50	47		1	95	70-130	12/29/2009 1057
Ethylbenzene	50	55		1	109	70-130	12/29/2009 1057
2-Hexanone	100	99		1	99	60-140	12/29/2009 1057
Isopropylbenzene	50	58		1	115	70-130	12/29/2009 1057
Methyl acetate	50	48		1	96	15-128	12/29/2009 1057
Methyl tertiary butyl ether (MTBE)	50	51		1	102	70-130	12/29/2009 1057
4-Methyl-2-pentanone	100	100		1	104	60-140	12/29/2009 1057
Methylcyclohexane	50	57		1	113	70-130	12/29/2009 1057
Methylene chloride	50	47		1	94	70-130	12/29/2009 1057
Styrene	50	58		1	115	70-130	12/29/2009 1057
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	12/29/2009 1057
Tetrachloroethene	50	52		1	104	70-130	12/29/2009 1057
Toluene	50	53		1	106	70-130	12/29/2009 1057
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	12/29/2009 1057
1,2,4-Trichlorobenzene	50	58		1	116	70-130	12/29/2009 1057
1,1,2-Trichloroethane	50	53		1	106	70-130	12/29/2009 1057
1,1,1-Trichloroethane	50	51		1	102	70-130	12/29/2009 1057

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25654-002

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/29/2009 1057
Trichlorofluoromethane	50	50		1	100	60-140	12/29/2009 1057
Vinyl chloride	50	49		1	98	60-140	12/29/2009 1057
Xylenes (total)	100	110		1	110	70-130	12/29/2009 1057
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		99			70-130		
1,2-Dichloroethane-d4		97			70-130		
Toluene-d8		103			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25654-003

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	113	4.6	46-153	20	12/29/2009 1119
Benzene	50	49		1	99	1.5	70-130	20	12/29/2009 1119
Bromodichloromethane	50	53		1	105	1.0	70-130	20	12/29/2009 1119
Bromoform	50	42		1	83	5.9	70-130	20	12/29/2009 1119
Bromomethane (Methyl bromide)	50	50		1	99	7.3	60-140	20	12/29/2009 1119
2-Butanone (MEK)	100	100		1	105	6.4	60-140	20	12/29/2009 1119
Carbon disulfide	50	54		1	108	1.1	60-140	20	12/29/2009 1119
Carbon tetrachloride	50	50		1	100	1.9	70-130	20	12/29/2009 1119
Chlorobenzene	50	52		1	104	0.51	70-130	20	12/29/2009 1119
Chloroethane	50	51		1	102	1.1	42-163	20	12/29/2009 1119
Chloroform	50	49		1	97	1.3	70-130	20	12/29/2009 1119
Chloromethane (Methyl chloride)	50	46		1	92	3.4	20-158	20	12/29/2009 1119
Cyclohexane	50	53		1	106	1.1	70-130	20	12/29/2009 1119
1,2-Dibromo-3-chloropropane (DBCP)	50	54		1	108	2.5	70-130	20	12/29/2009 1119
Dibromochloromethane	50	54		1	108	0.23	70-130	20	12/29/2009 1119
1,2-Dibromoethane (EDB)	50	54		1	109	1.5	70-130	20	12/29/2009 1119
1,4-Dichlorobenzene	50	52		1	104	1.9	70-130	20	12/29/2009 1119
1,2-Dichlorobenzene	50	54		1	108	0.39	70-130	20	12/29/2009 1119
1,3-Dichlorobenzene	50	54		1	108	0.63	70-130	20	12/29/2009 1119
Dichlorodifluoromethane	50	47		1	94	1.9	60-140	20	12/29/2009 1119
1,2-Dichloroethane	50	49		1	99	2.7	70-130	20	12/29/2009 1119
1,1-Dichloroethane	50	49		1	97	1.2	70-130	20	12/29/2009 1119
cis-1,2-Dichloroethene	50	49		1	97	1.3	70-130	20	12/29/2009 1119
1,1-Dichloroethene	50	47		1	95	2.1	70-130	20	12/29/2009 1119
trans-1,2-Dichloroethene	50	49		1	98	1.3	70-130	20	12/29/2009 1119
1,2-Dichloropropane	50	50		1	100	0.044	70-130	20	12/29/2009 1119
cis-1,3-Dichloropropene	50	56		1	112	2.7	70-130	20	12/29/2009 1119
trans-1,3-Dichloropropene	50	48		1	96	0.98	70-130	20	12/29/2009 1119
Ethylbenzene	50	56		1	111	2.0	70-130	20	12/29/2009 1119
2-Hexanone	100	100		1	100	0.91	60-140	20	12/29/2009 1119
Isopropylbenzene	50	58		1	117	1.2	70-130	20	12/29/2009 1119
Methyl acetate	50	45		1	90	5.8	15-128	20	12/29/2009 1119
Methyl tertiary butyl ether (MTBE)	50	50		1	100	1.4	70-130	20	12/29/2009 1119
4-Methyl-2-pentanone	100	100		1	102	1.3	60-140	20	12/29/2009 1119
Methylcyclohexane	50	56		1	112	0.67	70-130	20	12/29/2009 1119
Methylene chloride	50	47		1	94	0.52	70-130	20	12/29/2009 1119
Styrene	50	58		1	117	1.5	70-130	20	12/29/2009 1119
1,1,2,2-Tetrachloroethane	50	53		1	107	1.2	70-130	20	12/29/2009 1119
Tetrachloroethene	50	54		1	107	2.6	70-130	20	12/29/2009 1119
Toluene	50	54		1	108	2.0	70-130	20	12/29/2009 1119
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	107	2.9	70-130	20	12/29/2009 1119
1,2,4-Trichlorobenzene	50	56		1	113	2.8	70-130	20	12/29/2009 1119
1,1,2-Trichloroethane	50	53		1	107	0.33	70-130	20	12/29/2009 1119
1,1,1-Trichloroethane	50	51		1	102	0.77	70-130	20	12/29/2009 1119

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25654-003

Matrix: Aqueous

Batch: 25654

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	1.7	70-130	20	12/29/2009 1119
Trichlorofluoromethane	50	50		1	100	0.080	60-140	20	12/29/2009 1119
Vinyl chloride	50	48		1	97	1.7	60-140	20	12/29/2009 1119
Xylenes (total)	100	110		1	112	1.6	70-130	20	12/29/2009 1119
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		95	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25655-001

Matrix: Aqueous

Batch: 25655

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 0236
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 0236
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 0236
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 0236
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 0236
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 0236
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 0236
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Cyclohexane	0.38	J	1	0.50	0.30	ug/L	12/29/2009 0236
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 0236
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 0236
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 0236
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 0236
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 0236
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 0236
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 0236
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 0236
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 0236
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 0236
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 0236
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 0236
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 0236
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 0236
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 0236
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 0236
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 0236
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 0236
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 0236
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 0236
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 0236
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 0236
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 0236
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 0236

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25655-001

Matrix: Aqueous

Batch: 25655

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 0236
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 0236
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 0236
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 0236
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25655-002

Matrix: Aqueous

Batch: 25655

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	46-153	12/29/2009 0023
Benzene	50	51		1	102	70-130	12/29/2009 0023
Bromodichloromethane	50	54		1	108	70-130	12/29/2009 0023
Bromoform	50	51		1	102	70-130	12/29/2009 0023
Bromomethane (Methyl bromide)	50	54		1	108	60-140	12/29/2009 0023
2-Butanone (MEK)	100	110		1	105	60-140	12/29/2009 0023
Carbon disulfide	50	54		1	109	60-140	12/29/2009 0023
Carbon tetrachloride	50	53		1	105	70-130	12/29/2009 0023
Chlorobenzene	50	53		1	105	70-130	12/29/2009 0023
Chloroethane	50	54		1	108	42-163	12/29/2009 0023
Chloroform	50	52		1	103	70-130	12/29/2009 0023
Chloromethane (Methyl chloride)	50	50		1	99	20-158	12/29/2009 0023
Cyclohexane	50	59		1	119	70-130	12/29/2009 0023
1,2-Dibromo-3-chloropropane (DBCP)	50	60		1	121	70-130	12/29/2009 0023
Dibromochloromethane	50	58		1	117	70-130	12/29/2009 0023
1,2-Dibromoethane (EDB)	50	54		1	109	70-130	12/29/2009 0023
1,4-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
1,2-Dichlorobenzene	50	53		1	106	70-130	12/29/2009 0023
1,3-Dichlorobenzene	50	55		1	111	70-130	12/29/2009 0023
Dichlorodifluoromethane	50	52		1	104	60-140	12/29/2009 0023
1,2-Dichloroethane	50	51		1	101	70-130	12/29/2009 0023
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 0023
cis-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,1-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
trans-1,2-Dichloroethene	50	52		1	104	70-130	12/29/2009 0023
1,2-Dichloropropane	50	51		1	102	70-130	12/29/2009 0023
cis-1,3-Dichloropropene	50	50		1	100	70-130	12/29/2009 0023
trans-1,3-Dichloropropene	50	51		1	102	70-130	12/29/2009 0023
Ethylbenzene	50	57		1	113	70-130	12/29/2009 0023
2-Hexanone	100	110		1	106	60-140	12/29/2009 0023
Isopropylbenzene	50	60		1	120	70-130	12/29/2009 0023
Methyl acetate	50	46		1	93	15-128	12/29/2009 0023
Methyl tertiary butyl ether (MTBE)	50	54		1	107	70-130	12/29/2009 0023
4-Methyl-2-pentanone	100	110		1	110	60-140	12/29/2009 0023
Methylcyclohexane	50	60		1	120	70-130	12/29/2009 0023
Methylene chloride	50	49		1	99	70-130	12/29/2009 0023
Styrene	50	60		1	119	70-130	12/29/2009 0023
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	12/29/2009 0023
Tetrachloroethene	50	54		1	107	70-130	12/29/2009 0023
Toluene	50	54		1	108	70-130	12/29/2009 0023
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	117	70-130	12/29/2009 0023
1,2,4-Trichlorobenzene	50	61		1	123	70-130	12/29/2009 0023
1,1,2-Trichloroethane	50	53		1	106	70-130	12/29/2009 0023
1,1,1-Trichloroethane	50	54		1	108	70-130	12/29/2009 0023

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25655-002

Matrix: Aqueous

Batch: 25655

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 0023
Trichlorofluoromethane	50	50		1	101	60-140	12/29/2009 0023
Vinyl chloride	50	53		1	106	60-140	12/29/2009 0023
Xylenes (total)	100	110		1	115	70-130	12/29/2009 0023
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		97			70-130		
1,2-Dichloroethane-d4		98			70-130		
Toluene-d8		100			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25655-003

Batch: 25655

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	78	+	1	78	28	46-153	20	12/29/2009 0045
Benzene	50	49		1	99	2.8	70-130	20	12/29/2009 0045
Bromodichloromethane	50	52		1	104	3.7	70-130	20	12/29/2009 0045
Bromoform	50	49		1	98	4.3	70-130	20	12/29/2009 0045
Bromomethane (Methyl bromide)	50	51		1	102	6.2	60-140	20	12/29/2009 0045
2-Butanone (MEK)	100	100		1	101	3.8	60-140	20	12/29/2009 0045
Carbon disulfide	50	51		1	102	6.5	60-140	20	12/29/2009 0045
Carbon tetrachloride	50	51		1	101	4.1	70-130	20	12/29/2009 0045
Chlorobenzene	50	53		1	106	0.56	70-130	20	12/29/2009 0045
Chloroethane	50	51		1	102	6.1	42-163	20	12/29/2009 0045
Chloroform	50	49		1	98	5.2	70-130	20	12/29/2009 0045
Chloromethane (Methyl chloride)	50	49		1	98	1.7	20-158	20	12/29/2009 0045
Cyclohexane	50	57		1	114	3.6	70-130	20	12/29/2009 0045
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	17	70-130	20	12/29/2009 0045
Dibromochloromethane	50	57		1	114	2.0	70-130	20	12/29/2009 0045
1,2-Dibromoethane (EDB)	50	55		1	111	1.9	70-130	20	12/29/2009 0045
1,4-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
1,2-Dichlorobenzene	50	53		1	105	1.1	70-130	20	12/29/2009 0045
1,3-Dichlorobenzene	50	55		1	110	0.64	70-130	20	12/29/2009 0045
Dichlorodifluoromethane	50	50		1	100	3.6	60-140	20	12/29/2009 0045
1,2-Dichloroethane	50	48		1	96	5.2	70-130	20	12/29/2009 0045
1,1-Dichloroethane	50	48		1	95	5.8	70-130	20	12/29/2009 0045
cis-1,2-Dichloroethene	50	48		1	96	7.3	70-130	20	12/29/2009 0045
1,1-Dichloroethene	50	48		1	96	7.4	70-130	20	12/29/2009 0045
trans-1,2-Dichloroethene	50	49		1	99	4.6	70-130	20	12/29/2009 0045
1,2-Dichloropropane	50	51		1	102	0.23	70-130	20	12/29/2009 0045
cis-1,3-Dichloropropene	50	52		1	104	3.3	70-130	20	12/29/2009 0045
trans-1,3-Dichloropropene	50	52		1	104	2.4	70-130	20	12/29/2009 0045
Ethylbenzene	50	57		1	113	0.039	70-130	20	12/29/2009 0045
2-Hexanone	100	110		1	114	7.1	60-140	20	12/29/2009 0045
Isopropylbenzene	50	60		1	119	0.044	70-130	20	12/29/2009 0045
Methyl acetate	50	42		1	85	9.1	15-128	20	12/29/2009 0045
Methyl tertiary butyl ether (MTBE)	50	49		1	97	9.5	70-130	20	12/29/2009 0045
4-Methyl-2-pentanone	100	110		1	107	2.2	60-140	20	12/29/2009 0045
Methylcyclohexane	50	59		1	118	1.7	70-130	20	12/29/2009 0045
Methylene chloride	50	46		1	93	6.4	70-130	20	12/29/2009 0045
Styrene	50	59		1	118	0.64	70-130	20	12/29/2009 0045
1,1,2,2-Tetrachloroethane	50	52		1	104	3.9	70-130	20	12/29/2009 0045
Tetrachloroethene	50	53		1	106	0.60	70-130	20	12/29/2009 0045
Toluene	50	55		1	110	1.6	70-130	20	12/29/2009 0045
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	112	4.0	70-130	20	12/29/2009 0045
1,2,4-Trichlorobenzene	50	54		1	108	12	70-130	20	12/29/2009 0045
1,1,2-Trichloroethane	50	53		1	107	0.16	70-130	20	12/29/2009 0045
1,1,1-Trichloroethane	50	52		1	103	4.2	70-130	20	12/29/2009 0045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25655-003

Matrix: Aqueous

Batch: 25655

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	3.2	70-130	20	12/29/2009 0045
Trichlorofluoromethane	50	48		1	96	5.5	60-140	20	12/29/2009 0045
Vinyl chloride	50	50		1	100	6.1	60-140	20	12/29/2009 0045
Xylenes (total)	100	110		1	112	2.1	70-130	20	12/29/2009 0045
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		93	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: LQ25668-001

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	1.0	0.20	ug/L	01/08/2010 0018
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	01/08/2010 0018
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	01/08/2010 0018
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	01/08/2010 0018
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	01/08/2010 0018
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	01/08/2010 0018
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	01/08/2010 0018
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	01/08/2010 0018
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
2-Chlorophenol	ND		1	1.0	0.13	ug/L	01/08/2010 0018
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	01/08/2010 0018
2-Methylphenol	ND		1	1.0	0.17	ug/L	01/08/2010 0018
2-Nitroaniline	ND		1	2.0	0.55	ug/L	01/08/2010 0018
2-Nitrophenol	ND		1	2.0	0.27	ug/L	01/08/2010 0018
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	01/08/2010 0018
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	01/08/2010 0018
3-Nitroaniline	ND		1	2.0	0.77	ug/L	01/08/2010 0018
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	01/08/2010 0018
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	01/08/2010 0018
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	01/08/2010 0018
4-Chloroaniline	ND		1	1.0	0.13	ug/L	01/08/2010 0018
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	01/08/2010 0018
4-Nitroaniline	ND		1	2.0	0.39	ug/L	01/08/2010 0018
4-Nitrophenol	ND		1	5.0	0.64	ug/L	01/08/2010 0018
Acenaphthene	ND		1	1.0	0.090	ug/L	01/08/2010 0018
Acenaphthylene	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Acetophenone	ND		1	1.0	0.32	ug/L	01/08/2010 0018
Anthracene	ND		1	1.0	0.13	ug/L	01/08/2010 0018
Atrazine	ND		1	1.0	0.20	ug/L	01/08/2010 0018
Benzaldehyde	ND		1	5.0	1.0	ug/L	01/08/2010 0018
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	01/08/2010 0018
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	01/08/2010 0018
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	01/08/2010 0018
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	01/08/2010 0018
bis(2-Chloroethyl)ether	ND		1	1.0	0.13	ug/L	01/08/2010 0018
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	01/08/2010 0018
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Caprolactam	ND		1	5.0	1.2	ug/L	01/08/2010 0018
Carbazole	ND		1	1.0	0.25	ug/L	01/08/2010 0018
Chrysene	ND		1	1.0	0.12	ug/L	01/08/2010 0018
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: LQ25668-001

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	01/08/2010 0018
Dibenzofuran	ND		1	1.0	0.16	ug/L	01/08/2010 0018
Diethylphthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	01/08/2010 0018
Fluoranthene	ND		1	1.0	0.21	ug/L	01/08/2010 0018
Fluorene	ND		1	1.0	0.10	ug/L	01/08/2010 0018
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	01/08/2010 0018
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	01/08/2010 0018
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	01/08/2010 0018
Hexachloroethane	ND		1	1.0	0.11	ug/L	01/08/2010 0018
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	01/08/2010 0018
Isophorone	ND		1	1.0	0.080	ug/L	01/08/2010 0018
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	01/08/2010 0018
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	01/08/2010 0018
Naphthalene	ND		1	1.0	0.070	ug/L	01/08/2010 0018
Nitrobenzene	ND		1	1.0	0.10	ug/L	01/08/2010 0018
Pentachlorophenol	ND		1	5.0	0.54	ug/L	01/08/2010 0018
Phenanthrene	ND		1	1.0	0.18	ug/L	01/08/2010 0018
Phenol	ND		1	1.0	0.11	ug/L	01/08/2010 0018
Pyrene	ND		1	1.0	0.16	ug/L	01/08/2010 0018

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		55	41-144
2-Fluorobiphenyl		57	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5	N	23	28-128
Terphenyl-d14		46	10-148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25668-002

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	11		1	53	46-125	01/08/2010 0038
2,4,6-Trichlorophenol	20	9.2		1	46	36-123	01/08/2010 0038
2,4-Dichlorophenol	20	10		1	51	38-127	01/08/2010 0038
2,4-Dimethylphenol	20	7.9		1	39	36-110	01/08/2010 0038
2,4-Dinitrophenol	100	55		1	55	33-143	01/08/2010 0038
2,4-Dinitrotoluene	40	21	N	1	53	55-137	01/08/2010 0038
2,6-Dinitrotoluene	40	21	N	1	52	53-128	01/08/2010 0038
2-Chloronaphthalene	20	10		1	52	42-132	01/08/2010 0038
2-Chlorophenol	20	10		1	50	40-128	01/08/2010 0038
2-Methylnaphthalene	20	9.8		1	49	49-122	01/08/2010 0038
2-Methylphenol	20	9.9		1	50	33-122	01/08/2010 0038
2-Nitroaniline	40	21		1	51	48-126	01/08/2010 0038
2-Nitrophenol	40	20		1	51	44-131	01/08/2010 0038
3 & 4-Methylphenol	40	16	N	1	40	48-112	01/08/2010 0038
3-Nitroaniline	40	7.8	N	1	19	29-109	01/08/2010 0038
4,6-Dinitro-2-methylphenol	100	55		1	55	46-151	01/08/2010 0038
4-Bromophenyl phenyl ether	20	10		1	51	49-123	01/08/2010 0038
4-Chloro-3-methyl phenol	20	9.7		1	49	48-136	01/08/2010 0038
4-Chloroaniline	20	3.7		1	19	18-73	01/08/2010 0038
4-Chlorophenyl phenyl ether	20	10		1	51	34-124	01/08/2010 0038
4-Nitroaniline	40	20		1	49	42-154	01/08/2010 0038
4-Nitrophenol	100	30	N	1	30	43-145	01/08/2010 0038
Acenaphthene	20	10		1	51	51-130	01/08/2010 0038
Acenaphthylene	20	10		1	50	46-131	01/08/2010 0038
Anthracene	20	10		1	51	48-122	01/08/2010 0038
Benzo(a)anthracene	20	11		1	54	50-143	01/08/2010 0038
Benzo(a)pyrene	20	12		1	60	55-141	01/08/2010 0038
Benzo(b)fluoranthene	20	11		1	55	48-147	01/08/2010 0038
Benzo(g,h,i)perylene	20	10		1	52	48-139	01/08/2010 0038
Benzo(k)fluoranthene	20	10		1	52	48-148	01/08/2010 0038
bis(2-Chloroethoxy)methane	20	10		1	51	46-130	01/08/2010 0038
bis(2-Chloroethyl)ether	20	10		1	52	42-127	01/08/2010 0038
bis(2-Chloroisopropyl)ether	20	9.7		1	48	36-133	01/08/2010 0038
bis(2-Ethylhexyl)phthalate	20	11		1	57	40-141	01/08/2010 0038
Butyl benzyl phthalate	20	11		1	54	52-142	01/08/2010 0038
Carbazole	20	11		1	56	45-101	01/08/2010 0038
Chrysene	20	11		1	56	51-137	01/08/2010 0038
Di-n-butyl phthalate	20	11		1	55	50-134	01/08/2010 0038
Di-n-octylphthalate	20	11		1	57	50-136	01/08/2010 0038
Dibenzo(a,h)anthracene	20	10		1	52	48-139	01/08/2010 0038
Dibenzofuran	20	10		1	51	45-142	01/08/2010 0038
Diethylphthalate	20	11		1	53	48-124	01/08/2010 0038
Dimethyl phthalate	20	11		1	53	43-122	01/08/2010 0038
Fluoranthene	20	10		1	51	50-124	01/08/2010 0038

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25668-002

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	20	10		1	52	39-122	01/08/2010 0038
Hexachlorobenzene	20	10		1	52	46-125	01/08/2010 0038
Hexachlorobutadiene	20	10		1	50	38-121	01/08/2010 0038
Hexachlorocyclopentadiene	100	45		1	45	24-110	01/08/2010 0038
Hexachloroethane	20	10		1	50	32-109	01/08/2010 0038
Indeno(1,2,3-c,d)pyrene	20	10		1	52	49-146	01/08/2010 0038
Isophorone	20	11		1	53	43-118	01/08/2010 0038
N-Nitrosodi-n-propylamine	20	10		1	50	46-135	01/08/2010 0038
N-Nitrosodiphenylamine (Diphenylamine)	20	12		1	59	44-124	01/08/2010 0038
Naphthalene	20	10		1	50	45-118	01/08/2010 0038
Nitrobenzene	20	11		1	54	46-131	01/08/2010 0038
Pentachlorophenol	100	45		1	45	30-137	01/08/2010 0038
Phenanthrene	20	10		1	52	49-122	01/08/2010 0038
Phenol	20	5.4	N	1	27	35-118	01/08/2010 0038
Pyrene	20	11		1	53	50-130	01/08/2010 0038
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		53	41-144				
2-Fluorobiphenyl		54	37-129				
2-Fluorophenol		38	24-127				
Nitrobenzene-d5		55	38-127				
Phenol-d5	N	25	28-128				
Terphenyl-d14		47	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL17024-013MS

Batch: 25668

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	43	16		1	38	10-133	01/02/2010 1440
Acenaphthylene	ND	43	16		1	37	34-128	01/02/2010 1440
Anthracene	ND	43	16	N	1	38	48-122	01/02/2010 1440
Benzo(a)anthracene	ND	43	15	N	1	34	53-98	01/02/2010 1440
Benzo(a)pyrene	ND	43	21		1	48	11-160	01/02/2010 1440
Benzo(b)fluoranthene	ND	43	15		1	33	10-165	01/02/2010 1440
Benzo(g,h,i)perylene	ND	43	16	N	1	37	42-111	01/02/2010 1440
Benzo(k)fluoranthene	ND	43	23		1	53	13-175	01/02/2010 1440
4-Bromophenyl phenyl ether	ND	43	18	N	1	40	49-123	01/02/2010 1440
Butyl benzyl phthalate	ND	43	18	N	1	42	52-142	01/02/2010 1440
Carbazole	ND	43	18	N	1	41	45-101	01/02/2010 1440
4-Chloro-3-methyl phenol	ND	43	17	N	1	38	40-98	01/02/2010 1440
4-Chloroaniline	ND	43	ND	N	1	0.00	10-98	01/02/2010 1440
bis(2-Chloroethoxy)methane	ND	43	16	N	1	37	43-93	01/02/2010 1440
bis(2-Chloroethyl)ether	ND	43	17	N	1	38	41-88	01/02/2010 1440
bis(2-Chloroisopropyl)ether	ND	43	16		1	38	36-99	01/02/2010 1440
2-Chloronaphthalene	ND	43	13	N	1	30	40-89	01/02/2010 1440
2-Chlorophenol	ND	43	17		1	38	33-92	01/02/2010 1440
4-Chlorophenyl phenyl ether	ND	43	17		1	39	34-124	01/02/2010 1440
Chrysene	ND	43	20	N	1	46	51-107	01/02/2010 1440
Dibenzo(a,h)anthracene	ND	43	18	N	1	40	47-116	01/02/2010 1440
Dibenzofuran	ND	43	16	N	1	38	45-94	01/02/2010 1440
2,4-Dichlorophenol	ND	43	17		1	39	34-105	01/02/2010 1440
Diethylphthalate	ND	43	18	N	1	42	48-124	01/02/2010 1440
Dimethyl phthalate	ND	43	17	N	1	40	43-122	01/02/2010 1440
2,4-Dimethylphenol	ND	43	14	N	1	32	33-77	01/02/2010 1440
Di-n-butyl phthalate	ND	43	19	N	1	44	50-134	01/02/2010 1440
4,6-Dinitro-2-methylphenol	ND	220	89		1	41	33-118	01/02/2010 1440
2,4-Dinitrophenol	ND	220	79		1	36	19-119	01/02/2010 1440
2,4-Dinitrotoluene	ND	87	36	N	1	41	50-104	01/02/2010 1440
2,6-Dinitrotoluene	ND	87	37	N	1	43	53-128	01/02/2010 1440
Di-n-octylphthalate	ND	43	22		1	50	40-112	01/02/2010 1440
bis(2-Ethylhexyl)phthalate	ND	43	19		1	43	10-142	01/02/2010 1440
Fluoranthene	ND	43	18	N	1	40	50-124	01/02/2010 1440
Fluorene	ND	43	16	N	1	38	39-122	01/02/2010 1440
Hexachlorobenzene	ND	43	17	N	1	40	46-125	01/02/2010 1440
Hexachlorobutadiene	ND	43	15	N	1	35	42-94	01/02/2010 1440
Hexachlorocyclopentadiene	ND	220	58		1	27	14-89	01/02/2010 1440
Hexachloroethane	ND	43	16	N	1	36	39-86	01/02/2010 1440
Indeno(1,2,3-c,d)pyrene	ND	43	17	N	1	38	43-113	01/02/2010 1440
Isophorone	ND	43	17	N	1	40	42-84	01/02/2010 1440
2-Methylnaphthalene	ND	43	16	N	1	36	46-90	01/02/2010 1440
2-Methylphenol	ND	43	19		1	44	33-122	01/02/2010 1440
3 & 4-Methylphenol	ND	87	31		1	36	24-97	01/02/2010 1440

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL17024-013MS

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	ND	43	15	N	1	35	46-89	01/02/2010 1440
2-Nitroaniline	ND	87	35	N	1	41	48-126	01/02/2010 1440
3-Nitroaniline	ND	87	11		1	12	10-110	01/02/2010 1440
4-Nitroaniline	ND	87	32	N	1	37	41-99	01/02/2010 1440
Nitrobenzene	ND	43	18	N	1	41	44-91	01/02/2010 1440
2-Nitrophenol	ND	87	32		1	37	34-102	01/02/2010 1440
4-Nitrophenol	ND	220	73		1	33	29-122	01/02/2010 1440
N-Nitrosodi-n-propylamine	ND	43	19		1	43	41-96	01/02/2010 1440
N-Nitrosodiphenylamine (Diphenylamine)	ND	43	19		1	44	10-150	01/02/2010 1440
Pentachlorophenol	ND	220	76		1	35	32-110	01/02/2010 1440
Phenanthrene	ND	43	17	N	1	39	49-122	01/02/2010 1440
Phenol	ND	43	12	N	1	27	33-92	01/02/2010 1440
Pyrene	ND	43	17	N	1	38	50-130	01/02/2010 1440
2,4,5-Trichlorophenol	ND	43	18	N	1	42	46-125	01/02/2010 1440
2,4,6-Trichlorophenol	ND	43	16		1	37	36-123	01/02/2010 1440
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		79	37-129					
2-Fluorophenol		69	24-127					
Nitrobenzene-d5		85	38-127					
Phenol-d5		57	28-128					
Terphenyl-d14		70	10-148					
2,4,6-Tribromophenol		83	41-144					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL17024-013MD

Batch: 25668

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	43	18		1	42	11	10-133	40	01/02/2010 1500
Acenaphthylene	ND	43	18		1	42	11	34-128	40	01/02/2010 1500
Anthracene	ND	43	19	N	1	43	12	48-122	40	01/02/2010 1500
Benzo(a)anthracene	ND	43	17	N	1	38	10	53-98	40	01/02/2010 1500
Benzo(a)pyrene	ND	43	24		1	55	13	11-160	40	01/02/2010 1500
Benzo(b)fluoranthene	ND	43	16		1	37	9.8	10-165	40	01/02/2010 1500
Benzo(g,h,i)perylene	ND	43	19		1	43	14	42-111	40	01/02/2010 1500
Benzo(k)fluoranthene	ND	43	27		1	61	14	13-175	40	01/02/2010 1500
4-Bromophenyl phenyl ether	ND	43	20	N	1	45	11	49-123	40	01/02/2010 1500
Butyl benzyl phthalate	ND	43	20	N	1	46	9.4	52-142	40	01/02/2010 1500
Carbazole	ND	43	20		1	46	12	45-101	40	01/02/2010 1500
4-Chloro-3-methyl phenol	ND	43	20		1	45	16	40-98	40	01/02/2010 1500
4-Chloroaniline	ND	43	ND	N	1	0.00	0.00	10-98	40	01/02/2010 1500
bis(2-Chloroethoxy)methane	ND	43	18	N	1	42	15	43-93	40	01/02/2010 1500
bis(2-Chloroethyl)ether	ND	43	19		1	43	12	41-88	40	01/02/2010 1500
bis(2-Chloroisopropyl)ether	ND	43	19		1	43	14	36-99	40	01/02/2010 1500
2-Chloronaphthalene	ND	43	14	N	1	32	8.4	40-89	40	01/02/2010 1500
2-Chlorophenol	ND	43	19		1	44	13	33-92	40	01/02/2010 1500
4-Chlorophenyl phenyl ether	ND	43	19		1	44	11	34-124	40	01/02/2010 1500
Chrysene	ND	43	22	N	1	50	8.8	51-107	40	01/02/2010 1500
Dibenzo(a,h)anthracene	ND	43	20	N	1	46	14	47-116	40	01/02/2010 1500
Dibenzofuran	ND	43	18	N	1	42	11	45-94	40	01/02/2010 1500
2,4-Dichlorophenol	ND	43	20		1	45	15	34-105	40	01/02/2010 1500
Diethylphthalate	ND	43	21	N	1	47	12	48-124	40	01/02/2010 1500
Dimethyl phthalate	ND	43	20		1	46	15	43-122	40	01/02/2010 1500
2,4-Dimethylphenol	ND	43	16		1	37	15	33-77	40	01/02/2010 1500
Di-n-butyl phthalate	ND	43	21	N	1	49	10	50-134	40	01/02/2010 1500
4,6-Dinitro-2-methylphenol	ND	220	100		1	47	13	33-118	40	01/02/2010 1500
2,4-Dinitrophenol	ND	220	87		1	40	8.8	19-119	40	01/02/2010 1500
2,4-Dinitrotoluene	ND	87	40	N	1	46	12	50-104	40	01/02/2010 1500
2,6-Dinitrotoluene	ND	87	42	N	1	48	13	53-128	40	01/02/2010 1500
Di-n-octylphthalate	ND	43	25		1	58	13	40-112	40	01/02/2010 1500
bis(2-Ethylhexyl)phthalate	ND	43	21		1	47	9.1	10-142	40	01/02/2010 1500
Fluoranthene	ND	43	19	N	1	45	9.8	50-124	40	01/02/2010 1500
Fluorene	ND	43	19		1	43	13	39-122	40	01/02/2010 1500
Hexachlorobenzene	ND	43	19	N	1	44	9.6	46-125	40	01/02/2010 1500
Hexachlorobutadiene	ND	43	17	N	1	39	10	42-94	40	01/02/2010 1500
Hexachlorocyclopentadiene	ND	220	62		1	28	5.6	14-89	40	01/02/2010 1500
Hexachloroethane	ND	43	18		1	41	13	39-86	40	01/02/2010 1500
Indeno(1,2,3-c,d)pyrene	ND	43	20		1	45	16	43-113	40	01/02/2010 1500
Isophorone	ND	43	20		1	47	15	42-84	40	01/02/2010 1500
2-Methylnaphthalene	ND	43	18	N	1	40	12	46-90	40	01/02/2010 1500
2-Methylphenol	ND	43	23		1	53	19	33-122	40	01/02/2010 1500
3 & 4-Methylphenol	ND	87	38		1	44	20	24-97	40	01/02/2010 1500

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL17024-013MD

Matrix: Aqueous

Batch: 25668

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/23/2009 1630

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	ND	43	17	N	1	40	12	46-89	40	01/02/2010 1500
2-Nitroaniline	ND	87	40	N	1	46	13	48-126	40	01/02/2010 1500
3-Nitroaniline	ND	87	12		1	14	13	10-110	40	01/02/2010 1500
4-Nitroaniline	ND	87	35		1	41	10	41-99	40	01/02/2010 1500
Nitrobenzene	ND	43	20		1	46	13	44-91	40	01/02/2010 1500
2-Nitrophenol	ND	87	37		1	42	13	34-102	40	01/02/2010 1500
4-Nitrophenol	ND	220	84		1	39	15	29-122	40	01/02/2010 1500
N-Nitrosodi-n-propylamine	ND	43	22		1	50	15	41-96	40	01/02/2010 1500
N-Nitrosodiphenylamine (Diphenylamine)	ND	43	21		1	49	10	10-150	40	01/02/2010 1500
Pentachlorophenol	ND	220	86		1	40	12	32-110	40	01/02/2010 1500
Phenanthrene	ND	43	19	N	1	44	10	49-122	40	01/02/2010 1500
Phenol	ND	43	14		1	33	17	33-92	40	01/02/2010 1500
Pyrene	ND	43	19	N	1	43	12	50-130	40	01/02/2010 1500
2,4,5-Trichlorophenol	ND	43	20		1	47	12	46-125	40	01/02/2010 1500
2,4,6-Trichlorophenol	ND	43	18		1	42	13	36-123	40	01/02/2010 1500
Surrogate	Q	% Rec	Acceptance Limit							
2-Fluorobiphenyl		87	37-129							
2-Fluorophenol		80	24-127							
Nitrobenzene-d5		99	38-127							
Phenol-d5		67	28-128							
Terphenyl-d14		76	10-148							
2,4,6-Tribromophenol		95	41-144							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ24171-001

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 1726
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 1726
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 1726
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 1726
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 1726
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 1726
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 1726
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl	N	30	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Organochlorine Pesticides by GC - LCS

Sample ID: KQ24171-002

Matrix: Aqueous

Batch: 24171

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.49		1	98	70-130	12/31/2009 1745
4,4'-DDE	0.50	0.47		1	93	70-130	12/31/2009 1745
4,4'-DDT	0.50	0.49		1	98	70-130	12/31/2009 1745
Aldrin	0.50	0.44		1	88	70-130	12/31/2009 1745
alpha-BHC	0.50	0.45		1	90	70-130	12/31/2009 1745
beta-BHC	0.50	0.44		1	88	70-130	12/31/2009 1745
delta-BHC	0.50	0.47		1	95	70-130	12/31/2009 1745
Dieldrin	0.50	0.48		1	95	70-130	12/31/2009 1745
Endosulfan I	0.50	0.45		1	91	70-130	12/31/2009 1745
Endosulfan II	0.50	0.48		1	96	70-130	12/31/2009 1745
Endosulfan sulfate	0.50	0.48		1	96	70-130	12/31/2009 1745
Endrin	0.50	0.49		1	99	70-130	12/31/2009 1745
Endrin aldehyde	0.50	0.49		1	98	70-130	12/31/2009 1745
gamma-BHC (Lindane)	0.50	0.45		1	91	70-130	12/31/2009 1745
gamma-Chlordane	0.50	0.46		1	92	70-130	12/31/2009 1745
Heptachlor	0.50	0.45		1	91	70-130	12/31/2009 1745
Heptachlor epoxide	0.50	0.45		1	89	70-130	12/31/2009 1745
Methoxychlor	0.50	0.59		1	119	70-130	12/31/2009 1745
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		70	49-124				
Tetrachloro-m-xylene		90	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: LQ24660-001

Matrix: Aqueous

Batch: 24660

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 2121

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	01/06/2010 0156
4,4'-DDE	ND		1	0.025	0.0060	ug/L	01/06/2010 0156
4,4'-DDT	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
Aldrin	ND		1	0.025	0.0020	ug/L	01/06/2010 0156
alpha-BHC	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
beta-BHC	ND		1	0.025	0.019	ug/L	01/06/2010 0156
delta-BHC	ND		1	0.025	0.0080	ug/L	01/06/2010 0156
Dieldrin	ND		1	0.025	0.0040	ug/L	01/06/2010 0156
Endosulfan I	ND		1	0.025	0.0060	ug/L	01/06/2010 0156
Endosulfan II	ND		1	0.025	0.024	ug/L	01/06/2010 0156
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
Endrin	ND		1	0.025	0.0050	ug/L	01/06/2010 0156
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
Endrin ketone	ND		1	0.025	0.0040	ug/L	01/06/2010 0156
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	01/06/2010 0156
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
Heptachlor	ND		1	0.025	0.020	ug/L	01/06/2010 0156
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	01/06/2010 0156
Methoxychlor	ND		1	0.10	0.014	ug/L	01/06/2010 0156
Toxaphene	ND		1	0.25	0.030	ug/L	01/06/2010 0156
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: LQ24660-002

Matrix: Aqueous

Batch: 24660

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 2121

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.49		1	97	70-130	01/06/2010 0216
4,4'-DDE	0.50	0.46		1	92	70-130	01/06/2010 0216
4,4'-DDT	0.50	0.46		1	91	70-130	01/06/2010 0216
Aldrin	0.50	0.44		1	87	70-130	01/06/2010 0216
alpha-BHC	0.50	0.46		1	91	70-130	01/06/2010 0216
beta-BHC	0.50	0.43		1	86	70-130	01/06/2010 0216
delta-BHC	0.50	0.46		1	92	70-130	01/06/2010 0216
Dieldrin	0.50	0.50		1	99	70-130	01/06/2010 0216
Endosulfan I	0.50	0.43		1	87	70-130	01/06/2010 0216
Endosulfan II	0.50	0.46		1	93	70-130	01/06/2010 0216
Endosulfan sulfate	0.50	0.49		1	97	70-130	01/06/2010 0216
Endrin	0.50	0.51		1	102	70-130	01/06/2010 0216
Endrin aldehyde	0.50	0.34	N	1	68	70-130	01/06/2010 0216
gamma-BHC (Lindane)	0.50	0.45		1	91	70-130	01/06/2010 0216
gamma-Chlordane	0.50	0.46		1	92	70-130	01/06/2010 0216
Heptachlor	0.50	0.43		1	87	70-130	01/06/2010 0216
Heptachlor epoxide	0.50	0.46		1	91	70-130	01/06/2010 0216
Methoxychlor	0.50	0.52		1	103	70-130	01/06/2010 0216
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		81	49-124				
Tetrachloro-m-xylene		84	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCSD

Sample ID: LQ24660-003

Matrix: Aqueous

Batch: 24660

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 2121

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
4,4'-DDD	0.50	0.50		1	99	2.5	70-130	30	01/06/2010 0236
4,4'-DDE	0.50	0.48		1	96	3.7	70-130	30	01/06/2010 0236
4,4'-DDT	0.50	0.47		1	94	3.2	70-130	30	01/06/2010 0236
Aldrin	0.50	0.44		1	88	1.4	70-130	30	01/06/2010 0236
alpha-BHC	0.50	0.47		1	93	2.0	70-130	30	01/06/2010 0236
beta-BHC	0.50	0.43		1	87	1.6	70-130	30	01/06/2010 0236
delta-BHC	0.50	0.47		1	95	3.4	70-130	30	01/06/2010 0236
Dieldrin	0.50	0.51		1	102	2.7	70-130	30	01/06/2010 0236
Endosulfan I	0.50	0.45		1	90	3.6	70-130	30	01/06/2010 0236
Endosulfan II	0.50	0.47		1	94	2.0	70-130	30	01/06/2010 0236
Endosulfan sulfate	0.50	0.49		1	99	1.5	70-130	30	01/06/2010 0236
Endrin	0.50	0.47		1	94	8.1	70-130	30	01/06/2010 0236
Endrin aldehyde	0.50	0.41		1	82	19	70-130	30	01/06/2010 0236
gamma-BHC (Lindane)	0.50	0.47		1	93	2.7	70-130	30	01/06/2010 0236
gamma-Chlordane	0.50	0.48		1	95	3.4	70-130	30	01/06/2010 0236
Heptachlor	0.50	0.45		1	89	2.9	70-130	30	01/06/2010 0236
Heptachlor epoxide	0.50	0.47		1	95	3.7	70-130	30	01/06/2010 0236
Methoxychlor	0.50	0.53		1	107	3.2	70-130	30	01/06/2010 0236
Surrogate	Q	% Rec	Acceptance Limit						
Decachlorobiphenyl		74	49-124						
Tetrachloro-m-xylene		87	58-122						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: LQ25657-001

Matrix: Aqueous

Batch: 25657

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 1738

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	01/06/2010 0356
4,4'-DDE	ND		1	0.025	0.0060	ug/L	01/06/2010 0356
4,4'-DDT	0.036		1	0.025	0.0030	ug/L	01/06/2010 0356
Aldrin	ND		1	0.025	0.0020	ug/L	01/06/2010 0356
alpha-BHC	ND		1	0.025	0.0030	ug/L	01/06/2010 0356
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 0356
beta-BHC	ND		1	0.025	0.019	ug/L	01/06/2010 0356
delta-BHC	ND		1	0.025	0.0080	ug/L	01/06/2010 0356
Dieldrin	ND		1	0.025	0.0040	ug/L	01/06/2010 0356
Endosulfan I	ND		1	0.025	0.0060	ug/L	01/06/2010 0356
Endosulfan II	ND		1	0.025	0.024	ug/L	01/06/2010 0356
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	01/06/2010 0356
Endrin	ND		1	0.025	0.0050	ug/L	01/06/2010 0356
Endrin aldehyde	0.0035	J	1	0.025	0.0030	ug/L	01/06/2010 0356
Endrin ketone	ND		1	0.025	0.0040	ug/L	01/06/2010 0356
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	01/06/2010 0356
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 0356
Heptachlor	ND		1	0.025	0.020	ug/L	01/06/2010 0356
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	01/06/2010 0356
Methoxychlor	ND		1	0.10	0.014	ug/L	01/06/2010 0356
Toxaphene	ND		1	0.25	0.030	ug/L	01/06/2010 0356
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		85	49-124				
Tetrachloro-m-xylene		83	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: LQ25657-002

Matrix: Aqueous

Batch: 25657

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 1738

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.49		1	97	70-130	01/06/2010 0412
4,4'-DDE	0.50	0.48		1	96	70-130	01/06/2010 0412
4,4'-DDT	0.50	0.51		1	102	70-130	01/06/2010 0412
Aldrin	0.50	0.46		1	92	70-130	01/06/2010 0412
alpha-BHC	0.50	0.46		1	93	70-130	01/06/2010 0412
beta-BHC	0.50	0.42		1	84	70-130	01/06/2010 0412
delta-BHC	0.50	0.47		1	95	70-130	01/06/2010 0412
Dieldrin	0.50	0.50		1	99	70-130	01/06/2010 0412
Endosulfan I	0.50	0.44		1	88	70-130	01/06/2010 0412
Endosulfan II	0.50	0.54		1	108	70-130	01/06/2010 0412
Endosulfan sulfate	0.50	0.47		1	94	70-130	01/06/2010 0412
Endrin	0.50	0.49		1	98	70-130	01/06/2010 0412
Endrin aldehyde	0.50	0.40		1	81	70-130	01/06/2010 0412
gamma-BHC (Lindane)	0.50	0.47		1	94	70-130	01/06/2010 0412
gamma-Chlordane	0.50	0.48		1	96	70-130	01/06/2010 0412
Heptachlor	0.50	0.45		1	91	70-130	01/06/2010 0412
Heptachlor epoxide	0.50	0.47		1	94	70-130	01/06/2010 0412
Methoxychlor	0.50	0.46		1	91	70-130	01/06/2010 0412
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		77	49-124				
Tetrachloro-m-xylene		93	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCSD

Sample ID: LQ25657-003

Matrix: Aqueous

Batch: 25657

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/04/2010 1738

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
4,4'-DDD	0.50	0.87	N <sub>i</sub> +	1	174	200	70-130	30	01/06/2010 1906
4,4'-DDE	0.50	0.89	N <sub>i</sub> +	1	178	200	70-130	30	01/06/2010 1906
4,4'-DDT	0.50	1.0	N <sub>i</sub> +	1	204	200	70-130	30	01/06/2010 1906
Aldrin	0.50	0.81	N <sub>i</sub> +	1	162	200	70-130	30	01/06/2010 1906
alpha-BHC	0.50	0.83	N <sub>i</sub> +	1	166	200	70-130	30	01/06/2010 1906
beta-BHC	0.50	0.72	N <sub>i</sub> +	1	145	200	70-130	30	01/06/2010 1906
delta-BHC	0.50	0.84	N <sub>i</sub> +	1	168	200	70-130	30	01/06/2010 1906
Dieldrin	0.50	0.88	N <sub>i</sub> +	1	176	200	70-130	30	01/06/2010 1906
Endosulfan I	0.50	0.75	N <sub>i</sub> +	1	151	200	70-130	30	01/06/2010 1906
Endosulfan II	0.50	0.80	N <sub>i</sub> +	1	161	200	70-130	30	01/06/2010 1906
Endosulfan sulfate	0.50	0.82	N <sub>i</sub> +	1	164	200	70-130	30	01/06/2010 1906
Endrin	0.50	0.62	+	1	123	200	70-130	30	01/06/2010 1906
Endrin aldehyde	0.50	0.82	N <sub>i</sub> +	1	164	200	70-130	30	01/06/2010 1906
gamma-BHC (Lindane)	0.50	0.82	N <sub>i</sub> +	1	165	200	70-130	30	01/06/2010 1906
gamma-Chlordane	0.50	0.86	N <sub>i</sub> +	1	172	200	70-130	30	01/06/2010 1906
Heptachlor	0.50	0.76	N <sub>i</sub> +	1	151	200	70-130	30	01/06/2010 1906
Heptachlor epoxide	0.50	0.83	N <sub>i</sub> +	1	165	200	70-130	30	01/06/2010 1906
Methoxychlor	0.50	0.79	N <sub>i</sub> +	1	158	200	70-130	30	01/06/2010 1906
Surrogate	Q	% Rec	Acceptance Limit						
Decachlorobiphenyl	N	148	49-124						
Tetrachloro-m-xylene	N	162	58-122						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: LQ25659-001

Matrix: Aqueous

Batch: 25659

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 1726
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 1726
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 1726
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 1726
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 1726
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 1726
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 1726
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 1726
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 1726
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 1726
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 1726
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl	N	30	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Organochlorine Pesticides by GC - LCS

Sample ID: LQ25659-002

Matrix: Aqueous

Batch: 25659

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.49		1	98	70-130	12/31/2009 1745
4,4'-DDE	0.50	0.47		1	93	70-130	12/31/2009 1745
4,4'-DDT	0.50	0.49		1	98	70-130	12/31/2009 1745
Aldrin	0.50	0.44		1	88	70-130	12/31/2009 1745
alpha-BHC	0.50	0.45		1	90	70-130	12/31/2009 1745
beta-BHC	0.50	0.44		1	88	70-130	12/31/2009 1745
delta-BHC	0.50	0.47		1	95	70-130	12/31/2009 1745
Dieldrin	0.50	0.48		1	95	70-130	12/31/2009 1745
Endosulfan I	0.50	0.45		1	91	70-130	12/31/2009 1745
Endosulfan II	0.50	0.48		1	96	70-130	12/31/2009 1745
Endosulfan sulfate	0.50	0.48		1	96	70-130	12/31/2009 1745
Endrin	0.50	0.49		1	99	70-130	12/31/2009 1745
Endrin aldehyde	0.50	0.49		1	98	70-130	12/31/2009 1745
gamma-BHC (Lindane)	0.50	0.45		1	91	70-130	12/31/2009 1745
gamma-Chlordane	0.50	0.46		1	92	70-130	12/31/2009 1745
Heptachlor	0.50	0.45		1	91	70-130	12/31/2009 1745
Heptachlor epoxide	0.50	0.45		1	89	70-130	12/31/2009 1745
Methoxychlor	0.50	0.59		1	119	70-130	12/31/2009 1745
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		70	49-124				
Tetrachloro-m-xylene		90	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MS

Sample ID: KL17024-013MS

Matrix: Aqueous

Batch: 25659

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aldrin	ND	1.1	0.91		1	82	70-130	12/31/2009 1825
alpha-BHC	ND	1.1	0.94		1	84	70-130	12/31/2009 1825
beta-BHC	ND	1.1	0.91		1	82	70-130	12/31/2009 1825
delta-BHC	ND	1.1	1.0		1	90	70-130	12/31/2009 1825
gamma-BHC (Lindane)	ND	1.1	0.94		1	85	70-130	12/31/2009 1825
gamma-Chlordane	ND	1.1	0.95		1	85	70-130	12/31/2009 1825
4,4'-DDD	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
4,4'-DDE	ND	1.1	0.96		1	86	70-130	12/31/2009 1825
4,4'-DDT	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
Dieldrin	ND	1.1	0.99		1	89	70-130	12/31/2009 1825
Endosulfan I	ND	1.1	0.92		1	83	70-130	12/31/2009 1825
Endosulfan II	ND	1.1	1.0		1	91	70-130	12/31/2009 1825
Endosulfan sulfate	ND	1.1	1.0		1	92	70-130	12/31/2009 1825
Endrin	ND	1.1	1.1		1	95	70-130	12/31/2009 1825
Endrin aldehyde	ND	1.1	1.0		1	94	70-130	12/31/2009 1825
Heptachlor	ND	1.1	0.95		1	85	70-130	12/31/2009 1825
Heptachlor epoxide	ND	1.1	0.92		1	83	70-130	12/31/2009 1825
Methoxychlor	ND	1.1	1.3		1	116	70-130	12/31/2009 1825
Surrogate	Q	% Rec	Acceptance Limit					
Decachlorobiphenyl		77	49-124					
Tetrachloro-m-xylene		83	58-122					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MSD

Sample ID: KL17024-013MD

Matrix: Aqueous

Batch: 25659

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1130

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Aldrin	ND	1.1	0.96	1		86	4.6	70-130	30	12/31/2009 1845	
alpha-BHC	ND	1.1	0.98	1		89	4.8	70-130	30	12/31/2009 1845	
beta-BHC	ND	1.1	0.94	1		85	3.8	70-130	30	12/31/2009 1845	
delta-BHC	ND	1.1	1.0	1		94	4.6	70-130	30	12/31/2009 1845	
gamma-BHC (Lindane)	ND	1.1	0.99	1		89	4.7	70-130	30	12/31/2009 1845	
gamma-Chlordane	ND	1.1	0.98	1		88	3.8	70-130	30	12/31/2009 1845	
4,4'-DDD	ND	1.1	1.1	1		95	3.0	70-130	30	12/31/2009 1845	
4,4'-DDE	ND	1.1	0.99	1		89	3.1	70-130	30	12/31/2009 1845	
4,4'-DDT	ND	1.1	1.0	1		93	1.1	70-130	30	12/31/2009 1845	
Dieldrin	ND	1.1	1.0	1		93	3.9	70-130	30	12/31/2009 1845	
Endosulfan I	ND	1.1	0.96	1		87	4.1	70-130	30	12/31/2009 1845	
Endosulfan II	ND	1.1	1.0	1		94	2.8	70-130	30	12/31/2009 1845	
Endosulfan sulfate	ND	1.1	1.0	1		94	1.5	70-130	30	12/31/2009 1845	
Endrin	ND	1.1	1.1	1		97	2.5	70-130	30	12/31/2009 1845	
Endrin aldehyde	ND	1.1	1.1	1		96	2.5	70-130	30	12/31/2009 1845	
Heptachlor	ND	1.1	0.99	1		89	4.5	70-130	30	12/31/2009 1845	
Heptachlor epoxide	ND	1.1	0.96	1		87	4.0	70-130	30	12/31/2009 1845	
Methoxychlor	ND	1.1	1.3	1		115	0.14	70-130	30	12/31/2009 1845	
Surrogate	Q	% Rec	Acceptance Limit								
Decachlorobiphenyl		78	49-124								
Tetrachloro-m-xylene		86	58-122								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: KQ24095-001

Matrix: Aqueous

Batch: 24095

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/29/2009 2159
Barium	ND		1	0.025	0.0075	mg/L	12/29/2009 2159
Cadmium	ND		1	0.0020	0.00060	mg/L	12/29/2009 2159
Chromium	ND		1	0.0050	0.0021	mg/L	12/31/2009 1715
Lead	0.0022	J	1	0.010	0.0019	mg/L	12/29/2009 2159
Selenium	ND		1	0.010	0.0026	mg/L	12/30/2009 2114
Silver	ND		1	0.0050	0.00040	mg/L	12/29/2009 2159

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ24095-002

Matrix: Aqueous

Batch: 24095

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.42		1	105	80-120	12/29/2009 2205
Barium	2.0	2.2		1	108	80-120	12/29/2009 2205
Cadmium	0.40	0.41		1	102	80-120	12/29/2009 2205
Chromium	2.0	2.2		1	109	80-120	12/31/2009 1721
Lead	0.40	0.37		1	92	80-120	12/29/2009 2205
Selenium	0.40	0.43		1	107	80-120	12/30/2009 2120
Silver	0.40	0.44		1	109	80-120	12/29/2009 2205

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: KQ24095-003

Matrix: Aqueous

Batch: 24095

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.42		1	106	0.46	80-120	20	12/29/2009 2211
Barium	2.0	2.2		1	110	1.8	80-120	20	12/29/2009 2211
Cadmium	0.40	0.41		1	103	1.3	80-120	20	12/29/2009 2211
Chromium	2.0	2.2		1	109	0.030	80-120	20	12/31/2009 1727
Lead	0.40	0.40		1	99	7.5	80-120	20	12/29/2009 2211
Selenium	0.40	0.44		1	109	1.9	80-120	20	12/30/2009 2126
Silver	0.40	0.44		1	110	1.2	80-120	20	12/29/2009 2211

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ23801-001

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/17/2009 2311

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: KQ23801-002

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	97	85-115	12/17/2009 2313

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



CVAA - LCSD

Sample ID: KQ23801-003

Matrix: Aqueous

Batch: 23801

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0018		1	88	9.7	85-115	20	12/17/2009 2316

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: LQ25665-001

Matrix: Aqueous

Batch: 25665

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/29/2009 2159
Barium	ND		1	0.025	0.0075	mg/L	12/29/2009 2159
Cadmium	ND		1	0.0020	0.00060	mg/L	12/29/2009 2159
Chromium	ND		1	0.0050	0.0021	mg/L	12/29/2009 2159
Lead	0.0022	J	1	0.010	0.0019	mg/L	12/29/2009 2159
Selenium	ND		1	0.010	0.0026	mg/L	12/30/2009 2114
Silver	ND		1	0.0050	0.00040	mg/L	12/29/2009 2159

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: LQ25665-002

Matrix: Aqueous

Batch: 25665

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.42		1	105	80-120	12/29/2009 2205
Barium	2.0	2.2		1	108	80-120	12/29/2009 2205
Cadmium	0.40	0.41		1	102	80-120	12/29/2009 2205
Chromium	2.0	2.1		1	103	80-120	12/29/2009 2205
Lead	0.40	0.37		1	92	80-120	12/29/2009 2205
Selenium	0.40	0.43		1	107	80-120	12/30/2009 2120
Silver	0.40	0.44		1	109	80-120	12/29/2009 2205

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: LQ25665-003

Matrix: Aqueous

Batch: 25665

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.42		1	106	0.46	80-120	20	12/29/2009 2211
Barium	2.0	2.2		1	110	1.8	80-120	20	12/29/2009 2211
Cadmium	0.40	0.41		1	103	1.3	80-120	20	12/29/2009 2211
Chromium	2.0	2.1		1	105	1.5	80-120	20	12/29/2009 2211
Lead	0.40	0.40		1	99	7.5	80-120	20	12/29/2009 2211
Selenium	0.40	0.44		1	109	1.9	80-120	20	12/30/2009 2126
Silver	0.40	0.44		1	110	1.2	80-120	20	12/29/2009 2211

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: LQ25666-001

Matrix: Aqueous

Batch: 25666

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/30/2009 0234
Barium	ND		1	0.025	0.0075	mg/L	12/30/2009 0234
Cadmium	ND		1	0.0020	0.00060	mg/L	12/30/2009 0234
Chromium	0.0038	J	1	0.0050	0.0021	mg/L	12/30/2009 0234
Lead	ND		1	0.010	0.0019	mg/L	12/30/2009 0234
Selenium	0.0034	J	1	0.010	0.0026	mg/L	12/31/2009 0042
Silver	ND		1	0.0050	0.00040	mg/L	12/31/2009 0042

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: LQ25666-002

Matrix: Aqueous

Batch: 25666

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.39		1	98	80-120	12/30/2009 0240
Barium	2.0	2.1		1	104	80-120	12/30/2009 0240
Cadmium	0.40	0.38		1	95	80-120	12/30/2009 0240
Chromium	2.0	1.9		1	97	80-120	12/30/2009 0240
Lead	0.40	0.37		1	92	80-120	12/30/2009 0240
Selenium	0.40	0.42		1	105	80-120	12/31/2009 0048
Silver	0.40	0.44		1	109	80-120	12/31/2009 0048

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: LQ25666-003

Matrix: Aqueous

Batch: 25666

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.39		1	98	0.30	80-120	20	12/30/2009 0245
Barium	2.0	2.1		1	104	0.62	80-120	20	12/30/2009 0245
Cadmium	0.40	0.38		1	95	0.61	80-120	20	12/30/2009 0245
Chromium	2.0	1.9		1	97	0.34	80-120	20	12/30/2009 0245
Lead	0.40	0.35		1	88	4.1	80-120	20	12/30/2009 0245
Selenium	0.40	0.42		1	106	1.3	80-120	20	12/31/2009 0054
Silver	0.40	0.44		1	110	0.80	80-120	20	12/31/2009 0054

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: LQ25667-001

Matrix: Aqueous

Batch: 25667

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/19/2009 1830
Barium	ND		1	0.025	0.0075	mg/L	12/19/2009 1830
Cadmium	ND		1	0.0020	0.00060	mg/L	12/19/2009 1830
Chromium	ND		1	0.0050	0.0021	mg/L	12/19/2009 1830
Lead	ND		1	0.010	0.0019	mg/L	12/19/2009 1830
Selenium	ND		1	0.010	0.0026	mg/L	12/19/2009 1830
Silver	0.0014	J	1	0.0050	0.00040	mg/L	12/21/2009 1725

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - LCS

Sample ID: LQ25667-002

Matrix: Aqueous

Batch: 25667

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.43		1	107	80-120	12/19/2009 1834
Barium	2.0	2.1		1	104	80-120	12/19/2009 1834
Cadmium	0.40	0.41		1	103	80-120	12/19/2009 1834
Chromium	2.0	1.9		1	96	80-120	12/19/2009 1834
Lead	0.40	0.43		1	107	80-120	12/19/2009 1834
Selenium	0.40	0.44		1	109	80-120	12/19/2009 1834
Silver	0.40	0.40		1	101	80-120	12/21/2009 1731

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: LQ25667-003

Matrix: Aqueous

Batch: 25667

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/18/2009 1630

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.43		1	107	0.52	80-120	20	12/19/2009 1838
Barium	2.0	2.1		1	105	0.74	80-120	20	12/19/2009 1838
Cadmium	0.40	0.42		1	104	1.1	80-120	20	12/19/2009 1838
Chromium	2.0	1.9		1	96	0.30	80-120	20	12/19/2009 1838
Lead	0.40	0.43		1	107	0.0012	80-120	20	12/19/2009 1838
Selenium	0.40	0.44		1	110	1.3	80-120	20	12/19/2009 1838
Silver	0.40	0.40		1	101	0.20	80-120	20	12/21/2009 1736

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: LQ25661-001

Matrix: Aqueous

Batch: 25661

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/17/2009 2311

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: LQ25661-002

Matrix: Aqueous

Batch: 25661

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	97	85-115	12/17/2009 2313

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: LQ25661-003

Matrix: Aqueous

Batch: 25661

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0018		1	88	9.7	85-115	20	12/17/2009 2316

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: LQ25663-001

Batch: 25663

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 12/17/2009 2030

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Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/18/2009 0030

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PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: LQ25663-002

Matrix: Aqueous

Batch: 25663

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	95	85-115	12/18/2009 0033

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: LQ25663-003

Matrix: Aqueous

Batch: 25663

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/17/2009 2030

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0019		1	96	1.6	85-115	20	12/18/2009 0036

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results





Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 102697

Client: **ARCADIS**  
 Address: **2849 Paces Ferry Rd**  
 City: **Atlanta** State: **GA** Zip Code: **30339**  
 Project Name: **Hunter - HAA-01**  
 Project No: **G09BHAES.HOIB.NALTM**  
 Report to Contact: **Janet Christy**  
 Sampler's Signature: *[Signature]*  
 Printed Name: **Erica Maddox**  
 Telephone No. / Fax No. / E-mail: **864-987-3900**  
 Worksheet No. \_\_\_\_\_ Page **1** of **1**

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix			No. of Containers by Preservative Type					Remarks / Cooler I.D.	
			Advocate	Soil	Water	Acetone	Lines	H2SO4	HNO3	HCl		NaOH
HAA01-MW-14 (121609)	12/16/09	1125	X					2	1	3		VOCs Pesticides SVOCs K17024
HAA01-MW-14D (121609)		0905	X					2	1	3		
HAA01-MW-13 (121609)		1655	X					2	1	3		
COE-MW-08 (121609)		1520	X					2	1	3		
COE-MW-07 (121609)		1250	X					2	1	3		
TB-01 (121609)		0900	X							2		
<i>[Signature]</i> Maddox 12/16/09												

Possible Hazard Identification:  Non-Hazard  Flammable  Skin irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT):  Standard  Rush (Specify)  
 1. Requisitioned by: *[Signature]* Maddox  
 2. Requisitioned by: \_\_\_\_\_  
 3. Requisitioned by: **FedEx**

Date	Time	Date	Time	Date	Time
12/16/09	1400				
		12/17/09	0850		
				12/17/09	0850

Comments: **LAB USE ONLY**  
 Recieved on ice (Circle)  Yes  No  
 Recieved Temp. **4-6 °C**

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Cient Copy  
 Document Number: F-AU-012 Effective Date: 08-04-07

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Arcadis Cooler Inspected by/date: EC P/17/09 Lot #: KL17024

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt: <u>4.6</u> °C / / °C / / °C / / °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (4" or 6mm in diameter) in any VOA vials?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)  
 Sample(s) \_\_\_\_\_ were received incorrectly preserved and were adjusted accordingly in sample receiving with \_\_\_\_\_ (VOLUME) with the SR # (number) \_\_\_\_\_

Sample(s) \_\_\_\_\_ WE  
 Sample(s) \_\_\_\_\_ TKN/cyanide/BNA/pest/PCB/herb.  
 Toxicity sample(s) \_\_\_\_\_ analyzed by method 330.5.

**FedEx. PRIORITY OVERNIGHT**

**THU**

Emp# 73680 22:59 16DEC09  
 Deliver By: 17DEC09

TRK# 8512 1114 4475 FORM 0215  
 29172 -SC-US CAE

**XH USCA**



**Corrective Action taken, if necessary:**  
 Was client notified: Yes  No   
 SESI employee: \_\_\_\_\_  
 Comments: \_\_\_\_\_

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Hunter - HAA01

Project Number: GP08HAFS.H01B.NALTM

Lot Number: KL18009

Date Completed: 01/15/2010

Date Revised: 01/20/2010



Nisreen Saikaly  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* KL18009 \***

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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: KL18009

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

## Pesticides

The sample results associated with a P qualifier have a relative percent difference (RPD) between the two dissimilar phase GC columns which exceeds 40%. In accordance with Section 7.10.4 of SW-846 method 8000B, the higher of the two results is reported. Due to disparity of the two results, it is likely that the reported results are biased high, or maybe a false positive.

The surrogate recovery for both surrogates in sample -004 was outside the acceptance limit, this sample was re-extracted and re-analyzed outside the holding time, yielding the same results. The surrogate recovery is attributed to matrix interference. All sample results are reported and no corrective action is required.

As per SOP requirements, only one of the surrogates has to be within acceptance limits. The sample results are reported and no corrective action is required.

## Volatile Organic Compound

The LCS recovery for 1,2,4-Trichlorobenzene was outside method control limits in batch 24494. The LCSD results were within limits. Therefore the associated sample results were reported and no corrective action was required.

Sample -017 was run at a 2X dilution. The extract of this sample was black and viscous.

The surrogate recovery of sample -018 was outside acceptance limits. One bottle for this sample was received broken. No sample remained for re- extraction.

## Semivolatile Organic Compounds

The MS/MSD recoveries in batch 24263 were outside acceptance criteria. All other QA/QC criteria for the batch were within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

Sample -017 was run at a 2X dilution. The extract of this sample was black and viscous.

The surrogate recovery of sample -018 was outside acceptance limits. One bottle for this sample was received broken. No sample remained for re- extraction.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary ARCADIS U.S., Inc. Lot Number: KL18009

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	COE-MW-06 (121709)	Aqueous	12/17/2009 0930	12/18/2009
002	COE-MW-05 (121709)	Aqueous	12/17/2009 1105	12/18/2009
003	HAA01-MW-11 (121709)	Aqueous	12/17/2009 1220	12/18/2009
004	HAA01-MW-12 (121709)	Aqueous	12/17/2009 1330	12/18/2009
005	HAA01-MW-12D (121709)	Aqueous	12/17/2009 1510	12/18/2009
006	TB1(121709)	Aqueous	12/17/2009 0800	12/18/2009
007	HMW-10 (121709)	Aqueous	12/17/2009 1046	12/18/2009
008	HAA01-MW-15 (121709)	Aqueous	12/17/2009 1225	12/18/2009
009	COE-MW-4 (121709)	Aqueous	12/17/2009 1355	12/18/2009
010	HMW-13 (121709)	Aqueous	12/17/2009 1521	12/18/2009
011	TB-02(121709)	Aqueous	12/17/2009 1000	12/18/2009
012	HAA01-MW-10 (121709)	Aqueous	12/17/2009 1650	01/18/2010
013	HMW21 (121709)	Aqueous	12/17/2009 1655	01/18/2010
014	TB-04 (121709)	Aqueous	12/17/2009 1600	01/18/2010
015	HMW-4 (121709)	Aqueous	12/17/2009 0920	01/18/2010
016	HAA01-MW-17 (121709)	Aqueous	12/17/2009 1150	01/18/2010
017	HMW-24 (121709)	Aqueous	12/17/2009 1315	01/18/2010
018	HMW-23 (121709)	Aqueous	12/17/2009 1420	01/18/2010
019	HMW-6 (121709)	Aqueous	12/17/2009 1540	01/18/2010
020	HAA01-MW-16 (121709)	Aqueous	12/17/2009 0923	01/18/2010
021	TB-03 (121709)	Aqueous	12/17/2009 0900	01/18/2010

(21 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KL18009

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	COE-MW-06 (121709)	Aqueous	Acetone	8260B	4.6	J	ug/L	7
001	COE-MW-06 (121709)	Aqueous	Benzene	8260B	0.24	J	ug/L	7
001	COE-MW-06 (121709)	Aqueous	Carbon disulfide	8260B	0.14	J	ug/L	7
001	COE-MW-06 (121709)	Aqueous	trans-1,2-Dichloroethene	8260B	0.60		ug/L	7
001	COE-MW-06 (121709)	Aqueous	1,1-Dichloroethene	8260B	0.76		ug/L	7
001	COE-MW-06 (121709)	Aqueous	cis-1,2-Dichloroethene	8260B	240		ug/L	7
001	COE-MW-06 (121709)	Aqueous	2-Hexanone	8260B	0.30	J	ug/L	7
001	COE-MW-06 (121709)	Aqueous	Barium	6010C	0.036		mg/L	11
001	COE-MW-06 (121709)	Aqueous	Chromium	6010C	0.0033	J	mg/L	11
001	COE-MW-06 (121709)	Aqueous	Silver	6010C	0.0014	J	mg/L	11
002	COE-MW-05 (121709)	Aqueous	Benzene	8260B	0.18	J	ug/L	12
002	COE-MW-05 (121709)	Aqueous	trans-1,2-Dichloroethene	8260B	0.29	J	ug/L	12
002	COE-MW-05 (121709)	Aqueous	cis-1,2-Dichloroethene	8260B	69		ug/L	12
002	COE-MW-05 (121709)	Aqueous	2-Hexanone	8260B	1.2	J	ug/L	12
002	COE-MW-05 (121709)	Aqueous	Vinyl chloride	8260B	0.75		ug/L	13
002	COE-MW-05 (121709)	Aqueous	Barium	6010C	0.047		mg/L	16
002	COE-MW-05 (121709)	Aqueous	Chromium	6010C	0.0033	J	mg/L	16
002	COE-MW-05 (121709)	Aqueous	Silver	6010C	0.0020	J	mg/L	16
003	HAA01-MW-11 (121709)	Aqueous	Acetone	8260B	8.2	J	ug/L	17
003	HAA01-MW-11 (121709)	Aqueous	Carbon disulfide	8260B	0.10	J	ug/L	17
003	HAA01-MW-11 (121709)	Aqueous	Mercury	7470A	0.000059	J	mg/L	20
003	HAA01-MW-11 (121709)	Aqueous	Barium	6010C	0.058		mg/L	21
003	HAA01-MW-11 (121709)	Aqueous	Chromium	6010C	0.0073		mg/L	21
003	HAA01-MW-11 (121709)	Aqueous	Silver	6010C	0.0018	J	mg/L	21
004	HAA01-MW-12 (121709)	Aqueous	Acetone	8260B	70		ug/L	22
004	HAA01-MW-12 (121709)	Aqueous	Carbon disulfide	8260B	0.15	J	ug/L	22
004	HAA01-MW-12 (121709)	Aqueous	Barium	6010C	0.094		mg/L	27
004	HAA01-MW-12 (121709)	Aqueous	Chromium	6010C	0.0029	J	mg/L	27
005	HAA01-MW-12D (121709)	Aqueous	Acetone	8260B	3.1	J	ug/L	28
005	HAA01-MW-12D (121709)	Aqueous	Carbon disulfide	8260B	0.45	J	ug/L	28
005	HAA01-MW-12D (121709)	Aqueous	Barium	6010C	0.0094	J	mg/L	32
005	HAA01-MW-12D (121709)	Aqueous	Chromium	6010C	0.0024	J	mg/L	32
005	HAA01-MW-12D (121709)	Aqueous	Lead	6010C	0.0028	J	mg/L	32
005	HAA01-MW-12D (121709)	Aqueous	Silver	6010C	0.0013	J	mg/L	32
006	TB1(121709)	Aqueous	Acetone	8260B	2.1	J	ug/L	33
007	HMW-10 (121709)	Aqueous	Acetone	8260B	3.2	J	ug/L	35
007	HMW-10 (121709)	Aqueous	2-Hexanone	8260B	0.30	J	ug/L	35
008	HAA01-MW-15 (121709)	Aqueous	Acetone	8260B	4.7	J	ug/L	39
008	HAA01-MW-15 (121709)	Aqueous	Barium	6010C	0.078		mg/L	43
008	HAA01-MW-15 (121709)	Aqueous	Chromium	6010C	0.0042	J	mg/L	43
009	COE-MW-4 (121709)	Aqueous	Acetone	8260B	14	J	ug/L	44
009	COE-MW-4 (121709)	Aqueous	Benzene	8260B	2.3		ug/L	44
009	COE-MW-4 (121709)	Aqueous	Carbon disulfide	8260B	0.28	J	ug/L	44
009	COE-MW-4 (121709)	Aqueous	trans-1,2-Dichloroethene	8260B	9.3		ug/L	44
009	COE-MW-4 (121709)	Aqueous	1,1-Dichloroethene	8260B	2.4		ug/L	44

## Executive Summary (Continued)

Lot Number: KL18009

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
009	COE-MW-4 (121709)	Aqueous	cis-1,2-Dichloroethene	8260B	1400		ug/L	44
009	COE-MW-4 (121709)	Aqueous	2-Hexanone	8260B	2.5	J	ug/L	44
009	COE-MW-4 (121709)	Aqueous	Toluene	8260B	0.75	J	ug/L	44
009	COE-MW-4 (121709)	Aqueous	Trichloroethene	8260B	0.98	J	ug/L	45
009	COE-MW-4 (121709)	Aqueous	Vinyl chloride	8260B	86		ug/L	45
009	COE-MW-4 (121709)	Aqueous	Xylenes (total)	8260B	1.1		ug/L	45
009	COE-MW-4 (121709)	Aqueous	Barium	6010C	0.020	J	mg/L	48
009	COE-MW-4 (121709)	Aqueous	Chromium	6010C	0.0032	J	mg/L	48
009	COE-MW-4 (121709)	Aqueous	Selenium	6010C	0.0026	J	mg/L	48
009	COE-MW-4 (121709)	Aqueous	Silver	6010C	0.0026	J	mg/L	48
010	HMW-13 (121709)	Aqueous	Acetone	8260B	490		ug/L	49
010	HMW-13 (121709)	Aqueous	Benzene	8260B	56		ug/L	49
010	HMW-13 (121709)	Aqueous	Cyclohexane	8260B	130		ug/L	49
010	HMW-13 (121709)	Aqueous	Ethylbenzene	8260B	56		ug/L	49
010	HMW-13 (121709)	Aqueous	Isopropylbenzene	8260B	86		ug/L	49
010	HMW-13 (121709)	Aqueous	4-Methyl-2-pentanone	8260B	2.4	J	ug/L	49
010	HMW-13 (121709)	Aqueous	Methylcyclohexane	8260B	160		ug/L	49
010	HMW-13 (121709)	Aqueous	1,1,2,2-Tetrachloroethane	8260B	0.84		ug/L	49
010	HMW-13 (121709)	Aqueous	Toluene	8260B	0.48	J	ug/L	49
010	HMW-13 (121709)	Aqueous	Xylenes (total)	8260B	61		ug/L	50
010	HMW-13 (121709)	Aqueous	Benzo(b)fluoranthene	8270D	0.25	J	ug/L	51
010	HMW-13 (121709)	Aqueous	Benzo(g,h,i)perylene	8270D	0.78	J	ug/L	51
010	HMW-13 (121709)	Aqueous	Benzo(k)fluoranthene	8270D	0.12	J	ug/L	51
010	HMW-13 (121709)	Aqueous	Indeno(1,2,3-c,d)pyrene	8270D	0.43	J	ug/L	52
010	HMW-13 (121709)	Aqueous	2-Methylnaphthalene	8270D	22		ug/L	52
010	HMW-13 (121709)	Aqueous	3 & 4-Methylphenol	8270D	9.9		ug/L	52
010	HMW-13 (121709)	Aqueous	Naphthalene	8270D	100		ug/L	52
011	TB-02(121709)	Aqueous	Acetone	8260B	22		ug/L	53
012	HAA01-MW-10 (121709)	Aqueous	Acetone	8260B	4.6	J	ug/L	55
012	HAA01-MW-10 (121709)	Aqueous	Arsenic	6010C	0.0048	J	mg/L	60
012	HAA01-MW-10 (121709)	Aqueous	Barium	6010C	0.094		mg/L	60
012	HAA01-MW-10 (121709)	Aqueous	Chromium	6010C	0.0063		mg/L	60
012	HAA01-MW-10 (121709)	Aqueous	Silver	6010C	0.0017	J	mg/L	60
013	HMW21 (121709)	Aqueous	Acetone	8260B	7.7	J	ug/L	61
013	HMW21 (121709)	Aqueous	Benzene	8260B	0.98	J	ug/L	61
013	HMW21 (121709)	Aqueous	trans-1,2-Dichloroethene	8260B	3.5		ug/L	61
013	HMW21 (121709)	Aqueous	1,1-Dichloroethene	8260B	2.7		ug/L	61
013	HMW21 (121709)	Aqueous	cis-1,2-Dichloroethene	8260B	1200		ug/L	61
013	HMW21 (121709)	Aqueous	Endrin aldehyde	8081B	0.0045	J	ug/L	63
013	HMW21 (121709)	Aqueous	Barium	6010C	0.024	J	mg/L	65
014	TB-04 (121709)	Aqueous	Acetone	8260B	2.6	J	ug/L	66
015	HMW-4 (121709)	Aqueous	Acetone	8260B	2.4	J	ug/L	68
016	HAA01-MW-17 (121709)	Aqueous	Acetone	8260B	5.6	J	ug/L	70
017	HMW-24 (121709)	Aqueous	Acetone	8260B	9.4	J	ug/L	72
017	HMW-24 (121709)	Aqueous	Benzene	8260B	4.9		ug/L	72
017	HMW-24 (121709)	Aqueous	Ethylbenzene	8260B	2.1		ug/L	72
017	HMW-24 (121709)	Aqueous	2-Hexanone	8260B	5.1	J	ug/L	72
017	HMW-24 (121709)	Aqueous	Isopropylbenzene	8260B	3.1		ug/L	72

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## Executive Summary (Continued)

Lot Number: KL18009

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
017	HMW-24 (121709)	Aqueous	2-Methylnaphthalene	8270D	0.40	J	ug/L	75
017	HMW-24 (121709)	Aqueous	Naphthalene	8270D	3.2		ug/L	75
018	HMW-23 (121709)	Aqueous	4-Chloroaniline	8270D	25		ug/L	76
018	HMW-23 (121709)	Aqueous	2-Methylnaphthalene	8270D	9.7		ug/L	77
018	HMW-23 (121709)	Aqueous	Naphthalene	8270D	58		ug/L	77
019	HMW-6 (121709)	Aqueous	Acetone	8260B	1.8	J	ug/L	78
020	HAA01-MW-16 (121709)	Aqueous	Acetone	8260B	2.1	J	ug/L	82
020	HAA01-MW-16 (121709)	Aqueous	Barium	6010C	0.072		mg/L	88
021	TB-03 (121709)	Aqueous	Acetone	8260B	1.2	J	ug/L	89

(102 detections)



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-001

Description: COE-MW-06 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0930

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 1958	RRH		24459		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	4.6	J	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	0.24	J	0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	0.14	J	0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	0.60		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	0.76		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	240		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	0.30	J	10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-001
Description: COE-MW-06 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0930	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 1958	RRH		24459

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-001
Description: COE-MW-06 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0930	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0020	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		72	49-124
Tetrachloro-m-xylene		76	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-001
Description: COE-MW-06 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0930	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2254	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-001
Description: COE-MW-06 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0930	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0407	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0205	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.036		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0033	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0014	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-002

Description: COE-MW-05 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1105

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 1619	RRH		24459		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	ND		10	0.061	ug/L	1	
Benzene	71-43-2	8260B	0.18	J	0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	0.29	J	0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	69		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	1.2	J	10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-002
Description: COE-MW-05 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1105	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 1619	RRH		24459

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	0.75		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-002
Description: COE-MW-05 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1105	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0120	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		65	49-124
Tetrachloro-m-xylene		78	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-002
Description: COE-MW-05 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1105	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2159	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-002
Description: COE-MW-05 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1105	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0413	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0211	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.047		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0033	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0020	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-003

Description: HAA01-MW-11 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1220

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 1641	RRH		24459			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	8.2	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	0.10	J	0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-003
Description: HAA01-MW-11 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1220	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 1641	RRH		24459

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-003
Description: HAA01-MW-11 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1220	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0139	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		60	49-124
Tetrachloro-m-xylene		78	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-003
Description: HAA01-MW-11 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1220	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2204	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	0.000059	J	0.00010	0.000053	mg/L	1

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		N = Recovery is out of criteria
		H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-003
Description: HAA01-MW-11 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1220	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0419	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0217	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.058		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0073		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0018	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-004

Description: HAA01-MW-12 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1330

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 1703	RRH		24459		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	70		10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.15	J	0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-004
Description: HAA01-MW-12 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1330	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 1703	RRH		24459

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-004
Description: HAA01-MW-12 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1330	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0159	NCM	12/23/2009 1413	24180
2	3520C	8081B	1	01/06/2010 2235	ASB	01/05/2010 2120	24707

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.027	0.0021	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.027	0.0032	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.027	0.020	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.027	0.0085	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.027	0.0053	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.027	0.0032	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.027	0.0032	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.027	0.0064	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.027	0.0064	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.027	0.0032	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.027	0.0043	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.027	0.0064	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.027	0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.027	0.0032	ug/L	1
Endrin	72-20-8	8081B	ND		0.027	0.0053	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.027	0.0032	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.027	0.0043	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.027	0.021	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.027	0.0032	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.015	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.27	0.032	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	39	49-124	HN	32	49-124
Tetrachloro-m-xylene	N	53	58-122	H	72	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-004
Description: HAA01-MW-12 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1330	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0159	NCM	12/23/2009 1413	24180
2	3520C	8081B	1	01/06/2010 2235	ASB	01/05/2010 2120	24707

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.026	0.0021	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.026	0.0031	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.026	0.020	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.026	0.0082	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	ND	H	0.026	0.0052	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.026	0.0031	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.026	0.0031	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.026	0.0062	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.026	0.0062	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.026	0.0031	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.026	0.0041	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.026	0.0062	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.026	0.025	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.026	0.0031	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.026	0.0052	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.026	0.0031	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.026	0.0041	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.026	0.021	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.026	0.0031	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.014	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.26	0.031	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	39	49-124	HN	32	49-124
Tetrachloro-m-xylene	N	53	58-122	H	72	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-004
Description: HAA01-MW-12 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1330	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2207	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-004

Description: HAA01-MW-12 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1330

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0425	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0223	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.094		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0029	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-005

Description: HAA01-MW-12D (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1510

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 2328	RRH		24494			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	3.1	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	0.45	J	0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-005
Description: HAA01-MW-12D (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1510	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 2328	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-005
Description: HAA01-MW-12D (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1510	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0219	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	45	49-124
Tetrachloro-m-xylene		76	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-005
Description: HAA01-MW-12D (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1510	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2210	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-005
Description: HAA01-MW-12D (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1510	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0431	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0229	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.0094	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0024	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	0.0028	J	0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	0.0013	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-006

Description: TB1(121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0800

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/29/2009 2307	RRH		24494			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	2.1	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-006
Description: TB1(121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0800	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 2307	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-007

Description: HMW-10 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1046

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/29/2009 2349	RRH		24494		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	3.2	J	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	0.30	J	10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-007
Description: HMW-10 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1046	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/29/2009 2349	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-007

Description: HMW-10 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1046

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/05/2010 2318	MZ	12/24/2009 2015	24263			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.0	0.091	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.1	1.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.1	1.7	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.1	1.2	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.081	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.1	0.82	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.1	1.7	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.1	1.7	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	1.7	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.1	1.5	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.1	0.25	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	1.7	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.091	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.1	0.23	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-007

Description: HMW-10 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1046

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/05/2010 2318	MZ	12/24/2009 2015	24263

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.081	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.081	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.58	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.071	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.56	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.78	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.1	0.65	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.081	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.1	0.55	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	37-129
2-Fluorophenol		62	24-127
Nitrobenzene-d5		71	38-127
Phenol-d5		65	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		74	41-144

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-008

Description: HAA01-MW-15 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1225

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0010	RRH		24494			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	4.7	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-008
Description: HAA01-MW-15 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1225	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0010	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-008
Description: HAA01-MW-15 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1225	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0239	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.027	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.027	0.0032	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.027	0.020	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.027	0.0086	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.027	0.0054	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.027	0.0032	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.027	0.0032	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.027	0.0065	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.027	0.0065	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.027	0.0032	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.027	0.0043	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.027	0.0065	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.027	0.026	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.027	0.0032	ug/L	1
Endrin	72-20-8	8081B	ND		0.027	0.0054	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.027	0.0032	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.027	0.0043	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.027	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.027	0.0032	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.015	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.27	0.032	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	39	49-124
Tetrachloro-m-xylene		59	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-008
Description: HAA01-MW-15 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1225	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2212	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-008

Description: HAA01-MW-15 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1225

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0437	CDF	12/22/2009 1500	24099
2	3005A	6010C	1	12/31/2009 0235	KJC	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.078		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0042	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-009

Description: COE-MW-4 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1355

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	2	12/30/2009 0650	RRH		24460
2	5030B	8260B	5	12/30/2009 1505	RRH		24546

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	14	J	20	0.12	ug/L	1
Benzene	71-43-2	8260B	2.3		1.0	0.054	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.34	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.020	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		1.0	0.41	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.1	ug/L	1
Carbon disulfide	75-15-0	8260B	0.28	J	1.0	0.19	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.17	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.34	ug/L	1
Chloroethane	75-00-3	8260B	ND		1.0	0.34	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.34	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.60	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.14	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.34	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.12	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.34	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.34	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.34	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		1.0	0.14	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.11	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.047	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	9.3		1.0	0.16	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	2.4		1.0	0.19	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1400		2.5	0.44	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.16	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.36	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.18	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.34	ug/L	1
2-Hexanone	591-78-6	8260B	2.5	J	20	0.55	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.058	ug/L	1
Methyl acetate	79-20-9	8260B	ND		2.0	0.60	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.038	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		20	0.62	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		10	1.9	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.34	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.030	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.026	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.029	ug/L	1
Toluene	108-88-3	8260B	0.75	J	1.0	0.34	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.60	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.34	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.058	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-009

Description: COE-MW-4 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1355

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	2	12/30/2009 0650	RRH		24460
2	5030B	8260B	5	12/30/2009 1505	RRH		24546

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.062	ug/L	1
Trichloroethene	79-01-6	8260B	0.98	J	1.0	0.049	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.10	ug/L	1
Vinyl chloride	75-01-4	8260B	86		1.0	0.13	ug/L	1
Xylenes (total)	1330-20-7	8260B	1.1		1.0	0.34	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		92	70-130
Bromofluorobenzene		91	70-130		88	70-130
Toluene-d8		99	70-130		98	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-009
Description: COE-MW-4 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1355	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0258	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		74	49-124
Tetrachloro-m-xylene		84	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-009
Description: COE-MW-4 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1355	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2215	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-009
Description: COE-MW-4 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1355	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0454	CDF	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.020	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0032	J	0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	0.0026	J	0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	0.0026	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-010

Description: HMW-13 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1521

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0031	RRH		24494		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	490		10	0.061	ug/L	1	
Benzene	71-43-2	8260B	56		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	130		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	56		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	86		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	2.4	J	10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	160		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	0.84		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	0.48	J	0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-010
Description: HMW-13 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1521	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0031	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	61		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-010

Description: HMW-13 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1521

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/06/2010 0018	MZ	12/24/2009 2015	24263
2	3520C	8270D	4	01/11/2010 1655	GLR	12/24/2009 2015	24263

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acenaphthene	83-32-9	8270D	ND		1.0	0.091	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		5.1	1.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	0.25	J	1.0	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	0.78	J	1.0	0.23	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	0.12	J	1.0	0.12	ug/L	1
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		5.1	1.7	ug/L	1
Caprolactam	105-60-2	8270D	ND		5.1	1.2	ug/L	1
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.081	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.1	0.82	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		5.1	1.7	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		5.1	1.7	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	1.7	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.1	1.5	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		5.1	0.25	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	1.7	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	1.7	ug/L	1
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.091	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-010

Description: HMW-13 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1521

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/06/2010 0018	MZ	12/24/2009 2015	24263
2	3520C	8270D	4	01/11/2010 1655	GLR	12/24/2009 2015	24263

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.1	0.23	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	0.43	J	1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.081	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	22		1.0	0.081	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	9.9		2.0	0.58	ug/L	1
Naphthalene	91-20-3	8270D	100		4.0	0.28	ug/L	2
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.56	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.78	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.1	0.65	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.081	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.1	0.55	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Run 1			Run 2		
	Q	% Recovery	Acceptance Limits	Q	% Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129		58	37-129
2-Fluorophenol		51	24-127		54	24-127
Nitrobenzene-d5		63	38-127		60	38-127
Phenol-d5		61	28-128		57	28-128
Terphenyl-d14		34	10-148		40	10-148
2,4,6-Tribromophenol		100	41-144		79	41-144

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-011

Description: TB-02(121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1000

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0052	RRH		24494		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	22		10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-011
Description: TB-02(121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1000	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0052	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-012

Description: HAA01-MW-10 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1650

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0504	RRH		25716			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	4.6	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-012
Description: HAA01-MW-10 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0504	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-012

Description: HAA01-MW-10 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1650

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/05/2010 2159	MZ	12/24/2009 2015	25714			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.0	0.091	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.1	1.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.1	1.7	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.1	1.2	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.081	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.1	0.82	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.1	1.7	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.1	1.7	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.1	1.7	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.1	1.5	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.1	0.25	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.1	1.7	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.1	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.091	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.1	0.23	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-012
Description: HAA01-MW-10 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/05/2010 2159	MZ	12/24/2009 2015	25714

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.081	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.081	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.58	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.071	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.56	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.78	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.1	0.65	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.081	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.1	0.55	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		58	37-129
2-Fluorophenol		57	24-127
Nitrobenzene-d5		63	38-127
Phenol-d5		52	28-128
Terphenyl-d14		36	10-148
2,4,6-Tribromophenol		58	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-012
Description: HAA01-MW-10 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2218	BNW	12/21/2009 1535	25709

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-012
Description: HAA01-MW-10 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1650	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0500	CDF	12/22/2009 1500	25712

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	0.0048	J	0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.094		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	0.0063		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	0.0017	J	0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-013

Description: HMW21 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1655

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	4	12/30/2009 0711	RRH		25722			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	7.7	J	40	0.24	ug/L	1
Benzene	71-43-2	8260B	0.98	J	2.0	0.11	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		2.0	0.68	ug/L	1
Bromoform	75-25-2	8260B	ND		2.0	0.041	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.81	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		40	8.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		2.0	0.39	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		2.0	0.34	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.0	0.68	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.68	ug/L	1
Chloroform	67-66-3	8260B	ND		2.0	0.68	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		2.0	0.70	ug/L	1
Cyclohexane	110-82-7	8260B	ND		2.0	1.2	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		2.0	0.28	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		2.0	0.68	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		2.0	0.24	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		2.0	0.68	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		2.0	0.68	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		2.0	0.68	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.28	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		2.0	0.21	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		2.0	0.093	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	3.5		2.0	0.32	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	2.7		2.0	0.38	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1200		2.0	0.35	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		2.0	0.32	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		2.0	0.72	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		2.0	0.36	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		2.0	0.68	ug/L	1
2-Hexanone	591-78-6	8260B	ND		40	1.1	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		2.0	0.12	ug/L	1
Methyl acetate	79-20-9	8260B	ND		4.0	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2.0	0.076	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		40	1.2	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		20	3.8	ug/L	1
Methylene chloride	75-09-2	8260B	ND		2.0	0.68	ug/L	1
Styrene	100-42-5	8260B	ND		2.0	0.060	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		2.0	0.052	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		2.0	0.057	ug/L	1
Toluene	108-88-3	8260B	ND		2.0	0.68	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		2.0	1.2	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		2.0	0.68	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		2.0	0.12	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		2.0	0.12	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-013
Description: HMW21 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1655	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	4	12/30/2009 0711	RRH		25722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		2.0	0.098	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		2.0	0.20	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.26	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		2.0	0.68	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-013
Description: HMW21 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1655	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0318	NCM	12/23/2009 1413	25708

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.025	0.0020	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.025	0.0030	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.025	0.019	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.025	0.0081	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.025	0.0051	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.025	0.0030	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.025	0.0030	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.025	0.0061	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.025	0.0030	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.025	0.0040	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.025	0.0061	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.025	0.024	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.025	0.0030	ug/L	1
Endrin	72-20-8	8081B	ND		0.025	0.0051	ug/L	1
Endrin aldehyde	7421-93-4	8081B	0.0045	J	0.025	0.0030	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.025	0.0040	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.025	0.020	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.025	0.0030	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.10	0.014	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.25	0.030	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		63	49-124
Tetrachloro-m-xylene		82	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-013
Description: HMW21 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1655	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/23/2009 1950	BNW	12/23/2009 1600	25710

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-013

Description: HMW21 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1655

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 2154	KJC	12/23/2009 1800	25713
2	3005A	6010C	1	12/31/2009 0322	KJC	12/23/2009 1800	25713
3	3005A	6010C	1	12/31/2009 2021	CDF	12/23/2009 1800	25713

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.024	J	0.025	0.0075	mg/L	2
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	2
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	3
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	2
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	2
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-014

Description: TB-04 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1600

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0113	RRH		25716		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	2.6	J	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-014
Description: TB-04 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1600	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0113	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-015

Description: HMW-4 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0920

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0135	RRH		25716			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	2.4	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-015
Description: HMW-4 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0920	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0135	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-016

Description: HAA01-MW-17 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1150

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0156	RRH		25716		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	5.6	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-016
Description: HAA01-MW-17 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1150	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0156	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-017

Description: HMW-24 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1315

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0217	RRH		25716		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	9.4	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	4.9		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	2.1		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	5.1	J	10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	3.1		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-017
Description: HMW-24 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1315	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0217	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-017

Description: HMW-24 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1315

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	2	01/08/2010 0025	MZ	12/24/2009 2015	25714			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		2.0	0.18	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		2.0	0.32	ug/L	1		
Acetophenone	98-86-2	8270D	ND		2.0	0.64	ug/L	1		
Anthracene	120-12-7	8270D	ND		2.0	0.26	ug/L	1		
Atrazine	1912-24-9	8270D	ND		2.0	0.40	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		10	2.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		2.0	0.30	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		2.0	0.32	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		2.0	0.40	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		2.0	0.46	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		2.0	0.24	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		2.0	0.40	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		2.0	0.24	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		10	3.4	ug/L	1		
Caprolactam	105-60-2	8270D	ND		10	2.4	ug/L	1		
Carbazole	86-74-8	8270D	ND		2.0	0.50	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		2.0	0.44	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		2.0	0.26	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		2.0	0.26	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		2.0	0.26	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		2.0	0.16	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		2.0	0.24	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		2.0	0.26	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		2.0	0.22	ug/L	1		
Chrysene	218-01-9	8270D	ND		2.0	0.24	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		2.0	0.26	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		2.0	0.32	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		10	1.6	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		2.0	0.30	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		10	3.4	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		10	3.4	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		2.0	0.62	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		10	3.4	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		10	3.0	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		10	0.50	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		4.0	0.90	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		4.0	0.80	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		10	3.4	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		10	3.4	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		2.0	0.42	ug/L	1		
Fluorene	86-73-7	8270D	ND		2.0	0.20	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		2.0	0.42	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		2.0	0.18	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		10	0.46	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-017
Description: HMW-24 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1315	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	2	01/08/2010 0025	MZ	12/24/2009 2015	25714

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		2.0	0.22	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		2.0	0.46	ug/L	1
Isophorone	78-59-1	8270D	ND		2.0	0.16	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	0.40	J	2.0	0.16	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		2.0	0.34	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		4.0	1.1	ug/L	1
Naphthalene	91-20-3	8270D	3.2		2.0	0.14	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		4.0	1.1	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		4.0	1.5	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		4.0	0.78	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		2.0	0.20	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	0.54	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		10	1.3	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		2.0	0.16	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		2.0	0.76	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		10	1.1	ug/L	1
Phenanthrene	85-01-8	8270D	ND		2.0	0.36	ug/L	1
Phenol	108-95-2	8270D	ND		2.0	0.22	ug/L	1
Pyrene	129-00-0	8270D	ND		2.0	0.32	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		2.0	0.36	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		2.0	0.44	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	37-129
2-Fluorophenol		34	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5	N	20	28-128
Terphenyl-d14		30	10-148
2,4,6-Tribromophenol		52	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-018

Description: HMW-23 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1420

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	2	01/08/2010 0045	MZ	12/24/2009 2015	25714			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		2.0	0.18	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		2.0	0.32	ug/L	1		
Acetophenone	98-86-2	8270D	ND		2.0	0.64	ug/L	1		
Anthracene	120-12-7	8270D	ND		2.0	0.26	ug/L	1		
Atrazine	1912-24-9	8270D	ND		2.0	0.40	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		10	2.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		2.0	0.30	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		2.0	0.32	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		2.0	0.40	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		2.0	0.46	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		2.0	0.24	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		2.0	0.40	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		2.0	0.24	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		10	3.4	ug/L	1		
Caprolactam	105-60-2	8270D	ND		10	2.4	ug/L	1		
Carbazole	86-74-8	8270D	ND		2.0	0.50	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		2.0	0.44	ug/L	1		
4-Chloroaniline	106-47-8	8270D	25		2.0	0.26	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		2.0	0.26	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		2.0	0.26	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		2.0	0.16	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		2.0	0.24	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		2.0	0.26	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		2.0	0.22	ug/L	1		
Chrysene	218-01-9	8270D	ND		2.0	0.24	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		2.0	0.26	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		2.0	0.32	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		10	1.6	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		2.0	0.30	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		10	3.4	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		10	3.4	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		2.0	0.62	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		10	3.4	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		10	3.0	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		10	0.50	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		4.0	0.90	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		4.0	0.80	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		10	3.4	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		10	3.4	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		2.0	0.42	ug/L	1		
Fluorene	86-73-7	8270D	ND		2.0	0.20	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		2.0	0.42	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		2.0	0.18	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		10	0.46	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-018
Description: HMW-23 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1420	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	2	01/08/2010 0045	MZ	12/24/2009 2015	25714

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		2.0	0.22	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		2.0	0.46	ug/L	1
Isophorone	78-59-1	8270D	ND		2.0	0.16	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	9.7		2.0	0.16	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		2.0	0.34	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		4.0	1.1	ug/L	1
Naphthalene	91-20-3	8270D	58		2.0	0.14	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		4.0	1.1	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		4.0	1.5	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		4.0	0.78	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		2.0	0.20	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	0.54	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		10	1.3	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		2.0	0.16	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		2.0	0.76	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		10	1.1	ug/L	1
Phenanthrene	85-01-8	8270D	ND		2.0	0.36	ug/L	1
Phenol	108-95-2	8270D	ND		2.0	0.22	ug/L	1
Pyrene	129-00-0	8270D	ND		2.0	0.32	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		2.0	0.36	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		2.0	0.44	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		47	37-129
2-Fluorophenol	N	0.70	24-127
Nitrobenzene-d5		58	38-127
Phenol-d5		34	28-128
Terphenyl-d14		38	10-148
2,4,6-Tribromophenol		59	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-019

Description: HMW-6 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1540

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0238	RRH		25716			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	1.8	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-019
Description: HMW-6 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1540	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0238	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-019

Description: HMW-6 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1540

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/06/2010 0117	MZ	12/24/2009 2015	25714			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.0	0.090	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.0	1.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.0	1.7	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.0	1.2	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.080	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.0	0.81	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.0	1.7	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.0	1.7	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	1.7	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.0	1.5	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.0	0.25	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	1.7	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.090	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.0	0.23	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-019
Description: HMW-6 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1540	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/06/2010 0117	MZ	12/24/2009 2015	25714

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.080	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.080	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.57	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.070	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.55	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.77	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.0	0.64	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.080	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.0	0.54	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		50	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		48	38-127
Phenol-d5		35	28-128
Terphenyl-d14		27	10-148
2,4,6-Tribromophenol		63	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-020

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0259	RRH		25716			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	2.1	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-020
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0259	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-020

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/06/2010 0137	MZ	12/24/2009 2015	25714			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.0	0.090	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.0	1.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.0	1.7	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.0	1.2	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.080	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.0	0.81	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.0	1.7	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.0	1.7	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	1.7	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.0	1.5	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.0	0.25	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	1.7	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.090	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.0	0.23	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-020
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	01/06/2010 0137	MZ	12/24/2009 2015	25714

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.080	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.080	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.57	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.070	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.55	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.77	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.0	0.64	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.080	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.0	0.54	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		51	37-129
2-Fluorophenol		50	24-127
Nitrobenzene-d5		50	38-127
Phenol-d5		38	28-128
Terphenyl-d14		51	10-148
2,4,6-Tribromophenol		55	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-020
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0338	NCM	12/23/2009 1413	25708

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		69	49-124
Tetrachloro-m-xylene		85	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-020
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2221	BNW	12/21/2009 1535	25709

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-020

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3005A	6010C	1	12/30/2009 0506	CDF	12/22/2009 1500	25712			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.072		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18009-021

Description: TB-03 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0900

Date Received: 01/18/2010

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0320	RRH		25716			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	1.2	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18009-021
Description: TB-03 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0900	
Date Received: 01/18/2010	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0320	RRH		25716

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24459-001

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 1225
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 1225
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 1225
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 1225
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 1225
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 1225
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 1225
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 1225
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 1225
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 1225
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 1225
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 1225
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 1225
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 1225
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 1225
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 1225
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 1225
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 1225
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 1225
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 1225
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 1225
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 1225
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 1225
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 1225
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 1225
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 1225
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 1225
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 1225
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 1225
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 1225
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 1225
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 1225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24459-001

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 1225
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 1225
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 1225
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 1225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		93	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24459-002

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	118	46-153	12/29/2009 1057
Benzene	50	49		1	98	70-130	12/29/2009 1057
Bromodichloromethane	50	53		1	106	70-130	12/29/2009 1057
Bromoform	50	44		1	88	70-130	12/29/2009 1057
Bromomethane (Methyl bromide)	50	53		1	107	60-140	12/29/2009 1057
2-Butanone (MEK)	100	110		1	112	60-140	12/29/2009 1057
Carbon disulfide	50	55		1	109	60-140	12/29/2009 1057
Carbon tetrachloride	50	51		1	102	70-130	12/29/2009 1057
Chlorobenzene	50	52		1	104	70-130	12/29/2009 1057
Chloroethane	50	52		1	103	42-163	12/29/2009 1057
Chloroform	50	49		1	99	70-130	12/29/2009 1057
Chloromethane (Methyl chloride)	50	48		1	95	20-158	12/29/2009 1057
Cyclohexane	50	54		1	107	70-130	12/29/2009 1057
1,2-Dibromo-3-chloropropane (DBCP)	50	56		1	111	70-130	12/29/2009 1057
Dibromochloromethane	50	54		1	108	70-130	12/29/2009 1057
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	12/29/2009 1057
1,4-Dichlorobenzene	50	51		1	102	70-130	12/29/2009 1057
1,2-Dichlorobenzene	50	54		1	107	70-130	12/29/2009 1057
1,3-Dichlorobenzene	50	54		1	107	70-130	12/29/2009 1057
Dichlorodifluoromethane	50	48		1	95	60-140	12/29/2009 1057
1,2-Dichloroethane	50	51		1	102	70-130	12/29/2009 1057
1,1-Dichloroethane	50	48		1	96	70-130	12/29/2009 1057
cis-1,2-Dichloroethene	50	49		1	99	70-130	12/29/2009 1057
1,1-Dichloroethene	50	48		1	97	70-130	12/29/2009 1057
trans-1,2-Dichloroethene	50	49		1	99	70-130	12/29/2009 1057
1,2-Dichloropropane	50	50		1	100	70-130	12/29/2009 1057
cis-1,3-Dichloropropene	50	48		1	96	70-130	12/29/2009 1057
trans-1,3-Dichloropropene	50	47		1	95	70-130	12/29/2009 1057
Ethylbenzene	50	55		1	109	70-130	12/29/2009 1057
2-Hexanone	100	99		1	99	60-140	12/29/2009 1057
Isopropylbenzene	50	58		1	115	70-130	12/29/2009 1057
Methyl acetate	50	48		1	96	15-128	12/29/2009 1057
Methyl tertiary butyl ether (MTBE)	50	51		1	102	70-130	12/29/2009 1057
4-Methyl-2-pentanone	100	100		1	104	60-140	12/29/2009 1057
Methylcyclohexane	50	57		1	113	70-130	12/29/2009 1057
Methylene chloride	50	47		1	94	70-130	12/29/2009 1057
Styrene	50	58		1	115	70-130	12/29/2009 1057
1,1,2,2-Tetrachloroethane	50	54		1	108	70-130	12/29/2009 1057
Tetrachloroethene	50	52		1	104	70-130	12/29/2009 1057
Toluene	50	53		1	106	70-130	12/29/2009 1057
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	12/29/2009 1057
1,2,4-Trichlorobenzene	50	58		1	116	70-130	12/29/2009 1057
1,1,2-Trichloroethane	50	53		1	106	70-130	12/29/2009 1057
1,1,1-Trichloroethane	50	51		1	102	70-130	12/29/2009 1057

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24459-002

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/29/2009 1057
Trichlorofluoromethane	50	50		1	100	60-140	12/29/2009 1057
Vinyl chloride	50	49		1	98	60-140	12/29/2009 1057
Xylenes (total)	100	110		1	110	70-130	12/29/2009 1057
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24459-003

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	113	4.6	46-153	20	12/29/2009 1119
Benzene	50	49		1	99	1.5	70-130	20	12/29/2009 1119
Bromodichloromethane	50	53		1	105	1.0	70-130	20	12/29/2009 1119
Bromoform	50	42		1	83	5.9	70-130	20	12/29/2009 1119
Bromomethane (Methyl bromide)	50	50		1	99	7.3	60-140	20	12/29/2009 1119
2-Butanone (MEK)	100	100		1	105	6.4	60-140	20	12/29/2009 1119
Carbon disulfide	50	54		1	108	1.1	60-140	20	12/29/2009 1119
Carbon tetrachloride	50	50		1	100	1.9	70-130	20	12/29/2009 1119
Chlorobenzene	50	52		1	104	0.51	70-130	20	12/29/2009 1119
Chloroethane	50	51		1	102	1.1	42-163	20	12/29/2009 1119
Chloroform	50	49		1	97	1.3	70-130	20	12/29/2009 1119
Chloromethane (Methyl chloride)	50	46		1	92	3.4	20-158	20	12/29/2009 1119
Cyclohexane	50	53		1	106	1.1	70-130	20	12/29/2009 1119
1,2-Dibromo-3-chloropropane (DBCP)	50	54		1	108	2.5	70-130	20	12/29/2009 1119
Dibromochloromethane	50	54		1	108	0.23	70-130	20	12/29/2009 1119
1,2-Dibromoethane (EDB)	50	54		1	109	1.5	70-130	20	12/29/2009 1119
1,4-Dichlorobenzene	50	52		1	104	1.9	70-130	20	12/29/2009 1119
1,2-Dichlorobenzene	50	54		1	108	0.39	70-130	20	12/29/2009 1119
1,3-Dichlorobenzene	50	54		1	108	0.63	70-130	20	12/29/2009 1119
Dichlorodifluoromethane	50	47		1	94	1.9	60-140	20	12/29/2009 1119
1,2-Dichloroethane	50	49		1	99	2.7	70-130	20	12/29/2009 1119
1,1-Dichloroethane	50	49		1	97	1.2	70-130	20	12/29/2009 1119
cis-1,2-Dichloroethene	50	49		1	97	1.3	70-130	20	12/29/2009 1119
1,1-Dichloroethene	50	47		1	95	2.1	70-130	20	12/29/2009 1119
trans-1,2-Dichloroethene	50	49		1	98	1.3	70-130	20	12/29/2009 1119
1,2-Dichloropropane	50	50		1	100	0.044	70-130	20	12/29/2009 1119
cis-1,3-Dichloropropene	50	49		1	98	2.6	70-130	20	12/29/2009 1119
trans-1,3-Dichloropropene	50	48		1	96	0.98	70-130	20	12/29/2009 1119
Ethylbenzene	50	56		1	111	2.0	70-130	20	12/29/2009 1119
2-Hexanone	100	100		1	100	0.91	60-140	20	12/29/2009 1119
Isopropylbenzene	50	58		1	117	1.2	70-130	20	12/29/2009 1119
Methyl acetate	50	45		1	90	5.8	15-128	20	12/29/2009 1119
Methyl tertiary butyl ether (MTBE)	50	50		1	100	1.4	70-130	20	12/29/2009 1119
4-Methyl-2-pentanone	100	100		1	102	1.3	60-140	20	12/29/2009 1119
Methylcyclohexane	50	56		1	112	0.67	70-130	20	12/29/2009 1119
Methylene chloride	50	47		1	94	0.52	70-130	20	12/29/2009 1119
Styrene	50	58		1	117	1.5	70-130	20	12/29/2009 1119
1,1,2,2-Tetrachloroethane	50	53		1	107	1.2	70-130	20	12/29/2009 1119
Tetrachloroethene	50	54		1	107	2.6	70-130	20	12/29/2009 1119
Toluene	50	54		1	108	2.0	70-130	20	12/29/2009 1119
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	107	2.9	70-130	20	12/29/2009 1119
1,2,4-Trichlorobenzene	50	56		1	113	2.8	70-130	20	12/29/2009 1119
1,1,2-Trichloroethane	50	53		1	107	0.33	70-130	20	12/29/2009 1119
1,1,1-Trichloroethane	50	51		1	102	0.77	70-130	20	12/29/2009 1119

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24459-003

Matrix: Aqueous

Batch: 24459

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	1.7	70-130	20	12/29/2009 1119
Trichlorofluoromethane	50	50		1	100	0.080	60-140	20	12/29/2009 1119
Vinyl chloride	50	48		1	97	1.7	60-140	20	12/29/2009 1119
Xylenes (total)	100	110		1	112	1.6	70-130	20	12/29/2009 1119
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		95	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24460-001

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2253
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2253
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2253
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2253
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2253
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2253
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2253
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2253
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2253
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2253
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2253
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2253
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2253
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2253
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2253
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2253
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2253
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2253
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2253
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2253
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2253
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2253
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2253
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2253
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2253
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2253
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2253
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2253
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2253

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24460-001

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2253
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2253
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24460-002

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	117	46-153	12/29/2009 2125
Benzene	50	50		1	99	70-130	12/29/2009 2125
Bromodichloromethane	50	52		1	105	70-130	12/29/2009 2125
Bromoform	50	40		1	80	70-130	12/29/2009 2125
Bromomethane (Methyl bromide)	50	55		1	109	60-140	12/29/2009 2125
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2125
Carbon disulfide	50	56		1	111	60-140	12/29/2009 2125
Carbon tetrachloride	50	52		1	104	70-130	12/29/2009 2125
Chlorobenzene	50	53		1	105	70-130	12/29/2009 2125
Chloroethane	50	54		1	108	42-163	12/29/2009 2125
Chloroform	50	50		1	101	70-130	12/29/2009 2125
Chloromethane (Methyl chloride)	50	49		1	98	20-158	12/29/2009 2125
Cyclohexane	50	56		1	112	70-130	12/29/2009 2125
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	12/29/2009 2125
Dibromochloromethane	50	54		1	108	70-130	12/29/2009 2125
1,2-Dibromoethane (EDB)	50	53		1	106	70-130	12/29/2009 2125
1,4-Dichlorobenzene	50	52		1	104	70-130	12/29/2009 2125
1,2-Dichlorobenzene	50	54		1	109	70-130	12/29/2009 2125
1,3-Dichlorobenzene	50	54		1	108	70-130	12/29/2009 2125
Dichlorodifluoromethane	50	48		1	96	60-140	12/29/2009 2125
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2125
1,1-Dichloroethane	50	50		1	100	70-130	12/29/2009 2125
1,1-Dichloroethene	50	49		1	99	70-130	12/29/2009 2125
trans-1,2-Dichloroethene	50	51		1	102	70-130	12/29/2009 2125
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2125
cis-1,3-Dichloropropene	50	49		1	98	70-130	12/29/2009 2125
trans-1,3-Dichloropropene	50	48		1	96	70-130	12/29/2009 2125
Ethylbenzene	50	55		1	110	70-130	12/29/2009 2125
2-Hexanone	100	98		1	98	60-140	12/29/2009 2125
Isopropylbenzene	50	59		1	118	70-130	12/29/2009 2125
Methyl acetate	50	47		1	94	15-128	12/29/2009 2125
Methyl tertiary butyl ether (MTBE)	50	53		1	106	70-130	12/29/2009 2125
4-Methyl-2-pentanone	100	100		1	103	60-140	12/29/2009 2125
Methylcyclohexane	50	56		1	113	70-130	12/29/2009 2125
Methylene chloride	50	49		1	98	70-130	12/29/2009 2125
Styrene	50	58		1	117	70-130	12/29/2009 2125
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	12/29/2009 2125
Tetrachloroethene	50	53		1	105	70-130	12/29/2009 2125
Toluene	50	54		1	108	70-130	12/29/2009 2125
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	109	70-130	12/29/2009 2125
1,2,4-Trichlorobenzene	50	60		1	121	70-130	12/29/2009 2125
1,1,2-Trichloroethane	50	53		1	105	70-130	12/29/2009 2125
1,1,1-Trichloroethane	50	53		1	107	70-130	12/29/2009 2125
Trichloroethene	50	51		1	103	70-130	12/29/2009 2125

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24460-002

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichlorofluoromethane	50	49		1	98	60-140	12/29/2009 2125
Vinyl chloride	50	50		1	100	60-140	12/29/2009 2125
Xylenes (total)	100	110		1	112	70-130	12/29/2009 2125
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		95			70-130		
1,2-Dichloroethane-d4		94			70-130		
Toluene-d8		103			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24460-003

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	103	13	46-153	20	12/29/2009 2147
Benzene	50	45		1	90	9.6	70-130	20	12/29/2009 2147
Bromodichloromethane	50	48		1	96	8.7	70-130	20	12/29/2009 2147
Bromoform	50	36		1	72	10	70-130	20	12/29/2009 2147
Bromomethane (Methyl bromide)	50	49		1	98	10	60-140	20	12/29/2009 2147
2-Butanone (MEK)	100	99		1	99	9.3	60-140	20	12/29/2009 2147
Carbon disulfide	50	49		1	98	12	60-140	20	12/29/2009 2147
Carbon tetrachloride	50	46		1	92	12	70-130	20	12/29/2009 2147
Chlorobenzene	50	49		1	98	6.6	70-130	20	12/29/2009 2147
Chloroethane	50	49		1	97	11	42-163	20	12/29/2009 2147
Chloroform	50	45		1	91	10	70-130	20	12/29/2009 2147
Chloromethane (Methyl chloride)	50	44		1	88	11	20-158	20	12/29/2009 2147
Cyclohexane	50	50		1	100	11	70-130	20	12/29/2009 2147
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	15	70-130	20	12/29/2009 2147
Dibromochloromethane	50	49		1	97	10	70-130	20	12/29/2009 2147
1,2-Dibromoethane (EDB)	50	50		1	99	6.5	70-130	20	12/29/2009 2147
1,4-Dichlorobenzene	50	50		1	100	3.9	70-130	20	12/29/2009 2147
1,2-Dichlorobenzene	50	51		1	102	6.3	70-130	20	12/29/2009 2147
1,3-Dichlorobenzene	50	51		1	102	5.2	70-130	20	12/29/2009 2147
Dichlorodifluoromethane	50	43		1	86	10	60-140	20	12/29/2009 2147
1,2-Dichloroethane	50	47		1	94	7.2	70-130	20	12/29/2009 2147
1,1-Dichloroethane	50	44		1	88	13	70-130	20	12/29/2009 2147
1,1-Dichloroethene	50	44		1	87	12	70-130	20	12/29/2009 2147
trans-1,2-Dichloroethene	50	45		1	91	12	70-130	20	12/29/2009 2147
1,2-Dichloropropane	50	48		1	96	7.3	70-130	20	12/29/2009 2147
cis-1,3-Dichloropropene	50	46		1	91	6.8	70-130	20	12/29/2009 2147
trans-1,3-Dichloropropene	50	45		1	90	6.6	70-130	20	12/29/2009 2147
Ethylbenzene	50	52		1	105	4.9	70-130	20	12/29/2009 2147
2-Hexanone	100	95		1	95	3.6	60-140	20	12/29/2009 2147
Isopropylbenzene	50	56		1	113	4.8	70-130	20	12/29/2009 2147
Methyl acetate	50	41		1	83	13	15-128	20	12/29/2009 2147
Methyl tertiary butyl ether (MTBE)	50	47		1	94	13	70-130	20	12/29/2009 2147
4-Methyl-2-pentanone	100	96		1	96	7.4	60-140	20	12/29/2009 2147
Methylcyclohexane	50	52		1	103	8.8	70-130	20	12/29/2009 2147
Methylene chloride	50	44		1	88	11	70-130	20	12/29/2009 2147
Styrene	50	55		1	111	5.4	70-130	20	12/29/2009 2147
1,1,2,2-Tetrachloroethane	50	50		1	99	6.3	70-130	20	12/29/2009 2147
Tetrachloroethene	50	49		1	98	7.2	70-130	20	12/29/2009 2147
Toluene	50	51		1	102	5.9	70-130	20	12/29/2009 2147
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	7.2	70-130	20	12/29/2009 2147
1,2,4-Trichlorobenzene	50	54		1	107	11	70-130	20	12/29/2009 2147
1,1,2-Trichloroethane	50	50		1	100	4.7	70-130	20	12/29/2009 2147
1,1,1-Trichloroethane	50	48		1	96	10	70-130	20	12/29/2009 2147
Trichloroethene	50	47		1	94	8.2	70-130	20	12/29/2009 2147

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24460-003

Matrix: Aqueous

Batch: 24460

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichlorofluoromethane	50	46		1	92	6.6	60-140	20	12/29/2009 2147
Vinyl chloride	50	45		1	90	11	60-140	20	12/29/2009 2147
Xylenes (total)	100	110		1	105	6.5	70-130	20	12/29/2009 2147
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		91	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24494-001

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2225
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2225
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2225
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2225
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2225
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2225
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2225
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2225
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2225
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2225
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2225
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2225
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 2225
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2225
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2225
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2225
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2225
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2225
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2225
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2225
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2225
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2225
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2225
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2225
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2225
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2225
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2225
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2225
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24494-001

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2225
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2225
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2225
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24494-002

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	109	46-153	12/29/2009 2101
Benzene	50	48		1	96	70-130	12/29/2009 2101
Bromodichloromethane	50	55		1	111	70-130	12/29/2009 2101
Bromoform	50	63		1	125	70-130	12/29/2009 2101
Bromomethane (Methyl bromide)	50	57		1	113	60-140	12/29/2009 2101
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2101
Carbon disulfide	50	56		1	113	60-140	12/29/2009 2101
Carbon tetrachloride	50	61		1	123	70-130	12/29/2009 2101
Chlorobenzene	50	50		1	100	70-130	12/29/2009 2101
Chloroethane	50	58		1	116	42-163	12/29/2009 2101
Chloroform	50	52		1	103	70-130	12/29/2009 2101
Chloromethane (Methyl chloride)	50	54		1	107	20-158	12/29/2009 2101
Cyclohexane	50	63		1	127	70-130	12/29/2009 2101
1,2-Dibromo-3-chloropropane (DBCP)	50	62		1	125	70-130	12/29/2009 2101
Dibromochloromethane	50	59		1	119	70-130	12/29/2009 2101
1,2-Dibromoethane (EDB)	50	55		1	109	70-130	12/29/2009 2101
1,4-Dichlorobenzene	50	65		1	129	70-130	12/29/2009 2101
1,2-Dichlorobenzene	50	51		1	101	70-130	12/29/2009 2101
1,3-Dichlorobenzene	50	64		1	128	70-130	12/29/2009 2101
Dichlorodifluoromethane	50	62		1	124	60-140	12/29/2009 2101
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
cis-1,2-Dichloroethene	50	50		1	100	70-130	12/29/2009 2101
1,1-Dichloroethene	50	57		1	114	70-130	12/29/2009 2101
trans-1,2-Dichloroethene	50	52		1	105	70-130	12/29/2009 2101
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2101
cis-1,3-Dichloropropene	50	56		1	111	70-130	12/29/2009 2101
trans-1,3-Dichloropropene	50	57		1	115	70-130	12/29/2009 2101
Ethylbenzene	50	53		1	107	70-130	12/29/2009 2101
2-Hexanone	100	100		1	104	60-140	12/29/2009 2101
Isopropylbenzene	50	57		1	114	70-130	12/29/2009 2101
Methyl acetate	50	55		1	111	15-128	12/29/2009 2101
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	12/29/2009 2101
4-Methyl-2-pentanone	100	100		1	101	60-140	12/29/2009 2101
Methylcyclohexane	50	65		1	130	70-130	12/29/2009 2101
Methylene chloride	50	57		1	115	70-130	12/29/2009 2101
Styrene	50	56		1	113	70-130	12/29/2009 2101
1,1,2,2-Tetrachloroethane	50	56		1	112	70-130	12/29/2009 2101
Tetrachloroethene	50	57		1	113	70-130	12/29/2009 2101
Toluene	50	51		1	101	70-130	12/29/2009 2101
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	63		1	126	70-130	12/29/2009 2101
1,2,4-Trichlorobenzene	50	66	N	1	133	70-130	12/29/2009 2101
1,1,2-Trichloroethane	50	54		1	109	70-130	12/29/2009 2101
1,1,1-Trichloroethane	50	57		1	114	70-130	12/29/2009 2101

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24494-002

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 2101
Trichlorofluoromethane	50	61		1	121	60-140	12/29/2009 2101
Vinyl chloride	50	53		1	105	60-140	12/29/2009 2101
Xylenes (total)	100	110		1	107	70-130	12/29/2009 2101
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		107	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24494-003

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	120		1	116	6.3	46-153	20	12/29/2009 2122
Benzene	50	47		1	95	1.8	70-130	20	12/29/2009 2122
Bromodichloromethane	50	54		1	109	1.9	70-130	20	12/29/2009 2122
Bromoform	50	63		1	126	0.65	70-130	20	12/29/2009 2122
Bromomethane (Methyl bromide)	50	53		1	106	7.0	60-140	20	12/29/2009 2122
2-Butanone (MEK)	100	110		1	113	2.9	60-140	20	12/29/2009 2122
Carbon disulfide	50	57		1	113	0.13	60-140	20	12/29/2009 2122
Carbon tetrachloride	50	61		1	122	1.0	70-130	20	12/29/2009 2122
Chlorobenzene	50	49		1	98	2.2	70-130	20	12/29/2009 2122
Chloroethane	50	58		1	116	0.17	42-163	20	12/29/2009 2122
Chloroform	50	51		1	101	1.5	70-130	20	12/29/2009 2122
Chloromethane (Methyl chloride)	50	55		1	109	1.8	20-158	20	12/29/2009 2122
Cyclohexane	50	62		1	125	1.5	70-130	20	12/29/2009 2122
1,2-Dibromo-3-chloropropane (DBCP)	50	64		1	129	3.3	70-130	20	12/29/2009 2122
Dibromochloromethane	50	59		1	118	0.62	70-130	20	12/29/2009 2122
1,2-Dibromoethane (EDB)	50	54		1	108	0.70	70-130	20	12/29/2009 2122
1,4-Dichlorobenzene	50	63		1	126	2.8	70-130	20	12/29/2009 2122
1,2-Dichlorobenzene	50	49		1	98	2.9	70-130	20	12/29/2009 2122
1,3-Dichlorobenzene	50	63		1	126	2.2	70-130	20	12/29/2009 2122
Dichlorodifluoromethane	50	61		1	121	2.6	60-140	20	12/29/2009 2122
1,2-Dichloroethane	50	50		1	101	0.25	70-130	20	12/29/2009 2122
1,1-Dichloroethane	50	50		1	100	0.67	70-130	20	12/29/2009 2122
cis-1,2-Dichloroethene	50	49		1	99	1.1	70-130	20	12/29/2009 2122
1,1-Dichloroethene	50	57		1	114	0.27	70-130	20	12/29/2009 2122
trans-1,2-Dichloroethene	50	52		1	103	1.4	70-130	20	12/29/2009 2122
1,2-Dichloropropane	50	51		1	102	0.95	70-130	20	12/29/2009 2122
cis-1,3-Dichloropropene	50	55		1	110	1.4	70-130	20	12/29/2009 2122
trans-1,3-Dichloropropene	50	57		1	114	0.32	70-130	20	12/29/2009 2122
Ethylbenzene	50	52		1	104	2.4	70-130	20	12/29/2009 2122
2-Hexanone	100	110		1	109	4.4	60-140	20	12/29/2009 2122
Isopropylbenzene	50	56		1	111	2.4	70-130	20	12/29/2009 2122
Methyl acetate	50	57		1	113	2.2	15-128	20	12/29/2009 2122
Methyl tertiary butyl ether (MTBE)	50	50		1	101	0.99	70-130	20	12/29/2009 2122
4-Methyl-2-pentanone	100	110		1	105	3.7	60-140	20	12/29/2009 2122
Methylcyclohexane	50	64		1	128	1.7	70-130	20	12/29/2009 2122
Methylene chloride	50	56		1	113	1.5	70-130	20	12/29/2009 2122
Styrene	50	55		1	111	1.9	70-130	20	12/29/2009 2122
1,1,2,2-Tetrachloroethane	50	57		1	115	2.6	70-130	20	12/29/2009 2122
Tetrachloroethene	50	55		1	110	2.5	70-130	20	12/29/2009 2122
Toluene	50	50		1	100	1.8	70-130	20	12/29/2009 2122
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	62		1	124	1.9	70-130	20	12/29/2009 2122
1,2,4-Trichlorobenzene	50	65		1	130	2.3	70-130	20	12/29/2009 2122
1,1,2-Trichloroethane	50	54		1	108	0.85	70-130	20	12/29/2009 2122
1,1,1-Trichloroethane	50	56		1	113	1.3	70-130	20	12/29/2009 2122

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24494-003

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	52		1	103	2.9	70-130	20	12/29/2009 2122
Trichlorofluoromethane	50	59		1	118	2.4	60-140	20	12/29/2009 2122
Vinyl chloride	50	53		1	105	0.24	60-140	20	12/29/2009 2122
Xylenes (total)	100	100		1	104	2.2	70-130	20	12/29/2009 2122
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	70-130						
1,2-Dichloroethane-d4		104	70-130						
Toluene-d8		107	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24546-001

Matrix: Aqueous

Batch: 24546

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/30/2009 1219
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		92	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24546-002

Matrix: Aqueous

Batch: 24546

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
cis-1,2-Dichloroethene	50	46		1	93	70-130	12/30/2009 1052
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		94			70-130		
1,2-Dichloroethane-d4		93			70-130		
Toluene-d8		101			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24546-003

Matrix: Aqueous

Batch: 24546

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
cis-1,2-Dichloroethene	50	48		1	95	2.7	70-130	20	12/30/2009 1114
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		94	70-130						
1,2-Dichloroethane-d4		93	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25716-001

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2225
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2225
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2225
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2225
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2225
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2225
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2225
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2225
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2225
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2225
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2225
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2225
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 2225
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2225
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2225
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2225
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2225
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2225
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2225
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2225
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2225
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2225
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2225
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2225
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2225
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2225
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2225
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2225
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25716-001

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2225
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2225
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2225
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25716-002

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	109	46-153	12/29/2009 2101
Benzene	50	48		1	96	70-130	12/29/2009 2101
Bromodichloromethane	50	55		1	111	70-130	12/29/2009 2101
Bromoform	50	63		1	125	70-130	12/29/2009 2101
Bromomethane (Methyl bromide)	50	57		1	113	60-140	12/29/2009 2101
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2101
Carbon disulfide	50	56		1	113	60-140	12/29/2009 2101
Carbon tetrachloride	50	61		1	123	70-130	12/29/2009 2101
Chlorobenzene	50	50		1	100	70-130	12/29/2009 2101
Chloroethane	50	58		1	116	42-163	12/29/2009 2101
Chloroform	50	52		1	103	70-130	12/29/2009 2101
Chloromethane (Methyl chloride)	50	54		1	107	20-158	12/29/2009 2101
Cyclohexane	50	63		1	127	70-130	12/29/2009 2101
1,2-Dibromo-3-chloropropane (DBCP)	50	62		1	125	70-130	12/29/2009 2101
Dibromochloromethane	50	59		1	119	70-130	12/29/2009 2101
1,2-Dibromoethane (EDB)	50	55		1	109	70-130	12/29/2009 2101
1,4-Dichlorobenzene	50	65		1	129	70-130	12/29/2009 2101
1,2-Dichlorobenzene	50	51		1	101	70-130	12/29/2009 2101
1,3-Dichlorobenzene	50	64		1	128	70-130	12/29/2009 2101
Dichlorodifluoromethane	50	62		1	124	60-140	12/29/2009 2101
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
cis-1,2-Dichloroethene	50	50		1	100	70-130	12/29/2009 2101
1,1-Dichloroethene	50	57		1	114	70-130	12/29/2009 2101
trans-1,2-Dichloroethene	50	52		1	105	70-130	12/29/2009 2101
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2101
cis-1,3-Dichloropropene	50	56		1	111	70-130	12/29/2009 2101
trans-1,3-Dichloropropene	50	57		1	115	70-130	12/29/2009 2101
Ethylbenzene	50	53		1	107	70-130	12/29/2009 2101
2-Hexanone	100	100		1	104	60-140	12/29/2009 2101
Isopropylbenzene	50	57		1	114	70-130	12/29/2009 2101
Methyl acetate	50	55		1	111	15-128	12/29/2009 2101
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	12/29/2009 2101
4-Methyl-2-pentanone	100	100		1	101	60-140	12/29/2009 2101
Methylcyclohexane	50	65		1	130	70-130	12/29/2009 2101
Methylene chloride	50	57		1	115	70-130	12/29/2009 2101
Styrene	50	56		1	113	70-130	12/29/2009 2101
1,1,2,2-Tetrachloroethane	50	56		1	112	70-130	12/29/2009 2101
Tetrachloroethene	50	57		1	113	70-130	12/29/2009 2101
Toluene	50	51		1	101	70-130	12/29/2009 2101
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	63		1	126	70-130	12/29/2009 2101
1,2,4-Trichlorobenzene	50	66	N	1	133	70-130	12/29/2009 2101
1,1,2-Trichloroethane	50	54		1	109	70-130	12/29/2009 2101
1,1,1-Trichloroethane	50	57		1	114	70-130	12/29/2009 2101

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25716-002

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 2101
Trichlorofluoromethane	50	61		1	121	60-140	12/29/2009 2101
Vinyl chloride	50	53		1	105	60-140	12/29/2009 2101
Xylenes (total)	100	110		1	107	70-130	12/29/2009 2101
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		102			70-130		
1,2-Dichloroethane-d4		102			70-130		
Toluene-d8		107			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25716-003

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	120		1	116	6.3	46-153	20	12/29/2009 2122
Benzene	50	47		1	95	1.8	70-130	20	12/29/2009 2122
Bromodichloromethane	50	54		1	109	1.9	70-130	20	12/29/2009 2122
Bromoform	50	63		1	126	0.65	70-130	20	12/29/2009 2122
Bromomethane (Methyl bromide)	50	53		1	106	7.0	60-140	20	12/29/2009 2122
2-Butanone (MEK)	100	110		1	113	2.9	60-140	20	12/29/2009 2122
Carbon disulfide	50	57		1	113	0.13	60-140	20	12/29/2009 2122
Carbon tetrachloride	50	61		1	122	1.0	70-130	20	12/29/2009 2122
Chlorobenzene	50	49		1	98	2.2	70-130	20	12/29/2009 2122
Chloroethane	50	58		1	116	0.17	42-163	20	12/29/2009 2122
Chloroform	50	51		1	101	1.5	70-130	20	12/29/2009 2122
Chloromethane (Methyl chloride)	50	55		1	109	1.8	20-158	20	12/29/2009 2122
Cyclohexane	50	62		1	125	1.5	70-130	20	12/29/2009 2122
1,2-Dibromo-3-chloropropane (DBCP)	50	64		1	129	3.3	70-130	20	12/29/2009 2122
Dibromochloromethane	50	59		1	118	0.62	70-130	20	12/29/2009 2122
1,2-Dibromoethane (EDB)	50	54		1	108	0.70	70-130	20	12/29/2009 2122
1,4-Dichlorobenzene	50	63		1	126	2.8	70-130	20	12/29/2009 2122
1,2-Dichlorobenzene	50	49		1	98	2.9	70-130	20	12/29/2009 2122
1,3-Dichlorobenzene	50	63		1	126	2.2	70-130	20	12/29/2009 2122
Dichlorodifluoromethane	50	61		1	121	2.6	60-140	20	12/29/2009 2122
1,2-Dichloroethane	50	50		1	101	0.25	70-130	20	12/29/2009 2122
1,1-Dichloroethane	50	50		1	100	0.67	70-130	20	12/29/2009 2122
cis-1,2-Dichloroethene	50	49		1	99	1.1	70-130	20	12/29/2009 2122
1,1-Dichloroethene	50	57		1	114	0.27	70-130	20	12/29/2009 2122
trans-1,2-Dichloroethene	50	52		1	103	1.4	70-130	20	12/29/2009 2122
1,2-Dichloropropane	50	51		1	102	0.95	70-130	20	12/29/2009 2122
cis-1,3-Dichloropropene	50	55		1	110	1.4	70-130	20	12/29/2009 2122
trans-1,3-Dichloropropene	50	57		1	114	0.32	70-130	20	12/29/2009 2122
Ethylbenzene	50	52		1	104	2.4	70-130	20	12/29/2009 2122
2-Hexanone	100	110		1	109	4.4	60-140	20	12/29/2009 2122
Isopropylbenzene	50	56		1	111	2.4	70-130	20	12/29/2009 2122
Methyl acetate	50	57		1	113	2.2	15-128	20	12/29/2009 2122
Methyl tertiary butyl ether (MTBE)	50	50		1	101	0.99	70-130	20	12/29/2009 2122
4-Methyl-2-pentanone	100	110		1	105	3.7	60-140	20	12/29/2009 2122
Methylcyclohexane	50	64		1	128	1.7	70-130	20	12/29/2009 2122
Methylene chloride	50	56		1	113	1.5	70-130	20	12/29/2009 2122
Styrene	50	55		1	111	1.9	70-130	20	12/29/2009 2122
1,1,2,2-Tetrachloroethane	50	57		1	115	2.6	70-130	20	12/29/2009 2122
Tetrachloroethene	50	55		1	110	2.5	70-130	20	12/29/2009 2122
Toluene	50	50		1	100	1.8	70-130	20	12/29/2009 2122
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	62		1	124	1.9	70-130	20	12/29/2009 2122
1,2,4-Trichlorobenzene	50	65		1	130	2.3	70-130	20	12/29/2009 2122
1,1,2-Trichloroethane	50	54		1	108	0.85	70-130	20	12/29/2009 2122
1,1,1-Trichloroethane	50	56		1	113	1.3	70-130	20	12/29/2009 2122

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25716-003

Matrix: Aqueous

Batch: 25716

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	52		1	103	2.9	70-130	20	12/29/2009 2122
Trichlorofluoromethane	50	59		1	118	2.4	60-140	20	12/29/2009 2122
Vinyl chloride	50	53		1	105	0.24	60-140	20	12/29/2009 2122
Xylenes (total)	100	100		1	104	2.2	70-130	20	12/29/2009 2122
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	70-130						
1,2-Dichloroethane-d4		104	70-130						
Toluene-d8		107	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25722-001

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2253
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2253
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2253
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2253
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2253
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2253
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2253
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2253
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2253
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2253
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2253
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2253
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 2253
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2253
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2253
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2253
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2253
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2253
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2253
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2253
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2253
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2253
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2253
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2253
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2253
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2253
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2253
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2253
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2253
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2253
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2253

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: LQ25722-001

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2253
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2253
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2253
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2253
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25722-002

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	117	46-153	12/29/2009 2125
Benzene	50	50		1	99	70-130	12/29/2009 2125
Bromodichloromethane	50	52		1	105	70-130	12/29/2009 2125
Bromoform	50	40		1	80	70-130	12/29/2009 2125
Bromomethane (Methyl bromide)	50	55		1	109	60-140	12/29/2009 2125
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2125
Carbon disulfide	50	56		1	111	60-140	12/29/2009 2125
Carbon tetrachloride	50	52		1	104	70-130	12/29/2009 2125
Chlorobenzene	50	53		1	105	70-130	12/29/2009 2125
Chloroethane	50	54		1	108	42-163	12/29/2009 2125
Chloroform	50	50		1	101	70-130	12/29/2009 2125
Chloromethane (Methyl chloride)	50	49		1	98	20-158	12/29/2009 2125
Cyclohexane	50	56		1	112	70-130	12/29/2009 2125
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	12/29/2009 2125
Dibromochloromethane	50	54		1	108	70-130	12/29/2009 2125
1,2-Dibromoethane (EDB)	50	53		1	106	70-130	12/29/2009 2125
1,4-Dichlorobenzene	50	52		1	104	70-130	12/29/2009 2125
1,2-Dichlorobenzene	50	54		1	109	70-130	12/29/2009 2125
1,3-Dichlorobenzene	50	54		1	108	70-130	12/29/2009 2125
Dichlorodifluoromethane	50	48		1	96	60-140	12/29/2009 2125
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2125
1,1-Dichloroethane	50	50		1	100	70-130	12/29/2009 2125
cis-1,2-Dichloroethene	50	50		1	101	70-130	12/29/2009 2125
1,1-Dichloroethene	50	49		1	99	70-130	12/29/2009 2125
trans-1,2-Dichloroethene	50	51		1	102	70-130	12/29/2009 2125
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2125
cis-1,3-Dichloropropene	50	56		1	112	70-130	12/29/2009 2125
trans-1,3-Dichloropropene	50	48		1	96	70-130	12/29/2009 2125
Ethylbenzene	50	55		1	110	70-130	12/29/2009 2125
2-Hexanone	100	98		1	98	60-140	12/29/2009 2125
Isopropylbenzene	50	59		1	118	70-130	12/29/2009 2125
Methyl acetate	50	47		1	94	15-128	12/29/2009 2125
Methyl tertiary butyl ether (MTBE)	50	53		1	106	70-130	12/29/2009 2125
4-Methyl-2-pentanone	100	100		1	103	60-140	12/29/2009 2125
Methylcyclohexane	50	56		1	113	70-130	12/29/2009 2125
Methylene chloride	50	49		1	98	70-130	12/29/2009 2125
Styrene	50	58		1	117	70-130	12/29/2009 2125
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	12/29/2009 2125
Tetrachloroethene	50	53		1	105	70-130	12/29/2009 2125
Toluene	50	54		1	108	70-130	12/29/2009 2125
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	109	70-130	12/29/2009 2125
1,2,4-Trichlorobenzene	50	60		1	121	70-130	12/29/2009 2125
1,1,2-Trichloroethane	50	53		1	105	70-130	12/29/2009 2125
1,1,1-Trichloroethane	50	53		1	107	70-130	12/29/2009 2125

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25722-002

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	103	70-130	12/29/2009 2125
Trichlorofluoromethane	50	49		1	98	60-140	12/29/2009 2125
Vinyl chloride	50	50		1	100	60-140	12/29/2009 2125
Xylenes (total)	100	110		1	112	70-130	12/29/2009 2125
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25722-003

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	103	13	46-153	20	12/29/2009 2147
Benzene	50	45		1	90	9.6	70-130	20	12/29/2009 2147
Bromodichloromethane	50	48		1	96	8.7	70-130	20	12/29/2009 2147
Bromoform	50	36		1	72	10	70-130	20	12/29/2009 2147
Bromomethane (Methyl bromide)	50	49		1	98	10	60-140	20	12/29/2009 2147
2-Butanone (MEK)	100	99		1	99	9.3	60-140	20	12/29/2009 2147
Carbon disulfide	50	49		1	98	12	60-140	20	12/29/2009 2147
Carbon tetrachloride	50	46		1	92	12	70-130	20	12/29/2009 2147
Chlorobenzene	50	49		1	98	6.6	70-130	20	12/29/2009 2147
Chloroethane	50	49		1	97	11	42-163	20	12/29/2009 2147
Chloroform	50	45		1	91	10	70-130	20	12/29/2009 2147
Chloromethane (Methyl chloride)	50	44		1	88	11	20-158	20	12/29/2009 2147
Cyclohexane	50	50		1	100	11	70-130	20	12/29/2009 2147
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	15	70-130	20	12/29/2009 2147
Dibromochloromethane	50	49		1	97	10	70-130	20	12/29/2009 2147
1,2-Dibromoethane (EDB)	50	50		1	99	6.5	70-130	20	12/29/2009 2147
1,4-Dichlorobenzene	50	50		1	100	3.9	70-130	20	12/29/2009 2147
1,2-Dichlorobenzene	50	51		1	102	6.3	70-130	20	12/29/2009 2147
1,3-Dichlorobenzene	50	51		1	102	5.2	70-130	20	12/29/2009 2147
Dichlorodifluoromethane	50	43		1	86	10	60-140	20	12/29/2009 2147
1,2-Dichloroethane	50	47		1	94	7.2	70-130	20	12/29/2009 2147
1,1-Dichloroethane	50	44		1	88	13	70-130	20	12/29/2009 2147
cis-1,2-Dichloroethene	50	45		1	90	11	70-130	20	12/29/2009 2147
1,1-Dichloroethene	50	44		1	87	12	70-130	20	12/29/2009 2147
trans-1,2-Dichloroethene	50	45		1	91	12	70-130	20	12/29/2009 2147
1,2-Dichloropropane	50	48		1	96	7.3	70-130	20	12/29/2009 2147
cis-1,3-Dichloropropene	50	52		1	104	7.1	70-130	20	12/29/2009 2147
trans-1,3-Dichloropropene	50	45		1	90	6.6	70-130	20	12/29/2009 2147
Ethylbenzene	50	52		1	105	4.9	70-130	20	12/29/2009 2147
2-Hexanone	100	95		1	95	3.6	60-140	20	12/29/2009 2147
Isopropylbenzene	50	56		1	113	4.8	70-130	20	12/29/2009 2147
Methyl acetate	50	41		1	83	13	15-128	20	12/29/2009 2147
Methyl tertiary butyl ether (MTBE)	50	47		1	94	13	70-130	20	12/29/2009 2147
4-Methyl-2-pentanone	100	96		1	96	7.4	60-140	20	12/29/2009 2147
Methylcyclohexane	50	52		1	103	8.8	70-130	20	12/29/2009 2147
Methylene chloride	50	44		1	88	11	70-130	20	12/29/2009 2147
Styrene	50	55		1	111	5.4	70-130	20	12/29/2009 2147
1,1,2,2-Tetrachloroethane	50	50		1	99	6.3	70-130	20	12/29/2009 2147
Tetrachloroethene	50	49		1	98	7.2	70-130	20	12/29/2009 2147
Toluene	50	51		1	102	5.9	70-130	20	12/29/2009 2147
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	7.2	70-130	20	12/29/2009 2147
1,2,4-Trichlorobenzene	50	54		1	107	11	70-130	20	12/29/2009 2147
1,1,2-Trichloroethane	50	50		1	100	4.7	70-130	20	12/29/2009 2147
1,1,1-Trichloroethane	50	48		1	96	10	70-130	20	12/29/2009 2147

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: LQ25722-003

Matrix: Aqueous

Batch: 25722

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	47		1	94	8.2	70-130	20	12/29/2009 2147
Trichlorofluoromethane	50	46		1	92	6.6	60-140	20	12/29/2009 2147
Vinyl chloride	50	45		1	90	11	60-140	20	12/29/2009 2147
Xylenes (total)	100	110		1	105	6.5	70-130	20	12/29/2009 2147
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		91	70-130						
Toluene-d8		103	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24263-001

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	1.0	0.20	ug/L	01/05/2010 2120
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	01/05/2010 2120
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	01/05/2010 2120
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	01/05/2010 2120
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	01/05/2010 2120
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	01/05/2010 2120
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	01/05/2010 2120
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
2-Chlorophenol	ND		1	1.0	0.13	ug/L	01/05/2010 2120
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	01/05/2010 2120
2-Methylphenol	ND		1	1.0	0.17	ug/L	01/05/2010 2120
2-Nitroaniline	ND		1	2.0	0.55	ug/L	01/05/2010 2120
2-Nitrophenol	ND		1	2.0	0.27	ug/L	01/05/2010 2120
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	01/05/2010 2120
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	01/05/2010 2120
3-Nitroaniline	ND		1	2.0	0.77	ug/L	01/05/2010 2120
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	01/05/2010 2120
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	01/05/2010 2120
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
4-Chloroaniline	ND		1	1.0	0.13	ug/L	01/05/2010 2120
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	01/05/2010 2120
4-Nitroaniline	ND		1	2.0	0.39	ug/L	01/05/2010 2120
4-Nitrophenol	ND		1	5.0	0.64	ug/L	01/05/2010 2120
Acenaphthene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Acenaphthylene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Acetophenone	ND		1	1.0	0.32	ug/L	01/05/2010 2120
Anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Atrazine	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzaldehyde	ND		1	5.0	1.0	ug/L	01/05/2010 2120
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	01/05/2010 2120
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroethyl)ether	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	01/05/2010 2120
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Caprolactam	ND		1	5.0	1.2	ug/L	01/05/2010 2120
Carbazole	ND		1	1.0	0.25	ug/L	01/05/2010 2120
Chrysene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24263-001

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Dibenzofuran	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Diethylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Fluoranthene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Fluorene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	01/05/2010 2120
Hexachloroethane	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Isophorone	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	01/05/2010 2120
Naphthalene	ND		1	1.0	0.070	ug/L	01/05/2010 2120
Nitrobenzene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Pentachlorophenol	ND		1	5.0	0.54	ug/L	01/05/2010 2120
Phenanthrene	ND		1	1.0	0.18	ug/L	01/05/2010 2120
Phenol	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120

Surrogate	Q	% Rec	Acceptance Limit
2,4,6-Tribromophenol		62	41-144
2-Fluorobiphenyl		59	37-129
2-Fluorophenol		57	24-127
Nitrobenzene-d5		64	38-127
Phenol-d5		57	28-128
Terphenyl-d14		55	10-148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24263-002

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	12		1	59	46-125	01/05/2010 2140
2,4,6-Trichlorophenol	20	12		1	59	36-123	01/05/2010 2140
2,4-Dichlorophenol	20	12		1	59	38-127	01/05/2010 2140
2,4-Dimethylphenol	20	10		1	50	36-110	01/05/2010 2140
2,4-Dinitrophenol	100	57		1	57	33-143	01/05/2010 2140
2,4-Dinitrotoluene	40	23		1	57	55-137	01/05/2010 2140
2,6-Dinitrotoluene	40	24		1	59	53-128	01/05/2010 2140
2-Chloronaphthalene	20	10		1	51	42-132	01/05/2010 2140
2-Chlorophenol	20	12		1	59	40-128	01/05/2010 2140
2-Methylnaphthalene	20	11		1	55	49-122	01/05/2010 2140
2-Methylphenol	20	9.0		1	45	33-122	01/05/2010 2140
2-Nitroaniline	40	23		1	59	48-126	01/05/2010 2140
2-Nitrophenol	40	23		1	58	44-131	01/05/2010 2140
3 & 4-Methylphenol	40	20		1	51	48-112	01/05/2010 2140
3-Nitroaniline	40	18		1	46	29-109	01/05/2010 2140
4,6-Dinitro-2-methylphenol	100	61		1	61	46-151	01/05/2010 2140
4-Bromophenyl phenyl ether	20	12		1	61	49-123	01/05/2010 2140
4-Chloro-3-methyl phenol	20	12		1	61	48-136	01/05/2010 2140
4-Chloroaniline	20	4.3		1	22	18-73	01/05/2010 2140
4-Chlorophenyl phenyl ether	20	12		1	61	34-124	01/05/2010 2140
4-Nitroaniline	40	22		1	56	42-154	01/05/2010 2140
4-Nitrophenol	100	62		1	62	43-145	01/05/2010 2140
Acenaphthene	20	12		1	59	51-130	01/05/2010 2140
Acenaphthylene	20	11		1	56	46-131	01/05/2010 2140
Anthracene	20	11		1	57	48-122	01/05/2010 2140
Benzo(a)anthracene	20	12		1	60	50-143	01/05/2010 2140
Benzo(a)pyrene	20	14		1	68	55-141	01/05/2010 2140
Benzo(b)fluoranthene	20	13		1	64	48-147	01/05/2010 2140
Benzo(g,h,i)perylene	20	12		1	60	48-139	01/05/2010 2140
Benzo(k)fluoranthene	20	12		1	59	48-148	01/05/2010 2140
bis(2-Chloroethoxy)methane	20	11		1	57	46-130	01/05/2010 2140
bis(2-Chloroethyl)ether	20	12		1	59	42-127	01/05/2010 2140
bis(2-Chloroisopropyl)ether	20	11		1	55	36-133	01/05/2010 2140
bis(2-Ethylhexyl)phthalate	20	13		1	64	40-141	01/05/2010 2140
Butyl benzyl phthalate	20	12		1	60	52-142	01/05/2010 2140
Carbazole	20	13		1	63	45-101	01/05/2010 2140
Chrysene	20	12		1	60	51-137	01/05/2010 2140
Di-n-butyl phthalate	20	13		1	64	50-134	01/05/2010 2140
Di-n-octylphthalate	20	12		1	61	50-136	01/05/2010 2140
Dibenzo(a,h)anthracene	20	12		1	60	48-139	01/05/2010 2140
Dibenzofuran	20	12		1	58	45-142	01/05/2010 2140
Diethylphthalate	20	12		1	62	48-124	01/05/2010 2140
Dimethyl phthalate	20	12		1	62	43-122	01/05/2010 2140
Fluoranthene	20	12		1	60	50-124	01/05/2010 2140

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24263-002

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	20	12		1	60	39-122	01/05/2010 2140
Hexachlorobenzene	20	12		1	59	46-125	01/05/2010 2140
Hexachlorobutadiene	20	11		1	57	38-121	01/05/2010 2140
Hexachlorocyclopentadiene	100	48		1	48	24-110	01/05/2010 2140
Hexachloroethane	20	12		1	58	32-109	01/05/2010 2140
Indeno(1,2,3-c,d)pyrene	20	12		1	60	49-146	01/05/2010 2140
Isophorone	20	12		1	62	43-118	01/05/2010 2140
N-Nitrosodi-n-propylamine	20	11		1	57	46-135	01/05/2010 2140
N-Nitrosodiphenylamine (Diphenylamine)	20	14		1	68	44-124	01/05/2010 2140
Naphthalene	20	11		1	56	45-118	01/05/2010 2140
Nitrobenzene	20	12		1	59	46-131	01/05/2010 2140
Pentachlorophenol	100	52		1	52	30-137	01/05/2010 2140
Phenanthrene	20	12		1	59	49-122	01/05/2010 2140
Phenol	20	9.8		1	49	35-118	01/05/2010 2140
Pyrene	20	12		1	61	50-130	01/05/2010 2140
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		69	41-144				
2-Fluorobiphenyl		62	37-129				
2-Fluorophenol		55	24-127				
Nitrobenzene-d5		65	38-127				
Phenol-d5		57	28-128				
Terphenyl-d14		55	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

## Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL18009-007MS

Batch: 24263

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/24/2009 2015

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	50	11		1	21	10-133	01/05/2010 2338
Acenaphthylene	ND	50	10	N	1	20	34-128	01/05/2010 2338
Anthracene	ND	50	11	N	1	21	48-122	01/05/2010 2338
Benzo(a)anthracene	ND	50	12	N	1	24	53-98	01/05/2010 2338
Benzo(a)pyrene	ND	50	13		1	26	11-160	01/05/2010 2338
Benzo(b)fluoranthene	ND	50	12		1	25	10-165	01/05/2010 2338
Benzo(g,h,i)perylene	ND	50	12	N	1	25	42-111	01/05/2010 2338
Benzo(k)fluoranthene	ND	50	13		1	26	13-175	01/05/2010 2338
4-Bromophenyl phenyl ether	ND	50	11	N	1	23	49-123	01/05/2010 2338
Butyl benzyl phthalate	ND	50	12	N	1	25	52-142	01/05/2010 2338
Carbazole	ND	50	11	N	1	22	45-101	01/05/2010 2338
4-Chloro-3-methyl phenol	ND	50	13	N	1	26	40-98	01/05/2010 2338
4-Chloroaniline	ND	50	1.7	N	1	3.4	10-98	01/05/2010 2338
bis(2-Chloroethoxy)methane	ND	50	10	N	1	21	43-93	01/05/2010 2338
bis(2-Chloroethyl)ether	ND	50	10	N	1	20	41-88	01/05/2010 2338
bis(2-Chloroisopropyl)ether	ND	50	9.7	N	1	19	36-99	01/05/2010 2338
2-Chloronaphthalene	ND	50	11	N	1	22	40-89	01/05/2010 2338
2-Chlorophenol	ND	50	10	N	1	21	33-92	01/05/2010 2338
4-Chlorophenyl phenyl ether	ND	50	11	N	1	23	34-124	01/05/2010 2338
Chrysene	ND	50	12	N	1	24	51-107	01/05/2010 2338
Dibenzo(a,h)anthracene	ND	50	13	N	1	25	47-116	01/05/2010 2338
Dibenzofuran	ND	50	11	N	1	22	45-94	01/05/2010 2338
2,4-Dichlorophenol	ND	50	11	N	1	22	34-105	01/05/2010 2338
Diethylphthalate	ND	50	13	N	1	25	48-124	01/05/2010 2338
Dimethyl phthalate	ND	50	12	N	1	25	43-122	01/05/2010 2338
2,4-Dimethylphenol	ND	50	10	N	1	20	33-77	01/05/2010 2338
Di-n-butyl phthalate	ND	50	13	N	1	25	50-134	01/05/2010 2338
4,6-Dinitro-2-methylphenol	ND	250	68	N	1	27	33-118	01/05/2010 2338
2,4-Dinitrophenol	ND	250	57		1	23	19-119	01/05/2010 2338
2,4-Dinitrotoluene	ND	100	25	N	1	25	50-104	01/05/2010 2338
2,6-Dinitrotoluene	ND	100	25	N	1	25	53-128	01/05/2010 2338
Di-n-octylphthalate	ND	50	12	N	1	24	40-112	01/05/2010 2338
bis(2-Ethylhexyl)phthalate	ND	50	11		1	21	10-142	01/05/2010 2338
Fluoranthene	ND	50	12	N	1	23	50-124	01/05/2010 2338
Fluorene	ND	50	12	N	1	24	39-122	01/05/2010 2338
Hexachlorobenzene	ND	50	11	N	1	22	46-125	01/05/2010 2338
Hexachlorobutadiene	ND	50	10	N	1	20	42-94	01/05/2010 2338
Hexachlorocyclopentadiene	ND	250	41		1	16	14-89	01/05/2010 2338
Hexachloroethane	ND	50	9.4	N	1	19	39-86	01/05/2010 2338
Indeno(1,2,3-c,d)pyrene	ND	50	12	N	1	25	43-113	01/05/2010 2338
Isophorone	ND	50	11	N	1	22	42-84	01/05/2010 2338
2-Methylnaphthalene	ND	50	9.9	N	1	20	46-90	01/05/2010 2338
2-Methylphenol	ND	50	12	N	1	25	33-122	01/05/2010 2338
3 & 4-Methylphenol	ND	100	18	N	1	18	24-97	01/05/2010 2338

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: KL18009-007MS

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	ND	50	10	N	1	20	46-89	01/05/2010 2338
2-Nitroaniline	ND	100	20	N	1	20	48-126	01/05/2010 2338
3-Nitroaniline	ND	100	11		1	11	10-110	01/05/2010 2338
4-Nitroaniline	ND	100	14	N	1	14	41-99	01/05/2010 2338
Nitrobenzene	ND	50	13	N	1	27	44-91	01/05/2010 2338
2-Nitrophenol	ND	100	20	N	1	20	34-102	01/05/2010 2338
4-Nitrophenol	ND	250	65	N	1	26	29-122	01/05/2010 2338
N-Nitrosodi-n-propylamine	ND	50	10	N	1	20	41-96	01/05/2010 2338
N-Nitrosodiphenylamine (Diphenylamine)	ND	50	12		1	24	10-150	01/05/2010 2338
Pentachlorophenol	ND	250	58	N	1	23	32-110	01/05/2010 2338
Phenanthrene	ND	50	12	N	1	24	49-122	01/05/2010 2338
Phenol	ND	50	9.3	N	1	19	33-92	01/05/2010 2338
Pyrene	ND	50	12	N	1	25	50-130	01/05/2010 2338
2,4,5-Trichlorophenol	ND	50	12	N	1	24	46-125	01/05/2010 2338
2,4,6-Trichlorophenol	ND	50	12	N	1	23	36-123	01/05/2010 2338
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		56	37-129					
2-Fluorophenol		49	24-127					
Nitrobenzene-d5		60	38-127					
Phenol-d5		52	28-128					
Terphenyl-d14		55	10-148					
2,4,6-Tribromophenol		70	41-144					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL18009-007MD

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	50	13		1	25	16	10-133	40	01/05/2010 2358
Acenaphthylene	ND	50	6.0	N,+	1	12	50	34-128	40	01/05/2010 2358
Anthracene	ND	50	8.6	N	1	17	21	48-122	40	01/05/2010 2358
Benzo(a)anthracene	ND	50	7.6	N,+	1	15	44	53-98	40	01/05/2010 2358
Benzo(a)pyrene	ND	50	32	+	1	63	83	11-160	40	01/05/2010 2358
Benzo(b)fluoranthene	ND	50	86	N,+	1	172	150	10-165	40	01/05/2010 2358
Benzo(g,h,i)perylene	ND	50	24	+	1	49	65	42-111	40	01/05/2010 2358
Benzo(k)fluoranthene	ND	50	59	+	1	118	130	13-175	40	01/05/2010 2358
4-Bromophenyl phenyl ether	ND	50	12	N	1	24	6.4	49-123	40	01/05/2010 2358
Butyl benzyl phthalate	ND	50	3.0	N,+	1	5.9	120	52-142	40	01/05/2010 2358
Carbazole	ND	50	0.81	N,+	1	1.6	170	45-101	40	01/05/2010 2358
4-Chloro-3-methyl phenol	ND	50	13	N	1	26	1.8	40-98	40	01/05/2010 2358
4-Chloroaniline	ND	50	ND	N,+	1	0.00	200	10-98	40	01/05/2010 2358
bis(2-Chloroethoxy)methane	ND	50	2.9	N,+	1	5.8	110	43-93	40	01/05/2010 2358
bis(2-Chloroethyl)ether	ND	50	12	N	1	25	20	41-88	40	01/05/2010 2358
bis(2-Chloroisopropyl)ether	ND	50	12	N	1	23	17	36-99	40	01/05/2010 2358
2-Chloronaphthalene	ND	50	ND	N,+	1	0.00	200	40-89	40	01/05/2010 2358
2-Chlorophenol	ND	50	12	N	1	24	17	33-92	40	01/05/2010 2358
4-Chlorophenyl phenyl ether	ND	50	15	N	1	31	30	34-124	40	01/05/2010 2358
Chrysene	ND	50	7.9	N,+	1	16	42	51-107	40	01/05/2010 2358
Dibenzo(a,h)anthracene	ND	50	45	+	1	90	110	47-116	40	01/05/2010 2358
Dibenzofuran	ND	50	15	N	1	31	34	45-94	40	01/05/2010 2358
2,4-Dichlorophenol	ND	50	13	N	1	25	13	34-105	40	01/05/2010 2358
Diethylphthalate	ND	50	16	N	1	32	23	48-124	40	01/05/2010 2358
Dimethyl phthalate	ND	50	16	N	1	33	29	43-122	40	01/05/2010 2358
2,4-Dimethylphenol	ND	50	11	N	1	22	6.5	33-77	40	01/05/2010 2358
Di-n-butyl phthalate	ND	50	10	N	1	21	19	50-134	40	01/05/2010 2358
4,6-Dinitro-2-methylphenol	ND	250	84		1	34	22	33-118	40	01/05/2010 2358
2,4-Dinitrophenol	ND	250	75		1	30	26	19-119	40	01/05/2010 2358
2,4-Dinitrotoluene	ND	100	ND	N,+	1	0.00	200	50-104	40	01/05/2010 2358
2,6-Dinitrotoluene	ND	100	35	N	1	35	33	53-128	40	01/05/2010 2358
Di-n-octylphthalate	ND	50	51	+	1	101	120	40-112	40	01/05/2010 2358
bis(2-Ethylhexyl)phthalate	ND	50	4.1	N,+	1	8.1	90	10-142	40	01/05/2010 2358
Fluoranthene	ND	50	11	N	1	21	9.7	50-124	40	01/05/2010 2358
Fluorene	ND	50	16	N	1	32	31	39-122	40	01/05/2010 2358
Hexachlorobenzene	ND	50	10	N	1	21	7.1	46-125	40	01/05/2010 2358
Hexachlorobutadiene	ND	50	9.4	N	1	19	5.8	42-94	40	01/05/2010 2358
Hexachlorocyclopentadiene	ND	250	53		1	21	26	14-89	40	01/05/2010 2358
Hexachloroethane	ND	50	11	N	1	22	14	39-86	40	01/05/2010 2358
Indeno(1,2,3-c,d)pyrene	ND	50	32	+	1	65	89	43-113	40	01/05/2010 2358
Isophorone	ND	50	13	N	1	26	14	42-84	40	01/05/2010 2358
2-Methylnaphthalene	ND	50	11	N	1	23	14	46-90	40	01/05/2010 2358
2-Methylphenol	ND	50	8.6	N	1	17	36	33-122	40	01/05/2010 2358
3 & 4-Methylphenol	ND	100	18	N	1	18	0.11	24-97	40	01/05/2010 2358

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: KL18009-007MD

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Naphthalene	ND	50	12	N	1	23	15	46-89	40	01/05/2010 2358	
2-Nitroaniline	ND	100	9.4	N,+	1	9.4	70	48-126	40	01/05/2010 2358	
3-Nitroaniline	ND	100	ND	N,+	1	0.00	200	10-110	40	01/05/2010 2358	
4-Nitroaniline	ND	100	ND	N,+	1	0.00	200	41-99	40	01/05/2010 2358	
Nitrobenzene	ND	50	14	N	1	27	3.6	44-91	40	01/05/2010 2358	
2-Nitrophenol	ND	100	25	N	1	25	18	34-102	40	01/05/2010 2358	
4-Nitrophenol	ND	250	82		1	33	23	29-122	40	01/05/2010 2358	
N-Nitrosodi-n-propylamine	ND	50	11	N	1	23	13	41-96	40	01/05/2010 2358	
N-Nitrosodiphenylamine (Diphenylamine)	ND	50	0.64	N,+	1	1.3	180	10-150	40	01/05/2010 2358	
Pentachlorophenol	ND	250	58	N	1	23	0.086	32-110	40	01/05/2010 2358	
Phenanthrene	ND	50	12	N	1	24	0.80	49-122	40	01/05/2010 2358	
Phenol	ND	50	10	N	1	20	7.2	33-92	40	01/05/2010 2358	
Pyrene	ND	50	8.1	N,+	1	16	41	50-130	40	01/05/2010 2358	
2,4,5-Trichlorophenol	ND	50	16	N	1	32	30	46-125	40	01/05/2010 2358	
2,4,6-Trichlorophenol	ND	50	16	N	1	32	32	36-123	40	01/05/2010 2358	
Surrogate	Q	% Rec	Acceptance Limit								
2-Fluorobiphenyl		74	37-129								
2-Fluorophenol		55	24-127								
Nitrobenzene-d5		63	38-127								
Phenol-d5		46	28-128								
Terphenyl-d14		31	10-148								
2,4,6-Tribromophenol		64	41-144								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: LQ25714-001

Batch: 25714

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	1.0	0.20	ug/L	01/05/2010 2120
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	01/05/2010 2120
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	01/05/2010 2120
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	01/05/2010 2120
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	01/05/2010 2120
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	01/05/2010 2120
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	01/05/2010 2120
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
2-Chlorophenol	ND		1	1.0	0.13	ug/L	01/05/2010 2120
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	01/05/2010 2120
2-Methylphenol	ND		1	1.0	0.17	ug/L	01/05/2010 2120
2-Nitroaniline	ND		1	2.0	0.55	ug/L	01/05/2010 2120
2-Nitrophenol	ND		1	2.0	0.27	ug/L	01/05/2010 2120
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	01/05/2010 2120
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	01/05/2010 2120
3-Nitroaniline	ND		1	2.0	0.77	ug/L	01/05/2010 2120
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	01/05/2010 2120
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	01/05/2010 2120
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
4-Chloroaniline	ND		1	1.0	0.13	ug/L	01/05/2010 2120
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	01/05/2010 2120
4-Nitroaniline	ND		1	2.0	0.39	ug/L	01/05/2010 2120
4-Nitrophenol	ND		1	5.0	0.64	ug/L	01/05/2010 2120
Acenaphthene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Acenaphthylene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Acetophenone	ND		1	1.0	0.32	ug/L	01/05/2010 2120
Anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Atrazine	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzaldehyde	ND		1	5.0	1.0	ug/L	01/05/2010 2120
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	01/05/2010 2120
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroethyl)ether	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	01/05/2010 2120
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Caprolactam	ND		1	5.0	1.2	ug/L	01/05/2010 2120
Carbazole	ND		1	1.0	0.25	ug/L	01/05/2010 2120
Chrysene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: LQ25714-001

Matrix: Aqueous

Batch: 25714

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Dibenzofuran	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Diethylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Fluoranthene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Fluorene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	01/05/2010 2120
Hexachloroethane	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Isophorone	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	01/05/2010 2120
Naphthalene	ND		1	1.0	0.070	ug/L	01/05/2010 2120
Nitrobenzene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Pentachlorophenol	ND		1	5.0	0.54	ug/L	01/05/2010 2120
Phenanthrene	ND		1	1.0	0.18	ug/L	01/05/2010 2120
Phenol	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		62	41-144				
2-Fluorobiphenyl		59	37-129				
2-Fluorophenol		57	24-127				
Nitrobenzene-d5		64	38-127				
Phenol-d5		57	28-128				
Terphenyl-d14		55	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25714-002

Matrix: Aqueous

Batch: 25714

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	12		1	59	46-125	01/05/2010 2140
2,4,6-Trichlorophenol	20	12		1	59	36-123	01/05/2010 2140
2,4-Dichlorophenol	20	12		1	59	38-127	01/05/2010 2140
2,4-Dimethylphenol	20	10		1	50	36-110	01/05/2010 2140
2,4-Dinitrophenol	100	57		1	57	33-143	01/05/2010 2140
2,4-Dinitrotoluene	40	23		1	57	55-137	01/05/2010 2140
2,6-Dinitrotoluene	40	24		1	59	53-128	01/05/2010 2140
2-Chloronaphthalene	20	10		1	51	42-132	01/05/2010 2140
2-Chlorophenol	20	12		1	59	40-128	01/05/2010 2140
2-Methylnaphthalene	20	11		1	55	49-122	01/05/2010 2140
2-Methylphenol	20	9.0		1	45	33-122	01/05/2010 2140
2-Nitroaniline	40	23		1	59	48-126	01/05/2010 2140
2-Nitrophenol	40	23		1	58	44-131	01/05/2010 2140
3 & 4-Methylphenol	40	20		1	51	48-112	01/05/2010 2140
3-Nitroaniline	40	18		1	46	29-109	01/05/2010 2140
4,6-Dinitro-2-methylphenol	100	61		1	61	46-151	01/05/2010 2140
4-Bromophenyl phenyl ether	20	12		1	61	49-123	01/05/2010 2140
4-Chloro-3-methyl phenol	20	12		1	61	48-136	01/05/2010 2140
4-Chloroaniline	20	4.3		1	22	18-73	01/05/2010 2140
4-Chlorophenyl phenyl ether	20	12		1	61	34-124	01/05/2010 2140
4-Nitroaniline	40	22		1	56	42-154	01/05/2010 2140
4-Nitrophenol	100	62		1	62	43-145	01/05/2010 2140
Acenaphthene	20	12		1	59	51-130	01/05/2010 2140
Acenaphthylene	20	11		1	56	46-131	01/05/2010 2140
Anthracene	20	11		1	57	48-122	01/05/2010 2140
Benzo(a)anthracene	20	12		1	60	50-143	01/05/2010 2140
Benzo(a)pyrene	20	14		1	68	55-141	01/05/2010 2140
Benzo(b)fluoranthene	20	13		1	64	48-147	01/05/2010 2140
Benzo(g,h,i)perylene	20	12		1	60	48-139	01/05/2010 2140
Benzo(k)fluoranthene	20	12		1	59	48-148	01/05/2010 2140
bis(2-Chloroethoxy)methane	20	11		1	57	46-130	01/05/2010 2140
bis(2-Chloroethyl)ether	20	12		1	59	42-127	01/05/2010 2140
bis(2-Chloroisopropyl)ether	20	11		1	55	36-133	01/05/2010 2140
bis(2-Ethylhexyl)phthalate	20	13		1	64	40-141	01/05/2010 2140
Butyl benzyl phthalate	20	12		1	60	52-142	01/05/2010 2140
Carbazole	20	13		1	63	45-101	01/05/2010 2140
Chrysene	20	12		1	60	51-137	01/05/2010 2140
Di-n-butyl phthalate	20	13		1	64	50-134	01/05/2010 2140
Di-n-octylphthalate	20	12		1	61	50-136	01/05/2010 2140
Dibenzo(a,h)anthracene	20	12		1	60	48-139	01/05/2010 2140
Dibenzofuran	20	12		1	58	45-142	01/05/2010 2140
Diethylphthalate	20	12		1	62	48-124	01/05/2010 2140
Dimethyl phthalate	20	12		1	62	43-122	01/05/2010 2140
Fluoranthene	20	12		1	60	50-124	01/05/2010 2140

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: LQ25714-002

Matrix: Aqueous

Batch: 25714

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	20	12		1	60	39-122	01/05/2010 2140
Hexachlorobenzene	20	12		1	59	46-125	01/05/2010 2140
Hexachlorobutadiene	20	11		1	57	38-121	01/05/2010 2140
Hexachlorocyclopentadiene	100	48		1	48	24-110	01/05/2010 2140
Hexachloroethane	20	12		1	58	32-109	01/05/2010 2140
Indeno(1,2,3-c,d)pyrene	20	12		1	60	49-146	01/05/2010 2140
Isophorone	20	12		1	62	43-118	01/05/2010 2140
N-Nitrosodi-n-propylamine	20	11		1	57	46-135	01/05/2010 2140
N-Nitrosodiphenylamine (Diphenylamine)	20	14		1	68	44-124	01/05/2010 2140
Naphthalene	20	11		1	56	45-118	01/05/2010 2140
Nitrobenzene	20	12		1	59	46-131	01/05/2010 2140
Pentachlorophenol	100	52		1	52	30-137	01/05/2010 2140
Phenanthrene	20	12		1	59	49-122	01/05/2010 2140
Phenol	20	9.8		1	49	35-118	01/05/2010 2140
Pyrene	20	12		1	61	50-130	01/05/2010 2140
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		69	41-144				
2-Fluorobiphenyl		62	37-129				
2-Fluorophenol		55	24-127				
Nitrobenzene-d5		65	38-127				
Phenol-d5		57	28-128				
Terphenyl-d14		55	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ24180-001

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 2341
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 2341
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 2341
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 2341
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 2341
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 2341
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 2341
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		62	20-131				
Tetrachloro-m-xylene		86	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: KQ24180-002

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.45		1	91	70-130	01/01/2010 0001
4,4'-DDE	0.50	0.43		1	86	70-130	01/01/2010 0001
4,4'-DDT	0.50	0.42		1	84	70-130	01/01/2010 0001
Aldrin	0.50	0.42		1	83	70-130	01/01/2010 0001
alpha-BHC	0.50	0.42		1	84	70-130	01/01/2010 0001
beta-BHC	0.50	0.39		1	78	70-130	01/01/2010 0001
delta-BHC	0.50	0.44		1	87	70-130	01/01/2010 0001
Dieldrin	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan I	0.50	0.42		1	85	70-130	01/01/2010 0001
Endosulfan II	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan sulfate	0.50	0.46		1	92	70-130	01/01/2010 0001
Endrin	0.50	0.45		1	91	70-130	01/01/2010 0001
Endrin aldehyde	0.50	0.43		1	87	70-130	01/01/2010 0001
gamma-BHC (Lindane)	0.50	0.42		1	84	70-130	01/01/2010 0001
gamma-Chlordane	0.50	0.42		1	85	70-130	01/01/2010 0001
Heptachlor	0.50	0.41		1	83	70-130	01/01/2010 0001
Heptachlor epoxide	0.50	0.42		1	83	70-130	01/01/2010 0001
Methoxychlor	0.50	0.51		1	101	70-130	01/01/2010 0001
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	20-131				
Tetrachloro-m-xylene		84	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MS

Sample ID: KL18009-001MS

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aldrin	ND	1.0	0.86	P	1	83	70-130	01/01/2010 0040
alpha-BHC	ND	1.0	0.92		1	88	70-130	01/01/2010 0040
beta-BHC	ND	1.0	0.91		1	87	70-130	01/01/2010 0040
delta-BHC	ND	1.0	0.96		1	92	70-130	01/01/2010 0040
gamma-BHC (Lindane)	ND	1.0	0.92		1	89	70-130	01/01/2010 0040
gamma-Chlordane	ND	1.0	0.91		1	87	70-130	01/01/2010 0040
4,4'-DDD	ND	1.0	0.98		1	94	70-130	01/01/2010 0040
4,4'-DDE	ND	1.0	0.88		1	85	70-130	01/01/2010 0040
4,4'-DDT	ND	1.0	0.94		1	90	70-130	01/01/2010 0040
Dieldrin	ND	1.0	0.97		1	93	70-130	01/01/2010 0040
Endosulfan I	ND	1.0	0.91		1	87	70-130	01/01/2010 0040
Endosulfan II	ND	1.0	1.0		1	96	70-130	01/01/2010 0040
Endosulfan sulfate	ND	1.0	1.0		1	96	70-130	01/01/2010 0040
Endrin	ND	1.0	1.0		1	97	70-130	01/01/2010 0040
Endrin aldehyde	ND	1.0	1.0		1	97	70-130	01/01/2010 0040
Heptachlor	ND	1.0	0.89		1	85	70-130	01/01/2010 0040
Heptachlor epoxide	ND	1.0	0.94		1	90	70-130	01/01/2010 0040
Methoxychlor	ND	1.0	1.2		1	112	70-130	01/01/2010 0040
Surrogate	Q	% Rec	Acceptance Limit					
Decachlorobiphenyl		67	20-131					
Tetrachloro-m-xylene		85	26-132					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MSD

Sample ID: KL18009-001MD

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Aldrin	ND	1.0	1.2	P,+	1	122	34	70-130	30	01/01/2010 0100
alpha-BHC	ND	1.0	0.82		1	82	11	70-130	30	01/01/2010 0100
beta-BHC	ND	1.0	0.78		1	78	14	70-130	30	01/01/2010 0100
delta-BHC	ND	1.0	0.88		1	88	8.9	70-130	30	01/01/2010 0100
gamma-BHC (Lindane)	ND	1.0	0.84		1	84	9.4	70-130	30	01/01/2010 0100
gamma-Chlordane	ND	1.0	0.86		1	86	5.8	70-130	30	01/01/2010 0100
4,4'-DDD	ND	1.0	0.93		1	93	5.5	70-130	30	01/01/2010 0100
4,4'-DDE	ND	1.0	0.90		1	90	1.7	70-130	30	01/01/2010 0100
4,4'-DDT	ND	1.0	0.93		1	93	1.5	70-130	30	01/01/2010 0100
Dieldrin	ND	1.0	0.90		1	90	6.8	70-130	30	01/01/2010 0100
Endosulfan I	ND	1.0	0.83		1	83	8.9	70-130	30	01/01/2010 0100
Endosulfan II	ND	1.0	0.92		1	92	7.9	70-130	30	01/01/2010 0100
Endosulfan sulfate	ND	1.0	0.93		1	93	6.9	70-130	30	01/01/2010 0100
Endrin	ND	1.0	0.95		1	95	6.4	70-130	30	01/01/2010 0100
Endrin aldehyde	ND	1.0	0.94		1	94	6.7	70-130	30	01/01/2010 0100
Heptachlor	ND	1.0	0.83		1	83	6.4	70-130	30	01/01/2010 0100
Heptachlor epoxide	ND	1.0	0.84		1	84	11	70-130	30	01/01/2010 0100
Methoxychlor	ND	1.0	1.1		1	113	2.8	70-130	30	01/01/2010 0100
Surrogate	Q	% Rec	Acceptance Limit							
Decachlorobiphenyl		56	20-131							
Tetrachloro-m-xylene		79	26-132							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: LQ24707-001

Matrix: Aqueous

Batch: 24707

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/05/2010 2120

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	01/06/2010 2148
4,4'-DDE	ND		1	0.025	0.0060	ug/L	01/06/2010 2148
4,4'-DDT	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
Aldrin	ND		1	0.025	0.0020	ug/L	01/06/2010 2148
alpha-BHC	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
beta-BHC	ND		1	0.025	0.019	ug/L	01/06/2010 2148
delta-BHC	ND		1	0.025	0.0080	ug/L	01/06/2010 2148
Dieldrin	ND		1	0.025	0.0040	ug/L	01/06/2010 2148
Endosulfan I	ND		1	0.025	0.0060	ug/L	01/06/2010 2148
Endosulfan II	ND		1	0.025	0.024	ug/L	01/06/2010 2148
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
Endrin	ND		1	0.025	0.0050	ug/L	01/06/2010 2148
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
Endrin ketone	ND		1	0.025	0.0040	ug/L	01/06/2010 2148
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	01/06/2010 2148
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
Heptachlor	ND		1	0.025	0.020	ug/L	01/06/2010 2148
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	01/06/2010 2148
Methoxychlor	ND		1	0.10	0.014	ug/L	01/06/2010 2148
Toxaphene	ND		1	0.25	0.030	ug/L	01/06/2010 2148
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		87	20-131				
Tetrachloro-m-xylene		90	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: LQ24707-002

Matrix: Aqueous

Batch: 24707

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/05/2010 2120

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.56		1	113	70-130	01/06/2010 2203
4,4'-DDE	0.50	0.53		1	105	70-130	01/06/2010 2203
4,4'-DDT	0.50	0.62		1	124	70-130	01/06/2010 2203
Aldrin	0.50	0.48		1	95	70-130	01/06/2010 2203
alpha-BHC	0.50	0.50		1	100	70-130	01/06/2010 2203
beta-BHC	0.50	0.45		1	89	70-130	01/06/2010 2203
delta-BHC	0.50	0.49		1	98	70-130	01/06/2010 2203
Dieldrin	0.50	0.55		1	111	70-130	01/06/2010 2203
Endosulfan I	0.50	0.44		1	88	70-130	01/06/2010 2203
Endosulfan II	0.50	0.54		1	108	70-130	01/06/2010 2203
Endosulfan sulfate	0.50	0.55		1	110	70-130	01/06/2010 2203
Endrin	0.50	0.57		1	113	70-130	01/06/2010 2203
Endrin aldehyde	0.50	0.48		1	96	70-130	01/06/2010 2203
gamma-BHC (Lindane)	0.50	0.50		1	100	70-130	01/06/2010 2203
gamma-Chlordane	0.50	0.53		1	107	70-130	01/06/2010 2203
Heptachlor	0.50	0.49		1	97	70-130	01/06/2010 2203
Heptachlor epoxide	0.50	0.52		1	103	70-130	01/06/2010 2203
Methoxychlor	0.50	0.56		1	111	70-130	01/06/2010 2203
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		92	20-131				
Tetrachloro-m-xylene		96	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Organochlorine Pesticides by GC - LCSD

Sample ID: LQ24707-003

Matrix: Aqueous

Batch: 24707

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 01/05/2010 2120

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
4,4'-DDD	0.50	0.55		1	109	3.0	70-130	30	01/06/2010 2219
4,4'-DDE	0.50	0.51		1	103	2.4	70-130	30	01/06/2010 2219
4,4'-DDT	0.50	0.61		1	122	1.3	70-130	30	01/06/2010 2219
Aldrin	0.50	0.45		1	90	5.8	70-130	30	01/06/2010 2219
alpha-BHC	0.50	0.47		1	94	6.4	70-130	30	01/06/2010 2219
beta-BHC	0.50	0.42		1	84	5.7	70-130	30	01/06/2010 2219
delta-BHC	0.50	0.48		1	95	2.7	70-130	30	01/06/2010 2219
Dieldrin	0.50	0.54		1	108	2.6	70-130	30	01/06/2010 2219
Endosulfan I	0.50	0.45		1	91	2.7	70-130	30	01/06/2010 2219
Endosulfan II	0.50	0.60		1	120	10	70-130	30	01/06/2010 2219
Endosulfan sulfate	0.50	0.54		1	109	1.4	70-130	30	01/06/2010 2219
Endrin	0.50	0.55		1	110	3.0	70-130	30	01/06/2010 2219
Endrin aldehyde	0.50	0.47		1	93	3.3	70-130	30	01/06/2010 2219
gamma-BHC (Lindane)	0.50	0.47		1	94	5.9	70-130	30	01/06/2010 2219
gamma-Chlordane	0.50	0.52		1	104	2.0	70-130	30	01/06/2010 2219
Heptachlor	0.50	0.46		1	92	5.3	70-130	30	01/06/2010 2219
Heptachlor epoxide	0.50	0.50		1	100	3.3	70-130	30	01/06/2010 2219
Methoxychlor	0.50	0.54		1	109	2.4	70-130	30	01/06/2010 2219
Surrogate	Q	% Rec	Acceptance Limit						
Decachlorobiphenyl		83	20-131						
Tetrachloro-m-xylene		90	26-132						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: LQ25708-001

Matrix: Aqueous

Batch: 25708

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 2341
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 2341
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 2341
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 2341
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 2341
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 2341
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 2341
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		62	20-131				
Tetrachloro-m-xylene		86	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: LQ25708-002

Matrix: Aqueous

Batch: 25708

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.45		1	91	70-130	01/01/2010 0001
4,4'-DDE	0.50	0.43		1	86	70-130	01/01/2010 0001
4,4'-DDT	0.50	0.42		1	84	70-130	01/01/2010 0001
Aldrin	0.50	0.42		1	83	70-130	01/01/2010 0001
alpha-BHC	0.50	0.42		1	84	70-130	01/01/2010 0001
beta-BHC	0.50	0.39		1	78	70-130	01/01/2010 0001
delta-BHC	0.50	0.44		1	87	70-130	01/01/2010 0001
Dieldrin	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan I	0.50	0.42		1	85	70-130	01/01/2010 0001
Endosulfan II	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan sulfate	0.50	0.46		1	92	70-130	01/01/2010 0001
Endrin	0.50	0.45		1	91	70-130	01/01/2010 0001
Endrin aldehyde	0.50	0.43		1	87	70-130	01/01/2010 0001
gamma-BHC (Lindane)	0.50	0.42		1	84	70-130	01/01/2010 0001
gamma-Chlordane	0.50	0.42		1	85	70-130	01/01/2010 0001
Heptachlor	0.50	0.41		1	83	70-130	01/01/2010 0001
Heptachlor epoxide	0.50	0.42		1	83	70-130	01/01/2010 0001
Methoxychlor	0.50	0.51		1	101	70-130	01/01/2010 0001
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	20-131				
Tetrachloro-m-xylene		84	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: KQ24099-001

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/30/2009 0234
Barium	ND		1	0.025	0.0075	mg/L	12/30/2009 0234
Cadmium	ND		1	0.0020	0.00060	mg/L	12/30/2009 0234
Chromium	0.0038	J	1	0.0050	0.0021	mg/L	12/30/2009 0234
Lead	ND		1	0.010	0.0019	mg/L	12/30/2009 0234
Selenium	0.0034	J	1	0.010	0.0026	mg/L	12/31/2009 0042
Silver	ND		1	0.0050	0.00040	mg/L	12/31/2009 0042

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ24099-002

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.39		1	98	80-120	12/30/2009 0240
Barium	2.0	2.1		1	104	80-120	12/30/2009 0240
Cadmium	0.40	0.38		1	95	80-120	12/30/2009 0240
Chromium	2.0	1.9		1	97	80-120	12/30/2009 0240
Lead	0.40	0.37		1	92	80-120	12/30/2009 0240
Selenium	0.40	0.42		1	105	80-120	12/31/2009 0048
Silver	0.40	0.44		1	109	80-120	12/31/2009 0048

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: KQ24099-003

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.39		1	98	0.30	80-120	20	12/30/2009 0245
Barium	2.0	2.1		1	104	0.62	80-120	20	12/30/2009 0245
Cadmium	0.40	0.38		1	95	0.61	80-120	20	12/30/2009 0245
Chromium	2.0	1.9		1	97	0.34	80-120	20	12/30/2009 0245
Lead	0.40	0.35		1	88	4.1	80-120	20	12/30/2009 0245
Selenium	0.40	0.42		1	106	1.3	80-120	20	12/31/2009 0054
Silver	0.40	0.44		1	110	0.80	80-120	20	12/31/2009 0054

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ24024-001

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/21/2009 2132

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: KQ24024-002

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	93	85-115	12/21/2009 2134

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



CVAA - LCSD

Sample ID: KQ24024-003

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0019		1	95	2.1	85-115	20	12/21/2009 2137

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MS

Sample ID: KL18009-001MS

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	ND	0.0020	0.0019		1	95	85-115	12/21/2009 2301

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MSD

Sample ID: KL18009-001MD

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	ND	0.0020	0.0019		1	96	1.1	85-115	20	12/21/2009 2304

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MS

Sample ID: KL18009-002MS

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	ND	0.0020	0.0019		1	94	85-115	12/21/2009 2202

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: LQ25712-001

Matrix: Aqueous

Batch: 25712

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/30/2009 0234
Barium	ND		1	0.025	0.0075	mg/L	12/30/2009 0234
Cadmium	ND		1	0.0020	0.00060	mg/L	12/30/2009 0234
Chromium	0.0038	J	1	0.0050	0.0021	mg/L	12/30/2009 0234
Lead	ND		1	0.010	0.0019	mg/L	12/30/2009 0234
Selenium	ND		1	0.010	0.0026	mg/L	12/30/2009 0234

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: LQ25712-002

Matrix: Aqueous

Batch: 25712

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.39		1	98	80-120	12/30/2009 0240
Barium	2.0	2.1		1	104	80-120	12/30/2009 0240
Cadmium	0.40	0.38		1	95	80-120	12/30/2009 0240
Chromium	2.0	1.9		1	97	80-120	12/30/2009 0240
Lead	0.40	0.37		1	92	80-120	12/30/2009 0240
Selenium	0.40	0.35		1	88	80-120	12/30/2009 0240
Silver	0.40	0.42		1	104	80-120	12/30/2009 0240

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: LQ25712-003

Matrix: Aqueous

Batch: 25712

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.39		1	98	0.30	80-120	20	12/30/2009 0245
Barium	2.0	2.1		1	104	0.62	80-120	20	12/30/2009 0245
Cadmium	0.40	0.38		1	95	0.61	80-120	20	12/30/2009 0245
Chromium	2.0	1.9		1	97	0.34	80-120	20	12/30/2009 0245
Lead	0.40	0.35		1	88	4.1	80-120	20	12/30/2009 0245
Selenium	0.40	0.34		1	86	2.7	80-120	20	12/30/2009 0245
Silver	0.40	0.42		1	106	1.4	80-120	20	12/30/2009 0245

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: LQ25713-001

Matrix: Aqueous

Batch: 25713

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/23/2009 1800

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/30/2009 2137
Barium	ND		1	0.025	0.0075	mg/L	12/31/2009 0304
Cadmium	ND		1	0.0020	0.00060	mg/L	12/31/2009 0304
Chromium	ND		1	0.0050	0.0021	mg/L	12/31/2009 2003
Lead	ND		1	0.010	0.0019	mg/L	12/31/2009 0304
Selenium	ND		1	0.010	0.0026	mg/L	12/31/2009 0304
Silver	ND		1	0.0050	0.00040	mg/L	12/30/2009 2137

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - LCS

Sample ID: LQ25713-002

Matrix: Aqueous

Batch: 25713

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/23/2009 1800

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.40		1	99	80-120	12/30/2009 2142
Barium	2.0	2.1		1	106	80-120	12/31/2009 0310
Cadmium	0.40	0.42		1	104	80-120	12/31/2009 0310
Chromium	2.0	2.2		1	110	80-120	12/31/2009 2009
Lead	0.40	0.39		1	96	80-120	12/31/2009 0310
Selenium	0.40	0.42		1	105	80-120	12/31/2009 0310
Silver	0.40	0.42		1	104	80-120	12/30/2009 2142

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: LQ25713-003

Matrix: Aqueous

Batch: 25713

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/23/2009 1800

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.40		1	99	0.19	80-120	20	12/30/2009 2148
Barium	2.0	2.1		1	105	0.81	80-120	20	12/31/2009 0316
Cadmium	0.40	0.41		1	104	0.35	80-120	20	12/31/2009 0316
Chromium	2.0	2.2		1	110	0.17	80-120	20	12/31/2009 2015
Lead	0.40	0.38		1	95	1.3	80-120	20	12/31/2009 0316
Selenium	0.40	0.42		1	105	0.0024	80-120	20	12/31/2009 0316
Silver	0.40	0.41		1	103	1.0	80-120	20	12/30/2009 2148

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MS

Sample ID: KL18009-013MS

Matrix: Aqueous

Batch: 25713

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/23/2009 1800

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	ND	0.40	0.40		1	101	75-125	12/30/2009 2200
Barium	0.024	2.0	2.2		1	107	75-125	12/31/2009 0328
Cadmium	ND	0.40	0.42		1	104	75-125	12/31/2009 0328
Chromium	ND	2.0	2.2		1	110	75-125	12/31/2009 2026
Lead	ND	0.40	0.39		1	96	75-125	12/31/2009 0328
Selenium	ND	0.40	0.41		1	102	75-125	12/31/2009 0328
Silver	ND	0.40	0.42		1	104	75-125	12/30/2009 2200

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MSD

Sample ID: KL18009-013MD

Matrix: Aqueous

Batch: 25713

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/23/2009 1800

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	ND	0.40	0.41		1	102	1.3	75-125	20	12/30/2009 2206
Barium	0.024	2.0	2.2		1	107	0.38	75-125	20	12/31/2009 0334
Cadmium	ND	0.40	0.42		1	105	0.59	75-125	20	12/31/2009 0334
Chromium	ND	2.0	2.2		1	110	0.50	75-125	20	12/31/2009 2032
Lead	ND	0.40	0.39		1	98	1.5	75-125	20	12/31/2009 0334
Selenium	ND	0.40	0.42		1	104	1.8	75-125	20	12/31/2009 0334
Silver	ND	0.40	0.43		1	106	2.0	75-125	20	12/30/2009 2206

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: LQ25709-001

Batch: 25709

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/21/2009 2132

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: LQ25709-002

Batch: 25709

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	93	85-115	12/21/2009 2134

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCSD

Sample ID: LQ25709-003

Matrix: Aqueous

Batch: 25709

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0019		1	95	2.1	85-115	20	12/21/2009 2137

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: LQ25710-001

Batch: 25710

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 12/23/2009 1600

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/23/2009 1901

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# CVAA - LCS

Sample ID: LQ25710-002

Matrix: Aqueous

Batch: 25710

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/23/2009 1600

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	96	85-115	12/23/2009 1903

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: LQ25710-003

Matrix: Aqueous

Batch: 25710

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/23/2009 1600

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0019		1	96	0.00	85-115	20	12/23/2009 1906

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Chain of Custody Record

## SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive  
West Columbia, South Carolina 29172  
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 101505

Client: **ARCADIS** Telephone No. / Fax No. / E-mail: **864-957-3900** Quote No. \_\_\_\_\_  
 Address: **2849 PACES FERRY RD** Waybill No. \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_  
 City: **ATLANTA** State: **GA** Zip Code: **30339**  
 Project Name: **HUNTER - HAAOI REPORT** Printed Name: **JANEY CHRISTY**  
 Project No.: \_\_\_\_\_ No. of Containers by Preservative Type: \_\_\_\_\_  
 Sample ID / Description: **GP08 HAFS-HOIB-NALIN** Matrix: \_\_\_\_\_  
 (Containers for each sample may be combined on one line.)

Sample ID / Description	Date	Time	Matrix					No. of Containers by Preservative Type					Lot No.	Remarks / Cooler I.D.						
			Agonics	Sox	Acid	Alc	Other	MSDS	HMB	ACH	MCH	603 ML								
COE-MW-06 (121709)	12/17/09	0930	G	X								2	1	3	X	X	X			
COE-MW-05 (121709)	12/17/09	1105	G	X								2	1	3	X	X	X			
HAAOI-MW-11 (121709)	12/17/09	1220	G	X								2	1	3	X	X	X			
HAAOI-MW-12 (121709)	12/17/09	1330	G	X								2	1	3	X	X	X			
HAAOI-MW-12D (121709)	12/17/09	1510	G	X								2	1	3	X	X	X			
TBI (121709)	12/17/09	0800	G	X								2			X					

Procedure Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT): \_\_\_\_\_  
 A Standard / Rush (Specify): \_\_\_\_\_  
 1. Relinquished by: *[Signature]*  
 2. Relinquished by: *[Signature]*  
 3. Relinquished by: **FEDDY**  
 Date: **12/17/09** Time: **1100**  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: **12/18/09** Time: **0836**  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Laboratory received by: *[Signature]*  
 Date: **12/18/09** Time: **0836**  
 Receipt Temp: **5-1** °C  
 IAS (USE ONLY) Received on lbs (Circle)  No lbs Pack

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Samples; PINK-Field/Client Copy  
 Document Number: F-a-D-012 Effective Date: 08-04-02



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 101526

Client: **ARCADIS**  
 Address: **2849 Paces Ferry Rd**  
 City: **Atlanta** State: **GA** Zip Code: **30339**  
 Project Name: **Hunter - HAA-01**  
 Project No.: **GPOEHAFS.H01B.NALTM**  
 Sample ID / Description: **(Containers for each sample may be combined on one line.)**

Report to Contact: **Janet Christy**  
 Sampler's Signature: *[Signature]*  
 Printed Name: **Erica Maddox**

Telephone No. / Fax No. / E-mail: **804-957-3900**  
 Website No.: \_\_\_\_\_  
 Analysis (Attach list if more space is needed):  
**VOCS**  
**PCRA METALS**  
**RESIDUES**

Sample ID / Description	Date	Time	Matrix						No. of Containers by Preservative Type	Lot No.				
			Agar	Solid	Liquor	Filter	HW	OC			ACM	GC		
HMW-10 (12-17-09)	12-17-09	1046	G	X					X					
HAA01-MW-15 (12-17-09)		1225	G	X					X	X				
COE-MW-4 (12-17-09)		1355	G	X					X	X				
HMW-13 (12-17-09)		1521	G	X					X					
IB-02 (121709)		1000	S	X										

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown

Turn Around Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify): \_\_\_\_\_

Retrieved by: *[Signature]*  
 Date: 12/17/09 Time: 1900

Retrieved by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Retrieved by: \_\_\_\_\_ Date: 12-18-09 Time: 0800

Sample Disposal:  Return to Client  Disposal by Lab

QC Requirements (Specify): \_\_\_\_\_

LAB USE ONLY  
 Received on Ice (Circle) Yes  No  Ice Pack

Receipt Temp: 5 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-012 Effective Date: 08-04-02

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Arcadis Cooler Inspected by/date: ee 12/18/09 Lot #: KL18009

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt <u>5-1</u> °C / °C / °C / °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number)			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH <sub>3</sub> /TKN/cyanide/BNA/pest/PCB/herb.			
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.			

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee:

Date of response:

Comments: - VOA vial med broken for COC-MW-4 (-009)  
ee 12/18/09



**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 751-9111

**Number 101558**

Client: **ARCADIS**  
 Address: **2014 Paces Ferry Rd**  
 City: **Atlanta** State: **GA** Zip Code: **30339**  
 Project Name: **GSP08HAPS.101B.NALTM**  
 Project No: **Hunter-HAA-01**  
 Sample ID / Description: **HAA01-MW-10 (121709)**  
 Date: **12/17/09**  
 Time: **1655**  
 M.G. No.: **TB-04 (121709)**

Report to Contact: **Jarret Christy**  
 Computer's Signature: **[Signature]**  
 Printed Name: **Erica Maddox**

Sample ID / Description	Date	Time	Matrix	No. of Containers by Preservation Type								
				ASAP	REF	ICE	COOL	W/ACID	W/ALC	W/ACID		
HAA01-MW-10 (121709)	12/17/09	1655	X						3			
HMW-21 (121709)			X		2				1			
TB-04 (121709)			X						3			

Analysis (Attach just if more space is needed.)

1218009  
 Lot No.  
 K11811  
 Revision / Container ID

DCS  
 RCM  
 PFC  
 MMS  
 SCS

Telephone No. / Fax No. / E-mail: **864-457-3400**  
 Worksheet No.: **1** of **1**

NOTE: All samples are returned by air excepts from receipt unless other arrangements are made.  
 Note: All samples are returned by air excepts from receipt unless other arrangements are made.

Sample Disposal:  Return to Client  Disposed by Lab

QC Requirements (Specify):

1. Requested by: **Fedex** Date: **12/17/09** Time: **1400**  
 2. Received by: **[Signature]** Date: **12/18/09** Time: **0834**

3. Refrigerated by: **FUD04** Date: **12/18/09** Time: **0834**

Comments: **LAB USE ONLY**  
 Received on ice (Celsius) No. Avg. Frost **2.5 °C**

DISTRIBUTION: WHITE & YELLOW (Return to laboratory with Sample); PINK (Field/Client Copy)

Document Number: F-9-D-012 Effective Date: 09-04-08

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Arcadis Cooler Inspected by/date: ECR 12/18/09 Lot #: KL18011

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt: <u>2.5</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	10. Did all container (label) information (ID, date, time) agree with COC?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	13. Were all samples received within 1/3 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17. Were all metals/Cd/G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.		

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_

**SHEALY ENVIRONMENTAL SERVICES, INC.**  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 101525

**SHEALY Chain of Custody Record**

Client: <b>ARCADIS</b>		Report to Cardiac: <b>Janet Christy</b>		Telephone No. / Fax No. / E-mail: <b>864-957-3900</b>		Order No.	
Address: <b>2849 Paces Ferry Rd</b>		Sampler's Signature: <i>[Signature]</i>		Whysol No.		Page 1 of 1	
City: <b>Atlanta</b>		Printer Name: <b>Erica Maddox</b>		Analysis (Attach list if more space is needed.)		Lot No. <b>KL18009</b>	
Project Name: <b>HUNTER - HAA-01</b>		F.O. No.		Matrix		Remains / Cooler ID.	
Project No. <b>SP08HAFS.H01B.NALTM</b>		Date		No. of Containers by Preservative Type		KL16017 NMS	
Sample ID / Description		Time		3 3 3 3 3 3 2		KL14150	
HMW-4 (121709)		12/17/09 0930 X		3		SUCS	
HAA01-MW-17 (121709)		1150 X		3		SUCS	
HMW-24 (121709)		1315 X		3		SUCS	
HMW-23 (121709)		1420 X		3		SUCS	
HMW-16 (121709)		1540 X		3		SUCS	
HAA01-MW-16 (121709)		0923 X		3		SUCS	
IB-03 (121709)		0900 X		2		SUCS	
Signature: <i>[Signature]</i>		Date: <b>12/17/09</b>		Sample Disposal:		Note: All samples are retained for six weeks from receipt unless other arrangements are made.	
Requested by: <b>Erica Maddox</b>		Date: <b>12/17/09 1900</b>		Return to Client: <input type="checkbox"/> Disposal by Lab: <input type="checkbox"/>		CC Requirements (Specify):	
Requested by: <b>Erica Maddox</b>		Date: <b>12/18/09 0830</b>		1. Forwarded by: <b>Fedex</b>		2. Received by:	
Requested by: <b>FEDAL</b>		Date: <b>12/18/09 0830</b>		3. Laboratory received by: <i>[Signature]</i>		LAB USE ONLY	
Comments:		Received on site (Circle) <input checked="" type="checkbox"/> No. <b>3</b> Lab Pack		Received on site (Circle) <input type="checkbox"/> No. <b>3</b> Lab Pack		Temp: <b>3.3</b> °C	

DISTRIBUTION: WHITE & YELLOW Return to laboratory with Sample(s); PINK FieldClient Copy  
 Document Number: F-40-012 Effective Date: 08-04-02



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 5

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/09/07

## Sample Receipt Checklist (SRC)

Client: Aracadi Cooler inspected by/date: Eric Mishog Lot #: KL18017

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt: <u>3 B</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)? <i>See Comments</i>	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	16. Were bubbles present > "pea-size" (1/4 or 6mm in diameter) in any VOA vials?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/gest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		
Toxicity sample(s) _____ were received with TRC > 0.1 mg/L and were analyzed by method 330.5.		

**Corrective Action taken, if necessary:**

Was client notified: Yes  No  Did client respond: Yes  No   
 SESI employee: \_\_\_\_\_ Date of response: \_\_\_\_\_  
 Comments: 1 VOA vial neck broken for MW 17 (-002) & MW 10 (-006)  
all 3 vials (VOA) & 1 SUOA bottle neck broken for MW 23 (-004)  
Eric 12/18/09

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Janet Christy

Project Name: Hunter HAA-01

Project Number: GP08HAFS.H01B.NALTM

Lot Number: KL18017

Date Completed: 01/08/2010



Nisreen Saikaly  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* KL18017 \***

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DEHNR No: 329

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## Case Narrative ARCADIS U.S., Inc. Lot Number: KL18017

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

### SVOC

Sample -003 was run at a 2X dilution. The extract of this sample was black and viscous.

The surrogate recovery of sample -004 was outside acceptance limits. One bottle for this sample was received broken. No sample remained for re- extraction.

### VOC

The LCS recovery for 1,2,4-Trichlorobenzene was outside method control limits in batch 24494. The LCSD results were within limits. Therefore the associated sample results were reported and no corrective action was required.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary ARCADIS U.S., Inc. Lot Number: KL18017

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HMW-4 (121709)	Aqueous	12/17/2009 0920	12/18/2009
002	HAA01-MW-17 (121709)	Aqueous	12/17/2009 1150	12/18/2009
003	HMW-24 (121709)	Aqueous	12/17/2009 1315	12/18/2009
004	HMW-23 (121709)	Aqueous	12/17/2009 1420	12/18/2009
005	HMW-6 (121709)	Aqueous	12/17/2009 1540	12/18/2009
006	HAA01-MW-16 (121709)	Aqueous	12/17/2009 0923	12/18/2009
007	TB-03 (121709)	Aqueous	12/17/2009 0900	12/18/2009

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(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: KL18017

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	HMW-4 (121709)	Aqueous	Acetone	8260B	2.4	J	ug/L	5
002	HAA01-MW-17 (121709)	Aqueous	Acetone	8260B	5.6	J	ug/L	7
003	HMW-24 (121709)	Aqueous	Acetone	8260B	9.4	J	ug/L	9
003	HMW-24 (121709)	Aqueous	Benzene	8260B	4.9		ug/L	9
003	HMW-24 (121709)	Aqueous	Ethylbenzene	8260B	2.1		ug/L	9
003	HMW-24 (121709)	Aqueous	2-Hexanone	8260B	5.1	J	ug/L	9
003	HMW-24 (121709)	Aqueous	Isopropylbenzene	8260B	3.1		ug/L	9
003	HMW-24 (121709)	Aqueous	2-Methylnaphthalene	8270D	0.40	J	ug/L	12
003	HMW-24 (121709)	Aqueous	Naphthalene	8270D	3.2		ug/L	12
004	HMW-23 (121709)	Aqueous	4-Chloroaniline	8270D	25		ug/L	13
004	HMW-23 (121709)	Aqueous	2-Methylnaphthalene	8270D	9.7		ug/L	14
004	HMW-23 (121709)	Aqueous	Naphthalene	8270D	58		ug/L	14
005	HMW-6 (121709)	Aqueous	Acetone	8260B	1.8	J	ug/L	15
006	HAA01-MW-16 (121709)	Aqueous	Acetone	8260B	2.1	J	ug/L	19
006	HAA01-MW-16 (121709)	Aqueous	Barium	6010C	0.072		mg/L	25
007	TB-03 (121709)	Aqueous	Acetone	8260B	1.2	J	ug/L	26

(16 detections)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-001

Description: HMW-4 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0920

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0135	RRH		24494			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	2.4	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-001
Description: HMW-4 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0920	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0135	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-002

Description: HAA01-MW-17 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1150

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0156	RRH		24494		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	5.6	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-002
Description: HAA01-MW-17 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1150	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0156	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-003

Description: HMW-24 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1315

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0217	RRH		24494			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	9.4	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	4.9		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	2.1		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	5.1	J	10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	3.1		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-003
Description: HMW-24 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1315	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0217	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-003

Description: HMW-24 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1315

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch									
1	3520C	8270D	2	01/08/2010 0025	MZ	12/24/2009 2015	24263	Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
								Acenaphthene	83-32-9	8270D	ND		2.0	0.18	ug/L	1
								Acenaphthylene	208-96-8	8270D	ND		2.0	0.32	ug/L	1
								Acetophenone	98-86-2	8270D	ND		2.0	0.64	ug/L	1
								Anthracene	120-12-7	8270D	ND		2.0	0.26	ug/L	1
								Atrazine	1912-24-9	8270D	ND		2.0	0.40	ug/L	1
								Benzaldehyde	100-52-7	8270D	ND		10	2.0	ug/L	1
								Benzo(a)anthracene	56-55-3	8270D	ND		2.0	0.30	ug/L	1
								Benzo(a)pyrene	50-32-8	8270D	ND		2.0	0.32	ug/L	1
								Benzo(b)fluoranthene	205-99-2	8270D	ND		2.0	0.40	ug/L	1
								Benzo(g,h,i)perylene	191-24-2	8270D	ND		2.0	0.46	ug/L	1
								Benzo(k)fluoranthene	207-08-9	8270D	ND		2.0	0.24	ug/L	1
								1,1'-Biphenyl	92-52-4	8270D	ND		2.0	0.40	ug/L	1
								4-Bromophenyl phenyl ether	101-55-3	8270D	ND		2.0	0.24	ug/L	1
								Butyl benzyl phthalate	85-68-7	8270D	ND		10	3.4	ug/L	1
								Caprolactam	105-60-2	8270D	ND		10	2.4	ug/L	1
								Carbazole	86-74-8	8270D	ND		2.0	0.50	ug/L	1
								4-Chloro-3-methyl phenol	59-50-7	8270D	ND		2.0	0.44	ug/L	1
								4-Chloroaniline	106-47-8	8270D	ND		2.0	0.26	ug/L	1
								bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		2.0	0.26	ug/L	1
								bis(2-Chloroethyl)ether	111-44-4	8270D	ND		2.0	0.26	ug/L	1
								bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		2.0	0.16	ug/L	1
								2-Chloronaphthalene	91-58-7	8270D	ND		2.0	0.24	ug/L	1
								2-Chlorophenol	95-57-8	8270D	ND		2.0	0.26	ug/L	1
								4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		2.0	0.22	ug/L	1
								Chrysene	218-01-9	8270D	ND		2.0	0.24	ug/L	1
								Dibenzo(a,h)anthracene	53-70-3	8270D	ND		2.0	0.26	ug/L	1
								Dibenzofuran	132-64-9	8270D	ND		2.0	0.32	ug/L	1
								3,3'-Dichlorobenzidine	91-94-1	8270D	ND		10	1.6	ug/L	1
								2,4-Dichlorophenol	120-83-2	8270D	ND		2.0	0.30	ug/L	1
								Diethylphthalate	84-66-2	8270D	ND		10	3.4	ug/L	1
								Dimethyl phthalate	131-11-3	8270D	ND		10	3.4	ug/L	1
								2,4-Dimethylphenol	105-67-9	8270D	ND		2.0	0.62	ug/L	1
								Di-n-butyl phthalate	84-74-2	8270D	ND		10	3.4	ug/L	1
								4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		10	3.0	ug/L	1
								2,4-Dinitrophenol	51-28-5	8270D	ND		10	0.50	ug/L	1
								2,4-Dinitrotoluene	121-14-2	8270D	ND		4.0	0.90	ug/L	1
								2,6-Dinitrotoluene	606-20-2	8270D	ND		4.0	0.80	ug/L	1
								Di-n-octylphthalate	117-84-0	8270D	ND		10	3.4	ug/L	1
								bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		10	3.4	ug/L	1
								Fluoranthene	206-44-0	8270D	ND		2.0	0.42	ug/L	1
								Fluorene	86-73-7	8270D	ND		2.0	0.20	ug/L	1
								Hexachlorobenzene	118-74-1	8270D	ND		2.0	0.42	ug/L	1
								Hexachlorobutadiene	87-68-3	8270D	ND		2.0	0.18	ug/L	1
								Hexachlorocyclopentadiene	77-47-4	8270D	ND		10	0.46	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-003
Description: HMW-24 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1315	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	2	01/08/2010 0025	MZ	12/24/2009 2015	24263

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		2.0	0.22	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		2.0	0.46	ug/L	1
Isophorone	78-59-1	8270D	ND		2.0	0.16	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	0.40	J	2.0	0.16	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		2.0	0.34	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		4.0	1.1	ug/L	1
Naphthalene	91-20-3	8270D	3.2		2.0	0.14	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		4.0	1.1	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		4.0	1.5	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		4.0	0.78	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		2.0	0.20	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	0.54	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		10	1.3	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		2.0	0.16	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		2.0	0.76	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		10	1.1	ug/L	1
Phenanthrene	85-01-8	8270D	ND		2.0	0.36	ug/L	1
Phenol	108-95-2	8270D	ND		2.0	0.22	ug/L	1
Pyrene	129-00-0	8270D	ND		2.0	0.32	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		2.0	0.36	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		2.0	0.44	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	37-129
2-Fluorophenol		34	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5	N	20	28-128
Terphenyl-d14		30	10-148
2,4,6-Tribromophenol		52	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-004

Description: HMW-23 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1420

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch									
1	3520C	8270D	2	01/08/2010 0045	MZ	12/24/2009 2015	24263	Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
								Acenaphthene	83-32-9	8270D	ND		2.0	0.18	ug/L	1
								Acenaphthylene	208-96-8	8270D	ND		2.0	0.32	ug/L	1
								Acetophenone	98-86-2	8270D	ND		2.0	0.64	ug/L	1
								Anthracene	120-12-7	8270D	ND		2.0	0.26	ug/L	1
								Atrazine	1912-24-9	8270D	ND		2.0	0.40	ug/L	1
								Benzaldehyde	100-52-7	8270D	ND		10	2.0	ug/L	1
								Benzo(a)anthracene	56-55-3	8270D	ND		2.0	0.30	ug/L	1
								Benzo(a)pyrene	50-32-8	8270D	ND		2.0	0.32	ug/L	1
								Benzo(b)fluoranthene	205-99-2	8270D	ND		2.0	0.40	ug/L	1
								Benzo(g,h,i)perylene	191-24-2	8270D	ND		2.0	0.46	ug/L	1
								Benzo(k)fluoranthene	207-08-9	8270D	ND		2.0	0.24	ug/L	1
								1,1'-Biphenyl	92-52-4	8270D	ND		2.0	0.40	ug/L	1
								4-Bromophenyl phenyl ether	101-55-3	8270D	ND		2.0	0.24	ug/L	1
								Butyl benzyl phthalate	85-68-7	8270D	ND		10	3.4	ug/L	1
								Caprolactam	105-60-2	8270D	ND		10	2.4	ug/L	1
								Carbazole	86-74-8	8270D	ND		2.0	0.50	ug/L	1
								4-Chloro-3-methyl phenol	59-50-7	8270D	ND		2.0	0.44	ug/L	1
								4-Chloroaniline	106-47-8	8270D	25		2.0	0.26	ug/L	1
								bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		2.0	0.26	ug/L	1
								bis(2-Chloroethyl)ether	111-44-4	8270D	ND		2.0	0.26	ug/L	1
								bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		2.0	0.16	ug/L	1
								2-Chloronaphthalene	91-58-7	8270D	ND		2.0	0.24	ug/L	1
								2-Chlorophenol	95-57-8	8270D	ND		2.0	0.26	ug/L	1
								4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		2.0	0.22	ug/L	1
								Chrysene	218-01-9	8270D	ND		2.0	0.24	ug/L	1
								Dibenzo(a,h)anthracene	53-70-3	8270D	ND		2.0	0.26	ug/L	1
								Dibenzofuran	132-64-9	8270D	ND		2.0	0.32	ug/L	1
								3,3'-Dichlorobenzidine	91-94-1	8270D	ND		10	1.6	ug/L	1
								2,4-Dichlorophenol	120-83-2	8270D	ND		2.0	0.30	ug/L	1
								Diethylphthalate	84-66-2	8270D	ND		10	3.4	ug/L	1
								Dimethyl phthalate	131-11-3	8270D	ND		10	3.4	ug/L	1
								2,4-Dimethylphenol	105-67-9	8270D	ND		2.0	0.62	ug/L	1
								Di-n-butyl phthalate	84-74-2	8270D	ND		10	3.4	ug/L	1
								4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		10	3.0	ug/L	1
								2,4-Dinitrophenol	51-28-5	8270D	ND		10	0.50	ug/L	1
								2,4-Dinitrotoluene	121-14-2	8270D	ND		4.0	0.90	ug/L	1
								2,6-Dinitrotoluene	606-20-2	8270D	ND		4.0	0.80	ug/L	1
								Di-n-octylphthalate	117-84-0	8270D	ND		10	3.4	ug/L	1
								bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		10	3.4	ug/L	1
								Fluoranthene	206-44-0	8270D	ND		2.0	0.42	ug/L	1
								Fluorene	86-73-7	8270D	ND		2.0	0.20	ug/L	1
								Hexachlorobenzene	118-74-1	8270D	ND		2.0	0.42	ug/L	1
								Hexachlorobutadiene	87-68-3	8270D	ND		2.0	0.18	ug/L	1
								Hexachlorocyclopentadiene	77-47-4	8270D	ND		10	0.46	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-004

Description: HMW-23 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1420

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	2	01/08/2010 0045	MZ	12/24/2009 2015	24263			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Hexachloroethane	67-72-1	8270D	ND		2.0	0.22	ug/L	1		
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		2.0	0.46	ug/L	1		
Isophorone	78-59-1	8270D	ND		2.0	0.16	ug/L	1		
2-Methylnaphthalene	91-57-6	8270D	9.7		2.0	0.16	ug/L	1		
2-Methylphenol	95-48-7	8270D	ND		2.0	0.34	ug/L	1		
3 & 4-Methylphenol	106-44-5	8270D	ND		4.0	1.1	ug/L	1		
Naphthalene	91-20-3	8270D	58		2.0	0.14	ug/L	1		
2-Nitroaniline	88-74-4	8270D	ND		4.0	1.1	ug/L	1		
3-Nitroaniline	99-09-2	8270D	ND		4.0	1.5	ug/L	1		
4-Nitroaniline	100-01-6	8270D	ND		4.0	0.78	ug/L	1		
Nitrobenzene	98-95-3	8270D	ND		2.0	0.20	ug/L	1		
2-Nitrophenol	88-75-5	8270D	ND		4.0	0.54	ug/L	1		
4-Nitrophenol	100-02-7	8270D	ND		10	1.3	ug/L	1		
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		2.0	0.16	ug/L	1		
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		2.0	0.76	ug/L	1		
Pentachlorophenol	87-86-5	8270D	ND		10	1.1	ug/L	1		
Phenanthrene	85-01-8	8270D	ND		2.0	0.36	ug/L	1		
Phenol	108-95-2	8270D	ND		2.0	0.22	ug/L	1		
Pyrene	129-00-0	8270D	ND		2.0	0.32	ug/L	1		
2,4,5-Trichlorophenol	95-95-4	8270D	ND		2.0	0.36	ug/L	1		
2,4,6-Trichlorophenol	88-06-2	8270D	ND		2.0	0.44	ug/L	1		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		47	37-129
2-Fluorophenol	N	0.70	24-127
Nitrobenzene-d5		58	38-127
Phenol-d5		34	28-128
Terphenyl-d14		38	10-148
2,4,6-Tribromophenol		59	41-144

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-005

Description: HMW-6 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1540

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0238	RRH		24494		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	1.8	J	10	0.061	ug/L	1	
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1	
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1	
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1	
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1	
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1	
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-005
Description: HMW-6 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 1540	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0238	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-005

Description: HMW-6 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1540

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/06/2010 0117	MZ	12/24/2009 2015	24263			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acenaphthene	83-32-9	8270D	ND		1.0	0.090	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1		
Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1		
Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1		
Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		5.0	1.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1		
1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		5.0	1.7	ug/L	1		
Caprolactam	105-60-2	8270D	ND		5.0	1.2	ug/L	1		
Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1		
bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.080	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1		
Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1		
Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.0	0.81	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1		
Diethylphthalate	84-66-2	8270D	ND		5.0	1.7	ug/L	1		
Dimethyl phthalate	131-11-3	8270D	ND		5.0	1.7	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1		
Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	1.7	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.0	1.5	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		5.0	0.25	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1		
Di-n-octylphthalate	117-84-0	8270D	ND		5.0	1.7	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	1.7	ug/L	1		
Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1		
Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1		
Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1		
Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.090	ug/L	1		
Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.0	0.23	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-005

Description: HMW-6 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 1540

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/06/2010 0117	MZ	12/24/2009 2015	24263			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.080	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.080	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.57	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.070	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.55	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.77	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.0	0.64	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.080	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.0	0.54	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		50	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		48	38-127
Phenol-d5		35	28-128
Terphenyl-d14		27	10-148
2,4,6-Tribromophenol		63	41-144

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-006

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	12/30/2009 0259	RRH		24494		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.1	J	10	0.061	ug/L	1
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-006
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0259	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-006

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch									
1	3520C	8270D	1	01/06/2010 0137	MZ	12/24/2009 2015	24263	Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
								Acenaphthene	83-32-9	8270D	ND		1.0	0.090	ug/L	1
								Acenaphthylene	208-96-8	8270D	ND		1.0	0.16	ug/L	1
								Acetophenone	98-86-2	8270D	ND		1.0	0.32	ug/L	1
								Anthracene	120-12-7	8270D	ND		1.0	0.13	ug/L	1
								Atrazine	1912-24-9	8270D	ND		1.0	0.20	ug/L	1
								Benzaldehyde	100-52-7	8270D	ND		5.0	1.0	ug/L	1
								Benzo(a)anthracene	56-55-3	8270D	ND		1.0	0.15	ug/L	1
								Benzo(a)pyrene	50-32-8	8270D	ND		1.0	0.16	ug/L	1
								Benzo(b)fluoranthene	205-99-2	8270D	ND		1.0	0.20	ug/L	1
								Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.0	0.23	ug/L	1
								Benzo(k)fluoranthene	207-08-9	8270D	ND		1.0	0.12	ug/L	1
								1,1'-Biphenyl	92-52-4	8270D	ND		1.0	0.20	ug/L	1
								4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.0	0.12	ug/L	1
								Butyl benzyl phthalate	85-68-7	8270D	ND		5.0	1.7	ug/L	1
								Caprolactam	105-60-2	8270D	ND		5.0	1.2	ug/L	1
								Carbazole	86-74-8	8270D	ND		1.0	0.25	ug/L	1
								4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.0	0.22	ug/L	1
								4-Chloroaniline	106-47-8	8270D	ND		1.0	0.13	ug/L	1
								bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.0	0.13	ug/L	1
								bis(2-Chloroethyl)ether	111-44-4	8270D	ND		1.0	0.13	ug/L	1
								bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.0	0.080	ug/L	1
								2-Chloronaphthalene	91-58-7	8270D	ND		1.0	0.12	ug/L	1
								2-Chlorophenol	95-57-8	8270D	ND		1.0	0.13	ug/L	1
								4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.0	0.11	ug/L	1
								Chrysene	218-01-9	8270D	ND		1.0	0.12	ug/L	1
								Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.0	0.13	ug/L	1
								Dibenzofuran	132-64-9	8270D	ND		1.0	0.16	ug/L	1
								3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.0	0.81	ug/L	1
								2,4-Dichlorophenol	120-83-2	8270D	ND		1.0	0.15	ug/L	1
								Diethylphthalate	84-66-2	8270D	ND		5.0	1.7	ug/L	1
								Dimethyl phthalate	131-11-3	8270D	ND		5.0	1.7	ug/L	1
								2,4-Dimethylphenol	105-67-9	8270D	ND		1.0	0.31	ug/L	1
								Di-n-butyl phthalate	84-74-2	8270D	ND		5.0	1.7	ug/L	1
								4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.0	1.5	ug/L	1
								2,4-Dinitrophenol	51-28-5	8270D	ND		5.0	0.25	ug/L	1
								2,4-Dinitrotoluene	121-14-2	8270D	ND		2.0	0.45	ug/L	1
								2,6-Dinitrotoluene	606-20-2	8270D	ND		2.0	0.40	ug/L	1
								Di-n-octylphthalate	117-84-0	8270D	ND		5.0	1.7	ug/L	1
								bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		5.0	1.7	ug/L	1
								Fluoranthene	206-44-0	8270D	ND		1.0	0.21	ug/L	1
								Fluorene	86-73-7	8270D	ND		1.0	0.10	ug/L	1
								Hexachlorobenzene	118-74-1	8270D	ND		1.0	0.21	ug/L	1
								Hexachlorobutadiene	87-68-3	8270D	ND		1.0	0.090	ug/L	1
								Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.0	0.23	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-006

Description: HAA01-MW-16 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0923

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	3520C	8270D	1	01/06/2010 0137	MZ	12/24/2009 2015	24263			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		1.0	0.11	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.0	0.23	ug/L	1
Isophorone	78-59-1	8270D	ND		1.0	0.080	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		1.0	0.080	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		1.0	0.17	ug/L	1
3 & 4-Methylphenol	106-44-5	8270D	ND		2.0	0.57	ug/L	1
Naphthalene	91-20-3	8270D	ND		1.0	0.070	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.0	0.55	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.0	0.77	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.0	0.39	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.0	0.10	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.0	0.27	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.0	0.64	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.0	0.080	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.0	0.38	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.0	0.54	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.0	0.18	ug/L	1
Phenol	108-95-2	8270D	ND		1.0	0.11	ug/L	1
Pyrene	129-00-0	8270D	ND		1.0	0.16	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.0	0.18	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.0	0.22	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		51	37-129
2-Fluorophenol		50	24-127
Nitrobenzene-d5		50	38-127
Phenol-d5		38	28-128
Terphenyl-d14		51	10-148
2,4,6-Tribromophenol		55	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-006
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	01/01/2010 0338	NCM	12/23/2009 1413	24180

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND		0.028	0.0022	ug/L	1
alpha-BHC	319-84-6	8081B	ND		0.028	0.0033	ug/L	1
beta-BHC	319-85-7	8081B	ND		0.028	0.021	ug/L	1
delta-BHC	319-86-8	8081B	ND		0.028	0.0089	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.028	0.0056	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND		0.028	0.0033	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND		0.028	0.0033	ug/L	1
4,4'-DDD	72-54-8	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDE	72-55-9	8081B	ND		0.028	0.0067	ug/L	1
4,4'-DDT	50-29-3	8081B	ND		0.028	0.0033	ug/L	1
Dieldrin	60-57-1	8081B	ND		0.028	0.0044	ug/L	1
Endosulfan I	959-98-8	8081B	ND		0.028	0.0067	ug/L	1
Endosulfan II	33213-65-9	8081B	ND		0.028	0.027	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND		0.028	0.0033	ug/L	1
Endrin	72-20-8	8081B	ND		0.028	0.0056	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND		0.028	0.0033	ug/L	1
Endrin ketone	53494-70-5	8081B	ND		0.028	0.0044	ug/L	1
Heptachlor	76-44-8	8081B	ND		0.028	0.022	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND		0.028	0.0033	ug/L	1
Methoxychlor	72-43-5	8081B	ND		0.11	0.016	ug/L	1
Toxaphene	8001-35-2	8081B	ND		0.28	0.033	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		69	49-124
Tetrachloro-m-xylene		85	58-122

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time



# CVAA

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-006
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/21/2009 2221	BNW	12/21/2009 1535	24024

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Mercury	7439-97-6	7470A	ND	0.00010	0.000053		mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# RCRA Metals

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-006
Description: HAA01-MW-16 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0923	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010C	1	12/30/2009 0506	CDF	12/22/2009 1500	24099

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.072		0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	1
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: KL18017-007

Description: TB-03 (121709)

Matrix: Aqueous

Date Sampled: 12/17/2009 0900

Date Received: 12/18/2009

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	12/30/2009 0320	RRH		24494			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	1.2	J	10	0.061	ug/L	1		
Benzene	71-43-2	8260B	ND		0.50	0.027	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		0.50	0.17	ug/L	1		
Bromoform	75-25-2	8260B	ND		0.50	0.010	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		0.50	0.20	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		0.50	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		0.50	0.085	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		0.50	0.17	ug/L	1		
Chloroethane	75-00-3	8260B	ND		0.50	0.17	ug/L	1		
Chloroform	67-66-3	8260B	ND		0.50	0.17	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		0.50	0.17	ug/L	1		
Cyclohexane	110-82-7	8260B	ND		0.50	0.30	ug/L	1		
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		0.50	0.069	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		0.50	0.061	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		0.50	0.17	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		0.50	0.17	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		0.50	0.17	ug/L	1		
Dichlorodifluoromethane	75-71-8	8260B	ND		0.50	0.071	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		0.50	0.054	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		0.50	0.023	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		0.50	0.079	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		0.50	0.094	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		0.50	0.087	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		0.50	0.081	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		0.50	0.18	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		0.50	0.090	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		0.50	0.17	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Isopropylbenzene	98-82-8	8260B	ND		0.50	0.029	ug/L	1		
Methyl acetate	79-20-9	8260B	ND		1.0	0.30	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		0.50	0.019	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.95	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		0.50	0.17	ug/L	1		
Styrene	100-42-5	8260B	ND		0.50	0.015	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		0.50	0.013	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		0.50	0.014	ug/L	1		
Toluene	108-88-3	8260B	ND		0.50	0.17	ug/L	1		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		0.50	0.30	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		0.50	0.17	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		0.50	0.029	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		0.50	0.031	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

H = Out of holding time

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: KL18017-007
Description: TB-03 (121709)	Matrix: Aqueous
Date Sampled: 12/17/2009 0900	
Date Received: 12/18/2009	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/30/2009 0320	RRH		24494

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		0.50	0.024	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		0.50	0.051	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		0.50	0.065	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		0.50	0.17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      N = Recovery is out of criteria      H = Out of holding time

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24494-001

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	10	0.061	ug/L	12/29/2009 2225
Benzene	ND		1	0.50	0.027	ug/L	12/29/2009 2225
Bromodichloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Bromoform	ND		1	0.50	0.010	ug/L	12/29/2009 2225
Bromomethane (Methyl bromide)	ND		1	0.50	0.20	ug/L	12/29/2009 2225
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/29/2009 2225
Carbon disulfide	ND		1	0.50	0.097	ug/L	12/29/2009 2225
Carbon tetrachloride	ND		1	0.50	0.085	ug/L	12/29/2009 2225
Chlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloroform	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Chloromethane (Methyl chloride)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Cyclohexane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	0.50	0.069	ug/L	12/29/2009 2225
Dibromochloromethane	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dibromoethane (EDB)	ND		1	0.50	0.061	ug/L	12/29/2009 2225
1,4-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,2-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,3-Dichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Dichlorodifluoromethane	ND		1	0.50	0.071	ug/L	12/29/2009 2225
1,2-Dichloroethane	ND		1	0.50	0.023	ug/L	12/29/2009 2225
1,1-Dichloroethane	ND		1	0.50	0.054	ug/L	12/29/2009 2225
cis-1,2-Dichloroethene	ND		1	0.50	0.087	ug/L	12/29/2009 2225
1,1-Dichloroethene	ND		1	0.50	0.094	ug/L	12/29/2009 2225
trans-1,2-Dichloroethene	ND		1	0.50	0.079	ug/L	12/29/2009 2225
1,2-Dichloropropane	ND		1	0.50	0.081	ug/L	12/29/2009 2225
cis-1,3-Dichloropropene	ND		1	0.50	0.090	ug/L	12/29/2009 2225
trans-1,3-Dichloropropene	ND		1	0.50	0.18	ug/L	12/29/2009 2225
Ethylbenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
2-Hexanone	ND		1	10	0.27	ug/L	12/29/2009 2225
Isopropylbenzene	ND		1	0.50	0.029	ug/L	12/29/2009 2225
Methyl acetate	ND		1	1.0	0.30	ug/L	12/29/2009 2225
Methyl tertiary butyl ether (MTBE)	ND		1	0.50	0.019	ug/L	12/29/2009 2225
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	12/29/2009 2225
Methylcyclohexane	ND		1	5.0	0.95	ug/L	12/29/2009 2225
Methylene chloride	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Styrene	ND		1	0.50	0.015	ug/L	12/29/2009 2225
1,1,2,2-Tetrachloroethane	ND		1	0.50	0.013	ug/L	12/29/2009 2225
Tetrachloroethene	ND		1	0.50	0.014	ug/L	12/29/2009 2225
Toluene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	0.50	0.30	ug/L	12/29/2009 2225
1,2,4-Trichlorobenzene	ND		1	0.50	0.17	ug/L	12/29/2009 2225
1,1,2-Trichloroethane	ND		1	0.50	0.031	ug/L	12/29/2009 2225
1,1,1-Trichloroethane	ND		1	0.50	0.029	ug/L	12/29/2009 2225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: KQ24494-001

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	0.50	0.024	ug/L	12/29/2009 2225
Trichlorofluoromethane	ND		1	0.50	0.051	ug/L	12/29/2009 2225
Vinyl chloride	ND		1	0.50	0.065	ug/L	12/29/2009 2225
Xylenes (total)	ND		1	0.50	0.17	ug/L	12/29/2009 2225
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		104	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24494-002

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	109	46-153	12/29/2009 2101
Benzene	50	48		1	96	70-130	12/29/2009 2101
Bromodichloromethane	50	55		1	111	70-130	12/29/2009 2101
Bromoform	50	63		1	125	70-130	12/29/2009 2101
Bromomethane (Methyl bromide)	50	57		1	113	60-140	12/29/2009 2101
2-Butanone (MEK)	100	110		1	109	60-140	12/29/2009 2101
Carbon disulfide	50	56		1	113	60-140	12/29/2009 2101
Carbon tetrachloride	50	61		1	123	70-130	12/29/2009 2101
Chlorobenzene	50	50		1	100	70-130	12/29/2009 2101
Chloroethane	50	58		1	116	42-163	12/29/2009 2101
Chloroform	50	52		1	103	70-130	12/29/2009 2101
Chloromethane (Methyl chloride)	50	54		1	107	20-158	12/29/2009 2101
Cyclohexane	50	63		1	127	70-130	12/29/2009 2101
1,2-Dibromo-3-chloropropane (DBCP)	50	62		1	125	70-130	12/29/2009 2101
Dibromochloromethane	50	59		1	119	70-130	12/29/2009 2101
1,2-Dibromoethane (EDB)	50	55		1	109	70-130	12/29/2009 2101
1,4-Dichlorobenzene	50	65		1	129	70-130	12/29/2009 2101
1,2-Dichlorobenzene	50	51		1	101	70-130	12/29/2009 2101
1,3-Dichlorobenzene	50	64		1	128	70-130	12/29/2009 2101
Dichlorodifluoromethane	50	62		1	124	60-140	12/29/2009 2101
1,2-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
1,1-Dichloroethane	50	50		1	101	70-130	12/29/2009 2101
cis-1,2-Dichloroethene	50	50		1	100	70-130	12/29/2009 2101
1,1-Dichloroethene	50	57		1	114	70-130	12/29/2009 2101
trans-1,2-Dichloroethene	50	52		1	105	70-130	12/29/2009 2101
1,2-Dichloropropane	50	51		1	103	70-130	12/29/2009 2101
cis-1,3-Dichloropropene	50	56		1	111	70-130	12/29/2009 2101
trans-1,3-Dichloropropene	50	57		1	115	70-130	12/29/2009 2101
Ethylbenzene	50	53		1	107	70-130	12/29/2009 2101
2-Hexanone	100	100		1	104	60-140	12/29/2009 2101
Isopropylbenzene	50	57		1	114	70-130	12/29/2009 2101
Methyl acetate	50	55		1	111	15-128	12/29/2009 2101
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	12/29/2009 2101
4-Methyl-2-pentanone	100	100		1	101	60-140	12/29/2009 2101
Methylcyclohexane	50	65		1	130	70-130	12/29/2009 2101
Methylene chloride	50	57		1	115	70-130	12/29/2009 2101
Styrene	50	56		1	113	70-130	12/29/2009 2101
1,1,2,2-Tetrachloroethane	50	56		1	112	70-130	12/29/2009 2101
Tetrachloroethene	50	57		1	113	70-130	12/29/2009 2101
Toluene	50	51		1	101	70-130	12/29/2009 2101
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	63		1	126	70-130	12/29/2009 2101
1,2,4-Trichlorobenzene	50	66	N	1	133	70-130	12/29/2009 2101
1,1,2-Trichloroethane	50	54		1	109	70-130	12/29/2009 2101
1,1,1-Trichloroethane	50	57		1	114	70-130	12/29/2009 2101

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24494-002

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	12/29/2009 2101
Trichlorofluoromethane	50	61		1	121	60-140	12/29/2009 2101
Vinyl chloride	50	53		1	105	60-140	12/29/2009 2101
Xylenes (total)	100	110		1	107	70-130	12/29/2009 2101
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		107	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24494-003

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	120		1	116	6.3	46-153	20	12/29/2009 2122
Benzene	50	47		1	95	1.8	70-130	20	12/29/2009 2122
Bromodichloromethane	50	54		1	109	1.9	70-130	20	12/29/2009 2122
Bromoform	50	63		1	126	0.65	70-130	20	12/29/2009 2122
Bromomethane (Methyl bromide)	50	53		1	106	7.0	60-140	20	12/29/2009 2122
2-Butanone (MEK)	100	110		1	113	2.9	60-140	20	12/29/2009 2122
Carbon disulfide	50	57		1	113	0.13	60-140	20	12/29/2009 2122
Carbon tetrachloride	50	61		1	122	1.0	70-130	20	12/29/2009 2122
Chlorobenzene	50	49		1	98	2.2	70-130	20	12/29/2009 2122
Chloroethane	50	58		1	116	0.17	42-163	20	12/29/2009 2122
Chloroform	50	51		1	101	1.5	70-130	20	12/29/2009 2122
Chloromethane (Methyl chloride)	50	55		1	109	1.8	20-158	20	12/29/2009 2122
Cyclohexane	50	62		1	125	1.5	70-130	20	12/29/2009 2122
1,2-Dibromo-3-chloropropane (DBCP)	50	64		1	129	3.3	70-130	20	12/29/2009 2122
Dibromochloromethane	50	59		1	118	0.62	70-130	20	12/29/2009 2122
1,2-Dibromoethane (EDB)	50	54		1	108	0.70	70-130	20	12/29/2009 2122
1,4-Dichlorobenzene	50	63		1	126	2.8	70-130	20	12/29/2009 2122
1,2-Dichlorobenzene	50	49		1	98	2.9	70-130	20	12/29/2009 2122
1,3-Dichlorobenzene	50	63		1	126	2.2	70-130	20	12/29/2009 2122
Dichlorodifluoromethane	50	61		1	121	2.6	60-140	20	12/29/2009 2122
1,2-Dichloroethane	50	50		1	101	0.25	70-130	20	12/29/2009 2122
1,1-Dichloroethane	50	50		1	100	0.67	70-130	20	12/29/2009 2122
cis-1,2-Dichloroethene	50	49		1	99	1.1	70-130	20	12/29/2009 2122
1,1-Dichloroethene	50	57		1	114	0.27	70-130	20	12/29/2009 2122
trans-1,2-Dichloroethene	50	52		1	103	1.4	70-130	20	12/29/2009 2122
1,2-Dichloropropane	50	51		1	102	0.95	70-130	20	12/29/2009 2122
cis-1,3-Dichloropropene	50	55		1	110	1.4	70-130	20	12/29/2009 2122
trans-1,3-Dichloropropene	50	57		1	114	0.32	70-130	20	12/29/2009 2122
Ethylbenzene	50	52		1	104	2.4	70-130	20	12/29/2009 2122
2-Hexanone	100	110		1	109	4.4	60-140	20	12/29/2009 2122
Isopropylbenzene	50	56		1	111	2.4	70-130	20	12/29/2009 2122
Methyl acetate	50	57		1	113	2.2	15-128	20	12/29/2009 2122
Methyl tertiary butyl ether (MTBE)	50	50		1	101	0.99	70-130	20	12/29/2009 2122
4-Methyl-2-pentanone	100	110		1	105	3.7	60-140	20	12/29/2009 2122
Methylcyclohexane	50	64		1	128	1.7	70-130	20	12/29/2009 2122
Methylene chloride	50	56		1	113	1.5	70-130	20	12/29/2009 2122
Styrene	50	55		1	111	1.9	70-130	20	12/29/2009 2122
1,1,2,2-Tetrachloroethane	50	57		1	115	2.6	70-130	20	12/29/2009 2122
Tetrachloroethene	50	55		1	110	2.5	70-130	20	12/29/2009 2122
Toluene	50	50		1	100	1.8	70-130	20	12/29/2009 2122
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	62		1	124	1.9	70-130	20	12/29/2009 2122
1,2,4-Trichlorobenzene	50	65		1	130	2.3	70-130	20	12/29/2009 2122
1,1,2-Trichloroethane	50	54		1	108	0.85	70-130	20	12/29/2009 2122
1,1,1-Trichloroethane	50	56		1	113	1.3	70-130	20	12/29/2009 2122

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: KQ24494-003

Matrix: Aqueous

Batch: 24494

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	52		1	103	2.9	70-130	20	12/29/2009 2122
Trichlorofluoromethane	50	59		1	118	2.4	60-140	20	12/29/2009 2122
Vinyl chloride	50	53		1	105	0.24	60-140	20	12/29/2009 2122
Xylenes (total)	100	100		1	104	2.2	70-130	20	12/29/2009 2122
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		102	70-130						
1,2-Dichloroethane-d4		104	70-130						
Toluene-d8		107	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24263-001

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,1'-Biphenyl	ND		1	1.0	0.20	ug/L	01/05/2010 2120
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	01/05/2010 2120
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	01/05/2010 2120
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	01/05/2010 2120
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	01/05/2010 2120
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	01/05/2010 2120
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	01/05/2010 2120
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
2-Chlorophenol	ND		1	1.0	0.13	ug/L	01/05/2010 2120
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	01/05/2010 2120
2-Methylphenol	ND		1	1.0	0.17	ug/L	01/05/2010 2120
2-Nitroaniline	ND		1	2.0	0.55	ug/L	01/05/2010 2120
2-Nitrophenol	ND		1	2.0	0.27	ug/L	01/05/2010 2120
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	01/05/2010 2120
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	01/05/2010 2120
3-Nitroaniline	ND		1	2.0	0.77	ug/L	01/05/2010 2120
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	01/05/2010 2120
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	01/05/2010 2120
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	01/05/2010 2120
4-Chloroaniline	ND		1	1.0	0.13	ug/L	01/05/2010 2120
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	01/05/2010 2120
4-Nitroaniline	ND		1	2.0	0.39	ug/L	01/05/2010 2120
4-Nitrophenol	ND		1	5.0	0.64	ug/L	01/05/2010 2120
Acenaphthene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Acenaphthylene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Acetophenone	ND		1	1.0	0.32	ug/L	01/05/2010 2120
Anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Atrazine	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzaldehyde	ND		1	5.0	1.0	ug/L	01/05/2010 2120
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	01/05/2010 2120
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	01/05/2010 2120
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroethyl)ether	ND		1	1.0	0.13	ug/L	01/05/2010 2120
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	01/05/2010 2120
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Caprolactam	ND		1	5.0	1.2	ug/L	01/05/2010 2120
Carbazole	ND		1	1.0	0.25	ug/L	01/05/2010 2120
Chrysene	ND		1	1.0	0.12	ug/L	01/05/2010 2120
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: KQ24263-001

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	01/05/2010 2120
Dibenzofuran	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Diethylphthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	01/05/2010 2120
Fluoranthene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Fluorene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	01/05/2010 2120
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	01/05/2010 2120
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	01/05/2010 2120
Hexachloroethane	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	01/05/2010 2120
Isophorone	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	01/05/2010 2120
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	01/05/2010 2120
Naphthalene	ND		1	1.0	0.070	ug/L	01/05/2010 2120
Nitrobenzene	ND		1	1.0	0.10	ug/L	01/05/2010 2120
Pentachlorophenol	ND		1	5.0	0.54	ug/L	01/05/2010 2120
Phenanthrene	ND		1	1.0	0.18	ug/L	01/05/2010 2120
Phenol	ND		1	1.0	0.11	ug/L	01/05/2010 2120
Pyrene	ND		1	1.0	0.16	ug/L	01/05/2010 2120
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		62	41-144				
2-Fluorobiphenyl		59	37-129				
2-Fluorophenol		57	24-127				
Nitrobenzene-d5		64	38-127				
Phenol-d5		57	28-128				
Terphenyl-d14		55	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24263-002

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	12		1	59	46-125	01/05/2010 2140
2,4,6-Trichlorophenol	20	12		1	59	36-123	01/05/2010 2140
2,4-Dichlorophenol	20	12		1	59	38-127	01/05/2010 2140
2,4-Dimethylphenol	20	10		1	50	36-110	01/05/2010 2140
2,4-Dinitrophenol	100	57		1	57	33-143	01/05/2010 2140
2,4-Dinitrotoluene	40	23		1	57	55-137	01/05/2010 2140
2,6-Dinitrotoluene	40	24		1	59	53-128	01/05/2010 2140
2-Chloronaphthalene	20	10		1	51	42-132	01/05/2010 2140
2-Chlorophenol	20	12		1	59	40-128	01/05/2010 2140
2-Methylnaphthalene	20	11		1	55	49-122	01/05/2010 2140
2-Methylphenol	20	9.0		1	45	33-122	01/05/2010 2140
2-Nitroaniline	40	23		1	59	48-126	01/05/2010 2140
2-Nitrophenol	40	23		1	58	44-131	01/05/2010 2140
3 & 4-Methylphenol	40	20		1	51	48-112	01/05/2010 2140
3-Nitroaniline	40	18		1	46	29-109	01/05/2010 2140
4,6-Dinitro-2-methylphenol	100	61		1	61	46-151	01/05/2010 2140
4-Bromophenyl phenyl ether	20	12		1	61	49-123	01/05/2010 2140
4-Chloro-3-methyl phenol	20	12		1	61	48-136	01/05/2010 2140
4-Chloroaniline	20	4.3		1	22	18-73	01/05/2010 2140
4-Chlorophenyl phenyl ether	20	12		1	61	34-124	01/05/2010 2140
4-Nitroaniline	40	22		1	56	42-154	01/05/2010 2140
4-Nitrophenol	100	62		1	62	43-145	01/05/2010 2140
Acenaphthene	20	12		1	59	51-130	01/05/2010 2140
Acenaphthylene	20	11		1	56	46-131	01/05/2010 2140
Anthracene	20	11		1	57	48-122	01/05/2010 2140
Benzo(a)anthracene	20	12		1	60	50-143	01/05/2010 2140
Benzo(a)pyrene	20	14		1	68	55-141	01/05/2010 2140
Benzo(b)fluoranthene	20	13		1	64	48-147	01/05/2010 2140
Benzo(g,h,i)perylene	20	12		1	60	48-139	01/05/2010 2140
Benzo(k)fluoranthene	20	12		1	59	48-148	01/05/2010 2140
bis(2-Chloroethoxy)methane	20	11		1	57	46-130	01/05/2010 2140
bis(2-Chloroethyl)ether	20	12		1	59	42-127	01/05/2010 2140
bis(2-Chloroisopropyl)ether	20	11		1	55	36-133	01/05/2010 2140
bis(2-Ethylhexyl)phthalate	20	13		1	64	40-141	01/05/2010 2140
Butyl benzyl phthalate	20	12		1	60	52-142	01/05/2010 2140
Carbazole	20	13		1	63	45-101	01/05/2010 2140
Chrysene	20	12		1	60	51-137	01/05/2010 2140
Di-n-butyl phthalate	20	13		1	64	50-134	01/05/2010 2140
Di-n-octylphthalate	20	12		1	61	50-136	01/05/2010 2140
Dibenzo(a,h)anthracene	20	12		1	60	48-139	01/05/2010 2140
Dibenzofuran	20	12		1	58	45-142	01/05/2010 2140
Diethylphthalate	20	12		1	62	48-124	01/05/2010 2140
Dimethyl phthalate	20	12		1	62	43-122	01/05/2010 2140
Fluoranthene	20	12		1	60	50-124	01/05/2010 2140

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: KQ24263-002

Matrix: Aqueous

Batch: 24263

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/24/2009 2015

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Fluorene	20	12		1	60	39-122	01/05/2010 2140
Hexachlorobenzene	20	12		1	59	46-125	01/05/2010 2140
Hexachlorobutadiene	20	11		1	57	38-121	01/05/2010 2140
Hexachlorocyclopentadiene	100	48		1	48	24-110	01/05/2010 2140
Hexachloroethane	20	12		1	58	32-109	01/05/2010 2140
Indeno(1,2,3-c,d)pyrene	20	12		1	60	49-146	01/05/2010 2140
Isophorone	20	12		1	62	43-118	01/05/2010 2140
N-Nitrosodi-n-propylamine	20	11		1	57	46-135	01/05/2010 2140
N-Nitrosodiphenylamine (Diphenylamine)	20	14		1	68	44-124	01/05/2010 2140
Naphthalene	20	11		1	56	45-118	01/05/2010 2140
Nitrobenzene	20	12		1	59	46-131	01/05/2010 2140
Pentachlorophenol	100	52		1	52	30-137	01/05/2010 2140
Phenanthrene	20	12		1	59	49-122	01/05/2010 2140
Phenol	20	9.8		1	49	35-118	01/05/2010 2140
Pyrene	20	12		1	61	50-130	01/05/2010 2140
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		69	41-144				
2-Fluorobiphenyl		62	37-129				
2-Fluorophenol		55	24-127				
Nitrobenzene-d5		65	38-127				
Phenol-d5		57	28-128				
Terphenyl-d14		55	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: KQ24180-001

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDE	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
4,4'-DDT	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Aldrin	ND		1	0.025	0.0020	ug/L	12/31/2009 2341
alpha-BHC	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
alpha-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
beta-BHC	ND		1	0.025	0.019	ug/L	12/31/2009 2341
delta-BHC	ND		1	0.025	0.0080	ug/L	12/31/2009 2341
Dieldrin	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
Endosulfan I	ND		1	0.025	0.0060	ug/L	12/31/2009 2341
Endosulfan II	ND		1	0.025	0.024	ug/L	12/31/2009 2341
Endosulfan sulfate	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
Endrin aldehyde	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Endrin ketone	ND		1	0.025	0.0040	ug/L	12/31/2009 2341
gamma-BHC (Lindane)	ND		1	0.025	0.0050	ug/L	12/31/2009 2341
gamma-Chlordane	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Heptachlor	ND		1	0.025	0.020	ug/L	12/31/2009 2341
Heptachlor epoxide	ND		1	0.025	0.0030	ug/L	12/31/2009 2341
Methoxychlor	ND		1	0.10	0.014	ug/L	12/31/2009 2341
Toxaphene	ND		1	0.25	0.030	ug/L	12/31/2009 2341
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		62	49-124				
Tetrachloro-m-xylene		86	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Organochlorine Pesticides by GC - LCS

Sample ID: KQ24180-002

Matrix: Aqueous

Batch: 24180

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 12/23/2009 1413

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.45		1	91	70-130	01/01/2010 0001
4,4'-DDE	0.50	0.43		1	86	70-130	01/01/2010 0001
4,4'-DDT	0.50	0.42		1	84	70-130	01/01/2010 0001
Aldrin	0.50	0.42		1	83	70-130	01/01/2010 0001
alpha-BHC	0.50	0.42		1	84	70-130	01/01/2010 0001
beta-BHC	0.50	0.39		1	78	70-130	01/01/2010 0001
delta-BHC	0.50	0.44		1	87	70-130	01/01/2010 0001
Dieldrin	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan I	0.50	0.42		1	85	70-130	01/01/2010 0001
Endosulfan II	0.50	0.45		1	90	70-130	01/01/2010 0001
Endosulfan sulfate	0.50	0.46		1	92	70-130	01/01/2010 0001
Endrin	0.50	0.45		1	91	70-130	01/01/2010 0001
Endrin aldehyde	0.50	0.43		1	87	70-130	01/01/2010 0001
gamma-BHC (Lindane)	0.50	0.42		1	84	70-130	01/01/2010 0001
gamma-Chlordane	0.50	0.42		1	85	70-130	01/01/2010 0001
Heptachlor	0.50	0.41		1	83	70-130	01/01/2010 0001
Heptachlor epoxide	0.50	0.42		1	83	70-130	01/01/2010 0001
Methoxychlor	0.50	0.51		1	101	70-130	01/01/2010 0001
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		90	49-124				
Tetrachloro-m-xylene		84	58-122				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: KQ24099-001

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.010	0.0040	mg/L	12/30/2009 0234
Barium	ND		1	0.025	0.0075	mg/L	12/30/2009 0234
Cadmium	ND		1	0.0020	0.00060	mg/L	12/30/2009 0234
Chromium	0.0038	J	1	0.0050	0.0021	mg/L	12/30/2009 0234
Lead	ND		1	0.010	0.0019	mg/L	12/30/2009 0234
Selenium	0.0034	J	1	0.010	0.0026	mg/L	12/31/2009 0042
Silver	ND		1	0.0050	0.00040	mg/L	12/31/2009 0042

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: KQ24099-002

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.39		1	98	80-120	12/30/2009 0240
Barium	2.0	2.1		1	104	80-120	12/30/2009 0240
Cadmium	0.40	0.38		1	95	80-120	12/30/2009 0240
Chromium	2.0	1.9		1	97	80-120	12/30/2009 0240
Lead	0.40	0.37		1	92	80-120	12/30/2009 0240
Selenium	0.40	0.42		1	105	80-120	12/31/2009 0048
Silver	0.40	0.44		1	109	80-120	12/31/2009 0048

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: KQ24099-003

Matrix: Aqueous

Batch: 24099

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 12/22/2009 1500

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.39		1	98	0.30	80-120	20	12/30/2009 0245
Barium	2.0	2.1		1	104	0.62	80-120	20	12/30/2009 0245
Cadmium	0.40	0.38		1	95	0.61	80-120	20	12/30/2009 0245
Chromium	2.0	1.9		1	97	0.34	80-120	20	12/30/2009 0245
Lead	0.40	0.35		1	88	4.1	80-120	20	12/30/2009 0245
Selenium	0.40	0.42		1	106	1.3	80-120	20	12/31/2009 0054
Silver	0.40	0.44		1	110	0.80	80-120	20	12/31/2009 0054

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - MB

Sample ID: KQ24024-001

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	12/21/2009 2132

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# CVAA - LCS

Sample ID: KQ24024-002

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0019		1	93	85-115	12/21/2009 2134

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

CVAA - LCSD

Sample ID: KQ24024-003

Matrix: Aqueous

Batch: 24024

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 12/21/2009 1535

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0019		1	95	2.1	85-115	20	12/21/2009 2137

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 101525

Client: **ARCADIS**  
 Address: **2849 Paces Ferry Rd**  
 City: **Atlanta** State: **GA** Zip Code: **30339**  
 Project Name: **HUNTER-HAA-01**  
 Project No.: **GLOBHAFS.H01B.NALTM**  
 Report to Contact: **Janet Christy**  
 Sampler's Signature: *[Signature]*  
 Filled Name: **Erica Maddox**  
 Telephone No. / Fax No. / E-mail: **804-957-3100**  
 Maybill No.:  
 Quote No.:  
 Page **1** of **1**

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix	No. of Containers by Preservative Type						Lot No.	Remarks / Cooler I.D.	
				None	Formal	Ascor	Ascor	Ascor	Ascor			
HMW-4 (121709)	12/17/09	0920	X						3			
HAA01-MW-17 (121709)		1150	X						3			
HMW-24 (121709)		1315	X						3			
HMW-23 (121709)		1420	X						3			
HMW-6 (121709)		1540	X						3			
HAA01-MW-16 (121709)		0923	X						3			
TB-03 (121709)		0900	X						2			

Sample Disposal:  Return to Client  Disposal by Lab  
 Note: All samples are retained for six weeks from receipt unless other arrangements are made.  
 DC Requirements (Special):

Possible Hazard Identification:  
 Non-hazard  Flammable  Skin Irritant  Poison  Unknown  
 Turn Around Time Required (Prior lab approval required for expedited TAT.)  
 Standard  Rush (Specialty)  
 1. Relinquished by: *[Signature]* Date: **12/17/09** Time: **1900**  
 2. Relinquished by: *[Signature]* Date: **12/17/09** Time: **0824**  
 3. Relinquished by: **FUDAY** Date: **12/18/09** Time: **0824**  
 Comments:  
 Laboratory received by: *[Signature]* Date: **12/18/09** Time: **0824**  
 LAB USE ONLY: Received on ice (Circle)  Yes  No Ice Pack  
 Receipt Temp: **3.3** °C



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 6

Page 1 of 1  
 Replaces Date: 09/22/06  
 Effective Date: 05/29/07

## Sample Receipt Checklist (SRC)

Client: Arco-2 Cooler Inspected by/date: Eric Mishog Lot #: KL1017

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt <u>3.3</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	6. Were sample IDs listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	7. Was collection date & time listed?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	8. Were tests to be performed listed on the COC or was quote # provided?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	9. Did all samples arrive in the proper containers for each test?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)? <i>See Comments</i>	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	12. Was adequate sample volume available?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	14. Were any samples containers missing?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	15. Were there any excess samples not listed on COC?	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	16. Were bubbles present >"penn-size" (1/4" or 6mm in diameter) in any VOA vials?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) and toxicity (<0.1mg/L) samples free of residual chlorine?	
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number)		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.		
Toxicity sample(s) _____ were received with TRC >0.1 mg/L and were analyzed by method 330.5.		

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: 1 VOA vial neck broken for MW 17 (-002) & MW 10 (-006)  
all 3 vials (VOA) & 1 SUDA bottle neck broken for MW 23 (-004)  
ecc 12/18/06

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Allison Fang

Project Name: Hunter Stewart HAA-01

Project Number: GP08HAFS.H01C.DPCSR

Lot Number: NA31002

Date Completed: 02/02/2012



Nisreen Saikaly  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

\* NA31002 \*

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: NA31002

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Sample Summary ARCADIS U.S., Inc. Lot Number: NA31002

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	HA01-MW-12	Aqueous	01/30/2012 1340	01/31/2012
002	HA01-MW-14	Aqueous	01/30/2012 1440	01/31/2012
003	Trip Blank	Aqueous	01/30/2012	01/31/2012

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(3 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary

ARCADIS U.S., Inc.

Lot Number: NA31002

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	HA01-MW-14	Aqueous	cis-1,2-Dichloroethene	8260B	0.93	J	ug/L	7

(1 detection)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NA31002-001

Description: HA01-MW-12

Matrix: Aqueous

Date Sampled: 01/30/2012 1340

Date Received: 01/31/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/02/2012 1514	BM		76957			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1		
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1		
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.33	ug/L	1		
Bromoform	75-25-2	8260B	ND		1.0	0.66	ug/L	1		
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.80	ug/L	1		
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1		
Carbon disulfide	75-15-0	8260B	ND		1.0	0.097	ug/L	1		
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.14	ug/L	1		
Chlorobenzene	108-90-7	8260B	ND		2.0	0.33	ug/L	1		
Chloroethane	75-00-3	8260B	ND		2.0	0.47	ug/L	1		
Chloroform	67-66-3	8260B	ND		1.0	0.33	ug/L	1		
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1		
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.33	ug/L	1		
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.33	ug/L	1		
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.33	ug/L	1		
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.33	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1		
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.13	ug/L	1		
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.21	ug/L	1		
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.12	ug/L	1		
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.16	ug/L	1		
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.19	ug/L	1		
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.11	ug/L	1		
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.092	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1		
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1		
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1		
Methylene chloride	75-09-2	8260B	ND		1.0	0.33	ug/L	1		
Styrene	100-42-5	8260B	ND		1.0	0.12	ug/L	1		
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.16	ug/L	1		
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.13	ug/L	1		
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1		
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.51	ug/L	1		
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.21	ug/L	1		
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.074	ug/L	1		
Trichloroethene	79-01-6	8260B	ND		1.0	0.18	ug/L	1		
Vinyl chloride	75-01-4	8260B	ND		1.0	0.054	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: NA31002-001
Description: HA01-MW-12	Matrix: Aqueous
Date Sampled: 01/30/2012 1340	
Date Received: 01/31/2012	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		100	70-130

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	H = Out of holding time
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%	N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		* = Reportable result (only when report all runs)	

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# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NA31002-002

Description: HA01-MW-14

Matrix: Aqueous

Date Sampled: 01/30/2012 1440

Date Received: 01/31/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/02/2012 1536	BM		76957			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.33	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.66	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.14	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.0	0.33	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.47	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.33	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.33	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.33	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.13	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.21	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.93	J	1.0	0.12	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.16	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.19	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.11	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.092	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.33	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.12	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.16	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.13	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.51	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.21	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.074	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.18	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.054	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: NA31002-002
Description: HA01-MW-14	Matrix: Aqueous
Date Sampled: 01/30/2012 1440	
Date Received: 01/31/2012	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		99	70-130

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	H = Out of holding time
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%	N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		* = Reportable result (only when report all runs)	

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# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NA31002-003

Description: Trip Blank

Matrix: Aqueous

Date Sampled: 01/30/2012

Date Received: 01/31/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/02/2012 1552	BM		76958			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.33	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.66	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.14	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.0	0.33	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.47	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.33	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.33	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.33	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.13	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.21	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.12	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.16	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.19	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.11	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.092	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.33	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.12	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.16	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.13	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.51	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.21	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.074	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.18	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.054	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: NA31002-003
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 01/30/2012	
Date Received: 01/31/2012	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		97	70-130

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PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	H = Out of holding time
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%	N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"		* = Reportable result (only when report all runs)	

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## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ76957-001

Matrix: Aqueous

Batch: 76957

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/L	02/02/2012 0947
Benzene	ND		1	1.0	0.13	ug/L	02/02/2012 0947
Bromodichloromethane	ND		1	1.0	0.33	ug/L	02/02/2012 0947
Bromoform	ND		1	1.0	0.66	ug/L	02/02/2012 0947
Bromomethane (Methyl bromide)	ND		1	2.0	0.80	ug/L	02/02/2012 0947
2-Butanone (MEK)	ND		1	10	2.0	ug/L	02/02/2012 0947
Carbon disulfide	ND		1	1.0	0.097	ug/L	02/02/2012 0947
Carbon tetrachloride	ND		1	1.0	0.14	ug/L	02/02/2012 0947
Chlorobenzene	ND		1	2.0	0.33	ug/L	02/02/2012 0947
Chloroethane	ND		1	2.0	0.47	ug/L	02/02/2012 0947
Chloroform	ND		1	1.0	0.33	ug/L	02/02/2012 0947
Chloromethane (Methyl chloride)	ND		1	1.0	0.35	ug/L	02/02/2012 0947
Dibromochloromethane	ND		1	1.0	0.33	ug/L	02/02/2012 0947
1,3-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0947
1,4-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0947
1,2-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0947
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	02/02/2012 0947
1,1-Dichloroethane	ND		1	1.0	0.13	ug/L	02/02/2012 0947
cis-1,2-Dichloroethene	ND		1	1.0	0.12	ug/L	02/02/2012 0947
trans-1,2-Dichloroethene	ND		1	1.0	0.21	ug/L	02/02/2012 0947
1,1-Dichloroethene	ND		1	1.0	0.16	ug/L	02/02/2012 0947
1,2-Dichloropropane	ND		1	1.0	0.19	ug/L	02/02/2012 0947
trans-1,3-Dichloropropene	ND		1	1.0	0.11	ug/L	02/02/2012 0947
cis-1,3-Dichloropropene	ND		1	1.0	0.092	ug/L	02/02/2012 0947
Ethylbenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0947
2-Hexanone	ND		1	10	0.27	ug/L	02/02/2012 0947
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/02/2012 0947
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	02/02/2012 0947
Methylene chloride	ND		1	1.0	0.33	ug/L	02/02/2012 0947
Styrene	ND		1	1.0	0.12	ug/L	02/02/2012 0947
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.16	ug/L	02/02/2012 0947
Tetrachloroethene	ND		1	1.0	0.13	ug/L	02/02/2012 0947
Toluene	ND		1	1.0	0.33	ug/L	02/02/2012 0947
1,2,4-Trichlorobenzene	ND		1	1.0	0.51	ug/L	02/02/2012 0947
1,1,2-Trichloroethane	ND		1	1.0	0.21	ug/L	02/02/2012 0947
1,1,1-Trichloroethane	ND		1	1.0	0.074	ug/L	02/02/2012 0947
Trichloroethene	ND		1	1.0	0.18	ug/L	02/02/2012 0947
Vinyl chloride	ND		1	1.0	0.054	ug/L	02/02/2012 0947
Xylenes (total)	ND		1	1.0	0.33	ug/L	02/02/2012 0947
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ76957-002

Matrix: Aqueous

Batch: 76957

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	130		1	125	70-130	02/02/2012 0823
Benzene	50	56		1	113	70-130	02/02/2012 0823
Bromodichloromethane	50	56		1	112	70-130	02/02/2012 0823
Bromoform	50	63		1	126	70-130	02/02/2012 0823
Bromomethane (Methyl bromide)	50	56		1	111	60-140	02/02/2012 0823
2-Butanone (MEK)	100	110		1	114	60-140	02/02/2012 0823
Carbon disulfide	50	51		1	102	60-140	02/02/2012 0823
Carbon tetrachloride	50	59		1	118	70-130	02/02/2012 0823
Chlorobenzene	50	56		1	112	70-130	02/02/2012 0823
Chloroethane	50	55		1	111	42-163	02/02/2012 0823
Chloroform	50	57		1	115	70-130	02/02/2012 0823
Chloromethane (Methyl chloride)	50	53		1	107	70-130	02/02/2012 0823
Dibromochloromethane	50	57		1	114	70-130	02/02/2012 0823
1,3-Dichlorobenzene	50	56		1	111	70-130	02/02/2012 0823
1,4-Dichlorobenzene	50	55		1	109	70-130	02/02/2012 0823
1,2-Dichlorobenzene	50	56		1	111	70-130	02/02/2012 0823
1,2-Dichloroethane	50	55		1	109	70-130	02/02/2012 0823
1,1-Dichloroethane	50	58		1	116	70-130	02/02/2012 0823
cis-1,2-Dichloroethene	50	58		1	116	70-130	02/02/2012 0823
trans-1,2-Dichloroethene	50	61		1	123	70-130	02/02/2012 0823
1,1-Dichloroethene	50	66	N	1	132	70-130	02/02/2012 0823
1,2-Dichloropropane	50	57		1	114	70-130	02/02/2012 0823
trans-1,3-Dichloropropene	50	56		1	113	70-130	02/02/2012 0823
cis-1,3-Dichloropropene	50	58		1	116	70-130	02/02/2012 0823
Ethylbenzene	50	57		1	113	70-130	02/02/2012 0823
2-Hexanone	100	100		1	104	60-140	02/02/2012 0823
Methyl tertiary butyl ether (MTBE)	50	60		1	119	70-130	02/02/2012 0823
4-Methyl-2-pentanone	100	110		1	107	60-140	02/02/2012 0823
Methylene chloride	50	60		1	119	70-130	02/02/2012 0823
Styrene	50	57		1	114	70-130	02/02/2012 0823
1,1,2,2-Tetrachloroethane	50	57		1	113	60-140	02/02/2012 0823
Tetrachloroethene	50	57		1	113	70-130	02/02/2012 0823
Toluene	50	56		1	112	70-130	02/02/2012 0823
1,2,4-Trichlorobenzene	50	52		1	105	70-130	02/02/2012 0823
1,1,2-Trichloroethane	50	55		1	110	70-130	02/02/2012 0823
1,1,1-Trichloroethane	50	58		1	117	70-130	02/02/2012 0823
Trichloroethene	50	57		1	115	70-130	02/02/2012 0823
Vinyl chloride	50	58		1	116	70-130	02/02/2012 0823
Xylenes (total)	100	120		1	115	70-130	02/02/2012 0823
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ76957-003

Matrix: Aqueous

Batch: 76957

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	104	19	70-130	20	02/02/2012 0844
Benzene	50	55		1	111	1.7	70-130	20	02/02/2012 0844
Bromodichloromethane	50	55		1	109	2.5	70-130	20	02/02/2012 0844
Bromoform	50	60		1	120	4.9	70-130	20	02/02/2012 0844
Bromomethane (Methyl bromide)	50	54		1	108	2.4	60-140	20	02/02/2012 0844
2-Butanone (MEK)	100	110		1	107	5.8	60-140	20	02/02/2012 0844
Carbon disulfide	50	49		1	98	4.0	60-140	20	02/02/2012 0844
Carbon tetrachloride	50	57		1	113	3.8	70-130	20	02/02/2012 0844
Chlorobenzene	50	55		1	110	2.3	70-130	20	02/02/2012 0844
Chloroethane	50	54		1	108	2.2	42-163	20	02/02/2012 0844
Chloroform	50	55		1	111	3.5	70-130	20	02/02/2012 0844
Chloromethane (Methyl chloride)	50	52		1	104	2.9	70-130	20	02/02/2012 0844
Dibromochloromethane	50	56		1	112	1.8	70-130	20	02/02/2012 0844
1,3-Dichlorobenzene	50	55		1	110	1.4	70-130	20	02/02/2012 0844
1,4-Dichlorobenzene	50	53		1	107	2.6	70-130	20	02/02/2012 0844
1,2-Dichlorobenzene	50	54		1	107	3.5	70-130	20	02/02/2012 0844
1,2-Dichloroethane	50	53		1	107	2.1	70-130	20	02/02/2012 0844
1,1-Dichloroethane	50	57		1	113	2.5	70-130	20	02/02/2012 0844
cis-1,2-Dichloroethene	50	56		1	112	3.5	70-130	20	02/02/2012 0844
trans-1,2-Dichloroethene	50	60		1	119	2.9	70-130	20	02/02/2012 0844
1,1-Dichloroethene	50	64		1	129	2.4	70-130	20	02/02/2012 0844
1,2-Dichloropropane	50	56		1	112	1.7	70-130	20	02/02/2012 0844
trans-1,3-Dichloropropene	50	56		1	113	0.25	70-130	20	02/02/2012 0844
cis-1,3-Dichloropropene	50	57		1	114	1.8	70-130	20	02/02/2012 0844
Ethylbenzene	50	56		1	111	1.9	70-130	20	02/02/2012 0844
2-Hexanone	100	100		1	101	3.1	60-140	20	02/02/2012 0844
Methyl tertiary butyl ether (MTBE)	50	57		1	114	4.1	70-130	20	02/02/2012 0844
4-Methyl-2-pentanone	100	100		1	103	3.4	60-140	20	02/02/2012 0844
Methylene chloride	50	57		1	115	3.6	70-130	20	02/02/2012 0844
Styrene	50	55		1	109	4.1	70-130	20	02/02/2012 0844
1,1,2,2-Tetrachloroethane	50	54		1	107	5.0	60-140	20	02/02/2012 0844
Tetrachloroethene	50	56		1	113	0.78	70-130	20	02/02/2012 0844
Toluene	50	55		1	109	2.6	70-130	20	02/02/2012 0844
1,2,4-Trichlorobenzene	50	51		1	103	1.9	70-130	20	02/02/2012 0844
1,1,2-Trichloroethane	50	55		1	110	0.25	70-130	20	02/02/2012 0844
1,1,1-Trichloroethane	50	57		1	113	3.2	70-130	20	02/02/2012 0844
Trichloroethene	50	56		1	112	2.4	70-130	20	02/02/2012 0844
Vinyl chloride	50	56		1	111	3.8	70-130	20	02/02/2012 0844
Xylenes (total)	100	110		1	111	3.4	70-130	20	02/02/2012 0844
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		100	70-130						
Toluene-d8		99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ76958-001

Matrix: Aqueous

Batch: 76958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/L	02/02/2012 0849
Benzene	ND		1	1.0	0.13	ug/L	02/02/2012 0849
Bromodichloromethane	ND		1	1.0	0.33	ug/L	02/02/2012 0849
Bromoform	ND		1	1.0	0.66	ug/L	02/02/2012 0849
Bromomethane (Methyl bromide)	ND		1	2.0	0.80	ug/L	02/02/2012 0849
2-Butanone (MEK)	ND		1	10	2.0	ug/L	02/02/2012 0849
Carbon disulfide	ND		1	1.0	0.097	ug/L	02/02/2012 0849
Carbon tetrachloride	ND		1	1.0	0.14	ug/L	02/02/2012 0849
Chlorobenzene	ND		1	2.0	0.33	ug/L	02/02/2012 0849
Chloroethane	ND		1	2.0	0.47	ug/L	02/02/2012 0849
Chloroform	ND		1	1.0	0.33	ug/L	02/02/2012 0849
Chloromethane (Methyl chloride)	ND		1	1.0	0.35	ug/L	02/02/2012 0849
Dibromochloromethane	ND		1	1.0	0.33	ug/L	02/02/2012 0849
1,2-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0849
1,4-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0849
1,3-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0849
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	02/02/2012 0849
1,1-Dichloroethane	ND		1	1.0	0.13	ug/L	02/02/2012 0849
trans-1,2-Dichloroethene	ND		1	1.0	0.21	ug/L	02/02/2012 0849
cis-1,2-Dichloroethene	ND		1	1.0	0.12	ug/L	02/02/2012 0849
1,1-Dichloroethene	ND		1	1.0	0.16	ug/L	02/02/2012 0849
1,2-Dichloropropane	ND		1	1.0	0.19	ug/L	02/02/2012 0849
trans-1,3-Dichloropropene	ND		1	1.0	0.11	ug/L	02/02/2012 0849
cis-1,3-Dichloropropene	ND		1	1.0	0.092	ug/L	02/02/2012 0849
Ethylbenzene	ND		1	1.0	0.33	ug/L	02/02/2012 0849
2-Hexanone	ND		1	10	0.27	ug/L	02/02/2012 0849
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/02/2012 0849
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	02/02/2012 0849
Methylene chloride	ND		1	1.0	0.33	ug/L	02/02/2012 0849
Styrene	ND		1	1.0	0.12	ug/L	02/02/2012 0849
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.16	ug/L	02/02/2012 0849
Tetrachloroethene	ND		1	1.0	0.13	ug/L	02/02/2012 0849
Toluene	ND		1	1.0	0.33	ug/L	02/02/2012 0849
1,2,4-Trichlorobenzene	ND		1	1.0	0.51	ug/L	02/02/2012 0849
1,1,1-Trichloroethane	ND		1	1.0	0.074	ug/L	02/02/2012 0849
1,1,2-Trichloroethane	ND		1	1.0	0.21	ug/L	02/02/2012 0849
Trichloroethene	ND		1	1.0	0.18	ug/L	02/02/2012 0849
Vinyl chloride	ND		1	1.0	0.054	ug/L	02/02/2012 0849
Xylenes (total)	ND		1	1.0	0.33	ug/L	02/02/2012 0849
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		100	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ76958-002

Matrix: Aqueous

Batch: 76958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	106	70-130	02/02/2012 0717
Benzene	50	52		1	104	70-130	02/02/2012 0717
Bromodichloromethane	50	50		1	100	70-130	02/02/2012 0717
Bromoform	50	49		1	98	70-130	02/02/2012 0717
Bromomethane (Methyl bromide)	50	58		1	117	60-140	02/02/2012 0717
2-Butanone (MEK)	100	120		1	117	60-140	02/02/2012 0717
Carbon disulfide	50	53		1	106	60-140	02/02/2012 0717
Carbon tetrachloride	50	56		1	112	70-130	02/02/2012 0717
Chlorobenzene	50	52		1	104	70-130	02/02/2012 0717
Chloroethane	50	59		1	117	42-163	02/02/2012 0717
Chloroform	50	55		1	110	70-130	02/02/2012 0717
Chloromethane (Methyl chloride)	50	67	N	1	134	70-130	02/02/2012 0717
Dibromochloromethane	50	52		1	104	70-130	02/02/2012 0717
1,2-Dichlorobenzene	50	52		1	104	70-130	02/02/2012 0717
1,4-Dichlorobenzene	50	52		1	104	70-130	02/02/2012 0717
1,3-Dichlorobenzene	50	52		1	105	70-130	02/02/2012 0717
1,2-Dichloroethane	50	54		1	109	70-130	02/02/2012 0717
1,1-Dichloroethane	50	54		1	107	70-130	02/02/2012 0717
trans-1,2-Dichloroethene	50	52		1	104	70-130	02/02/2012 0717
cis-1,2-Dichloroethene	50	52		1	104	70-130	02/02/2012 0717
1,1-Dichloroethene	50	55		1	111	70-130	02/02/2012 0717
1,2-Dichloropropane	50	53		1	105	70-130	02/02/2012 0717
trans-1,3-Dichloropropene	50	53		1	105	70-130	02/02/2012 0717
cis-1,3-Dichloropropene	50	55		1	110	70-130	02/02/2012 0717
Ethylbenzene	50	52		1	105	70-130	02/02/2012 0717
2-Hexanone	100	110		1	108	60-140	02/02/2012 0717
Methyl tertiary butyl ether (MTBE)	50	55		1	110	70-130	02/02/2012 0717
4-Methyl-2-pentanone	100	110		1	115	60-140	02/02/2012 0717
Methylene chloride	50	53		1	106	70-130	02/02/2012 0717
Styrene	50	54		1	107	70-130	02/02/2012 0717
1,1,2,2-Tetrachloroethane	50	55		1	109	60-140	02/02/2012 0717
Tetrachloroethene	50	52		1	104	70-130	02/02/2012 0717
Toluene	50	53		1	106	70-130	02/02/2012 0717
1,2,4-Trichlorobenzene	50	52		1	105	70-130	02/02/2012 0717
1,1,1-Trichloroethane	50	54		1	108	70-130	02/02/2012 0717
1,1,2-Trichloroethane	50	51		1	101	70-130	02/02/2012 0717
Trichloroethene	50	53		1	106	70-130	02/02/2012 0717
Vinyl chloride	50	69	N	1	139	70-130	02/02/2012 0717
Xylenes (total)	100	100		1	104	70-130	02/02/2012 0717
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		107	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ76958-003

Matrix: Aqueous

Batch: 76958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	71	+	1	71	40	70-130	20	02/02/2012 0740
Benzene	50	52		1	104	0.91	70-130	20	02/02/2012 0740
Bromodichloromethane	50	49		1	98	2.0	70-130	20	02/02/2012 0740
Bromoform	50	45		1	91	7.8	70-130	20	02/02/2012 0740
Bromomethane (Methyl bromide)	50	60		1	119	2.2	60-140	20	02/02/2012 0740
2-Butanone (MEK)	100	100		1	105	11	60-140	20	02/02/2012 0740
Carbon disulfide	50	50		1	101	5.3	60-140	20	02/02/2012 0740
Carbon tetrachloride	50	55		1	110	2.0	70-130	20	02/02/2012 0740
Chlorobenzene	50	52		1	105	0.60	70-130	20	02/02/2012 0740
Chloroethane	50	58		1	117	0.56	42-163	20	02/02/2012 0740
Chloroform	50	52		1	104	5.8	70-130	20	02/02/2012 0740
Chloromethane (Methyl chloride)	50	67	N	1	135	0.92	70-130	20	02/02/2012 0740
Dibromochloromethane	50	51		1	102	2.0	70-130	20	02/02/2012 0740
1,2-Dichlorobenzene	50	52		1	105	0.45	70-130	20	02/02/2012 0740
1,4-Dichlorobenzene	50	53		1	106	1.0	70-130	20	02/02/2012 0740
1,3-Dichlorobenzene	50	54		1	108	2.5	70-130	20	02/02/2012 0740
1,2-Dichloroethane	50	52		1	103	4.9	70-130	20	02/02/2012 0740
1,1-Dichloroethane	50	50		1	100	6.6	70-130	20	02/02/2012 0740
trans-1,2-Dichloroethene	50	49		1	98	6.2	70-130	20	02/02/2012 0740
cis-1,2-Dichloroethene	50	49		1	98	6.0	70-130	20	02/02/2012 0740
1,1-Dichloroethene	50	53		1	105	5.1	70-130	20	02/02/2012 0740
1,2-Dichloropropane	50	51		1	102	3.4	70-130	20	02/02/2012 0740
trans-1,3-Dichloropropene	50	54		1	107	1.9	70-130	20	02/02/2012 0740
cis-1,3-Dichloropropene	50	54		1	108	1.8	70-130	20	02/02/2012 0740
Ethylbenzene	50	54		1	107	2.0	70-130	20	02/02/2012 0740
2-Hexanone	100	98		1	98	9.6	60-140	20	02/02/2012 0740
Methyl tertiary butyl ether (MTBE)	50	50		1	100	9.6	70-130	20	02/02/2012 0740
4-Methyl-2-pentanone	100	100		1	100	13	60-140	20	02/02/2012 0740
Methylene chloride	50	48		1	95	11	70-130	20	02/02/2012 0740
Styrene	50	54		1	108	0.71	70-130	20	02/02/2012 0740
1,1,2,2-Tetrachloroethane	50	51		1	102	6.5	60-140	20	02/02/2012 0740
Tetrachloroethene	50	54		1	108	3.6	70-130	20	02/02/2012 0740
Toluene	50	53		1	106	0.13	70-130	20	02/02/2012 0740
1,2,4-Trichlorobenzene	50	54		1	108	2.9	70-130	20	02/02/2012 0740
1,1,1-Trichloroethane	50	53		1	107	1.5	70-130	20	02/02/2012 0740
1,1,2-Trichloroethane	50	50		1	99	2.0	70-130	20	02/02/2012 0740
Trichloroethene	50	54		1	109	2.5	70-130	20	02/02/2012 0740
Vinyl chloride	50	72	N	1	143	3.2	70-130	20	02/02/2012 0740
Xylenes (total)	100	110		1	107	2.1	70-130	20	02/02/2012 0740
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		103	70-130						
Toluene-d8		98	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

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Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.  
 106 Vantage Point Drive  
 West Columbia, South Carolina 29172  
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111  
 www.shealylab.com

Chain of Custody Record

Number 11771

Report to Contact: **ARCADIS**  
 Telephone No. / Fax No. / Email: **adavis@arcadis-us.com**  
 Sampler (Printed Name): **Valyn Pounce**  
 Waybill No.:

Address: **601 Corporate Center Drive**  
 City: **Kalveigh** State: **NC** Zip Code:  
 Project Name: **HA-A-01**  
 Project Number:

Preservative: 1. Unpres. 4. HNO3 7. NaOH  
 2. NaOH/ZnA 5. HCL  
 3. H2SO4 6. Na Thio.  
 Matrix: **Analysis**  
 P.O Number: **MA21002**

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	QC Requirements (Specify)	Possible Hazard Identification
HA01-MW-12	1-30-12	1340 G	X	1. Received by	□ Non-Hazard □ Flammable □ Skin Irritant □ Poison □ Unknown
HA01-MW-14	1-30-12	1440 G	X	2. Received by	
TRIP BLANK				3. Received by	
				4. Laboratory Received by	Date: 1-31-12 Time: 0900

Turn Around Time Required (Prior lab approval required for expedited TAT): **48-hour TAT**  
 □ Standard Wash (Please Specify) □ Return to Client □ Disposal by Lab  
 1. Relinquished by Sampler: **Valyn Pounce** Date: **1-30-12** Time: **1450**  
 2. Relinquished by: **Valyn Pounce** Date: Time:  
 3. Relinquished by: Date: Time:  
 4. Relinquished by: **Fei Wu** Date: **1-31-12** Time: **0900**  
 Note: All samples are retained for six weeks from receipt unless other arrangements are made.  
 LAB USE ONLY: Received on ice (Check)  Yes /  No Ice Pack  Yes /  No Receipt Temp. 1.0 °C Temp. Blank  Y /  N

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 9

Page 1 of 1  
 Replaces Date: 05/06/11  
 Effective Date: 10/11/11

## Sample Receipt Checklist (SRC)

Client: ArCADiS Cooler Inspected by/date: ELU 1/23/12 Lot #: NA 31002

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		1. Were custody seals present on the cooler?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		2. If custody seals were present, were they intact and unbroken?
Cooler ID/temperature upon receipt <u>1-0</u> °C / °C / °C / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.		
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>		5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		14. Were any samples containers missing?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____		
Sample(s) <u>1-003 (TKN) (2)</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ TKN/cyanide/BNA/pest/PCB/herb. <small>if this portion cannot be retrieved, the recipient's records.</small>		
Date <u>1-30-12</u> FedEx Tracking Number <u>870270766242</u> Order's name <u>Valyn Tabunic</u> Phone <u>919 854-1282</u> Company <u>ARCADIS G &amp; M OF NC INC</u> Address <u>801 CORPORATE CENTER DR</u> <u>RALEIGH</u> State <u>NC</u> ZIP <u>27607-5073</u> Internal Billing Reference <u>6200405 UNK</u>		
<b>Corrective Action taken, if necessary:</b>		
Was client notified: Yes <input type="checkbox"/> No <input type="checkbox"/>		
SESI employee: _____		
Comments: _____		

Report of Analysis

ARCADIS U.S., Inc.  
30 Patewood Drive  
Suite 155  
Greenville, SC 29615  
Attention: Rachelle Born

Project Name: Hunter Stewart H01

Project Number: GP08HAFS.H01C

Lot Number: NB17010

Date Completed: 03/02/2012



Nisreen Saikaly  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

**\* NB17010 \***

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Case Narrative  
ARCADIS U.S., Inc.  
Lot Number: NB17010

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

## Pesticides

The LCS for Endrin aldehyde was outside method control limits in batch 78136. The surrogate recovery for the LCS and sample -001 was outside method control limits in this batch. The associated sample (-002) was re-extracted and re-analyzed outside the holding time. All runs are reported.

## Semivolatile Organic Compounds

The LCS/LCSD recovery for 4-Chloroaniline was slightly outside method control limits in batch 78138. As per method, it is statistically likely that a few analytes will be outside control limits; up to five analytes may marginally exceed the control limits. Therefore the associated sample results were reported and no corrective action was required.

The MS/MSD recoveries in batch 78138 were outside acceptance criteria. All other QA/QC criteria for the batch were within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
ARCADIS U.S., Inc.  
Lot Number: NB17010

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	H01-MW-7D	Aqueous	02/16/2012 1600	02/17/2012
002	TRIP BLANK	Aqueous	02/16/2012 1600	02/17/2012

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(2 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary

ARCADIS U.S., Inc.

Lot Number: NB17010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	H01-MW-7D	Aqueous	Toluene	8260B	0.65	J	ug/L	5
001	H01-MW-7D	Aqueous	bis(2-Ethylhexyl)phthalate	8270D	2.3	J	ug/L	7
001	H01-MW-7D	Aqueous	gamma-BHC (Lindane)	8081B	0.0040	JPH	ug/L	11
001	H01-MW-7D	Aqueous	Barium	6010C	0.012	J	mg/L	12
002	TRIP BLANK	Aqueous	Methylene chloride	8260B	0.66	J	ug/L	13

(5 detections)



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NB17010-001

Description: H01-MW-7D

Matrix: Aqueous

Date Sampled: 02/16/2012 1600

Date Received: 02/17/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/25/2012 1637	LBS		78695			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.33	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.66	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.14	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.0	0.33	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.47	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.33	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.33	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.33	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.13	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.21	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.12	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.16	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.19	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.11	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.092	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.33	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.12	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.16	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.13	ug/L	1
Toluene	108-88-3	8260B	0.65	J	1.0	0.33	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.51	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.21	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.074	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.18	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.054	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: NB17010-001
Description: H01-MW-7D	Matrix: Aqueous
Date Sampled: 02/16/2012 1600	
Date Received: 02/17/2012	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

## Semivolatle Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NB17010-001

Description: H01-MW-7D

Matrix: Aqueous

Date Sampled: 02/16/2012 1600

Date Received: 02/17/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch									
1	3520C	8270D	1	02/24/2012 2225	TAF	02/20/2012 1345	78138	Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
								Acenaphthene	83-32-9	8270D	ND		1.1	0.095	ug/L	1
								Acenaphthylene	208-96-8	8270D	ND		1.1	0.17	ug/L	1
								Anthracene	120-12-7	8270D	ND		1.1	0.14	ug/L	1
								Benzo(a)anthracene	56-55-3	8270D	ND		1.1	0.16	ug/L	1
								Benzo(a)pyrene	50-32-8	8270D	ND		1.1	0.17	ug/L	1
								Benzo(b)fluoranthene	205-99-2	8270D	ND		1.1	0.21	ug/L	1
								Benzo(g,h,i)perylene	191-24-2	8270D	ND		1.1	0.24	ug/L	1
								Benzo(k)fluoranthene	207-08-9	8270D	ND		1.1	0.13	ug/L	1
								4-Bromophenyl phenyl ether	101-55-3	8270D	ND		1.1	0.13	ug/L	1
								Butyl benzyl phthalate	85-68-7	8270D	ND		5.3	1.8	ug/L	1
								Carbazole	86-74-8	8270D	ND		1.1	0.26	ug/L	1
								4-Chloro-3-methyl phenol	59-50-7	8270D	ND		1.1	0.23	ug/L	1
								4-Chloroaniline	106-47-8	8270D	ND		1.1	0.14	ug/L	1
								bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		1.1	0.14	ug/L	1
								bis(2-Chloroisopropyl)ether	108-60-1	8270D	ND		1.1	0.084	ug/L	1
								2-Chloronaphthalene	91-58-7	8270D	ND		1.1	0.13	ug/L	1
								2-Chlorophenol	95-57-8	8270D	ND		1.1	0.14	ug/L	1
								4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		1.1	0.12	ug/L	1
								Chrysene	218-01-9	8270D	ND		1.1	0.13	ug/L	1
								Dibenzo(a,h)anthracene	53-70-3	8270D	ND		1.1	0.14	ug/L	1
								Dibenzofuran	132-64-9	8270D	ND		1.1	0.17	ug/L	1
								3,3'-Dichlorobenzidine	91-94-1	8270D	ND		5.3	0.85	ug/L	1
								2,4-Dichlorophenol	120-83-2	8270D	ND		1.1	0.16	ug/L	1
								Diethylphthalate	84-66-2	8270D	ND		5.3	1.8	ug/L	1
								Dimethyl phthalate	131-11-3	8270D	ND		5.3	1.8	ug/L	1
								2,4-Dimethylphenol	105-67-9	8270D	ND		1.1	0.33	ug/L	1
								Di-n-butyl phthalate	84-74-2	8270D	ND		5.3	1.8	ug/L	1
								4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		5.3	1.6	ug/L	1
								2,4-Dinitrophenol	51-28-5	8270D	ND		5.3	0.26	ug/L	1
								2,4-Dinitrotoluene	121-14-2	8270D	ND		2.1	0.47	ug/L	1
								2,6-Dinitrotoluene	606-20-2	8270D	ND		2.1	0.42	ug/L	1
								Di-n-octylphthalate	117-84-0	8270D	ND		5.3	1.8	ug/L	1
								bis(2-Ethylhexyl)phthalate	117-81-7	8270D	2.3	J	5.3	1.8	ug/L	1
								Fluoranthene	206-44-0	8270D	ND		1.1	0.22	ug/L	1
								Fluorene	86-73-7	8270D	ND		1.1	0.11	ug/L	1
								Hexachlorobenzene	118-74-1	8270D	ND		1.1	0.22	ug/L	1
								Hexachlorobutadiene	87-68-3	8270D	ND		1.1	0.095	ug/L	1
								Hexachlorocyclopentadiene	77-47-4	8270D	ND		5.3	0.24	ug/L	1
								Hexachloroethane	67-72-1	8270D	ND		1.1	0.12	ug/L	1
								Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		1.1	0.24	ug/L	1
								Isophorone	78-59-1	8270D	ND		1.1	0.084	ug/L	1
								2-Methylnaphthalene	91-57-6	8270D	ND		1.1	0.084	ug/L	1
								2-Methylphenol	95-48-7	8270D	ND		1.1	0.18	ug/L	1
								3 & 4-Methylphenol	106-44-5	8270D	ND		2.1	0.60	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

# Semivolatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.	Laboratory ID: NB17010-001
Description: H01-MW-7D	Matrix: Aqueous
Date Sampled: 02/16/2012 1600	
Date Received: 02/17/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	02/24/2012 2225	TAF	02/20/2012 1345	78138

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Naphthalene	91-20-3	8270D	ND		1.1	0.074	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		2.1	0.58	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		2.1	0.81	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		2.1	0.41	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		1.1	0.11	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		2.1	0.28	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		5.3	0.67	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		1.1	0.084	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		1.1	0.40	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		5.3	0.57	ug/L	1
Phenanthrene	85-01-8	8270D	ND		1.1	0.19	ug/L	1
Phenol	108-95-2	8270D	ND		1.1	0.12	ug/L	1
Pyrene	129-00-0	8270D	ND		1.1	0.17	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		1.1	0.19	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		1.1	0.23	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		67	37-129
2-Fluorophenol		60	24-127
Nitrobenzene-d5		63	38-127
Phenol-d5		69	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		78	41-144

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

# Herbicides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: NB17010-001
Description: H01-MW-7D	Matrix: Aqueous
Date Sampled: 02/16/2012 1600	
Date Received: 02/17/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8151A	8151A	1	02/22/2012 1751	MPM	02/20/2012 2027	78231

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
2,4-D	94-75-7	8151A	ND		2.2	0.43	ug/L	1
2,4,5-T	93-76-5	8151A	ND		0.54	0.11	ug/L	1
2,4,5-TP (Silvex)	93-72-1	8151A	ND		0.54	0.11	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
DCAA		82	62-117

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: NB17010-001
Description: H01-MW-7D	Matrix: Aqueous
Date Sampled: 02/16/2012 1600	
Date Received: 02/17/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	02/23/2012 2314	NCM	02/20/2012 1630	78136
2	3520C	8081B	1	03/01/2012 2222	NCM	02/27/2012 1720	78792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND*		0.026	0.0018	ug/L	1
alpha-BHC	319-84-6	8081B	ND*		0.026	0.0010	ug/L	1
beta-BHC	319-85-7	8081B	ND*		0.026	0.0040	ug/L	1
delta-BHC	319-86-8	8081B	ND*		0.026	0.0011	ug/L	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		0.026	0.0011	ug/L	1
alpha-Chlordane	5103-71-9	8081B	ND*		0.026	0.0013	ug/L	1
gamma-Chlordane	5103-74-2	8081B	ND*		0.026	0.0015	ug/L	1
4,4'-DDD	72-54-8	8081B	ND*		0.026	0.0010	ug/L	1
4,4'-DDE	72-55-9	8081B	ND*		0.026	0.011	ug/L	1
4,4'-DDT	50-29-3	8081B	ND*		0.026	0.0021	ug/L	1
Dieldrin	60-57-1	8081B	ND*		0.026	0.0010	ug/L	1
Endosulfan I	959-98-8	8081B	ND*		0.026	0.0023	ug/L	1
Endosulfan II	33213-65-9	8081B	ND*		0.026	0.0015	ug/L	1
Endosulfan sulfate	1031-07-8	8081B	ND*		0.026	0.0011	ug/L	1
Endrin	72-20-8	8081B	ND*		0.026	0.0010	ug/L	1
Endrin aldehyde	7421-93-4	8081B	ND*		0.026	0.0020	ug/L	1
Endrin ketone	53494-70-5	8081B	ND*		0.026	0.0012	ug/L	1
Heptachlor	76-44-8	8081B	ND*		0.026	0.013	ug/L	1
Heptachlor epoxide	1024-57-3	8081B	ND*		0.026	0.0021	ug/L	1
Methoxychlor	72-43-5	8081B	ND*		0.10	0.0021	ug/L	1
Toxaphene	8001-35-2	8081B	ND*		0.26	0.11	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	11	20-131	H	29	20-131
Tetrachloro-m-xylene		83	26-132	H	91	26-132

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

# Organochlorine Pesticides by GC

Client: ARCADIS U.S., Inc.	Laboratory ID: NB17010-001
Description: H01-MW-7D	Matrix: Aqueous
Date Sampled: 02/16/2012 1600	
Date Received: 02/17/2012	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8081B	1	02/23/2012 2314	NCM	02/20/2012 1630	78136
2	3520C	8081B	1	03/01/2012 2222	NCM	02/27/2012 1720	78792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aldrin	309-00-2	8081B	ND	H	0.026	0.0018	ug/L	2
alpha-BHC	319-84-6	8081B	ND	H	0.026	0.0010	ug/L	2
beta-BHC	319-85-7	8081B	ND	H	0.026	0.0041	ug/L	2
delta-BHC	319-86-8	8081B	ND	H	0.026	0.0011	ug/L	2
gamma-BHC (Lindane)	58-89-9	8081B	0.0040*	JPH	0.026	0.0011	ug/L	2
alpha-Chlordane	5103-71-9	8081B	ND	H	0.026	0.0014	ug/L	2
gamma-Chlordane	5103-74-2	8081B	ND	H	0.026	0.0016	ug/L	2
4,4'-DDD	72-54-8	8081B	ND	H	0.026	0.0010	ug/L	2
4,4'-DDE	72-55-9	8081B	ND	H	0.026	0.011	ug/L	2
4,4'-DDT	50-29-3	8081B	ND	H	0.026	0.0021	ug/L	2
Dieldrin	60-57-1	8081B	ND	H	0.026	0.0010	ug/L	2
Endosulfan I	959-98-8	8081B	ND	H	0.026	0.0023	ug/L	2
Endosulfan II	33213-65-9	8081B	ND	H	0.026	0.0016	ug/L	2
Endosulfan sulfate	1031-07-8	8081B	ND	H	0.026	0.0011	ug/L	2
Endrin	72-20-8	8081B	ND	H	0.026	0.0010	ug/L	2
Endrin aldehyde	7421-93-4	8081B	ND	H	0.026	0.0020	ug/L	2
Endrin ketone	53494-70-5	8081B	ND	H	0.026	0.0012	ug/L	2
Heptachlor	76-44-8	8081B	ND	H	0.026	0.014	ug/L	2
Heptachlor epoxide	1024-57-3	8081B	ND	H	0.026	0.0021	ug/L	2
Methoxychlor	72-43-5	8081B	ND	H	0.10	0.0021	ug/L	2
Toxaphene	8001-35-2	8081B	ND	H	0.26	0.11	ug/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Decachlorobiphenyl	N	11	20-131	H	29	20-131
Tetrachloro-m-xylene		83	26-132	H	91	26-132

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

## RCRA Metals

Client: ARCADIS U.S., Inc.

Laboratory ID: NB17010-001

Description: H01-MW-7D

Matrix: Aqueous

Date Sampled: 02/16/2012 1600

Date Received: 02/17/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	02/21/2012 2050	COH	02/21/2012 1725	78310
1	3005A	6010C	1	02/22/2012 1217	CDF	02/20/2012 1350	78164
2	3005A	6010C	1	02/23/2012 1348	CDF	02/20/2012 1350	78164

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010C	ND		0.010	0.0040	mg/L	1
Barium	7440-39-3	6010C	0.012	J	0.025	0.0075	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0020	0.00060	mg/L	2
Chromium	7440-47-3	6010C	ND		0.0050	0.0021	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0019	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	0.000053	mg/L	1
Selenium	7782-49-2	6010C	ND		0.010	0.0026	mg/L	1
Silver	7440-22-4	6010C	ND		0.0050	0.00040	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)



# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NB17010-002

Description: TRIP BLANK

Matrix: Aqueous

Date Sampled: 02/16/2012 1600

Date Received: 02/17/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/25/2012 1615	LBS		78695			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	6.7	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.33	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.66	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.80	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.097	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.14	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		2.0	0.33	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.47	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.33	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.35	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.33	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.33	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.13	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.21	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.12	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.16	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.19	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.11	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.092	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.27	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.31	ug/L	1
Methylene chloride	75-09-2	8260B	0.66	J	1.0	0.33	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.12	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.16	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.13	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.51	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.21	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.074	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.18	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.054	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

# Volatile Organic Compounds by GC/MS

Client: ARCADIS U.S., Inc.

Laboratory ID: NB17010-002

Description: TRIP BLANK

Matrix: Aqueous

Date Sampled: 02/16/2012 1600

Date Received: 02/17/2012

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		115	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

## QC Summary

# Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ78695-001

Matrix: Aqueous

Batch: 78695

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	6.7	ug/L	02/25/2012 1409
Benzene	ND		1	1.0	0.13	ug/L	02/25/2012 1409
Bromodichloromethane	ND		1	1.0	0.33	ug/L	02/25/2012 1409
Bromoform	ND		1	1.0	0.66	ug/L	02/25/2012 1409
Bromomethane (Methyl bromide)	ND		1	2.0	0.80	ug/L	02/25/2012 1409
2-Butanone (MEK)	ND		1	10	2.0	ug/L	02/25/2012 1409
Carbon disulfide	ND		1	1.0	0.097	ug/L	02/25/2012 1409
Carbon tetrachloride	ND		1	1.0	0.14	ug/L	02/25/2012 1409
Chlorobenzene	ND		1	2.0	0.33	ug/L	02/25/2012 1409
Chloroethane	ND		1	2.0	0.47	ug/L	02/25/2012 1409
Chloroform	ND		1	1.0	0.33	ug/L	02/25/2012 1409
Chloromethane (Methyl chloride)	ND		1	1.0	0.35	ug/L	02/25/2012 1409
Dibromochloromethane	ND		1	1.0	0.33	ug/L	02/25/2012 1409
1,4-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/25/2012 1409
1,3-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/25/2012 1409
1,2-Dichlorobenzene	ND		1	1.0	0.33	ug/L	02/25/2012 1409
1,1-Dichloroethane	ND		1	1.0	0.13	ug/L	02/25/2012 1409
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	02/25/2012 1409
trans-1,2-Dichloroethene	ND		1	1.0	0.21	ug/L	02/25/2012 1409
1,1-Dichloroethene	ND		1	1.0	0.16	ug/L	02/25/2012 1409
cis-1,2-Dichloroethene	ND		1	1.0	0.12	ug/L	02/25/2012 1409
1,2-Dichloropropane	ND		1	1.0	0.19	ug/L	02/25/2012 1409
cis-1,3-Dichloropropene	ND		1	1.0	0.092	ug/L	02/25/2012 1409
trans-1,3-Dichloropropene	ND		1	1.0	0.11	ug/L	02/25/2012 1409
Ethylbenzene	ND		1	1.0	0.33	ug/L	02/25/2012 1409
2-Hexanone	ND		1	10	0.27	ug/L	02/25/2012 1409
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/25/2012 1409
4-Methyl-2-pentanone	ND		1	10	0.31	ug/L	02/25/2012 1409
Methylene chloride	ND		1	1.0	0.33	ug/L	02/25/2012 1409
Styrene	ND		1	1.0	0.12	ug/L	02/25/2012 1409
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.16	ug/L	02/25/2012 1409
Tetrachloroethene	ND		1	1.0	0.13	ug/L	02/25/2012 1409
Toluene	ND		1	1.0	0.33	ug/L	02/25/2012 1409
1,2,4-Trichlorobenzene	ND		1	1.0	0.51	ug/L	02/25/2012 1409
1,1,2-Trichloroethane	ND		1	1.0	0.21	ug/L	02/25/2012 1409
1,1,1-Trichloroethane	ND		1	1.0	0.074	ug/L	02/25/2012 1409
Trichloroethene	ND		1	1.0	0.18	ug/L	02/25/2012 1409
Vinyl chloride	ND		1	1.0	0.054	ug/L	02/25/2012 1409
Xylenes (total)	ND		1	1.0	0.33	ug/L	02/25/2012 1409
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		107	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ78695-002

Matrix: Aqueous

Batch: 78695

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	76		1	76	70-130	02/25/2012 1152
Benzene	50	51		1	101	70-130	02/25/2012 1152
Bromodichloromethane	50	56		1	112	70-130	02/25/2012 1152
Bromoform	50	57		1	114	70-130	02/25/2012 1152
Bromomethane (Methyl bromide)	50	64		1	128	60-140	02/25/2012 1152
2-Butanone (MEK)	100	97		1	97	60-140	02/25/2012 1152
Carbon disulfide	50	56		1	112	60-140	02/25/2012 1152
Carbon tetrachloride	50	53		1	107	70-130	02/25/2012 1152
Chlorobenzene	50	51		1	101	70-130	02/25/2012 1152
Chloroethane	50	56		1	112	42-163	02/25/2012 1152
Chloroform	50	52		1	105	70-130	02/25/2012 1152
Chloromethane (Methyl chloride)	50	54		1	108	70-130	02/25/2012 1152
Dibromochloromethane	50	59		1	117	70-130	02/25/2012 1152
1,4-Dichlorobenzene	50	53		1	105	70-130	02/25/2012 1152
1,3-Dichlorobenzene	50	54		1	107	70-130	02/25/2012 1152
1,2-Dichlorobenzene	50	53		1	106	70-130	02/25/2012 1152
1,1-Dichloroethane	50	51		1	102	70-130	02/25/2012 1152
1,2-Dichloroethane	50	55		1	111	70-130	02/25/2012 1152
trans-1,2-Dichloroethene	50	51		1	102	70-130	02/25/2012 1152
1,1-Dichloroethene	50	49		1	97	70-130	02/25/2012 1152
cis-1,2-Dichloroethene	50	52		1	105	70-130	02/25/2012 1152
1,2-Dichloropropane	50	53		1	106	70-130	02/25/2012 1152
cis-1,3-Dichloropropene	50	61		1	121	70-130	02/25/2012 1152
trans-1,3-Dichloropropene	50	64		1	128	70-130	02/25/2012 1152
Ethylbenzene	50	52		1	104	70-130	02/25/2012 1152
2-Hexanone	100	120		1	116	60-140	02/25/2012 1152
Methyl tertiary butyl ether (MTBE)	50	55		1	109	70-130	02/25/2012 1152
4-Methyl-2-pentanone	100	110		1	107	60-140	02/25/2012 1152
Methylene chloride	50	50		1	99	70-130	02/25/2012 1152
Styrene	50	53		1	106	70-130	02/25/2012 1152
1,1,2,2-Tetrachloroethane	50	60		1	119	60-140	02/25/2012 1152
Tetrachloroethene	50	50		1	99	70-130	02/25/2012 1152
Toluene	50	51		1	103	70-130	02/25/2012 1152
1,2,4-Trichlorobenzene	50	52		1	104	70-130	02/25/2012 1152
1,1,2-Trichloroethane	50	57		1	114	70-130	02/25/2012 1152
1,1,1-Trichloroethane	50	51		1	102	70-130	02/25/2012 1152
Trichloroethene	50	49		1	98	70-130	02/25/2012 1152
Vinyl chloride	50	55		1	109	70-130	02/25/2012 1152
Xylenes (total)	100	110		1	105	70-130	02/25/2012 1152
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		108	70-130				
Toluene-d8		98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ78695-003

Matrix: Aqueous

Batch: 78695

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110	+	1	113	39	70-130	20	02/25/2012 1213
Benzene	50	51		1	103	1.5	70-130	20	02/25/2012 1213
Bromodichloromethane	50	57		1	115	2.4	70-130	20	02/25/2012 1213
Bromoform	50	58		1	117	2.3	70-130	20	02/25/2012 1213
Bromomethane (Methyl bromide)	50	67		1	134	4.4	60-140	20	02/25/2012 1213
2-Butanone (MEK)	100	120		1	117	19	60-140	20	02/25/2012 1213
Carbon disulfide	50	56		1	112	0.45	60-140	20	02/25/2012 1213
Carbon tetrachloride	50	54		1	109	1.9	70-130	20	02/25/2012 1213
Chlorobenzene	50	51		1	103	1.4	70-130	20	02/25/2012 1213
Chloroethane	50	56		1	113	0.57	42-163	20	02/25/2012 1213
Chloroform	50	54		1	109	3.6	70-130	20	02/25/2012 1213
Chloromethane (Methyl chloride)	50	55		1	109	1.2	70-130	20	02/25/2012 1213
Dibromochloromethane	50	58		1	116	0.92	70-130	20	02/25/2012 1213
1,4-Dichlorobenzene	50	53		1	106	0.89	70-130	20	02/25/2012 1213
1,3-Dichlorobenzene	50	54		1	107	0.12	70-130	20	02/25/2012 1213
1,2-Dichlorobenzene	50	53		1	105	0.67	70-130	20	02/25/2012 1213
1,1-Dichloroethane	50	52		1	104	2.4	70-130	20	02/25/2012 1213
1,2-Dichloroethane	50	58		1	116	4.8	70-130	20	02/25/2012 1213
trans-1,2-Dichloroethene	50	51		1	103	0.12	70-130	20	02/25/2012 1213
1,1-Dichloroethene	50	50		1	101	3.2	70-130	20	02/25/2012 1213
cis-1,2-Dichloroethene	50	53		1	106	1.3	70-130	20	02/25/2012 1213
1,2-Dichloropropane	50	55		1	110	3.1	70-130	20	02/25/2012 1213
cis-1,3-Dichloropropene	50	61		1	122	0.46	70-130	20	02/25/2012 1213
trans-1,3-Dichloropropene	50	64		1	128	0.42	70-130	20	02/25/2012 1213
Ethylbenzene	50	52		1	103	0.52	70-130	20	02/25/2012 1213
2-Hexanone	100	110		1	114	1.1	60-140	20	02/25/2012 1213
Methyl tertiary butyl ether (MTBE)	50	58		1	116	5.8	70-130	20	02/25/2012 1213
4-Methyl-2-pentanone	100	120		1	117	8.9	60-140	20	02/25/2012 1213
Methylene chloride	50	51		1	102	2.5	70-130	20	02/25/2012 1213
Styrene	50	56		1	111	4.3	70-130	20	02/25/2012 1213
1,1,2,2-Tetrachloroethane	50	59		1	118	1.1	60-140	20	02/25/2012 1213
Tetrachloroethene	50	50		1	100	0.45	70-130	20	02/25/2012 1213
Toluene	50	51		1	103	0.24	70-130	20	02/25/2012 1213
1,2,4-Trichlorobenzene	50	46		1	91	13	70-130	20	02/25/2012 1213
1,1,2-Trichloroethane	50	57		1	113	0.70	70-130	20	02/25/2012 1213
1,1,1-Trichloroethane	50	52		1	105	2.4	70-130	20	02/25/2012 1213
Trichloroethene	50	49		1	99	0.25	70-130	20	02/25/2012 1213
Vinyl chloride	50	56		1	112	2.2	70-130	20	02/25/2012 1213
Xylenes (total)	100	110		1	108	2.6	70-130	20	02/25/2012 1213
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		100	70-130						
1,2-Dichloroethane-d4		111	70-130						
Toluene-d8		98	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: NQ78138-001

Batch: 78138

Analytical Method: 8270D

Matrix: Aqueous

Prep Method: 3520C

Prep Date: 02/20/2012 1345

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
2,4,5-Trichlorophenol	ND		1	1.0	0.18	ug/L	02/24/2012 2135
2,4,6-Trichlorophenol	ND		1	1.0	0.22	ug/L	02/24/2012 2135
2,4-Dichlorophenol	ND		1	1.0	0.15	ug/L	02/24/2012 2135
2,4-Dimethylphenol	ND		1	1.0	0.31	ug/L	02/24/2012 2135
2,4-Dinitrophenol	ND		1	5.0	0.25	ug/L	02/24/2012 2135
2,4-Dinitrotoluene	ND		1	2.0	0.45	ug/L	02/24/2012 2135
2,6-Dinitrotoluene	ND		1	2.0	0.40	ug/L	02/24/2012 2135
2-Chloronaphthalene	ND		1	1.0	0.12	ug/L	02/24/2012 2135
2-Chlorophenol	ND		1	1.0	0.13	ug/L	02/24/2012 2135
2-Methylnaphthalene	ND		1	1.0	0.080	ug/L	02/24/2012 2135
2-Methylphenol	ND		1	1.0	0.17	ug/L	02/24/2012 2135
2-Nitroaniline	ND		1	2.0	0.55	ug/L	02/24/2012 2135
2-Nitrophenol	ND		1	2.0	0.27	ug/L	02/24/2012 2135
3 & 4-Methylphenol	ND		1	2.0	0.57	ug/L	02/24/2012 2135
3,3'-Dichlorobenzidine	ND		1	5.0	0.81	ug/L	02/24/2012 2135
3-Nitroaniline	ND		1	2.0	0.77	ug/L	02/24/2012 2135
4,6-Dinitro-2-methylphenol	ND		1	5.0	1.5	ug/L	02/24/2012 2135
4-Bromophenyl phenyl ether	ND		1	1.0	0.12	ug/L	02/24/2012 2135
4-Chloro-3-methyl phenol	ND		1	1.0	0.22	ug/L	02/24/2012 2135
4-Chloroaniline	ND		1	1.0	0.13	ug/L	02/24/2012 2135
4-Chlorophenyl phenyl ether	ND		1	1.0	0.11	ug/L	02/24/2012 2135
4-Nitroaniline	ND		1	2.0	0.39	ug/L	02/24/2012 2135
4-Nitrophenol	ND		1	5.0	0.64	ug/L	02/24/2012 2135
Acenaphthene	ND		1	1.0	0.090	ug/L	02/24/2012 2135
Acenaphthylene	ND		1	1.0	0.16	ug/L	02/24/2012 2135
Anthracene	ND		1	1.0	0.13	ug/L	02/24/2012 2135
Benzo(a)anthracene	ND		1	1.0	0.15	ug/L	02/24/2012 2135
Benzo(a)pyrene	ND		1	1.0	0.16	ug/L	02/24/2012 2135
Benzo(b)fluoranthene	ND		1	1.0	0.20	ug/L	02/24/2012 2135
Benzo(g,h,i)perylene	ND		1	1.0	0.23	ug/L	02/24/2012 2135
Benzo(k)fluoranthene	ND		1	1.0	0.12	ug/L	02/24/2012 2135
bis(2-Chloroethoxy)methane	ND		1	1.0	0.13	ug/L	02/24/2012 2135
bis(2-Chloroisopropyl)ether	ND		1	1.0	0.080	ug/L	02/24/2012 2135
bis(2-Ethylhexyl)phthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Butyl benzyl phthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Carbazole	ND		1	1.0	0.25	ug/L	02/24/2012 2135
Chrysene	ND		1	1.0	0.12	ug/L	02/24/2012 2135
Di-n-butyl phthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Di-n-octylphthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Dibenzo(a,h)anthracene	ND		1	1.0	0.13	ug/L	02/24/2012 2135
Dibenzofuran	ND		1	1.0	0.16	ug/L	02/24/2012 2135
Diethylphthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Dimethyl phthalate	ND		1	5.0	1.7	ug/L	02/24/2012 2135
Fluoranthene	ND		1	1.0	0.21	ug/L	02/24/2012 2135

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: NQ78138-001

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Fluorene	ND		1	1.0	0.10	ug/L	02/24/2012 2135
Hexachlorobenzene	ND		1	1.0	0.21	ug/L	02/24/2012 2135
Hexachlorobutadiene	ND		1	1.0	0.090	ug/L	02/24/2012 2135
Hexachlorocyclopentadiene	ND		1	5.0	0.23	ug/L	02/24/2012 2135
Hexachloroethane	ND		1	1.0	0.11	ug/L	02/24/2012 2135
Indeno(1,2,3-c,d)pyrene	ND		1	1.0	0.23	ug/L	02/24/2012 2135
Isophorone	ND		1	1.0	0.080	ug/L	02/24/2012 2135
N-Nitrosodi-n-propylamine	ND		1	1.0	0.080	ug/L	02/24/2012 2135
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	1.0	0.38	ug/L	02/24/2012 2135
Naphthalene	ND		1	1.0	0.070	ug/L	02/24/2012 2135
Nitrobenzene	ND		1	1.0	0.10	ug/L	02/24/2012 2135
Pentachlorophenol	ND		1	5.0	0.54	ug/L	02/24/2012 2135
Phenanthrene	ND		1	1.0	0.18	ug/L	02/24/2012 2135
Phenol	ND		1	1.0	0.11	ug/L	02/24/2012 2135
Pyrene	ND		1	1.0	0.16	ug/L	02/24/2012 2135
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		73	41-144				
2-Fluorobiphenyl		71	37-129				
2-Fluorophenol		66	24-127				
Nitrobenzene-d5		69	38-127				
Phenol-d5		71	28-128				
Terphenyl-d14		69	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: NQ78138-002

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-Trichlorophenol	20	16		1	80	46-125	02/24/2012 2200
2,4,6-Trichlorophenol	20	16		1	78	36-123	02/24/2012 2200
2,4-Dichlorophenol	20	17		1	83	38-127	02/24/2012 2200
2,4-Dimethylphenol	20	14		1	69	36-110	02/24/2012 2200
2,4-Dinitrophenol	100	95		1	95	33-143	02/24/2012 2200
2,4-Dinitrotoluene	40	32		1	81	55-137	02/24/2012 2200
2,6-Dinitrotoluene	40	33		1	82	53-128	02/24/2012 2200
2-Chloronaphthalene	20	13		1	63	42-132	02/24/2012 2200
2-Chlorophenol	20	14		1	68	40-128	02/24/2012 2200
2-Methylnaphthalene	20	17		1	86	49-122	02/24/2012 2200
2-Methylphenol	20	16		1	78	33-122	02/24/2012 2200
2-Nitroaniline	40	33		1	83	48-126	02/24/2012 2200
2-Nitrophenol	40	30		1	75	44-131	02/24/2012 2200
3 & 4-Methylphenol	40	33		1	83	48-112	02/24/2012 2200
3-Nitroaniline	40	33		1	83	29-109	02/24/2012 2200
4,6-Dinitro-2-methylphenol	100	89		1	89	46-151	02/24/2012 2200
4-Bromophenyl phenyl ether	20	16		1	81	49-123	02/24/2012 2200
4-Chloro-3-methyl phenol	20	18		1	90	48-136	02/24/2012 2200
4-Chloroaniline	20	2.6	N	1	13	18-73	02/24/2012 2200
4-Chlorophenyl phenyl ether	20	16		1	80	34-124	02/24/2012 2200
4-Nitroaniline	40	39		1	97	42-154	02/24/2012 2200
4-Nitrophenol	100	85		1	85	43-145	02/24/2012 2200
Acenaphthene	20	16		1	79	51-130	02/24/2012 2200
Acenaphthylene	20	15		1	75	46-131	02/24/2012 2200
Anthracene	20	16		1	82	48-122	02/24/2012 2200
Benzo(a)anthracene	20	16		1	79	50-143	02/24/2012 2200
Benzo(a)pyrene	20	17		1	84	55-141	02/24/2012 2200
Benzo(b)fluoranthene	20	18		1	89	48-147	02/24/2012 2200
Benzo(g,h,i)perylene	20	15		1	76	48-139	02/24/2012 2200
Benzo(k)fluoranthene	20	15		1	74	48-148	02/24/2012 2200
bis(2-Chloroethoxy)methane	20	16		1	82	46-130	02/24/2012 2200
bis(2-Chloroisopropyl)ether	20	14		1	68	36-133	02/24/2012 2200
bis(2-Ethylhexyl)phthalate	20	15		1	75	40-141	02/24/2012 2200
Butyl benzyl phthalate	20	17		1	85	52-142	02/24/2012 2200
Carbazole	20	20		1	98	45-101	02/24/2012 2200
Chrysene	20	16		1	80	51-137	02/24/2012 2200
Di-n-butyl phthalate	20	18		1	91	50-134	02/24/2012 2200
Di-n-octylphthalate	20	17		1	87	50-136	02/24/2012 2200
Dibenzo(a,h)anthracene	20	15		1	77	48-139	02/24/2012 2200
Dibenzofuran	20	16		1	80	45-142	02/24/2012 2200
Diethylphthalate	20	16		1	82	48-124	02/24/2012 2200
Dimethyl phthalate	20	16		1	81	43-122	02/24/2012 2200
Fluoranthene	20	17		1	84	50-124	02/24/2012 2200
Fluorene	20	16		1	81	39-122	02/24/2012 2200

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: NQ78138-002

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachlorobenzene	20	16		1	79	46-125	02/24/2012 2200
Hexachlorobutadiene	20	14		1	71	38-121	02/24/2012 2200
Hexachlorocyclopentadiene	100	57		1	57	24-110	02/24/2012 2200
Hexachloroethane	20	9.8		1	49	32-109	02/24/2012 2200
Indeno(1,2,3-c,d)pyrene	20	15		1	76	49-146	02/24/2012 2200
Isophorone	20	18		1	88	43-118	02/24/2012 2200
N-Nitrosodi-n-propylamine	20	17		1	87	46-135	02/24/2012 2200
N-Nitrosodiphenylamine (Diphenylamine)	4.3	3.5		1	81	44-124	02/24/2012 2200
Naphthalene	20	16		1	80	45-118	02/24/2012 2200
Nitrobenzene	20	15		1	74	46-131	02/24/2012 2200
Pentachlorophenol	100	92		1	92	30-137	02/24/2012 2200
Phenanthrene	20	17		1	83	49-122	02/24/2012 2200
Phenol	20	15		1	74	35-118	02/24/2012 2200
Pyrene	20	17		1	85	50-130	02/24/2012 2200
Surrogate	Q	% Rec	Acceptance Limit				
2,4,6-Tribromophenol		81	41-144				
2-Fluorobiphenyl		79	37-129				
2-Fluorophenol		68	24-127				
Nitrobenzene-d5		75	38-127				
Phenol-d5		78	28-128				
Terphenyl-d14		73	10-148				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: NB17010-001MS

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	42	29		1	70	10-133	02/24/2012 2249
Acenaphthylene	ND	42	27		1	65	34-128	02/24/2012 2249
Anthracene	ND	42	30		1	73	48-122	02/24/2012 2249
Benzo(a)anthracene	ND	42	29		1	70	53-98	02/24/2012 2249
Benzo(a)pyrene	ND	42	24		1	57	11-160	02/24/2012 2249
Benzo(b)fluoranthene	ND	42	27		1	65	10-165	02/24/2012 2249
Benzo(g,h,i)perylene	ND	42	21		1	51	42-111	02/24/2012 2249
Benzo(k)fluoranthene	ND	42	26		1	62	13-175	02/24/2012 2249
4-Bromophenyl phenyl ether	ND	42	30		1	72	49-123	02/24/2012 2249
Butyl benzyl phthalate	ND	42	33		1	80	52-142	02/24/2012 2249
Carbazole	ND	42	38		1	91	45-101	02/24/2012 2249
4-Chloro-3-methyl phenol	ND	42	29		1	69	40-98	02/24/2012 2249
4-Chloroaniline	ND	42	3.5	N	1	8.4	10-98	02/24/2012 2249
bis(2-Chloroethoxy)methane	ND	42	24		1	58	43-93	02/24/2012 2249
bis(2-Chloroisopropyl)ether	ND	42	25		1	60	36-99	02/24/2012 2249
2-Chloronaphthalene	ND	42	23		1	55	40-89	02/24/2012 2249
2-Chlorophenol	ND	42	24		1	58	33-92	02/24/2012 2249
4-Chlorophenyl phenyl ether	ND	42	31		1	73	34-124	02/24/2012 2249
Chrysene	ND	42	27		1	66	51-107	02/24/2012 2249
Dibenzo(a,h)anthracene	ND	42	21		1	51	47-116	02/24/2012 2249
Dibenzofuran	ND	42	30		1	72	45-94	02/24/2012 2249
2,4-Dichlorophenol	ND	42	25		1	60	34-105	02/24/2012 2249
Diethylphthalate	ND	42	34		1	80	48-124	02/24/2012 2249
Dimethyl phthalate	ND	42	31		1	75	43-122	02/24/2012 2249
2,4-Dimethylphenol	ND	42	19		1	45	33-77	02/24/2012 2249
Di-n-butyl phthalate	ND	42	39		1	95	50-134	02/24/2012 2249
4,6-Dinitro-2-methylphenol	ND	210	180		1	85	33-118	02/24/2012 2249
2,4-Dinitrophenol	ND	210	180		1	89	19-119	02/24/2012 2249
2,4-Dinitrotoluene	ND	83	65		1	79	50-104	02/24/2012 2249
2,6-Dinitrotoluene	ND	83	65		1	77	53-128	02/24/2012 2249
Di-n-octylphthalate	ND	42	17		1	41	40-112	02/24/2012 2249
bis(2-Ethylhexyl)phthalate	2.3	42	18		1	37	10-142	02/24/2012 2249
Fluoranthene	ND	42	33		1	79	50-124	02/24/2012 2249
Fluorene	ND	42	31		1	75	39-122	02/24/2012 2249
Hexachlorobenzene	ND	42	30		1	72	46-125	02/24/2012 2249
Hexachlorobutadiene	ND	42	21		1	50	42-94	02/24/2012 2249
Hexachlorocyclopentadiene	ND	210	78		1	37	14-89	02/24/2012 2249
Hexachloroethane	ND	42	16		1	39	39-86	02/24/2012 2249
Indeno(1,2,3-c,d)pyrene	ND	42	21		1	51	43-113	02/24/2012 2249
Isophorone	ND	42	26		1	63	42-84	02/24/2012 2249
2-Methylnaphthalene	ND	42	26		1	62	46-90	02/24/2012 2249
2-Methylphenol	ND	42	27		1	65	33-122	02/24/2012 2249
3 & 4-Methylphenol	ND	83	60		1	71	24-97	02/24/2012 2249
Naphthalene	ND	42	24		1	58	46-89	02/24/2012 2249

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: NB17010-001MS

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2-Nitroaniline	ND	83	63		1	75	48-126	02/24/2012 2249
3-Nitroaniline	ND	83	59		1	71	10-110	02/24/2012 2249
4-Nitroaniline	ND	83	73		1	87	41-99	02/24/2012 2249
Nitrobenzene	ND	42	26		1	63	44-91	02/24/2012 2249
2-Nitrophenol	ND	83	45		1	54	34-102	02/24/2012 2249
4-Nitrophenol	ND	210	170		1	82	29-122	02/24/2012 2249
N-Nitrosodi-n-propylamine	ND	42	30		1	73	41-96	02/24/2012 2249
N-Nitrosodiphenylamine (Diphenylamine)	ND	9.0	6.1		1	68	10-150	02/24/2012 2249
Pentachlorophenol	ND	210	170		1	84	32-110	02/24/2012 2249
Phenanthrene	ND	42	33		1	79	49-122	02/24/2012 2249
Phenol	ND	42	27		1	64	33-92	02/24/2012 2249
Pyrene	ND	42	34		1	81	50-130	02/24/2012 2249
2,4,5-Trichlorophenol	ND	42	31		1	75	46-125	02/24/2012 2249
2,4,6-Trichlorophenol	ND	42	29		1	70	36-123	02/24/2012 2249
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		67	37-129					
2-Fluorophenol		55	24-127					
Nitrobenzene-d5		62	38-127					
Phenol-d5		64	28-128					
Terphenyl-d14		57	10-148					
2,4,6-Tribromophenol		77	41-144					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: NB17010-001MD

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	43	30		1	71	3.7	10-133	40	02/24/2012 2314
Acenaphthylene	ND	43	29		1	67	6.2	34-128	40	02/24/2012 2314
Anthracene	ND	43	30		1	70	2.2	48-122	40	02/24/2012 2314
Benzo(a)anthracene	ND	43	19	N	1	46	40	53-98	40	02/24/2012 2314
Benzo(a)pyrene	ND	43	12	+	1	28	66	11-160	40	02/24/2012 2314
Benzo(b)fluoranthene	ND	43	15	+	1	36	55	10-165	40	02/24/2012 2314
Benzo(g,h,i)perylene	ND	43	10	N,+	1	24	72	42-111	40	02/24/2012 2314
Benzo(k)fluoranthene	ND	43	15	+	1	35	52	13-175	40	02/24/2012 2314
4-Bromophenyl phenyl ether	ND	43	31		1	72	1.3	49-123	40	02/24/2012 2314
Butyl benzyl phthalate	ND	43	28		1	66	17	52-142	40	02/24/2012 2314
Carbazole	ND	43	38		1	90	1.1	45-101	40	02/24/2012 2314
4-Chloro-3-methyl phenol	ND	43	36		1	84	22	40-98	40	02/24/2012 2314
4-Chloroaniline	ND	43	2.1	N,+	1	5.0	48	10-98	40	02/24/2012 2314
bis(2-Chloroethoxy)methane	ND	43	31		1	74	26	43-93	40	02/24/2012 2314
bis(2-Chloroisopropyl)ether	ND	43	26		1	62	5.9	36-99	40	02/24/2012 2314
2-Chloronaphthalene	ND	43	24		1	57	4.8	40-89	40	02/24/2012 2314
2-Chlorophenol	ND	43	26		1	62	8.2	33-92	40	02/24/2012 2314
4-Chlorophenyl phenyl ether	ND	43	30		1	70	1.8	34-124	40	02/24/2012 2314
Chrysene	ND	43	16	N,+	1	37	54	51-107	40	02/24/2012 2314
Dibenzo(a,h)anthracene	ND	43	11	N,+	1	26	61	47-116	40	02/24/2012 2314
Dibenzofuran	ND	43	30		1	72	1.9	45-94	40	02/24/2012 2314
2,4-Dichlorophenol	ND	43	32		1	76	26	34-105	40	02/24/2012 2314
Diethylphthalate	ND	43	32		1	75	5.2	48-124	40	02/24/2012 2314
Dimethyl phthalate	ND	43	32		1	75	1.1	43-122	40	02/24/2012 2314
2,4-Dimethylphenol	ND	43	27		1	62	36	33-77	40	02/24/2012 2314
Di-n-butyl phthalate	ND	43	37		1	86	7.4	50-134	40	02/24/2012 2314
4,6-Dinitro-2-methylphenol	ND	210	180		1	83	0.14	33-118	40	02/24/2012 2314
2,4-Dinitrophenol	ND	210	190		1	91	4.3	19-119	40	02/24/2012 2314
2,4-Dinitrotoluene	ND	85	64		1	75	2.4	50-104	40	02/24/2012 2314
2,6-Dinitrotoluene	ND	85	65		1	76	0.56	53-128	40	02/24/2012 2314
Di-n-octylphthalate	ND	43	8.5	N,+	1	20	68	40-112	40	02/24/2012 2314
bis(2-Ethylhexyl)phthalate	2.3	43	9.6	+	1	17	59	10-142	40	02/24/2012 2314
Fluoranthene	ND	43	31		1	74	4.8	50-124	40	02/24/2012 2314
Fluorene	ND	43	31		1	72	2.0	39-122	40	02/24/2012 2314
Hexachlorobenzene	ND	43	28		1	66	6.2	46-125	40	02/24/2012 2314
Hexachlorobutadiene	ND	43	28		1	66	30	42-94	40	02/24/2012 2314
Hexachlorocyclopentadiene	ND	210	100		1	49	28	14-89	40	02/24/2012 2314
Hexachloroethane	ND	43	18		1	43	12	39-86	40	02/24/2012 2314
Indeno(1,2,3-c,d)pyrene	ND	43	10	N,+	1	24	69	43-113	40	02/24/2012 2314
Isophorone	ND	43	34		1	80	26	42-84	40	02/24/2012 2314
2-Methylnaphthalene	ND	43	34		1	79	27	46-90	40	02/24/2012 2314
2-Methylphenol	ND	43	29		1	69	8.1	33-122	40	02/24/2012 2314
3 & 4-Methylphenol	ND	85	63		1	74	5.9	24-97	40	02/24/2012 2314
Naphthalene	ND	43	32		1	75	27	46-89	40	02/24/2012 2314

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: NB17010-001MD

Matrix: Aqueous

Batch: 78138

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 02/20/2012 1345

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
2-Nitroaniline	ND	85	64	1		75	2.5	48-126	40	02/24/2012 2314	
3-Nitroaniline	ND	85	58	1		68	2.6	10-110	40	02/24/2012 2314	
4-Nitroaniline	ND	85	73	1		86	0.10	41-99	40	02/24/2012 2314	
Nitrobenzene	ND	43	29	1		67	8.7	44-91	40	02/24/2012 2314	
2-Nitrophenol	ND	85	59	1		70	28	34-102	40	02/24/2012 2314	
4-Nitrophenol	ND	210	160	1		76	4.8	29-122	40	02/24/2012 2314	
N-Nitrosodi-n-propylamine	ND	43	33	1		78	9.3	41-96	40	02/24/2012 2314	
N-Nitrosodiphenylamine (Diphenylamine)	ND	9.1	5.6	1		61	9.3	10-150	40	02/24/2012 2314	
Pentachlorophenol	ND	210	180	1		84	2.7	32-110	40	02/24/2012 2314	
Phenanthrene	ND	43	32	1		75	2.3	49-122	40	02/24/2012 2314	
Phenol	ND	43	28	1		66	5.1	33-92	40	02/24/2012 2314	
Pyrene	ND	43	31	1		72	10	50-130	40	02/24/2012 2314	
2,4,5-Trichlorophenol	ND	43	32	1		74	1.7	46-125	40	02/24/2012 2314	
2,4,6-Trichlorophenol	ND	43	31	1		72	5.9	36-123	40	02/24/2012 2314	
Surrogate	Q	% Rec	Acceptance Limit								
2-Fluorobiphenyl		69	37-129								
2-Fluorophenol		61	24-127								
Nitrobenzene-d5		67	38-127								
Phenol-d5		68	28-128								
Terphenyl-d14		36	10-148								
2,4,6-Tribromophenol		78	41-144								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: NQ78136-001

Matrix: Aqueous

Batch: 78136

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 02/20/2012 1630

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0010	ug/L	02/23/2012 2235
4,4'-DDE	ND		1	0.025	0.011	ug/L	02/23/2012 2235
4,4'-DDT	ND		1	0.025	0.0020	ug/L	02/23/2012 2235
Aldrin	ND		1	0.025	0.0017	ug/L	02/23/2012 2235
alpha-BHC	ND		1	0.025	0.0010	ug/L	02/23/2012 2235
alpha-Chlordane	ND		1	0.025	0.0013	ug/L	02/23/2012 2235
beta-BHC	ND		1	0.025	0.0039	ug/L	02/23/2012 2235
delta-BHC	ND		1	0.025	0.0011	ug/L	02/23/2012 2235
Dieldrin	ND		1	0.025	0.0010	ug/L	02/23/2012 2235
Endosulfan I	ND		1	0.025	0.0022	ug/L	02/23/2012 2235
Endosulfan II	ND		1	0.025	0.0015	ug/L	02/23/2012 2235
Endosulfan sulfate	ND		1	0.025	0.0011	ug/L	02/23/2012 2235
Endrin	ND		1	0.025	0.0010	ug/L	02/23/2012 2235
Endrin aldehyde	ND		1	0.025	0.0019	ug/L	02/23/2012 2235
Endrin ketone	ND		1	0.025	0.0012	ug/L	02/23/2012 2235
gamma-BHC (Lindane)	ND		1	0.025	0.0011	ug/L	02/23/2012 2235
gamma-Chlordane	0.0015	J	1	0.025	0.0015	ug/L	02/23/2012 2235
Heptachlor	ND		1	0.025	0.013	ug/L	02/23/2012 2235
Heptachlor epoxide	ND		1	0.025	0.0020	ug/L	02/23/2012 2235
Methoxychlor	ND		1	0.10	0.0020	ug/L	02/23/2012 2235
Toxaphene	ND		1	0.25	0.11	ug/L	02/23/2012 2235
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		48	20-131				
Tetrachloro-m-xylene		88	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: NQ78136-002

Matrix: Aqueous

Batch: 78136

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 02/20/2012 1630

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.47		1	94	70-130	02/23/2012 2255
4,4'-DDE	0.50	0.47		1	93	70-130	02/23/2012 2255
4,4'-DDT	0.50	0.49		1	97	70-130	02/23/2012 2255
Aldrin	0.50	0.48		1	96	70-130	02/23/2012 2255
alpha-BHC	0.50	0.47		1	94	70-130	02/23/2012 2255
beta-BHC	0.50	0.47		1	94	70-130	02/23/2012 2255
delta-BHC	0.50	0.45		1	90	70-130	02/23/2012 2255
Dieldrin	0.50	0.47		1	95	70-130	02/23/2012 2255
Endosulfan I	0.50	0.45		1	89	70-130	02/23/2012 2255
Endosulfan II	0.50	0.43		1	87	70-130	02/23/2012 2255
Endosulfan sulfate	0.50	0.45		1	91	70-130	02/23/2012 2255
Endrin	0.50	0.51		1	102	70-130	02/23/2012 2255
Endrin aldehyde	0.50	0.32	N	1	65	70-130	02/23/2012 2255
gamma-BHC (Lindane)	0.50	0.46		1	92	70-130	02/23/2012 2255
gamma-Chlordane	0.50	0.49		1	98	70-130	02/23/2012 2255
Heptachlor	0.50	0.43		1	86	70-130	02/23/2012 2255
Heptachlor epoxide	0.50	0.45		1	90	70-130	02/23/2012 2255
Methoxychlor	0.50	0.50		1	100	70-130	02/23/2012 2255
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl	N	13	20-131				
Tetrachloro-m-xylene		92	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Herbicides by GC - MB

Sample ID: NQ78231-001

Matrix: Aqueous

Batch: 78231

Prep Method: 8151A

Analytical Method: 8151A

Prep Date: 02/20/2012 2027

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
2,4,5-T	ND		1	0.50	0.10	ug/L	02/22/2012 1704
2,4,5-TP (Silvex)	ND		1	0.50	0.10	ug/L	02/22/2012 1704
2,4-D	ND		1	2.0	0.40	ug/L	02/22/2012 1704
Surrogate	Q	% Rec	Acceptance Limit				
DCAA		82	62-117				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Herbicides by GC - LCS

Sample ID: NQ78231-002

Matrix: Aqueous

Batch: 78231

Prep Method: 8151A

Analytical Method: 8151A

Prep Date: 02/20/2012 2027

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
2,4,5-T	10	9.0		1	90	70-130	02/22/2012 1728
2,4,5-TP (Silvex)	10	8.7		1	87	70-130	02/22/2012 1728
2,4-D	10	9.3		1	93	70-130	02/22/2012 1728
Surrogate	Q	% Rec	Acceptance Limit				
DCAA		80	62-117				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - MB

Sample ID: NQ78792-001

Matrix: Aqueous

Batch: 78792

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 02/27/2012 1720

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
4,4'-DDD	ND		1	0.025	0.0010	ug/L	03/01/2012 2143
4,4'-DDE	ND		1	0.025	0.011	ug/L	03/01/2012 2143
4,4'-DDT	ND		1	0.025	0.0020	ug/L	03/01/2012 2143
Aldrin	ND		1	0.025	0.0017	ug/L	03/01/2012 2143
alpha-BHC	ND		1	0.025	0.0010	ug/L	03/01/2012 2143
alpha-Chlordane	ND		1	0.025	0.0013	ug/L	03/01/2012 2143
beta-BHC	ND		1	0.025	0.0039	ug/L	03/01/2012 2143
delta-BHC	ND		1	0.025	0.0011	ug/L	03/01/2012 2143
Dieldrin	ND		1	0.025	0.0010	ug/L	03/01/2012 2143
Endosulfan I	ND		1	0.025	0.0022	ug/L	03/01/2012 2143
Endosulfan II	ND		1	0.025	0.0015	ug/L	03/01/2012 2143
Endosulfan sulfate	ND		1	0.025	0.0011	ug/L	03/01/2012 2143
Endrin	ND		1	0.025	0.0010	ug/L	03/01/2012 2143
Endrin aldehyde	ND		1	0.025	0.0019	ug/L	03/01/2012 2143
Endrin ketone	ND		1	0.025	0.0012	ug/L	03/01/2012 2143
gamma-BHC (Lindane)	ND		1	0.025	0.0011	ug/L	03/01/2012 2143
gamma-Chlordane	ND		1	0.025	0.0015	ug/L	03/01/2012 2143
Heptachlor	ND		1	0.025	0.013	ug/L	03/01/2012 2143
Heptachlor epoxide	ND		1	0.025	0.0020	ug/L	03/01/2012 2143
Methoxychlor	ND		1	0.10	0.0020	ug/L	03/01/2012 2143
Toxaphene	ND		1	0.25	0.11	ug/L	03/01/2012 2143
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		94	20-131				
Tetrachloro-m-xylene		93	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Organochlorine Pesticides by GC - LCS

Sample ID: NQ78792-002

Matrix: Aqueous

Batch: 78792

Prep Method: 3520C

Analytical Method: 8081B

Prep Date: 02/27/2012 1720

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
4,4'-DDD	0.50	0.54		1	108	70-130	03/01/2012 2202
4,4'-DDE	0.50	0.55		1	110	70-130	03/01/2012 2202
4,4'-DDT	0.50	0.58		1	115	70-130	03/01/2012 2202
Aldrin	0.50	0.53		1	105	70-130	03/01/2012 2202
alpha-BHC	0.50	0.53		1	107	70-130	03/01/2012 2202
beta-BHC	0.50	0.52		1	104	70-130	03/01/2012 2202
delta-BHC	0.50	0.51		1	102	70-130	03/01/2012 2202
Dieldrin	0.50	0.54		1	108	70-130	03/01/2012 2202
Endosulfan I	0.50	0.51		1	103	70-130	03/01/2012 2202
Endosulfan II	0.50	0.51		1	102	70-130	03/01/2012 2202
Endosulfan sulfate	0.50	0.54		1	108	70-130	03/01/2012 2202
Endrin	0.50	0.58		1	117	70-130	03/01/2012 2202
Endrin aldehyde	0.50	0.40		1	80	70-130	03/01/2012 2202
gamma-BHC (Lindane)	0.50	0.54		1	108	70-130	03/01/2012 2202
gamma-Chlordane	0.50	0.55		1	110	70-130	03/01/2012 2202
Heptachlor	0.50	0.48		1	97	70-130	03/01/2012 2202
Heptachlor epoxide	0.50	0.52		1	104	70-130	03/01/2012 2202
Methoxychlor	0.50	0.58		1	116	70-130	03/01/2012 2202
Surrogate	Q	% Rec	Acceptance Limit				
Decachlorobiphenyl		52	20-131				
Tetrachloro-m-xylene		95	26-132				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: NQ78164-001

Matrix: Aqueous

Batch: 78164

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 02/20/2012 1350

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	0.0076	J	1	0.010	0.0040	mg/L	02/22/2012 1146
Barium	ND		1	0.025	0.0075	mg/L	02/22/2012 1146
Cadmium	ND		1	0.0020	0.00060	mg/L	02/23/2012 1336
Chromium	ND		1	0.0050	0.0021	mg/L	02/22/2012 1146
Lead	0.0041	J	1	0.010	0.0019	mg/L	02/22/2012 1146
Selenium	ND		1	0.010	0.0026	mg/L	02/22/2012 1146
Silver	ND		1	0.0050	0.00040	mg/L	02/23/2012 1336

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCS

Sample ID: NQ78164-002

Matrix: Aqueous

Batch: 78164

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 02/20/2012 1350

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.41		1	104	80-120	02/22/2012 1150
Barium	2.0	2.1		1	105	80-120	02/22/2012 1150
Cadmium	0.40	0.42		1	106	80-120	02/23/2012 1340
Chromium	2.0	2.0		1	100	80-120	02/22/2012 1150
Lead	0.40	0.42		1	105	80-120	02/22/2012 1150
Selenium	0.40	0.42		1	105	80-120	02/22/2012 1150
Silver	0.40	0.41		1	102	80-120	02/23/2012 1340

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: NQ78164-003

Matrix: Aqueous

Batch: 78164

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 02/20/2012 1350

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.40	0.39		1	98	6.0	80-120	20	02/22/2012 1154
Barium	2.0	2.1		1	105	0.51	80-120	20	02/22/2012 1154
Cadmium	0.40	0.42		1	106	0.022	80-120	20	02/23/2012 1344
Chromium	2.0	1.9		1	97	2.5	80-120	20	02/22/2012 1154
Lead	0.40	0.41		1	102	3.0	80-120	20	02/22/2012 1154
Selenium	0.40	0.42		1	105	0.44	80-120	20	02/22/2012 1154
Silver	0.40	0.41		1	102	0.50	80-120	20	02/23/2012 1344

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - MB

Sample ID: NQ78310-001

Batch: 78310

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 02/21/2012 1725

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000053	mg/L	02/21/2012 2027

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# RCRA Metals - LCS

Sample ID: NQ78310-002

Matrix: Aqueous

Batch: 78310

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 02/21/2012 1725

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0022		1	108	85-115	02/21/2012 2030

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# RCRA Metals - LCSD

Sample ID: NQ78310-003

Matrix: Aqueous

Batch: 78310

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 02/21/2012 1725

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0020	0.0021		1	107	0.93	85-115	20	02/21/2012 2033

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

NA17016



ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 3

Lab Work Order #

Client & Company Name: <b>ANDREW DAVIS ARCADIS</b>	Telephone: <b>919-854-1282</b>	Preservative: Filtered (✓)	B	E	E	E	C
Address: <b>801 Corporate Center Drive</b>	City: <b>Raleigh NC</b>	# of Containers: 3	2	2	2	2	1
City: <b>Raleigh NC</b>	State: <b>NC</b>	Consistency Information: 1	2	2	2	2	3
Project Name/Location/Address: <b>HUNTER ARMY AIRFIELD VALENTI DRIVE</b>	Project: <b>SCOTTSBORO/ARCADIS-US COM</b>	PARAMETER ANALYSIS & METHOD					
Sample's Printed Name: <b>VALENTI DRIVE</b>	Collection Date/Time: <b>2-16-2008</b>	Type (✓): Comp	✓				
Matrix: <b>W</b>	Matrix: <b>W</b>	X Metals X Herbicides X Pesticides X SVOCs X VOCs					
Sample ID: <b>AD1-MW-7D TRIP BLANK</b>	Date/Time: <b>2-16-2008</b>	Matrix: <b>W</b>					
Special Instructions/Comments: USE SAME TRIP BLANK AS AD1-MW-7D CCE							
Laboratory Information and Receipt: Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp: <b>5.9</b>	Property Name: <b>Valeyn Bourne</b> Signature: <i>Valeyn Bourne</i> Date/Time: <b>2-16-12/TMS</b>	Relinquished By: Printed Name: <b>Valeyn Bourne</b> Signature: <i>Valeyn Bourne</i> Date/Time: <b>2-16-12/TMS</b>	Received By: Printed Name: <b>Valeyn Bourne</b> Signature: <i>Valeyn Bourne                  Date/Time: <b>2-16-12/TMS</b> </i>	Relinquished By: Printed Name: <b>Valeyn Bourne</b> Signature: <i>Valeyn Bourne</i> Date/Time: <b>2-16-12/TMS</b>	Received By: Printed Name: <b>Valeyn Bourne</b> Signature: <i>Valeyn Bourne</i> Date/Time: <b>2-16-12/TMS</b>	Laboratory Received By: Printed Name: <b>Walter A. Lyon</b> Signature: <i>Walter A. Lyon</i> Date/Time: <b>2/12/08</b>	

PINK - Retained by ARCADIS

YELLOW - Lab copy

WHITE - Laboratory returns with results

Distribution:

2071626 CAC ASI Form 01.12.2017

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
 Document Number: F-AD-016  
 Revision Number: 9

Page 1 of 1  
 Replaces Date: 05/06/11  
 Effective Date: 10/11/11

## Sample Receipt Checklist (SRC)

Client: ARCADIS Cooler Inspected by/date: W R/17/12 Lot #: N13 17010

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt <u>58</u> °C <u>1</u> °C <u>1</u> °C <u>1</u> °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH) with the SR # (number) _____			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH <sub>3</sub> /TKN/cyanide/BNA/pest/PCB/herb.			
<small>All This portion can be removed for Recipient's records.</small> in <u>2-19-12</u> FedEx Tracking Number <u>877106322408</u>			
<b>Corrective Action taken, if necessary:</b>			
Was client notified: Yes <input type="checkbox"/> No <input type="checkbox"/>			
SESI employee: _____			
Comments: _____			
Company: <u>ARCADIS G &amp; M OF NC INC</u>			
Address: <u>301 CORPORATE CENTER DR</u>			
<small>Dept./Floor/Suite/Room</small>			
City: <u>RALEIGH</u> State: <u>NC</u> ZIP: <u>27607-5243</u>			



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NA31002  
HAA-01**

Analytical data were evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (July 2002), analytical method control criteria, the analytical laboratory Quality Assurance Control Limits, the Fort Stewart Military Reservation and Hunter Army Airfield Quality Assurance Project Plan (ARCADIS-2008), and professional judgment.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQUIS Data Qualification Module (DQM). DQM checks for the following parameters:

- Holding times and preservation;
- Blank contamination;
  - 1. Method blanks,
  - 2. Trip blanks,
  - 3. Equipment blanks;
- Matrix spike and Duplicate sample recovery;
- Matrix Spike and Matrix Spike Duplicate relative percent differences;
- Laboratory Control Sample and Duplicate recovery;
- Laboratory Control Sample and Duplicate relative percent differences;
- Surrogate recovery (organic analyses only); and
- Field duplicate relative percent difference.

Manual review was performed for the following items:

- Sample dilutions and reporting limits;
- Case Narratives; and
- Laboratory Duplicates

Data was generated by Shealy Environmental Services, Inc. – West Columbia, South Carolina. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

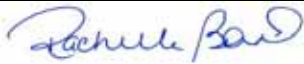
The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in these SDGs are considered usable as reported.



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NA31002  
HAA-01**

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the greater than guidance documents:

- UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.
- J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected greater than the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.
- U Not detected at the quantitative reporting limit

DQM RUN BY:	Rachelle Borne	03/12/12
REVIEW PERFORMED BY:	Rachelle Borne	03/12/12
SIGNATURE:		03/12/12



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NA31002  
HAA-01**

The following samples were included in this SDG:

<b>SDG</b>	<b>Sample ID</b>	<b>Sample Date</b>	<b>Parent Sample</b>
NA31002	HA01-MW-12(013012)	01/30/12	
NA31002	HA01-MW-14(013012)	01/30/12	
NA31002	Trip Blank(013012)	01/30/12	



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NA31002  
HAA-01**

ANALYTICAL DATA PACKAGE DOCUMENTATION

**GENERAL INFORMATION**

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	
13. South Carolina Certification Number		X		X	

QA - quality assurance

The analytical report was complete with the following exceptions or notations.

Note: The laboratory reported values between the quantitative reporting limit and the method detection limit as estimated concentrations. The "J" qualifier was retained in this validation. Non-detect values are reported at the quantitative reporting limit.



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NA31002  
HAA-01**

**VOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
C. Trip blanks	DQM		DQM	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R		DQM	DQM	
B. LCS duplicate (LCSD) %R		DQM	DQM	
C. LCS/LCSD RPD	DQM		DQM	
6. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery  
DQM – Data Qualification Module

RPD - relative percent difference

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8260B.

- The recoveries of 1,1-dichloroethene and chloromethane were above the control limit in the LCS and/or the LCSD. The associated field samples were non-detect for these compounds; therefore, qualification of the data is not warranted.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

Analytical data were evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (July 2002), analytical method control criteria, the analytical laboratory Quality Assurance Control Limits, the Fort Stewart Military Reservation and Hunter Army Airfield Quality Assurance Project Plan (ARCADIS-2008), and professional judgment.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQUIS Data Qualification Module (DQM). DQM checks for the following parameters:

- Holding times and preservation;
- Blank contamination;
  - 1. Method blanks,
  - 2. Trip blanks,
  - 3. Equipment blanks;
- Matrix spike and Duplicate sample recovery;
- Matrix Spike and Matrix Spike Duplicate relative percent differences;
- Laboratory Control Sample and Duplicate recovery;
- Laboratory Control Sample and Duplicate relative percent differences;
- Surrogate recovery (organic analyses only); and
- Field duplicate relative percent difference.

Manual review was performed for the following items:

- Sample dilutions and reporting limits;
- Case Narratives; and
- Laboratory Duplicates

Data was generated by Shealy Environmental Services, Inc. – West Columbia, South Carolina. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

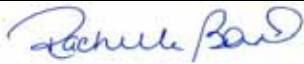
The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in these SDGs are considered usable as reported.



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the greater than guidance documents:

- UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.
- J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected greater than the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.
- R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.
- U Not detected at the quantitative reporting limit

DQM RUN BY:	Rachelle Borne	03/13/12
REVIEW PERFORMED BY:	Rachelle Borne	03/13/12
SIGNATURE:		03/13/12



HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01

The following samples were included in this SDG:

SDG	Sample ID	Sample Date	Parent Sample
NB17010	H01-MS-7D(021612)	02/16/12	
NB17010	Trip Blank(021612)	02/16/12	



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

ANALYTICAL DATA PACKAGE DOCUMENTATION

**GENERAL INFORMATION**

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	
13. South Carolina Certification Number		X		X	

QA - quality assurance

The analytical report was complete with the following exceptions or notations.

Note: The laboratory reported values between the quantitative reporting limit and the method detection limit as estimated concentrations. The "J" qualifier was retained in this validation. Non-detect values are reported at the quantitative reporting limit.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

**VOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
C. Trip blanks		DQM	DQM	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD		DQM		DQM
6. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery  
DQM – Data Qualification Module

RPD - relative percent difference

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8260B.

- 3C. The compound methylene chloride was detected in the trip blank. The associated field sample was non-detect for this compound; therefore, qualification of the data was not warranted.
  
- 5. The RPD between the LCS/LCSD pair was above the control limit for acetone. The associated field samples were qualified as estimated for acetone.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

**SEMIVOLATILE ORGANIC COMPOUNDS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R		DQM		DQM
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R		DQM		DQM
B. MS duplicate (MSD) %R		DQM		DQM
C. MS/MSD precision (RPD)		DQM		DQM
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery

RPD - relative percent difference

DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 8270D.

5. The recovery of the compound 4-chloroaniline was below the control limit in the LCS. The associated field sample was qualified as estimated for this compound.
  
6. Sample location H01-MW-7D(021612) was used as the MS/MSD. Several recoveries and RPDs for several compounds were outside the control limit. The associated field sample was qualified as estimated for these compounds when applicable. See the attached qualification summary for details. The recovery of 4-chloroaniline was less than 10% in the MS. The parent sample was qualified as rejected for 4-chloroaniline.

**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

**PESTICIDES AND HERBICIDES**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment blanks	NA		NA	
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS)				
A. LCS %R		DQM		DQM
B. LCS duplicate (LCSD) %R	NA		NA	
C. LCS/LCSD RPD	NA		NA	
6. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery

RPD - relative percent difference

DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods 8151A and 8081B.

- 3A. The compound gamma chlordane was detected in the method blank. The associated field sample was non-detect for this compound; therefore, qualification of the data was not warranted.
  
4. One of two surrogate recoveries were below the control limit in the pesticide analysis for H01-MW-7D(021612). The method requires that only one surrogate recovery be within the laboratory control limits; therefore, qualification of the data was not warranted.
  
5. The recovery of the compound endrin aldehydes was below the control limit in the LCS. The associated field sample was qualified as estimated for this compound.



**HUNTER STEWART  
ELECTRONIC VALIDATION REVIEW REPORT  
SDG: NB17010  
HAA-01**

**METALS**

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment blanks	NA		NA	
4. Laboratory control sample (LCS)				
A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
5. Matrix spike (MS)				
A. MS %R	NA		NA	
B. MS duplicate (MSD) %R	NA		NA	
C. MS/MSD precision (RPD)	NA		NA	
6. Field/Lab Duplicate precision (RPD)	NA		NA	

M – Manual Review      %R - percent recovery      RPD - relative percent difference  
DQM – Data Qualification Module

Comments:

This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method 6010C and 7470A.

- 3A.      The metals arsenic and lead were detected in the method blank. The associated field samples were non-detect for these metals; therefore, qualification of the data was not warranted.

## Appendix H

Hydraulic Conductivity Calculations

## **APPENDIX E**

### **Hydraulic Conductivity Calculations**



Purpose: Calculate groundwater velocities from available slug test data and piezometric surface elevation data.

Reference: Peck, Hanson, & Thornburn, 1974

Calculation: Linear groundwater flow velocity.

$I$  = gradient

$K$  = hydraulic conductivity

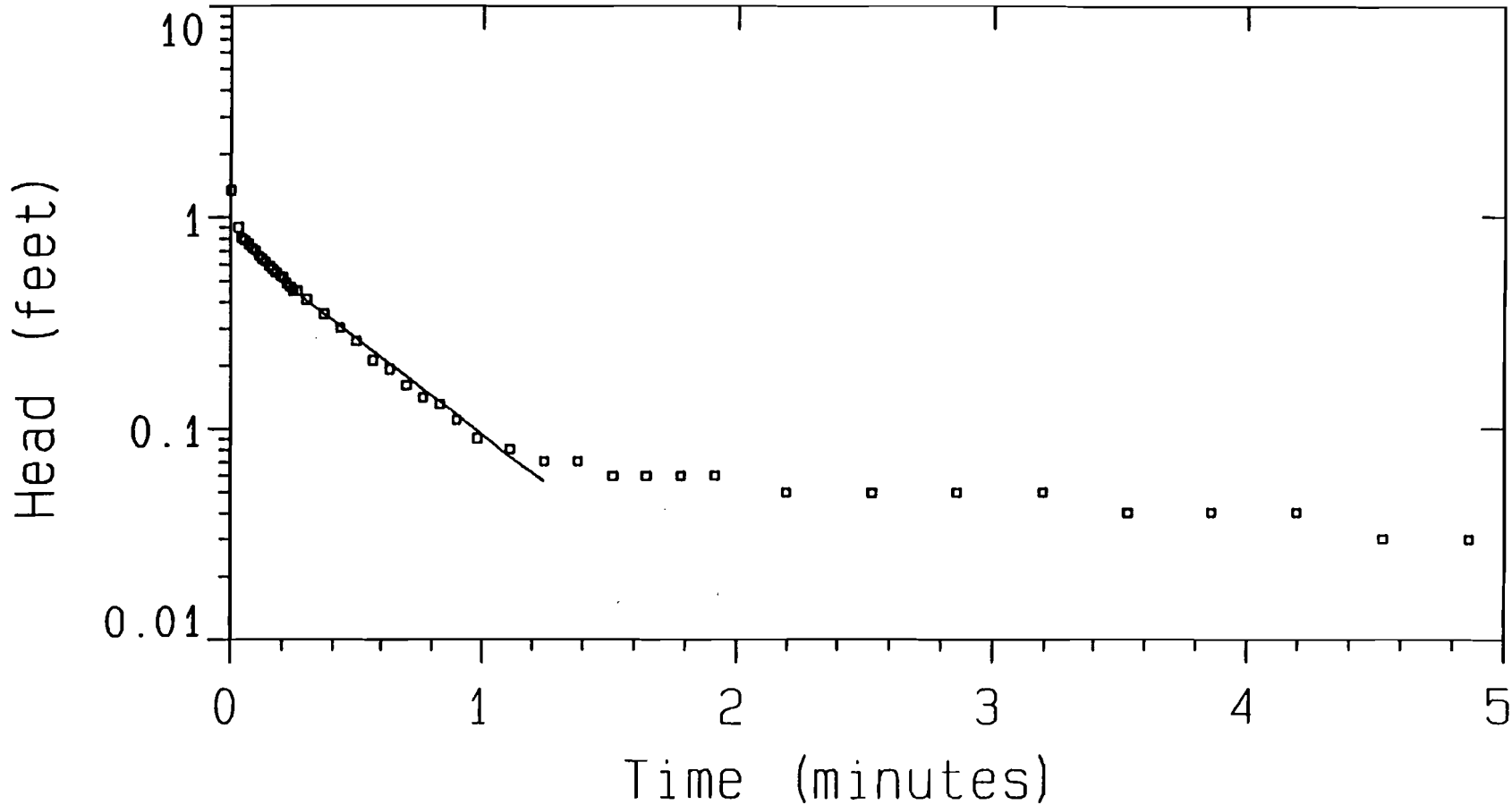
$n$  = porosity (assumed to be 30%)

$V$  = linear flow velocity

$$V = \frac{KI}{n}$$

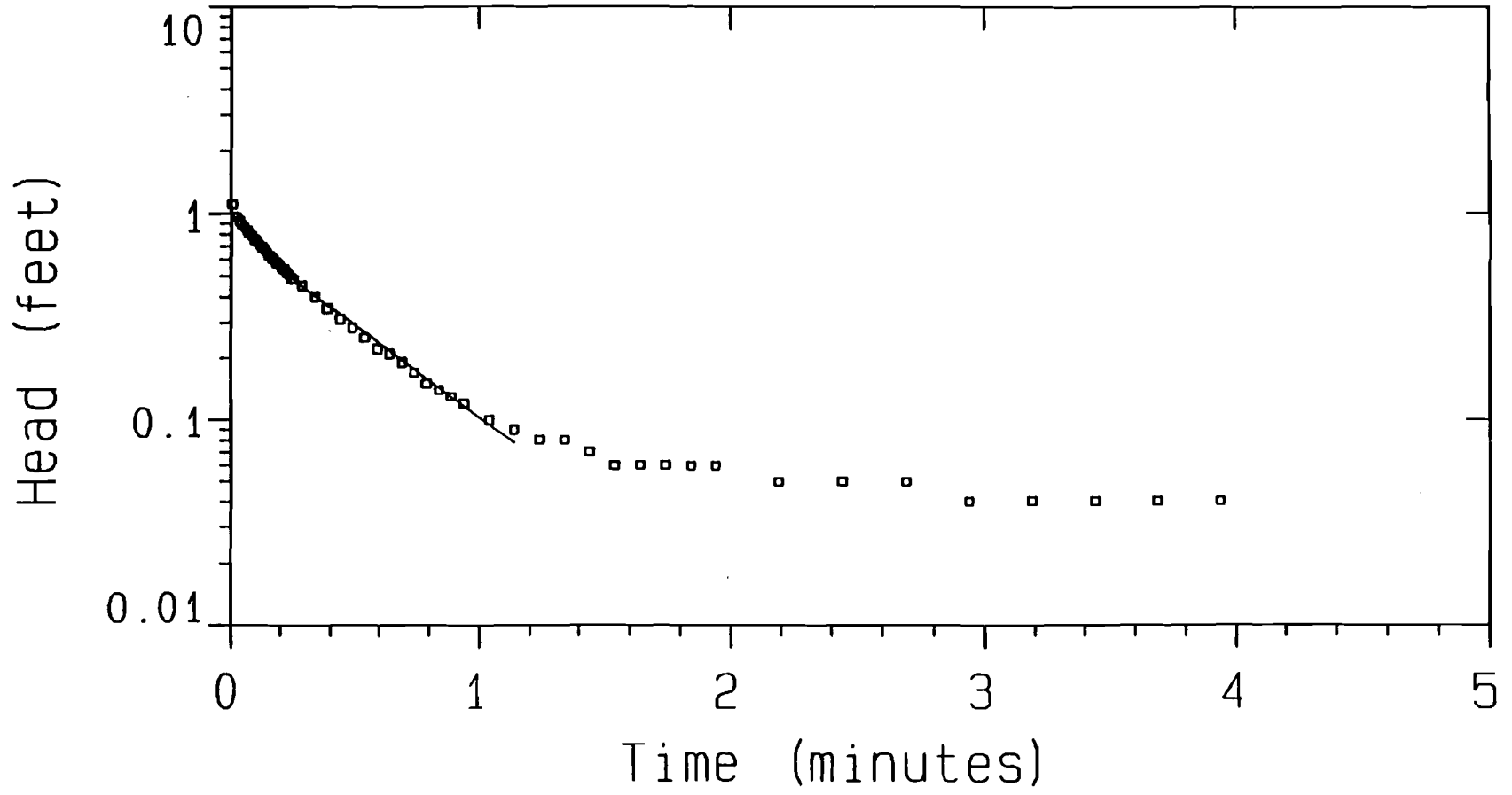
$$V \text{ (ft/min)} \times 60 \text{ min/hr} \times 24 \text{ hr/day} \times 365 \text{ day/yr} \equiv \text{ft/yr}$$

WELL NO.	$I$ (ft/ft)	$K$ (ft/min)	$V$	
			(ft/min)	(ft/yr)
HMW-4 (shallow)	0.0097 (low)	0.00111 (low)	$3.6 \times 10^{-5}$	18.8
	0.0154 (avg)	0.00133 (avg)	$6.8 \times 10^{-5}$	35.9
	0.0187 (high)	0.00155 (high)	$9.7 \times 10^{-5}$	50.7
HMW-3 (deep)	0.0097 (low)	0.00169 (low)	$5.5 \times 10^{-5}$	28.7
	0.0119 (avg)	0.00177 (avg)	$7.0 \times 10^{-5}$	36.8
	0.0131 (high)	0.00184 (high)	$8.0 \times 10^{-5}$	42.2



D-2

<b>MODEL TYPE:</b> BOUWER and RICE <b>CONDUCTIVITY:</b> .001840 ft/min <b>TRANSMISSIVITY:</b> .07768 sq. ft/min <b>INITIAL HEAD:</b> 1.340 ft	<b>for:</b> U.S. Army Corps of Engineers <b>by:</b> Environmental Science & Engineering	<b>Slug Test Data (Slug-In)</b>  Well: HMW-3 Hunter A.A.F. Savannah, GA
	<b>WELL DATA:</b> Units: ft <b>AQUIFER:</b> Water Table <b>THICKNESS:</b> 42.20 <b>SCREEN:</b> top: 39.00 base: 49.00 <b>DIAMETER:</b> casing: 666 intake: 1.708 <b>DEPTH:</b> Water Tab. 9.300 TD: 49.00	
<b>Log Set:</b> HMW3-1I	<b>Date:</b> 08/06/92	



E-3

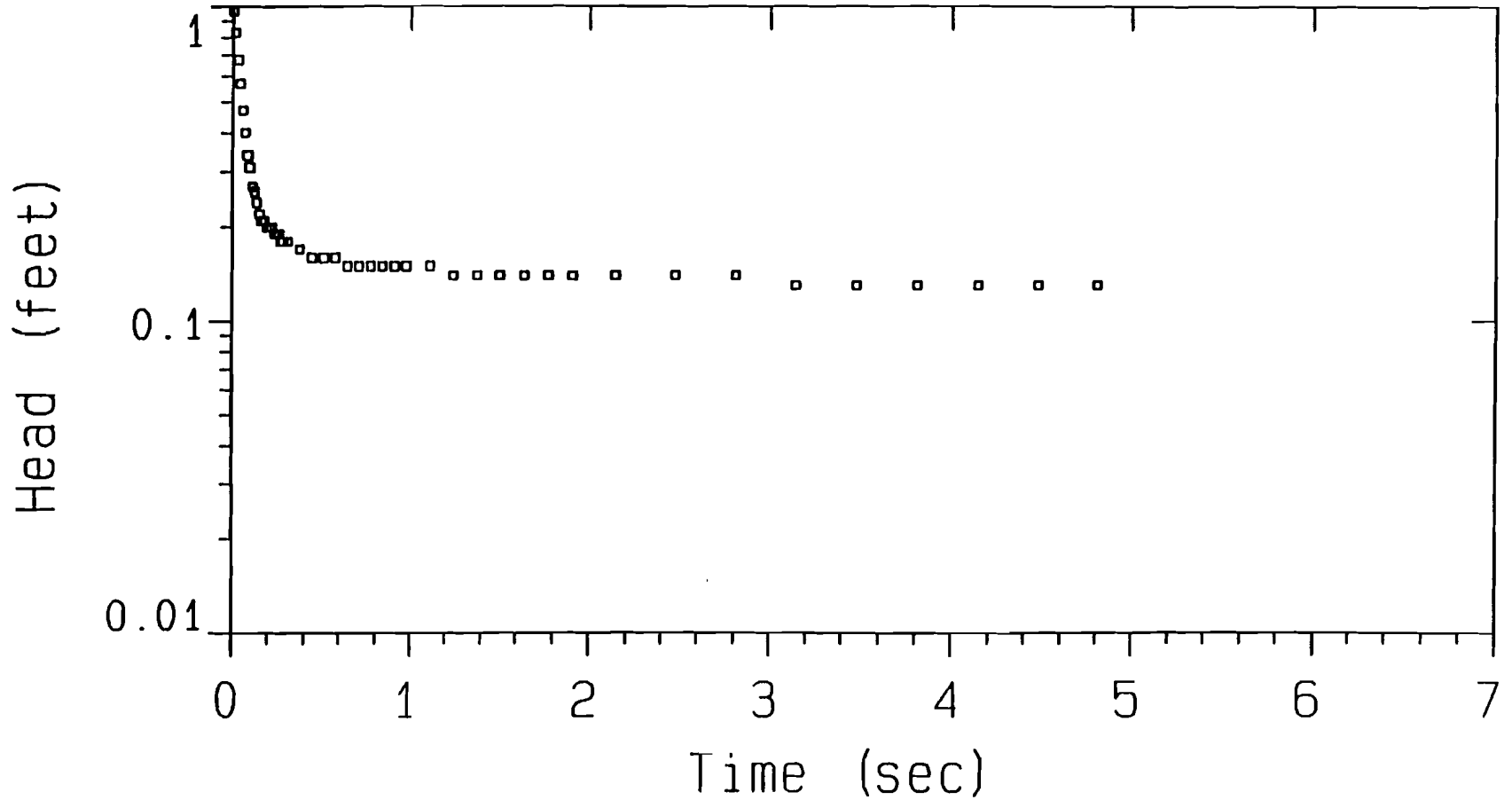
D-3

MODEL TYPE: BOUWER and RICE		for: U.S. Army Corps of Engineers	Slug Test Data (Slug-Out)
CONDUCTIVITY: .001691 ft/min		by: Environmental Science & Engineering	
TRANSMISSIVITY: .07137 sq. ft/min		WELL DATA: Units: ft	Well: HMW-3 Hunter A.A.F. Savannah, GA
INITIAL HEAD: 1.110 ft		AQUIFER: Water Table	
Data Set: HMW3-10	Date: 08/06/92	THICKNESS: 42.20	
		SCREEN: top: 39.00 base: 49.00	
		DIAMETER: casing: .1666 intake: 1.708	
		DEPTH: Water Table: 9.300 TD: 49.00	

372

EA

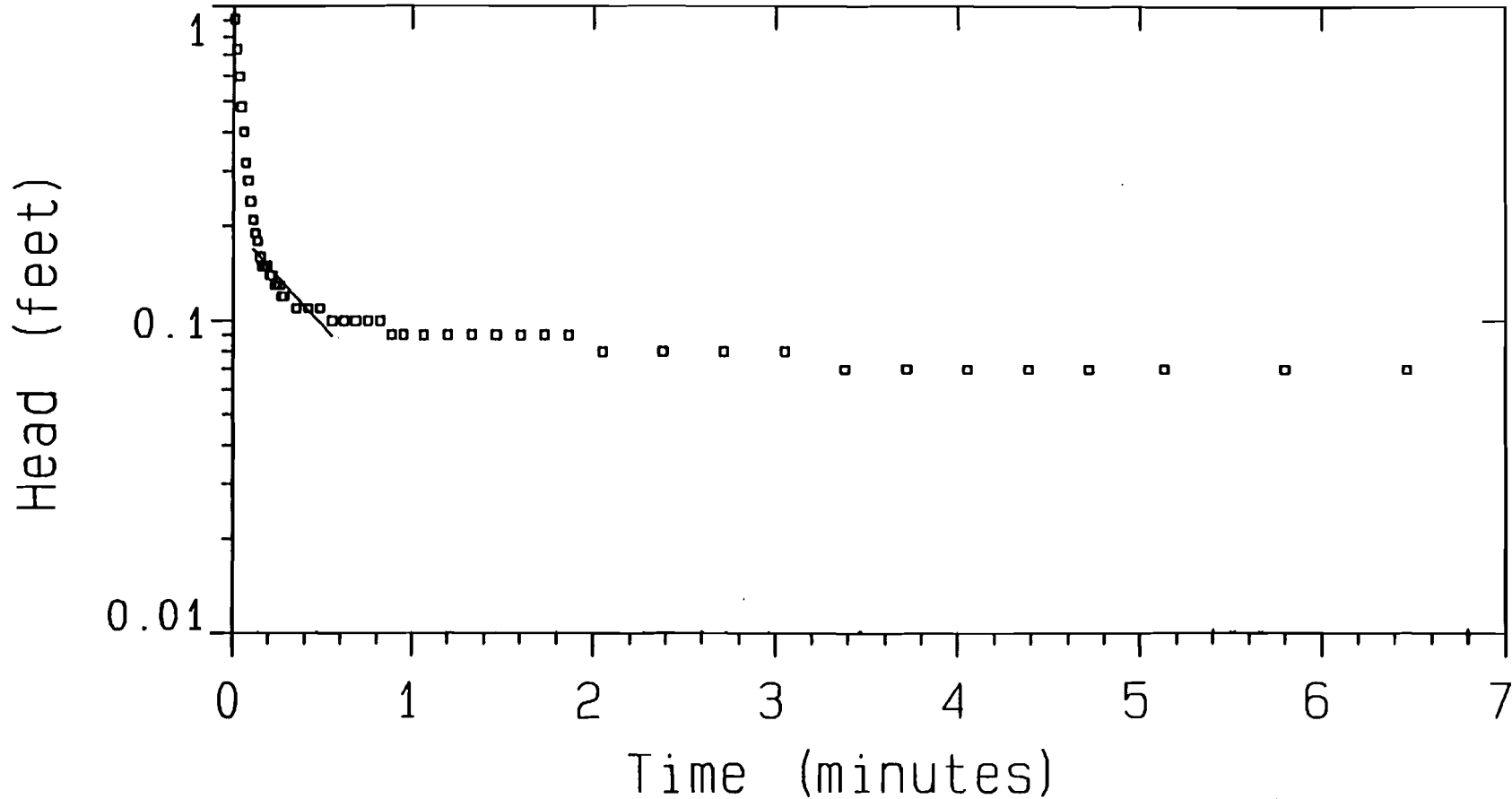
D-4



MODEL TYPE: BOUWER and RICE		for: U.S. Army Corps of Engineers		Slug Test Data (Slug-Out)	
CONDUCTIVITY: .001110 ft/min		by: Environmental Science & Engineering		Well: HMW-4 Hunter A.A.F. Savannah, GA	
TRANSMISSIVITY: .006859 sq. ft/min		WELL DATA: Units: ft			
INITIAL HEAD: .9700 ft		AQUIFER: Water Table			
Data Set: HMW4-10		THICKNESS: 6.180			
Date: 08/06/92		SCREEN: top: 3.000 base: 13.00			
		DIAMETER: casin: 1666 intake: 1.708			
		DEPTH: Water Tab 9.320 TD: 13.00			

E-5

D-5



MODEL TYPE: BOUWER and RICE  
 CONDUCTIVITY: .001546 ft/min  
 TRANSMISSIVITY: .009556 sq. ft/min  
 INITIAL HEAD: .9100 ft

Data Set: HMW-20

Date: 08/06/92

for: U.S. Army Corps of Engineers  
 by: Environmental Science & Engineering

WELL DATA: Units: ft  
 AQUIFER: Water Table  
 THICKNESS: 6.180  
 SCREEN: top: 3.000 base: 13.00  
 DIAMETER: casing: .1666 intake: 1.708  
 DEPTH: Water Table: 9.320 TD: 13.00

Slug Test Data (Slug-Out)

Well: HMW-4  
 Hunter A.A.F.  
 Savannah, GA

374



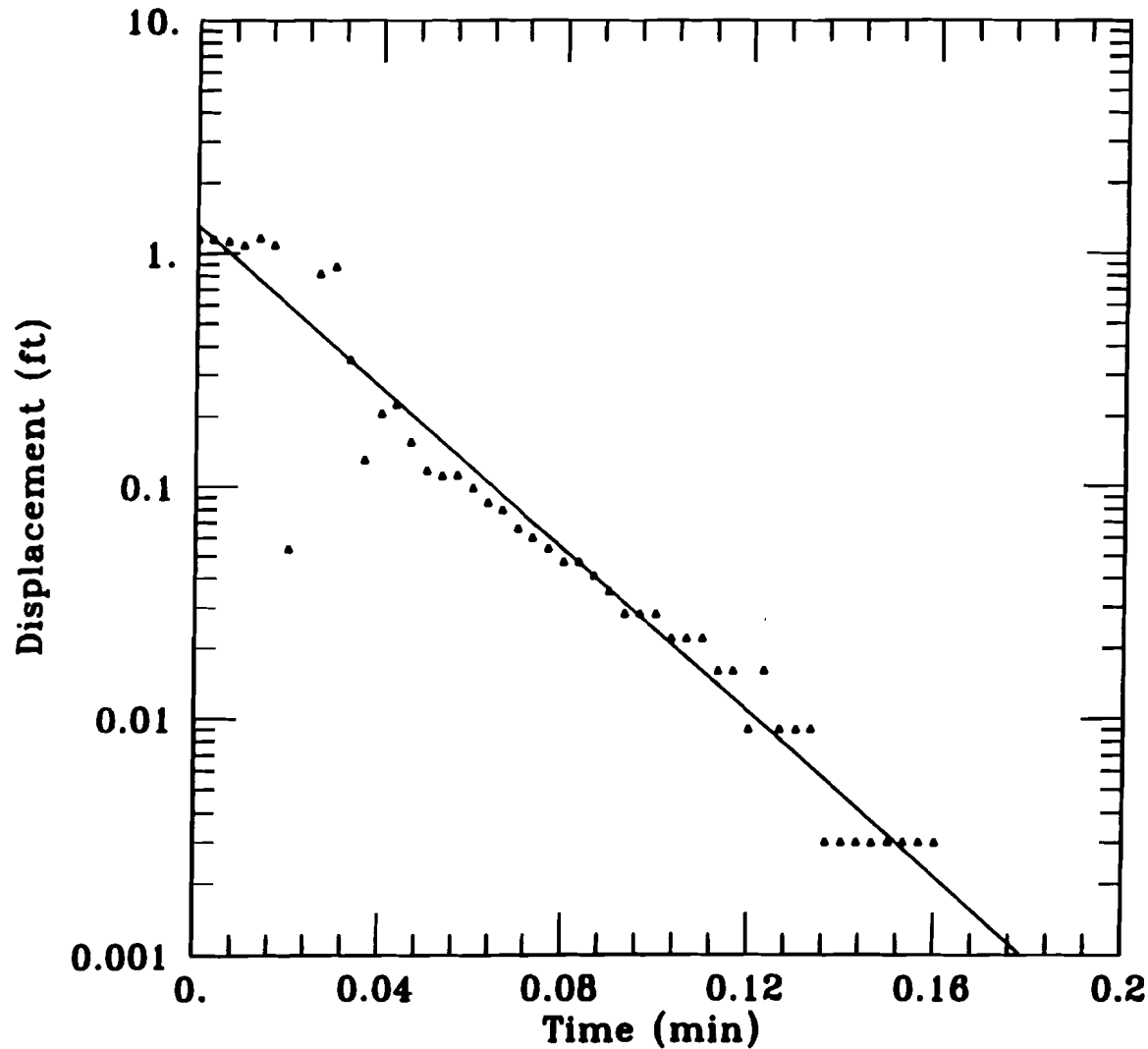
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG. & ENV. SVCS INC.

Location: SAVANNAH GA

Project: 11-3551-0320

# HUNTER ARMY AIRFIELD



DATA SET:  
HMW10-I.DAT  
11/30/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bouwer-Rice

PROJECT DATA:  
test date: 10/10/95  
test well: HMW-10, IN

TEST DATA:  
 $H_0 = 1.156$  ft  
 $r_c = 0.08333$  ft  
 $r_w = 0.3438$  ft  
 $L = 8.08$  ft  
 $b = 8.08$  ft  
 $H = 7.63$  ft

PARAMETER ESTIMATES:  
 $K = 0.19$  ft/min  
 $y_0 = 1.319$  ft

*Handwritten signature and date: 11/30/95*

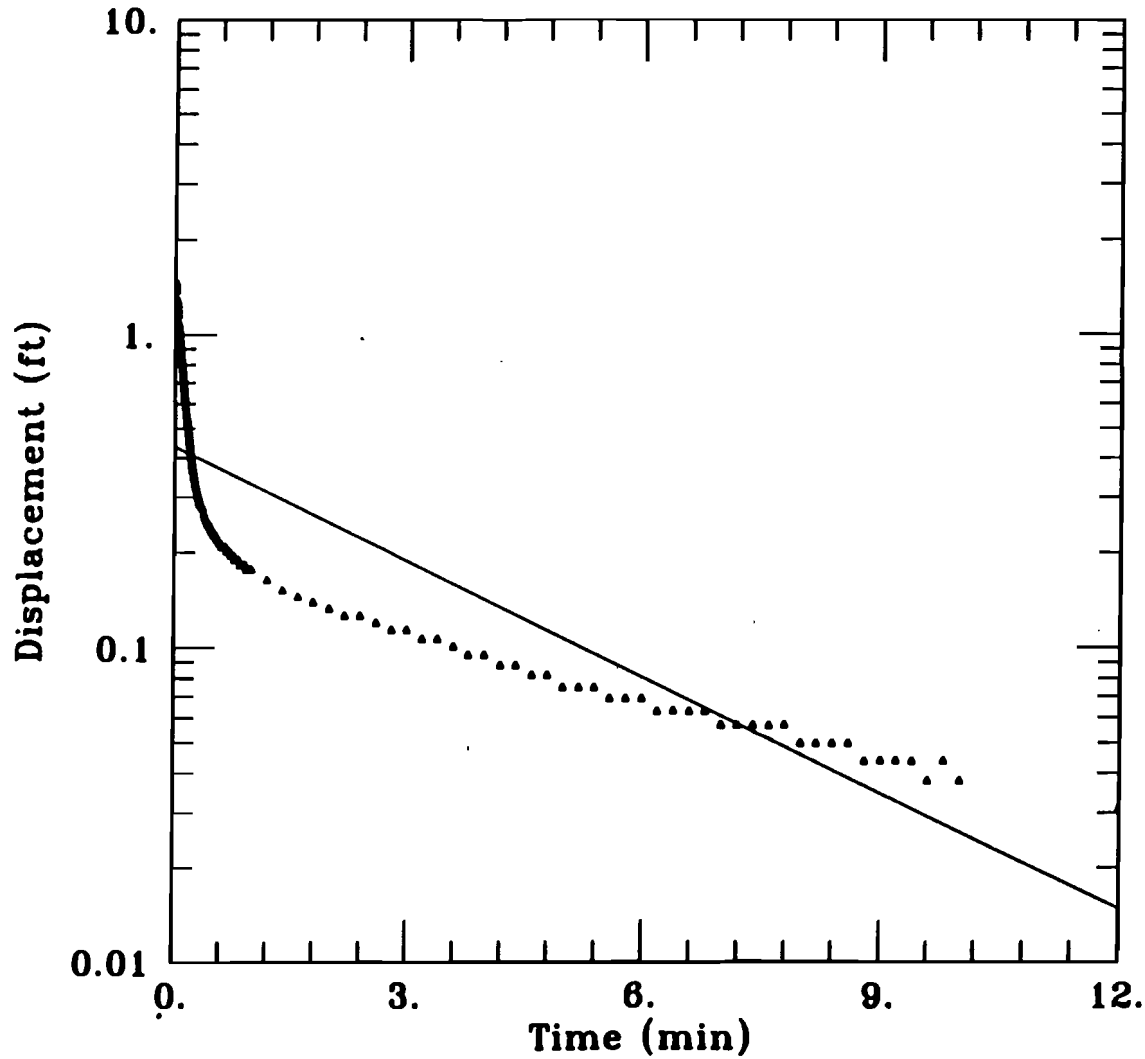
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG & ENV SVCS INC

Location: SAVANNAH, GA

Project: 11-3551-0320

## HUNTER ARMY AIRFIELD



DATA SET:  
HMW10-0.DAT  
12/19/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bouwer-Rice

PROJECT DATA:  
test date: 10/10/95  
test well: HMW-10, OUT

TEST DATA:  
H0 = 1.475 ft  
rc = 0.08333 ft  
rw = 0.3438 ft  
L = 8.08 ft  
b = 8.08 ft  
H = 7.63 ft

PARAMETER ESTIMATES:  
K = 0.001334 ft/min  
y0 = 0.4367 ft

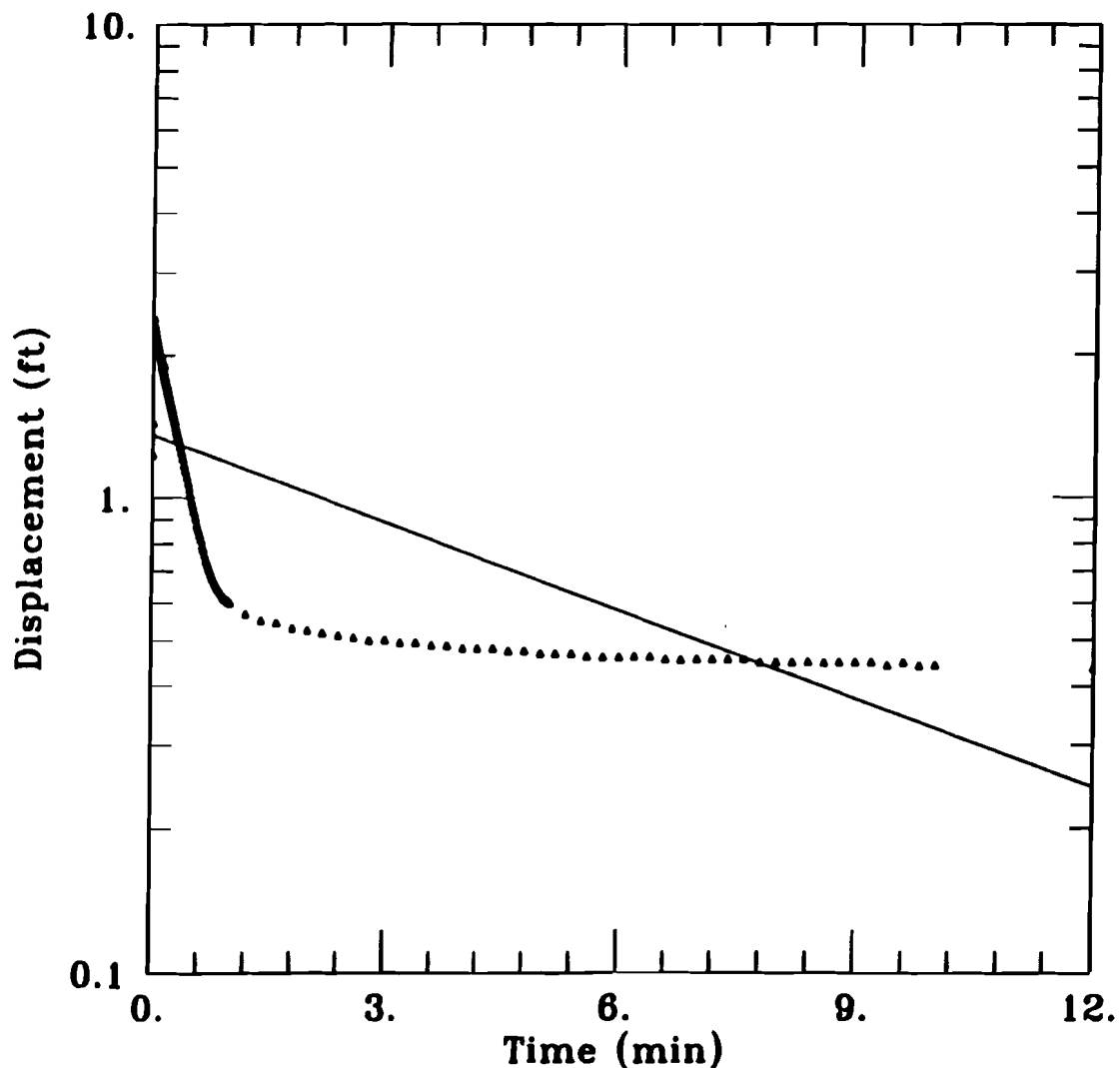
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG & ENV SVCS INC

Location: SAVANNAH GA

Project: 11-3551-0320

# HUNTER ARMY AIRFIELD



DATA SET:  
HMW11-0.DAT  
12/19/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bouwer-Rice

PROJECT DATA:  
test date: 10/09/95  
test well: HMW-11. OUT

TEST DATA:  
H0 = 2.404 ft  
rc = 0.08333 ft  
rw = 0.3438 ft  
L = 6.43 ft  
b = 15. ft  
H = 11.21 ft

PARAMETER ESTIMATES:  
K = 0.0008195 ft/min  
y0 = 1.358 ft

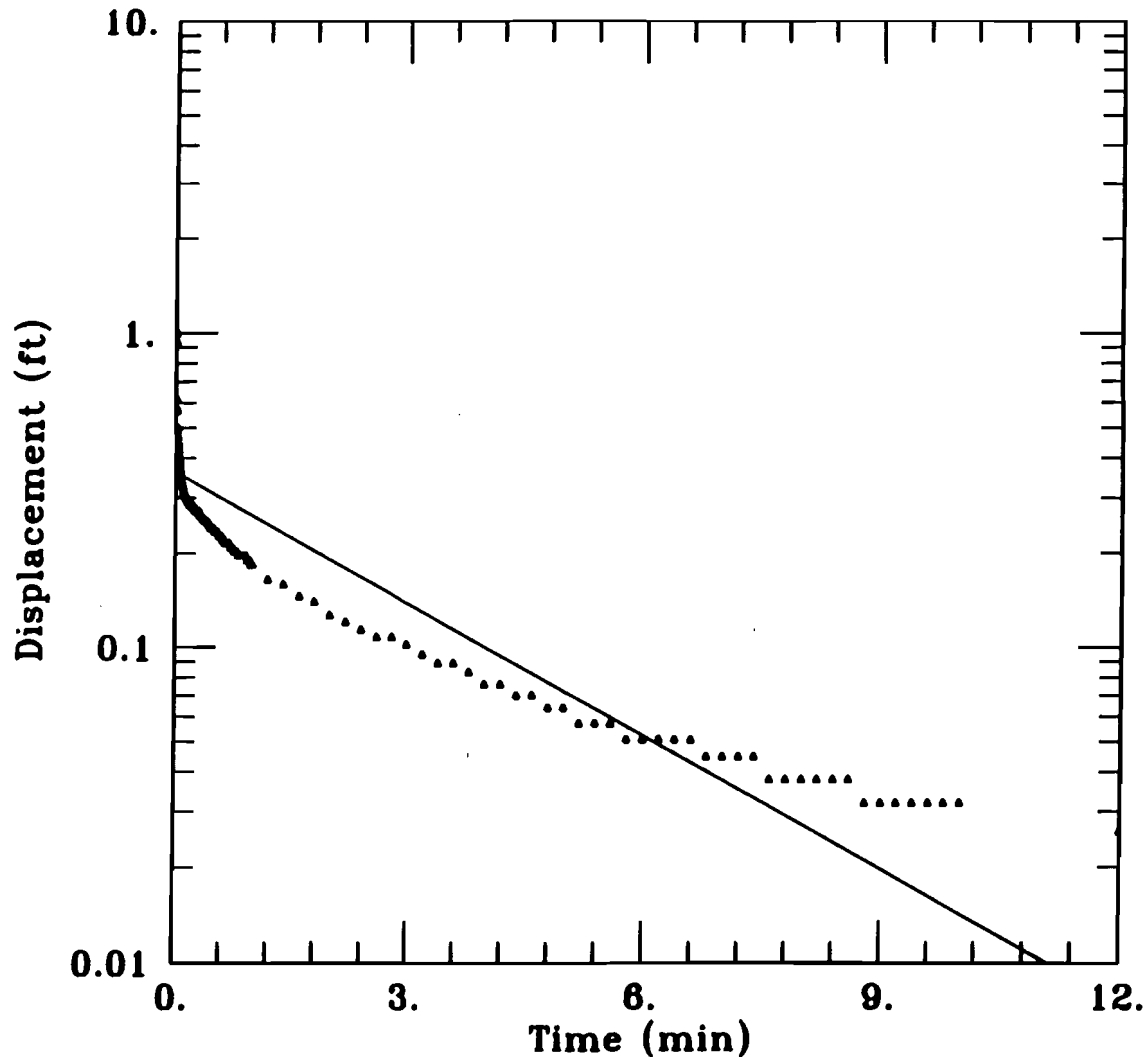
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG & ENV SVCS INC

Location: SAVANNAH GA

Project: 11-3551-0320

## HUNTER ARMY AIRFIELD



DATA SET:  
HMW12-I.DAT  
12/19/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bouwer-Rice

PROJECT DATA:  
test date: 10/09/95  
test well: HMW-12, IN

TEST DATA:  
H0 = 1.001 ft  
rc = 0.08333 ft  
rw = 0.3428 ft  
L = 6.52 ft  
b = 15. ft  
H = 11.59 ft

PARAMETER ESTIMATES:  
K = 0.001848 ft/min  
y0 = 0.363 ft

E-3

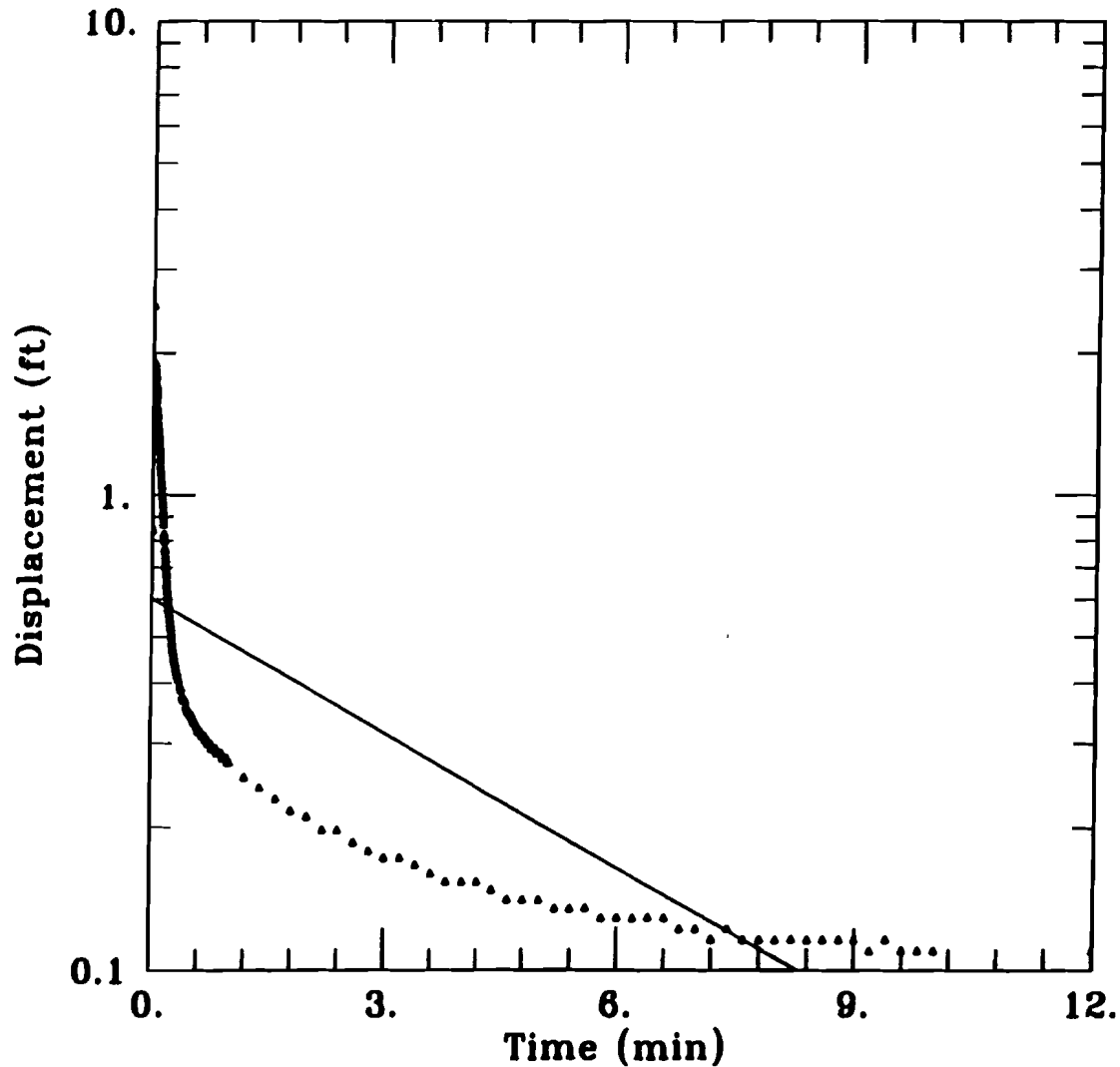
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG & ENV SVCS INC

Location: SAVANNAH GA

Project: 11-3551-0320

## HUNTER ARMY AIRFIELD



DATA SET:  
HMW12-0.DAT  
12/19/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bower-Rice

PROJECT DATA:  
test date: 10/09/95  
test well: HMW-12

TEST DATA:  
HO = 1.907 ft  
rc = 0.08333 ft  
rw = 0.3428 ft  
L = 6.52 ft  
b = 15. ft  
H = 11.59 ft

PARAMETER ESTIMATES:  
K = 0.001241 ft/min  
y0 = 0.6024 ft

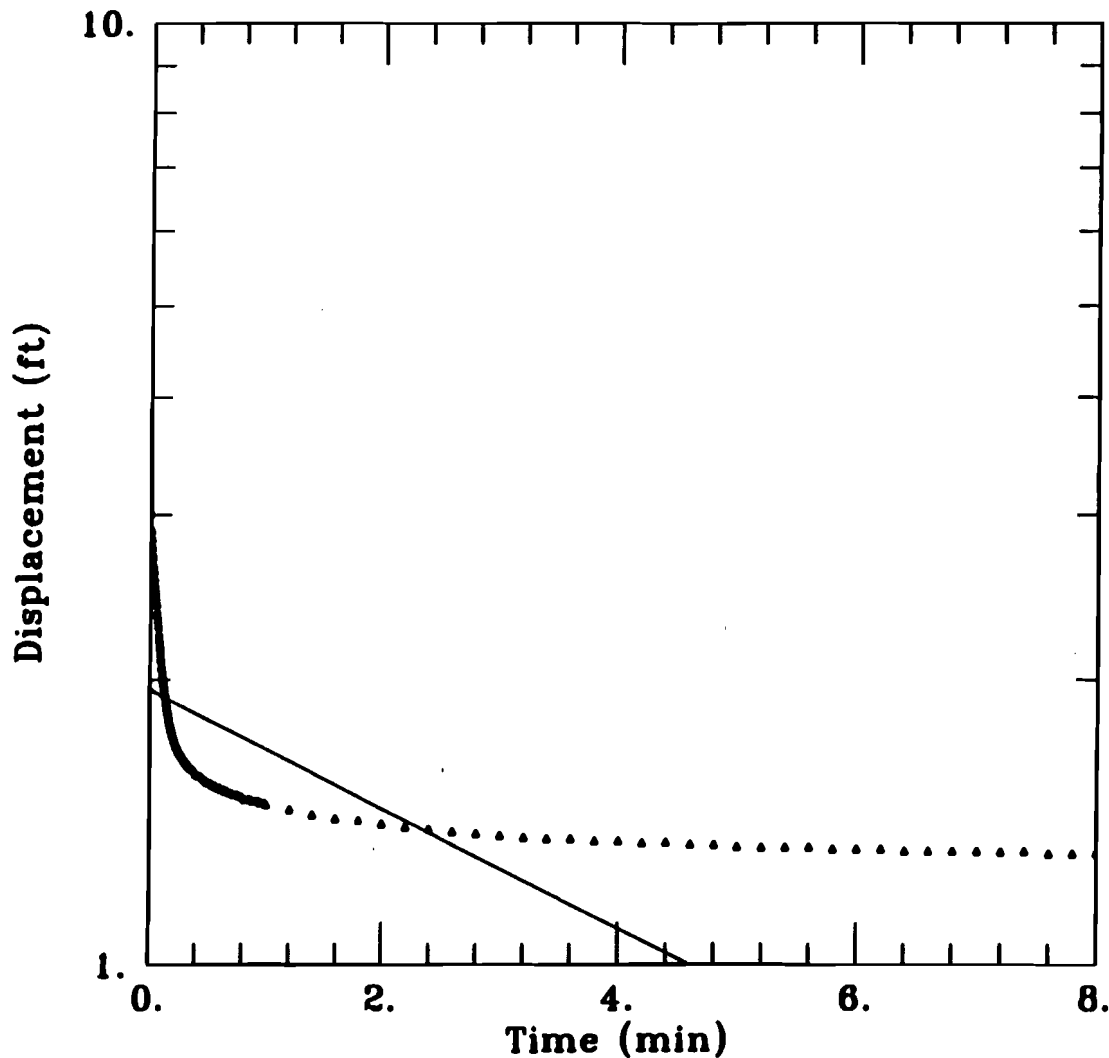
Client: ARMY CORPS OF ENGINEERS

Company: LAW ENG & ENV SVCS

Location: SAVANNAH GA

Project: 11-3551-0320

# HUNTER ARMY AIRFIELD



DATA SET:  
HMW13-0.DAT  
12/19/95

AQUIFER MODEL:  
Unconfined  
SOLUTION METHOD:  
Bouwer-Rice

PROJECT DATA:  
test date: 10/10/95  
test well: HMW-13, OUT



TEST DATA:  
H0 = 3.014 ft  
rc = 0.08333 ft  
rw = 0.3438 ft  
L = 7.28 ft  
b = 15. ft  
H = 12.93 ft

PARAMETER ESTIMATES:  
K = 0.0007968 ft/min  
y0 = 1.95 ft

Appendix I


Photograph Log

## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 1	<b>Date</b> 02/20/08		
<b>Description</b> View looking south at Former FTA Location			
<b>Photo No.</b> 2	<b>Date</b> 02/20/08		
<b>Description</b> View looking west at Former FTA Location			





## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 3	<b>Date</b> 02/20/08		
<b>Description</b> View looking north toward DAACG Area			

<b>Photo No.</b> 4	<b>Date</b> 02/20/08		
<b>Description</b> View of northern ditch looking east			


## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 5	<b>Date</b> 02/20/08		
<b>Description</b> Water that accumulated at upgradient end of northern ditch			

<b>Photo No.</b> 6	<b>Date</b> 02/20/08		
<b>Description</b> View of DAACG Area from Lightning Road			



## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 7	<b>Date</b> 02/20/08		
<b>Description</b> View of DAACG Area from Lightning Road			


<b>Photo No.</b> 8	<b>Date</b> 02/20/08		
<b>Description</b> View of access road looking east			


## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 9	<b>Date</b> 10/09/08		
<b>Description</b> Northern drainage swale looking west			
<b>Photo No.</b> 10	<b>Date</b> 10/09/08		
<b>Description</b> Former AST Area looking east			



## Appendix I Photographic Log


<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 11	<b>Date</b> 10/09/08		
<b>Description</b> Relative location of airfield east of FTA			

<b>Photo No.</b> 12	<b>Date</b> 10/09/08		
<b>Description</b> Wooded Area north of access road			




## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 13	<b>Date</b> 10/09/08		
<b>Description</b> View east across access road to Wooded Area			

<b>Photo No.</b> 14	<b>Date</b> 10/09/08		
<b>Description</b> Wooded Area (DAACG Area)			



## Appendix I Photographic Log

<b>Client Name:</b> U.S. Army Environmental Command		<b>Site Location:</b> HAA-01 Hunter Army Airfield, GA	<b>Project No.:</b> GP08HAFS.H01B
<b>Photo No.</b> 15	<b>Date</b> 10/09/08		
<b>Description</b> Wooded Area (DAACG Area)			

<b>Photo No.</b> 16	<b>Date</b> 10/09/08		
<b>Description</b> Wooded Area (DAACG Area)			

## Appendix J

ProUCL Output and IEUBK Model  
Output



A	B	C	D	E	F	G	H	I	J	K	L
1				<b>General UCL Statistics for Data Sets with Non-Detects</b>							
2	<b>User Selected Options</b>										
3	From File		WorkSheet.wst								
4	Full Precision		OFF								
5	Confidence Coefficient		95%								
6	Number of Bootstrap Operations		2000								
7											
8											
9	<b>Result (acenaphthylene)</b>										
10											
11	<b>General Statistics</b>										
12	Number of Valid Data			44		Number of Detected Data			10		
13	Number of Distinct Detected Data			10		Number of Non-Detect Data			34		
14							Percent Non-Detects			77.27%	
15											
16	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>					
17	Minimum Detected		0.11		Minimum Detected		-2.207				
18	Maximum Detected		3.6		Maximum Detected		1.281				
19	Mean of Detected		1.126		Mean of Detected		-0.437				
20	SD of Detected		1.135		SD of Detected		1.206				
21	Minimum Non-Detect		0.074		Minimum Non-Detect		-2.604				
22	Maximum Non-Detect		0.81		Maximum Non-Detect		-0.211				
23											
24	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			38		
25	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			6		
26	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			86.36%		
27											
28	<b>UCL Statistics</b>										
29	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>					
30	Shapiro Wilk Test Statistic		0.852		Shapiro Wilk Test Statistic		0.938				
31	5% Shapiro Wilk Critical Value		0.842		5% Shapiro Wilk Critical Value		0.842				
32	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>					
33											
34	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>					
35	DL/2 Substitution Method				DL/2 Substitution Method						
36	Mean		0.396		Mean		-1.474				
37	SD		0.658		SD		0.877				
38	95% DL/2 (t) UCL		0.562		95% H-Stat (DL/2) UCL		0.453				
39											
40	Maximum Likelihood Estimate(MLE) Method		N/A		Log ROS Method						
41	<b>MLE yields a negative mean</b>					Mean in Log Scale		-2.026			
42						SD in Log Scale		1.258			
43						Mean in Original Scale		0.343			
44						SD in Original Scale		0.679			
45						95% t UCL		0.515			
46						95% Percentile Bootstrap UCL		0.519			
47						95% BCA Bootstrap UCL		0.561			
48											
49	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>					
50	k star (bias corrected)		0.791		<b>Data appear Normal at 5% Significance Level</b>						
51	Theta Star		1.424								
52	nu star		15.81								
53											
54	A-D Test Statistic		0.293		<b>Nonparametric Statistics</b>						
55	5% A-D Critical Value		0.748		Kaplan-Meier (KM) Method						
56	K-S Test Statistic		0.748		Mean		0.374				
57	5% K-S Critical Value		0.274		SD		0.658				
58	<b>Data appear Gamma Distributed at 5% Significance Level</b>					SE of Mean		0.106			
59						95% KM (t) UCL		0.553			
60	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL		0.549			
61	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL		0.537				
62	Minimum		0.11		95% KM (bootstrap t) UCL		0.683				
63	Maximum		3.6		95% KM (BCA) UCL		0.668				
64	Mean		1.112		95% KM (Percentile Bootstrap) UCL		0.6				
65	Median		1.101		95% KM (Chebyshev) UCL		0.837				
66	SD		0.533		97.5% KM (Chebyshev) UCL		1.038				
67	k star		3.686		99% KM (Chebyshev) UCL		1.431				
68	Theta star		0.302								
69	Nu star		324.4		<b>Potential UCLs to Use</b>						
70	AppChi2		283.7		95% KM (t) UCL		0.553				
71	95% Gamma Approximate UCL		1.272		95% KM (Percentile Bootstrap) UCL		0.6				
72	95% Adjusted Gamma UCL		1.278								
73	<b>Note: DL/2 is not a recommended method.</b>										
74											

A	B	C	D	E	F	G	H	I	J	K	L	
75	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
76	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
77	For additional insight, the user may want to consult a statistician.											
78												
79												
80	Result (acetone)											
81												
82	General Statistics											
83	Number of Valid Data			50		Number of Detected Data			8			
84	Number of Distinct Detected Data			7		Number of Non-Detect Data			42			
85							Percent Non-Detects			84.00%		
86												
87	Raw Statistics					Log-transformed Statistics						
88	Minimum Detected		0.052		Minimum Detected		-2.957					
89	Maximum Detected		0.17		Maximum Detected		-1.772					
90	Mean of Detected		0.107		Mean of Detected		-2.315					
91	SD of Detected		0.0438		SD of Detected		0.416					
92	Minimum Non-Detect		0.0056		Minimum Non-Detect		-5.185					
93	Maximum Non-Detect		0.067		Maximum Non-Detect		-2.703					
94												
95	Note: Data have multiple DLs - Use of KM Method is recommen					Number treated as Non-Detect			43			
96	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			7			
97	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			86.00%			
98												
99	Warning: There are only 8 Detected Values in this data											
100	Note: It should be noted that even though bootstrap may be performed on this data set											
101	the resulting calculations may not be reliable enough to draw conclusions											
102												
103	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
104												
105												
106	UCL Statistics											
107	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
108	Shapiro Wilk Test Statistic		0.884		Shapiro Wilk Test Statistic		0.92					
109	5% Shapiro Wilk Critical Value		0.818		5% Shapiro Wilk Critical Value		0.818					
110	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
111												
112	Assuming Normal Distribution					Assuming Lognormal Distribution						
113	DL/2 Substitution Method				DL/2 Substitution Method							
114	Mean		0.0357		Mean		-3.665					
115	SD		0.0363		SD		0.788					
116	95% DL/2 (t) UCL		0.0443		95% H-Stat (DL/2) UCL		0.0444					
117												
118	Maximum Likelihood Estimate(MLE) Method		N/A		Log ROS Method							
119	MLE yields a negative mean					Mean in Log Scale		-3.861				
120						SD in Log Scale		0.809				
121						Mean in Original Scale		0.0315				
122						SD in Original Scale		0.0376				
123						95% t UCL		0.0404				
124						95% Percentile Bootstrap UCL		0.0408				
125						95% BCA Bootstrap UCL		0.042				
126												
127	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
128	k star (bias corrected)		4.354		Data appear Normal at 5% Significance Level							
129	Theta Star		0.0245									
130	nu star		69.66									
131												
132	A-D Test Statistic		0.451		Nonparametric Statistics							
133	5% A-D Critical Value		0.718		Kaplan-Meier (KM) Method							
134	K-S Test Statistic		0.718		Mean		0.0607					
135	5% K-S Critical Value		0.295		SD		0.0258					
136	Data appear Gamma Distributed at 5% Significance Level					SE of Mean		0.00391				
137						95% KM (t) UCL		0.0673				
138	Assuming Gamma Distribution					95% KM (z) UCL		0.0671				
139	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL		0.0747					
140	Minimum		0.052		95% KM (bootstrap t) UCL		0.0685					
141	Maximum		0.17		95% KM (BCA) UCL		0.0909					
142	Mean		0.108		95% KM (Percentile Bootstrap) UCL		0.088					
143	Median		0.109		95% KM (Chebyshev) UCL		0.0777					
144	SD		0.0248		97.5% KM (Chebyshev) UCL		0.0851					
145	k star		17.01		99% KM (Chebyshev) UCL		0.0996					
146	Theta star		0.00636									
147	Nu star		1701		Potential UCLs to Use							
148	AppChi2		1607		95% KM (t) UCL		0.0673					

A	B	C	D	E	F	G	H	I	J	K	L	
149	95% Gamma Approximate UCL			0.115	95% KM (Percentile Bootstrap) UCL			0.088				
150	95% Adjusted Gamma UCL			0.115								
151	Note: DL/2 is not a recommended method.											
152												
153	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
154	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
155	For additional insight, the user may want to consult a statistician.											
156												
157												
158	Result (anthracene)											
159												
160	General Statistics											
161	Number of Valid Data			44	Number of Detected Data			13				
162	Number of Distinct Detected Data			12	Number of Non-Detect Data			31				
163					Percent Non-Detects			70.45%				
164												
165	Raw Statistics					Log-transformed Statistics						
166	Minimum Detected			0.042	Minimum Detected			-3.17				
167	Maximum Detected			7.5	Maximum Detected			2.015				
168	Mean of Detected			1.82	Mean of Detected			-0.575				
169	SD of Detected			2.648	SD of Detected			1.731				
170	Minimum Non-Detect			0.074	Minimum Non-Detect			-2.604				
171	Maximum Non-Detect			0.48	Maximum Non-Detect			-0.734				
172												
173	Note: Data have multiple DLs - Use of KM Method is recommen				Number treated as Non-Detect			37				
174	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			7				
175	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			84.09%				
176												
177	UCL Statistics											
178	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
179	Shapiro Wilk Test Statistic			0.687	Shapiro Wilk Test Statistic			0.916				
180	5% Shapiro Wilk Critical Value			0.866	5% Shapiro Wilk Critical Value			0.866				
181	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
182												
183	Assuming Normal Distribution					Assuming Lognormal Distribution						
184	DL/2 Substitution Method				DL/2 Substitution Method							
185	Mean			0.659	Mean			-1.463				
186	SD			1.593	SD			1.155				
187	95% DL/2 (t) UCL			1.063	95% H-Stat (DL/2) UCL			0.706				
188												
189	Maximum Likelihood Estimate(MLE) Method			N/A	Log ROS Method							
190	MLE yields a negative mean					Mean in Log Scale			-2.131			
191						SD in Log Scale			1.592			
192						Mean in Original Scale			0.604			
193						SD in Original Scale			1.612			
194						95% t UCL			1.013			
195						95% Percentile Bootstrap UCL			1.039			
196						95% BCA Bootstrap UCL			1.174			
197												
198	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
199	k star (bias corrected)			0.463	Data Follow Appr. Gamma Distribution at 5% Significance Level							
200	Theta Star			3.931								
201	nu star			12.04								
202												
203	A-D Test Statistic			0.657	Nonparametric Statistics							
204	5% A-D Critical Value			0.787	Kaplan-Meier (KM) Method							
205	K-S Test Statistic			0.787	Mean			0.601				
206	5% K-S Critical Value			0.249	SD			1.593				
207	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean			0.25			
208						95% KM (t) UCL			1.021			
209	Assuming Gamma Distribution					95% KM (z) UCL			1.012			
210	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL			0.993				
211	Minimum			0.042	95% KM (bootstrap t) UCL			1.685				
212	Maximum			7.5	95% KM (BCA) UCL			1.081				
213	Mean			1.826	95% KM (Percentile Bootstrap) UCL			1.046				
214	Median			1.852	95% KM (Chebyshev) UCL			1.692				
215	SD			1.411	97.5% KM (Chebyshev) UCL			2.164				
216	k star			1.473	99% KM (Chebyshev) UCL			3.091				
217	Theta star			1.24								
218	Nu star			129.7	Potential UCLs to Use							
219	AppChi2			104.4	95% KM (t) UCL			1.021				
220	95% Gamma Approximate UCL			2.269								
221	95% Adjusted Gamma UCL			2.286								
222	Note: DL/2 is not a recommended method.											

A	B	C	D	E	F	G	H	I	J	K	L	
223												
224	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
225	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
226	For additional insight, the user may want to consult a statistician.											
227												
228												
229	<b>Result (arsenic)</b>											
230												
231	<b>General Statistics</b>											
232	Number of Valid Observations					23	Number of Distinct Observations					22
233												
234	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
235	Minimum					0.25	Minimum of Log Data					-1.386
236	Maximum					2.14	Maximum of Log Data					0.761
237	Mean					1.004	Mean of log Data					-0.153
238	Median					0.82	SD of log Data					0.596
239	SD					0.548						
240	Coefficient of Variation					0.546						
241	Skewness					0.531						
242												
243	<b>Relevant UCL Statistics</b>											
244	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>						
245	Shapiro Wilk Test Statistic					0.929	Shapiro Wilk Test Statistic					0.956
246	Shapiro Wilk Critical Value					0.914	Shapiro Wilk Critical Value					0.914
247	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
248												
249	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
250	95% Student's-t UCL					1.201	95% H-UCL					1.331
251	<b>95% UCLs (Adjusted for Skewness)</b>					<b>95% Chebyshev (MVUE) UCL</b>						1.595
252	95% Adjusted-CLT UCL (Chen-1995)					1.206	97.5% Chebyshev (MVUE) UCL					1.846
253	95% Modified-t UCL (Johnson-1978)					1.203	99% Chebyshev (MVUE) UCL					2.339
254												
255	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>						
256	k star (bias corrected)					2.928	<b>Data appear Normal at 5% Significance Level</b>					
257	Theta Star					0.343						
258	MLE of Mean					1.004						
259	MLE of Standard Deviation					0.587						
260	nu star					134.7						
261	Approximate Chi Square Value (.05)					108.9	<b>Nonparametric Statistics</b>					
262	Adjusted Level of Significance					0.0389	95% CLT UCL					1.192
263	Adjusted Chi Square Value					107.2	95% Jackknife UCL					1.201
264							95% Standard Bootstrap UCL					1.19
265	Anderson-Darling Test Statistic					0.42	95% Bootstrap-t UCL					1.218
266	Anderson-Darling 5% Critical Value					0.75	95% Hall's Bootstrap UCL					1.2
267	Kolmogorov-Smirnov Test Statistic					0.131	95% Percentile Bootstrap UCL					1.201
268	Kolmogorov-Smirnov 5% Critical Value					0.183	95% BCA Bootstrap UCL					1.189
269	<b>Data appear Gamma Distributed at 5% Significance Level</b>					<b>95% Chebyshev(Mean, Sd) UCL</b>						1.503
270							<b>97.5% Chebyshev(Mean, Sd) UCL</b>					1.718
271	<b>Assuming Gamma Distribution</b>					<b>99% Chebyshev(Mean, Sd) UCL</b>						2.142
272	95% Approximate Gamma UCL					1.242						
273	95% Adjusted Gamma UCL					1.262						
274												
275	<b>Potential UCL to Use</b>					<b>Use 95% Student's-t UCL</b>						1.201
276												
277	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
278	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
279	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
280												
281												
282	<b>Result (barium)</b>											
283												
284	<b>General Statistics</b>											
285	Number of Valid Observations					23	Number of Distinct Observations					18
286												
287	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
288	Minimum					2.4	Minimum of Log Data					0.875
289	Maximum					25	Maximum of Log Data					3.219
290	Mean					12.2	Mean of log Data					2.339
291	Median					11.4	SD of log Data					0.634
292	SD					6.243						
293	Coefficient of Variation					0.512						
294	Skewness					0.265						
295												
296	<b>Relevant UCL Statistics</b>											

A	B	C	D	E	F	G	H	I	J	K	L	
297	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>						
298	Shapiro Wilk Test Statistic					0.964	Shapiro Wilk Test Statistic					0.921
299	Shapiro Wilk Critical Value					0.914	Shapiro Wilk Critical Value					0.914
300	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
301												
302	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
303	95% Student's-t UCL					14.43	95% H-UCL					16.84
304	<b>95% UCLs (Adjusted for Skewness)</b>					95% Chebyshev (MVUE) UCL						20.23
305	95% Adjusted-CLT UCL (Chen-1995)					14.41	97.5% Chebyshev (MVUE) UCL					23.55
306	95% Modified-t UCL (Johnson-1978)					14.44	99% Chebyshev (MVUE) UCL					30.07
307												
308	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>						
309	k star (bias corrected)					2.855	<b>Data appear Normal at 5% Significance Level</b>					
310	Theta Star					4.272						
311	MLE of Mean					12.2						
312	MLE of Standard Deviation					7.218						
313	nu star					131.3						
314	Approximate Chi Square Value (.05)					105.9	<b>Nonparametric Statistics</b>					
315	Adjusted Level of Significance					0.0389	95% CLT UCL					14.34
316	Adjusted Chi Square Value					104.2	95% Jackknife UCL					14.43
317							95% Standard Bootstrap UCL					14.29
318	Anderson-Darling Test Statistic					0.446	95% Bootstrap-t UCL					14.59
319	Anderson-Darling 5% Critical Value					0.75	95% Hall's Bootstrap UCL					14.49
320	Kolmogorov-Smirnov Test Statistic					0.154	95% Percentile Bootstrap UCL					14.3
321	Kolmogorov-Smirnov 5% Critical Value					0.183	95% BCA Bootstrap UCL					14.23
322	<b>Data appear Gamma Distributed at 5% Significance Level</b>					95% Chebyshev(Mean, Sd) UCL						17.87
323							97.5% Chebyshev(Mean, Sd) UCL					20.33
324	<b>Assuming Gamma Distribution</b>					99% Chebyshev(Mean, Sd) UCL						25.15
325	95% Approximate Gamma UCL					15.13						
326	95% Adjusted Gamma UCL					15.37						
327												
328	<b>Potential UCL to Use</b>					Use 95% Student's-t UCL						14.43
329												
330	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
331	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
332	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
333												
334												
335	<b>Result (benz(a)anthracene)</b>											
336												
337	<b>General Statistics</b>											
338	Number of Valid Data					44	Number of Detected Data					17
339	Number of Distinct Detected Data					16	Number of Non-Detect Data					27
340							Percent Non-Detects					61.36%
341												
342	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
343	Minimum Detected					0.16	Minimum Detected					-1.833
344	Maximum Detected					34	Maximum Detected					3.526
345	Mean of Detected					5.826	Mean of Detected					0.451
346	SD of Detected					9.017	SD of Detected					1.804
347	Minimum Non-Detect					0.11	Minimum Non-Detect					-2.207
348	Maximum Non-Detect					0.48	Maximum Non-Detect					-0.734
349												
350	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					32	
351	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					12	
352	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					72.73%	
353												
354	<b>UCL Statistics</b>											
355	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>						
356	Shapiro Wilk Test Statistic					0.686	Shapiro Wilk Test Statistic					0.904
357	5% Shapiro Wilk Critical Value					0.892	5% Shapiro Wilk Critical Value					0.892
358	<b>Data not Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
359												
360	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
361	DL/2 Substitution Method						DL/2 Substitution Method					
362	Mean					2.363	Mean					-0.885
363	SD					6.163	SD					1.549
364	95% DL/2 (t) UCL					3.925	95% H-Stat (DL/2) UCL					2.814
365												
366	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
367	<b>MLE yields a negative mean</b>					Mean in Log Scale						-1.516
368						SD in Log Scale						2.092
369						Mean in Original Scale						2.311
370						SD in Original Scale						6.182

	A	B	C	D	E	F	G	H	I	J	K	L
371											95% t UCL	3.878
372											95% Percentile Bootstrap UCL	3.977
373											95% BCA Bootstrap UCL	4.724
374												
375	<b>Gamma Distribution Test with Detected Values Only</b>						<b>Data Distribution Test with Detected Values Only</b>					
376					k star (bias corrected)	0.44	<b>Data appear Lognormal at 5% Significance Level</b>					
377					Theta Star	13.25						
378					nu star	14.96						
379												
380					A-D Test Statistic	0.907	<b>Nonparametric Statistics</b>					
381					5% A-D Critical Value	0.801	Kaplan-Meier (KM) Method					
382					K-S Test Statistic	0.801					Mean	2.361
383					5% K-S Critical Value	0.221					SD	6.093
384	<b>Data not Gamma Distributed at 5% Significance Level</b>										SE of Mean	0.947
385											95% KM (t) UCL	3.953
386	<b>Assuming Gamma Distribution</b>										95% KM (z) UCL	3.918
387	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	3.921
388					Minimum	0.16					95% KM (bootstrap t) UCL	5.307
389					Maximum	34					95% KM (BCA) UCL	4.153
390					Mean	5.843					95% KM (Percentile Bootstrap) UCL	3.933
391					Median	5.88					95% KM (Chebyshev) UCL	6.488
392					SD	5.521					97.5% KM (Chebyshev) UCL	8.274
393					k star	1.056					99% KM (Chebyshev) UCL	11.78
394					Theta star	5.531						
395					Nu star	92.97	<b>Potential UCLs to Use</b>					
396					AppChi2	71.73					95% KM (Chebyshev) UCL	6.488
397					95% Gamma Approximate UCL	7.573						
398					95% Adjusted Gamma UCL	7.64						
399	<b>Note: DL/2 is not a recommended method.</b>											
400												
401	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
402	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
403	<b>For additional insight, the user may want to consult a statistician.</b>											
404												
405												
406	<b>Result (benzo(a)pyrene)</b>											
407												
408	<b>General Statistics</b>											
409					Number of Valid Data	44					Number of Detected Data	17
410					Number of Distinct Detected Data	17					Number of Non-Detect Data	27
411											Percent Non-Detects	61.36%
412												
413	<b>Raw Statistics</b>						<b>Log-transformed Statistics</b>					
414					Minimum Detected	0.16					Minimum Detected	-1.833
415					Maximum Detected	26					Maximum Detected	3.258
416					Mean of Detected	4.862					Mean of Detected	0.454
417					SD of Detected	7.072					SD of Detected	1.659
418					Minimum Non-Detect	0.15					Minimum Non-Detect	-1.897
419					Maximum Non-Detect	0.48					Maximum Non-Detect	-0.734
420												
421	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	32
422	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	12
423	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	72.73%
424												
425	<b>UCL Statistics</b>											
426	<b>Normal Distribution Test with Detected Values Only</b>						<b>Lognormal Distribution Test with Detected Values Only</b>					
427					Shapiro Wilk Test Statistic	0.712					Shapiro Wilk Test Statistic	0.92
428					5% Shapiro Wilk Critical Value	0.892					5% Shapiro Wilk Critical Value	0.892
429	<b>Data not Normal at 5% Significance Level</b>						<b>Data appear Lognormal at 5% Significance Level</b>					
430												
431	<b>Assuming Normal Distribution</b>						<b>Assuming Lognormal Distribution</b>					
432					DL/2 Substitution Method						DL/2 Substitution Method	
433					Mean	1.991					Mean	-0.877
434					SD	4.891					SD	1.48
435					95% DL/2 (t) UCL	3.23					95% H-Stat (DL/2) UCL	2.421
436												
437					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
438	<b>MLE yields a negative mean</b>										Mean in Log Scale	-1.035
439											SD in Log Scale	1.726
440											Mean in Original Scale	1.999
441											SD in Original Scale	4.889
442											95% t UCL	3.238
443											95% Percentile Bootstrap UCL	3.289
444											95% BCA Bootstrap UCL	3.703



A	B	C	D	E	F	G	H	I	J	K	L		
445													
446	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>							
447	k star (bias corrected)				0.496	<b>Data Follow Appr. Gamma Distribution at 5% Significance Level</b>							
448	Theta Star				9.802								
449	nu star				16.86								
450													
451	A-D Test Statistic				0.773	<b>Nonparametric Statistics</b>							
452	5% A-D Critical Value				0.793	Kaplan-Meier (KM) Method							
453	K-S Test Statistic				0.793	Mean 2.02							
454	5% K-S Critical Value				0.22	SD 4.824							
455	<b>Data follow Appr. Gamma Distribution at 5% Significance Level</b>					SE of Mean 0.75							
456						95% KM (t) UCL 3.281							
457	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL 3.253							
458	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL 3.25							
459	Minimum				0.16	95% KM (bootstrap t) UCL 4.436							
460	Maximum				26	95% KM (BCA) UCL 3.414							
461	Mean				4.863	95% KM (Percentile Bootstrap) UCL 3.293							
462	Median				4.982	95% KM (Chebyshev) UCL 5.289							
463	SD				4.371	97.5% KM (Chebyshev) UCL 6.703							
464	k star				1.188	99% KM (Chebyshev) UCL 9.481							
465	Theta star				4.093								
466	Nu star				104.6	<b>Potential UCLs to Use</b>							
467	AppChi2				81.97	95% KM (t) UCL 3.281							
468	95% Gamma Approximate UCL				6.204								
469	95% Adjusted Gamma UCL				6.256								
470	<b>Note: DL/2 is not a recommended method.</b>												
471													
472	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>												
473	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>												
474	<b>For additional insight, the user may want to consult a statistician.</b>												
475													
476													
477	<b>Result (benzo(b)fluoranthene)</b>												
478													
479	<b>General Statistics</b>												
480	Number of Valid Data				44	Number of Detected Data				17			
481	Number of Distinct Detected Data				17	Number of Non-Detect Data				27			
482						Percent Non-Detects				61.36%			
483													
484	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>							
485	Minimum Detected				0.32	Minimum Detected				-1.139			
486	Maximum Detected				28	Maximum Detected				3.332			
487	Mean of Detected				5.516	Mean of Detected				0.885			
488	SD of Detected				7.315	SD of Detected				1.403			
489	Minimum Non-Detect				0.11	Minimum Non-Detect				-2.207			
490	Maximum Non-Detect				0.48	Maximum Non-Detect				-0.734			
491													
492	Note: Data have multiple DLs - Use of KM Method is recommen					Number treated as Non-Detect				30			
493	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				14			
494	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				68.18%			
495													
496	<b>UCL Statistics</b>												
497	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>							
498	Shapiro Wilk Test Statistic				0.72	Shapiro Wilk Test Statistic				0.942			
499	5% Shapiro Wilk Critical Value				0.892	5% Shapiro Wilk Critical Value				0.892			
500	<b>Data not Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>							
501													
502	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>							
503	DL/2 Substitution Method					DL/2 Substitution Method							
504	Mean				2.243	Mean				-0.718			
505	SD				5.178	SD				1.557			
506	95% DL/2 (t) UCL				3.555	95% H-Stat (DL/2) UCL				3.391			
507													
508	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method							
509	<b>MLE yields a negative mean</b>					Mean in Log Scale -1.403							
510						SD in Log Scale 2.162							
511						Mean in Original Scale 2.184							
512						SD in Original Scale 5.203							
513						95% t UCL 3.503							
514						95% Percentile Bootstrap UCL 3.505							
515						95% BCA Bootstrap UCL 4.116							
516													
517	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>							
518	k star (bias corrected)				0.641	<b>Data appear Gamma Distributed at 5% Significance Level</b>							





	A	B	C	D	E	F	G	H	I	J	K	L	
593	A-D Test Statistic			0.527	<b>Nonparametric Statistics</b>								
594	5% A-D Critical Value			0.782	Kaplan-Meier (KM) Method								
595	K-S Test Statistic			0.782	Mean								1.121
596	5% K-S Critical Value			0.24	SD								2.696
597	<b>Data appear Gamma Distributed at 5% Significance Level</b>				SE of Mean								0.422
598					95% KM (t) UCL								1.831
599	<b>Assuming Gamma Distribution</b>				95% KM (z) UCL								1.815
600	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL								1.814
601	Minimum			0.095	95% KM (bootstrap t) UCL								2.468
602	Maximum			14	95% KM (BCA) UCL								1.92
603	Mean			3.219	95% KM (Percentile Bootstrap) UCL								1.832
604	Median			3.209	95% KM (Chebyshev) UCL								2.961
605	SD			2.311	97.5% KM (Chebyshev) UCL								3.758
606	k star			1.631	99% KM (Chebyshev) UCL								5.322
607	Theta star			1.974									
608	Nu star			143.5	<b>Potential UCLs to Use</b>								
609	AppChi2			116.8	95% KM (t) UCL								1.831
610	95% Gamma Approximate UCL			3.955									
611	95% Adjusted Gamma UCL			3.982									
612	<b>Note: DL/2 is not a recommended method.</b>												
613													
614	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>												
615	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>												
616	<b>For additional insight, the user may want to consult a statistician.</b>												
617													
618													
619	<b>Result (benzo(k)fluoranthene)</b>												
620													
621	<b>General Statistics</b>												
622	Number of Valid Data			44	Number of Detected Data			10					
623	Number of Distinct Detected Data			10	Number of Non-Detect Data			34					
624					Percent Non-Detects			77.27%					
625													
626	<b>Raw Statistics</b>						<b>Log-transformed Statistics</b>						
627	Minimum Detected			0.15	Minimum Detected			-1.897					
628	Maximum Detected			27	Maximum Detected			3.296					
629	Mean of Detected			7.323	Mean of Detected			1.089					
630	SD of Detected			8.261	SD of Detected			1.759					
631	Minimum Non-Detect			0.11	Minimum Non-Detect			-2.207					
632	Maximum Non-Detect			0.48	Maximum Non-Detect			-0.734					
633													
634	Note: Data have multiple DLs - Use of KM Method is recommen						Number treated as Non-Detect			36			
635	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			8			
636	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			81.82%			
637													
638	<b>UCL Statistics</b>												
639	<b>Normal Distribution Test with Detected Values Only</b>						<b>Lognormal Distribution Test with Detected Values Only</b>						
640	Shapiro Wilk Test Statistic			0.829	Shapiro Wilk Test Statistic			0.909					
641	5% Shapiro Wilk Critical Value			0.842	5% Shapiro Wilk Critical Value			0.842					
642	<b>Data not Normal at 5% Significance Level</b>						<b>Data appear Lognormal at 5% Significance Level</b>						
643													
644	<b>Assuming Normal Distribution</b>						<b>Assuming Lognormal Distribution</b>						
645	DL/2 Substitution Method				DL/2 Substitution Method								
646	Mean			1.805	Mean			-1.083					
647	SD			4.842	SD			1.451					
648	95% DL/2 (t) UCL			3.032	95% H-Stat (DL/2) UCL			1.85					
649													
650	Maximum Likelihood Estimate(MLE) Method			N/A	Log ROS Method								
651	<b>MLE yields a negative mean</b>						Mean in Log Scale			-1.85			
652							SD in Log Scale			2.159			
653							Mean in Original Scale			1.773			
654							SD in Original Scale			4.856			
655							95% t UCL			3.003			
656							95% Percentile Bootstrap UCL			3.038			
657							95% BCA Bootstrap UCL			3.547			
658													
659	<b>Gamma Distribution Test with Detected Values Only</b>						<b>Data Distribution Test with Detected Values Only</b>						
660	k star (bias corrected)			0.538	<b>Data appear Gamma Distributed at 5% Significance Level</b>								
661	Theta Star			13.61									
662	nu star			10.76									
663													
664	A-D Test Statistic			0.243	<b>Nonparametric Statistics</b>								
665	5% A-D Critical Value			0.763	Kaplan-Meier (KM) Method								
666	K-S Test Statistic			0.763	Mean								1.805

A	B	C	D	E	F	G	H	I	J	K	L
667	5% K-S Critical Value				0.277	SD				4.787	
668	<b>Data appear Gamma Distributed at 5% Significance Level</b>					SE of Mean				0.761	
669						95% KM (t) UCL				3.085	
670	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL				3.057	
671	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL				3		
672	Minimum				0.15	95% KM (bootstrap t) UCL				3.995	
673	Maximum				27	95% KM (BCA) UCL				4.5	
674	Mean				7.053	95% KM (Percentile Bootstrap) UCL				3.769	
675	Median				6.362	95% KM (Chebyshev) UCL				5.123	
676	SD				5.406	97.5% KM (Chebyshev) UCL				6.558	
677	k star				1.366	99% KM (Chebyshev) UCL				9.377	
678	Theta star				5.164						
679	Nu star				120.2	<b>Potential UCLs to Use</b>					
680	AppChi2				95.88	95% KM (t) UCL				3.085	
681	95% Gamma Approximate UCL				8.842						
682	95% Adjusted Gamma UCL				8.911						
683	<b>Note: DL/2 is not a recommended method.</b>										
684											
685	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>										
686	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>										
687	<b>For additional insight, the user may want to consult a statistician.</b>										
688											
689											
690	<b>Result (bis(2-ethylhexyl)phthalate)</b>										
691											
692	<b>General Statistics</b>										
693	Number of Valid Data				40	Number of Detected Data				6	
694	Number of Distinct Detected Data				5	Number of Non-Detect Data				34	
695					Percent Non-Detects				85.00%		
696											
697	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>					
698	Minimum Detected				0.086	Minimum Detected				-2.453	
699	Maximum Detected				0.39	Maximum Detected				-0.942	
700	Mean of Detected				0.194	Mean of Detected				-1.749	
701	SD of Detected				0.106	SD of Detected				0.507	
702	Minimum Non-Detect				0.33	Minimum Non-Detect				-1.109	
703	Maximum Non-Detect				3.5	Maximum Non-Detect				1.253	
704											
705	Note: Data have multiple DLs - Use of KM Method is recommen					Number treated as Non-Detect				40	
706	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
707	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
708											
709	<b>Warning: There are only 6 Detected Values in this data</b>										
710	<b>Note: It should be noted that even though bootstrap may be performed on this data set</b>										
711	<b>the resulting calculations may not be reliable enough to draw conclusions</b>										
712											
713	<b>It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.</b>										
714											
715											
716	<b>UCL Statistics</b>										
717	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>					
718	Shapiro Wilk Test Statistic				0.861	Shapiro Wilk Test Statistic				0.96	
719	5% Shapiro Wilk Critical Value				0.788	5% Shapiro Wilk Critical Value				0.788	
720	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>					
721											
722	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>					
723	DL/2 Substitution Method				DL/2 Substitution Method						
724	Mean				0.239	Mean				-1.606	
725	SD				0.261	SD				0.455	
726	95% DL/2 (t) UCL				0.309	95% H-Stat (DL/2) UCL				0.255	
727											
728	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
729	<b>MLE method failed to converge properly</b>					Mean in Log Scale				-1.885	
730					SD in Log Scale				0.299		
731					Mean in Original Scale				0.159		
732					SD in Original Scale				0.0539		
733					95% t UCL				0.173		
734					95% Percentile Bootstrap UCL				0.174		
735					95% BCA Bootstrap UCL				0.176		
736											
737	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>					
738	k star (bias corrected)				2.44	<b>Data appear Normal at 5% Significance Level</b>					
739	Theta Star				0.0796						
740	nu star				29.29						

	A	B	C	D	E	F	G	H	I	J	K	L	
741													
742					A-D Test Statistic	0.332	<b>Nonparametric Statistics</b>						
743					5% A-D Critical Value	0.699	Kaplan-Meier (KM) Method						
744					K-S Test Statistic	0.699					Mean	0.163	
745					5% K-S Critical Value	0.333					SD	0.0611	
746	<b>Data appear Gamma Distributed at 5% Significance Level</b>										SE of Mean	0.0233	
747											95% KM (t) UCL	0.202	
748	<b>Assuming Gamma Distribution</b>											95% KM (z) UCL	0.201
749	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.206
750					Minimum	0.086					95% KM (bootstrap t) UCL	0.213	
751					Maximum	0.39					95% KM (BCA) UCL	0.2	
752					Mean	0.196					95% KM (Percentile Bootstrap) UCL	0.199	
753					Median	0.201					95% KM (Chebyshev) UCL	0.264	
754					SD	0.0542					97.5% KM (Chebyshev) UCL	0.308	
755					k star	12.01					99% KM (Chebyshev) UCL	0.394	
756					Theta star	0.0163							
757					Nu star	960.7	<b>Potential UCLs to Use</b>						
758					AppChi2	889.8					95% KM (t) UCL	0.202	
759					95% Gamma Approximate UCL	0.211					95% KM (Percentile Bootstrap) UCL	0.199	
760					95% Adjusted Gamma UCL	0.212							
761	<b>Note: DL/2 is not a recommended method.</b>												
762													
763	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>												
764	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>												
765	<b>For additional insight, the user may want to consult a statistician.</b>												
766													
767													
768	<b>Result (cadmium)</b>												
769													
770	<b>General Statistics</b>												
771					Number of Valid Data	23					Number of Detected Data	13	
772					Number of Distinct Detected Data	7					Number of Non-Detect Data	10	
773											Percent Non-Detects	43.48%	
774													
775	<b>Raw Statistics</b>						<b>Log-transformed Statistics</b>						
776					Minimum Detected	0.014					Minimum Detected	-4.269	
777					Maximum Detected	2.5					Maximum Detected	0.916	
778					Mean of Detected	1.544					Mean of Detected	-0.704	
779					SD of Detected	1.064					SD of Detected	2.346	
780					Minimum Non-Detect	0.11					Minimum Non-Detect	-2.207	
781					Maximum Non-Detect	2.4					Maximum Non-Detect	0.875	
782													
783	Note: Data have multiple DLs - Use of KM Method is recommen											Number treated as Non-Detect	22
784	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	1
785	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	95.65%
786													
787	<b>UCL Statistics</b>												
788	<b>Normal Distribution Test with Detected Values Only</b>						<b>Lognormal Distribution Test with Detected Values Only</b>						
789					Shapiro Wilk Test Statistic	0.665					Shapiro Wilk Test Statistic	0.619	
790					5% Shapiro Wilk Critical Value	0.866					5% Shapiro Wilk Critical Value	0.866	
791	<b>Data not Normal at 5% Significance Level</b>						<b>Data not Lognormal at 5% Significance Level</b>						
792													
793	<b>Assuming Normal Distribution</b>						<b>Assuming Lognormal Distribution</b>						
794					DL/2 Substitution Method						DL/2 Substitution Method		
795					Mean	0.982					Mean	-1.248	
796					SD	1.047					SD	1.966	
797					95% DL/2 (t) UCL	1.357					95% H-Stat (DL/2) UCL	10.59	
798													
799	Maximum Likelihood Estimate(MLE) Method											Log ROS Method	
800	<b>MLE method failed to converge properly</b>											Mean in Log Scale	-1.653
801											SD in Log Scale	2.1	
802											Mean in Original Scale	0.902	
803											SD in Original Scale	1.085	
804											95% t UCL	1.291	
805											95% Percentile Bootstrap UCL	1.262	
806											95% BCA Bootstrap UCL	1.274	
807													
808	<b>Gamma Distribution Test with Detected Values Only</b>						<b>Data Distribution Test with Detected Values Only</b>						
809					k star (bias corrected)	0.474	<b>Data do not follow a Discernable Distribution (0.05)</b>						
810					Theta Star	3.255							
811					nu star	12.33							
812													
813					A-D Test Statistic	2.745	<b>Nonparametric Statistics</b>						
814					5% A-D Critical Value	0.786	Kaplan-Meier (KM) Method						

A	B	C	D	E	F	G	H	I	J	K	L	
815	K-S Test Statistic			0.786	Mean			0.916				
816	5% K-S Critical Value			0.249	SD			1.085				
817	<b>Data not Gamma Distributed at 5% Significance Level</b>					SE of Mean			0.241			
818						95% KM (t) UCL			1.329			
819	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL			1.312			
820	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			1.323			
821	Minimum			0.014	95% KM (bootstrap t) UCL			1.356				
822	Maximum			2.5	95% KM (BCA) UCL			1.34				
823	Mean			1.538	95% KM (Percentile Bootstrap) UCL			1.359				
824	Median			1.559	95% KM (Chebyshev) UCL			1.965				
825	SD			0.788	97.5% KM (Chebyshev) UCL			2.418				
826	k star			0.817	99% KM (Chebyshev) UCL			3.31				
827	Theta star			1.881								
828	Nu star			37.6	<b>Potential UCLs to Use</b>							
829	AppChi2			24.56	99% KM (Chebyshev) UCL			3.31				
830	95% Gamma Approximate UCL			2.354								
831	95% Adjusted Gamma UCL			2.43								
832	<b>Warning: Recommended UCL exceeds the maximum observation</b>											
833	<b>Note: DL/2 is not a recommended method.</b>											
834												
835	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
836	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
837	<b>For additional insight, the user may want to consult a statistician.</b>											
838												
839												
840	<b>Result (chromium)</b>											
841												
842	<b>General Statistics</b>											
843	Number of Valid Observations				25	Number of Distinct Observations				23		
844												
845	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
846	Minimum			0.91	Minimum of Log Data			-0.0943				
847	Maximum			8.6	Maximum of Log Data			2.152				
848	Mean			4.024	Mean of log Data			1.271				
849	Median			3.6	SD of log Data			0.524				
850	SD			1.95								
851	Coefficient of Variation			0.485								
852	Skewness			0.724								
853												
854	<b>Relevant UCL Statistics</b>											
855	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>						
856	Shapiro Wilk Test Statistic			0.953	Shapiro Wilk Test Statistic			0.976				
857	Shapiro Wilk Critical Value			0.918	Shapiro Wilk Critical Value			0.918				
858	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
859												
860	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
861	95% Student's-t UCL			4.691	95% H-UCL			5.053				
862	<b>95% UCLs (Adjusted for Skewness)</b>					95% Chebyshev (MVUE) UCL						6.003
863	95% Adjusted-CLT UCL (Chen-1995)			4.725	97.5% Chebyshev (MVUE) UCL			6.841				
864	95% Modified-t UCL (Johnson-1978)			4.7	99% Chebyshev (MVUE) UCL			8.489				
865												
866	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>						
867	k star (bias corrected)			3.807	<b>Data appear Normal at 5% Significance Level</b>							
868	Theta Star			1.057								
869	MLE of Mean			4.024								
870	MLE of Standard Deviation			2.062								
871	nu star			190.4								
872	Approximate Chi Square Value (.05)			159.4	<b>Nonparametric Statistics</b>							
873	Adjusted Level of Significance			0.0395	95% CLT UCL			4.665				
874	Adjusted Chi Square Value			157.5	95% Jackknife UCL			4.691				
875					95% Standard Bootstrap UCL			4.648				
876	Anderson-Darling Test Statistic			0.118	95% Bootstrap-t UCL			4.756				
877	Anderson-Darling 5% Critical Value			0.748	95% Hall's Bootstrap UCL			4.759				
878	Kolmogorov-Smirnov Test Statistic			0.0678	95% Percentile Bootstrap UCL			4.676				
879	Kolmogorov-Smirnov 5% Critical Value			0.175	95% BCA Bootstrap UCL			4.679				
880	<b>Data appear Gamma Distributed at 5% Significance Level</b>					95% Chebyshev(Mean, Sd) UCL			5.723			
881						97.5% Chebyshev(Mean, Sd) UCL			6.459			
882	<b>Assuming Gamma Distribution</b>					99% Chebyshev(Mean, Sd) UCL			7.903			
883	95% Approximate Gamma UCL			4.804								
884	95% Adjusted Gamma UCL			4.863								
885												
886	<b>Potential UCL to Use</b>					Use 95% Student's-t UCL						4.691
887												
888	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											

A	B	C	D	E	F	G	H	I	J	K	L	
889	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
890	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
891												
892												
893	<b>Result (chrysene)</b>											
894												
895	<b>General Statistics</b>											
896	Number of Valid Data	44	Number of Detected Data	17								
897	Number of Distinct Detected Data	15	Number of Non-Detect Data	27								
898			Percent Non-Detects	61.36%								
899												
900	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
901	Minimum Detected	0.2	Minimum Detected	-1.609								
902	Maximum Detected	33	Maximum Detected	3.497								
903	Mean of Detected	5.662	Mean of Detected	0.536								
904	SD of Detected	8.659	SD of Detected	1.69								
905	Minimum Non-Detect	0.11	Minimum Non-Detect	-2.207								
906	Maximum Non-Detect	0.48	Maximum Non-Detect	-0.734								
907												
908	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect		31				
909	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected		13				
910	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage		70.45%				
911												
912	<b>UCL Statistics</b>											
913	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>						
914	Shapiro Wilk Test Statistic	0.684	Shapiro Wilk Test Statistic	0.902								
915	5% Shapiro Wilk Critical Value	0.892	5% Shapiro Wilk Critical Value	0.892								
916	<b>Data not Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
917												
918	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
919	DL/2 Substitution Method		DL/2 Substitution Method									
920	Mean	2.299	Mean	-0.853								
921	SD	5.932	SD	1.531								
922	95% DL/2 (t) UCL	3.803	95% H-Stat (DL/2) UCL	2.785								
923												
924	Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method									
925	<b>MLE yields a negative mean</b>					Mean in Log Scale		-1.415				
926						SD in Log Scale		2.032				
927						Mean in Original Scale		2.253				
928						SD in Original Scale		5.949				
929						95% t UCL		3.761				
930						95% Percentile Bootstrap UCL		3.794				
931						95% BCA Bootstrap UCL		4.561				
932												
933	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
934	k star (bias corrected)	0.472	<b>Data appear Lognormal at 5% Significance Level</b>									
935	Theta Star	11.99										
936	nu star	16.06										
937												
938	A-D Test Statistic	0.958	<b>Nonparametric Statistics</b>									
939	5% A-D Critical Value	0.796	Kaplan-Meier (KM) Method									
940	K-S Test Statistic	0.796	Mean		2.32							
941	5% K-S Critical Value	0.221	SD		5.857							
942	<b>Data not Gamma Distributed at 5% Significance Level</b>					SE of Mean		0.91				
943						95% KM (t) UCL		3.85				
944	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL		3.817				
945	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL		3.822				
946	Minimum	0.2	95% KM (bootstrap t) UCL		5.517							
947	Maximum	33	95% KM (BCA) UCL		3.956							
948	Mean	5.663	95% KM (Percentile Bootstrap) UCL		3.937							
949	Median	5.604	95% KM (Chebyshev) UCL		6.287							
950	SD	5.289	97.5% KM (Chebyshev) UCL		8.004							
951	k star	1.149	99% KM (Chebyshev) UCL		11.38							
952	Theta star	4.927										
953	Nu star	101.2	<b>Potential UCLs to Use</b>									
954	AppChi2	78.95	95% KM (Chebyshev) UCL		6.287							
955	95% Gamma Approximate UCL											
956	95% Adjusted Gamma UCL											
957	<b>Note: DL/2 is not a recommended method.</b>											
958												
959	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
960	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
961	For additional insight, the user may want to consult a statistician.											
962												



A	B	C	D	E	F	G	H	I	J	K	L						
963																	
964	Result (dibenz(a,h)anthracene)																
965																	
966	<b>General Statistics</b>																
967	Number of Valid Data				44		Number of Detected Data				7						
968	Number of Distinct Detected Data				7		Number of Non-Detect Data				37						
969									Percent Non-Detects		84.09%						
970																	
971	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>											
972	Minimum Detected				0.091		Minimum Detected				-2.397						
973	Maximum Detected				3.9		Maximum Detected				1.361						
974	Mean of Detected				1.389		Mean of Detected				-0.502						
975	SD of Detected				1.573		SD of Detected				1.526						
976	Minimum Non-Detect				0.16		Minimum Non-Detect				-1.833						
977	Maximum Non-Detect				3.5		Maximum Non-Detect				1.253						
978																	
979	Note: Data have multiple DLs - Use of KM Method is recommen						Number treated as Non-Detect				43						
980	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				1						
981	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				97.73%						
982																	
983	<b>Warning: There are only 7 Detected Values in this data</b>																
984	<b>Note: It should be noted that even though bootstrap may be performed on this data set</b>																
985	<b>the resulting calculations may not be reliable enough to draw conclusions</b>																
986																	
987	<b>It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.</b>																
988																	
989																	
990	<b>UCL Statistics</b>																
991	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>											
992	Shapiro Wilk Test Statistic				0.82		Shapiro Wilk Test Statistic				0.901						
993	5% Shapiro Wilk Critical Value				0.803		5% Shapiro Wilk Critical Value				0.803						
994	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>											
995																	
996	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>											
997	DL/2 Substitution Method						DL/2 Substitution Method										
998	Mean				0.411		Mean				-1.482						
999	SD				0.767		SD				0.832						
1000	95% DL/2 (t) UCL				0.606		95% H-Stat (DL/2) UCL				0.424						
1001																	
1002	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method										
1003	<b>MLE method failed to converge properly</b>					Mean in Log Scale						-1.979					
1004																	
1005																	
1006																	
1007																	
1008																	
1009																	
1010																	
1011	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>											
1012	k star (bias corrected)				0.509		<b>Data appear Normal at 5% Significance Level</b>										
1013	Theta Star				2.727												
1014	nu star				7.128												
1015																	
1016	A-D Test Statistic				0.449		<b>Nonparametric Statistics</b>										
1017	5% A-D Critical Value				0.738		Kaplan-Meier (KM) Method										
1018	K-S Test Statistic				0.738		Mean				0.33						
1019	5% K-S Critical Value				0.323		SD				0.747						
1020	<b>Data appear Gamma Distributed at 5% Significance Level</b>					SE of Mean						0.124					
1021																	
1022	Assuming Gamma Distribution						95% KM (t) UCL				0.538						
1023	Gamma ROS Statistics using Extrapolated Data						95% KM (z) UCL				0.534						
1024	Minimum				0.091		95% KM (jackknife) UCL				0.512						
1025	Maximum				3.9		95% KM (bootstrap t) UCL				0.732						
1026	Mean				1.356		95% KM (BCA) UCL				0.768						
1027	Median				1.27		95% KM (Percentile Bootstrap) UCL				0.623						
1028	SD				0.775		95% KM (Chebyshev) UCL				0.87						
1029	k star				2.524		97.5% KM (Chebyshev) UCL				1.103						
1030	Theta star				0.537		99% KM (Chebyshev) UCL				1.561						
1031	Nu star				222.1		<b>Potential UCLs to Use</b>										
1032	AppChi2				188.6		95% KM (t) UCL				0.538						
1033	95% Gamma Approximate UCL				1.597		95% KM (Percentile Bootstrap) UCL				0.623						
1034	95% Adjusted Gamma UCL				1.606												
1035	Note: DL/2 is not a recommended method.																
1036																	

A	B	C	D	E	F	G	H	I	J	K	L	
1037	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1038	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1039	For additional insight, the user may want to consult a statistician.											
1040												
1041												
1042	Result (fluoranthene)											
1043												
1044	General Statistics											
1045	Number of Valid Data				44		Number of Detected Data				18	
1046	Number of Distinct Detected Data				17		Number of Non-Detect Data				26	
1047							Percent Non-Detects				59.09%	
1048												
1049	Raw Statistics					Log-transformed Statistics						
1050	Minimum Detected				0.16		Minimum Detected				-1.833	
1051	Maximum Detected				72		Maximum Detected				4.277	
1052	Mean of Detected				9.802		Mean of Detected				0.711	
1053	SD of Detected				18		SD of Detected				1.908	
1054	Minimum Non-Detect				0.077		Minimum Non-Detect				-2.564	
1055	Maximum Non-Detect				0.48		Maximum Non-Detect				-0.734	
1056												
1057	Note: Data have multiple DLs - Use of KM Method is recommen					Number treated as Non-Detect				29		
1058	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				15		
1059	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				65.91%		
1060												
1061	UCL Statistics											
1062	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1063	Shapiro Wilk Test Statistic				0.598		Shapiro Wilk Test Statistic				0.888	
1064	5% Shapiro Wilk Critical Value				0.897		5% Shapiro Wilk Critical Value				0.897	
1065	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1066												
1067	Assuming Normal Distribution					Assuming Lognormal Distribution						
1068	DL/2 Substitution Method						DL/2 Substitution Method					
1069	Mean				4.117		Mean				-0.738	
1070	SD				12.29		SD				1.728	
1071	95% DL/2 (t) UCL				7.231		95% H-Stat (DL/2) UCL				5.072	
1072												
1073	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1074	MLE yields a negative mean					Mean in Log Scale				-1.75		
1075							SD in Log Scale				2.552	
1076							Mean in Original Scale				4.041	
1077							SD in Original Scale				12.31	
1078							95% t UCL				7.162	
1079							95% Percentile Bootstrap UCL				7.561	
1080							95% BCA Bootstrap UCL				8.757	
1081												
1082	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1083	k star (bias corrected)				0.384		Data do not follow a Discernable Distribution (0.05)					
1084	Theta Star				25.54							
1085	nu star				13.82							
1086												
1087	A-D Test Statistic				1.312		Nonparametric Statistics					
1088	5% A-D Critical Value				0.818		Kaplan-Meier (KM) Method					
1089	K-S Test Statistic				0.818		Mean				4.119	
1090	5% K-S Critical Value				0.217		SD				12.15	
1091	Data not Gamma Distributed at 5% Significance Level					SE of Mean				1.884		
1092							95% KM (t) UCL				7.286	
1093	Assuming Gamma Distribution					95% KM (z) UCL				7.218		
1094	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				7.217	
1095	Minimum				0.16		95% KM (bootstrap t) UCL				12.59	
1096	Maximum				72		95% KM (BCA) UCL				7.752	
1097	Mean				9.559		95% KM (Percentile Bootstrap) UCL				7.427	
1098	Median				8.929		95% KM (Chebyshev) UCL				12.33	
1099	SD				11.39		97.5% KM (Chebyshev) UCL				15.89	
1100	k star				0.852		99% KM (Chebyshev) UCL				22.87	
1101	Theta star				11.22							
1102	Nu star				75.01		Potential UCLs to Use					
1103	AppChi2				56.06		95% KM (Chebyshev) UCL				12.33	
1104	95% Gamma Approximate UCL				12.79							
1105	95% Adjusted Gamma UCL				12.92							
1106	Note: DL/2 is not a recommended method.											
1107												
1108	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1110	For additional insight, the user may want to consult a statistician.											

A	B	C	D	E	F	G	H	I	J	K	L	
1111												
1112												
1113	Result (Indeno(1,2,3-cd)pyrene)											
1114												
1115	General Statistics											
1116	Number of Valid Data				44	Number of Detected Data				14		
1117	Number of Distinct Detected Data				13	Number of Non-Detect Data				30		
1118						Percent Non-Detects				68.18%		
1119												
1120	Raw Statistics					Log-transformed Statistics						
1121	Minimum Detected				0.092	Minimum Detected				-2.386		
1122	Maximum Detected				16	Maximum Detected				2.773		
1123	Mean of Detected				3.554	Mean of Detected				0.209		
1124	SD of Detected				4.797	SD of Detected				1.651		
1125	Minimum Non-Detect				0.17	Minimum Non-Detect				-1.772		
1126	Maximum Non-Detect				0.87	Maximum Non-Detect				-0.139		
1127												
1128	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect		38		
1129	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected		6		
1130	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage		86.36%		
1131												
1132	UCL Statistics											
1133	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1134	Shapiro Wilk Test Statistic				0.747	Shapiro Wilk Test Statistic				0.93		
1135	5% Shapiro Wilk Critical Value				0.874	5% Shapiro Wilk Critical Value				0.874		
1136	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1137												
1138	Assuming Normal Distribution					Assuming Lognormal Distribution						
1139	DL/2 Substitution Method					DL/2 Substitution Method						
1140	Mean				1.257	Mean				-1.111		
1141	SD				3.079	SD				1.31		
1142	95% DL/2 (t) UCL				2.038	95% H-Stat (DL/2) UCL				1.341		
1143												
1144	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1145	MLE yields a negative mean					Mean in Log Scale				-1.847		
1146						SD in Log Scale				1.844		
1147						Mean in Original Scale				1.19		
1148						SD in Original Scale				3.103		
1149						95% t UCL				1.977		
1150						95% Percentile Bootstrap UCL				1.999		
1151						95% BCA Bootstrap UCL				2.277		
1152												
1153	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1154	k star (bias corrected)				0.508	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1155	Theta Star				7.001							
1156	nu star				14.22							
1157												
1158	A-D Test Statistic				0.648	Nonparametric Statistics						
1159	5% A-D Critical Value				0.786	Kaplan-Meier (KM) Method						
1160	K-S Test Statistic				0.786	Mean				1.217		
1161	5% K-S Critical Value				0.24	SD				3.058		
1162	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.479		
1163						95% KM (t) UCL				2.022		
1164	Assuming Gamma Distribution					95% KM (z) UCL				2.005		
1165	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.967		
1166	Minimum				0.092	95% KM (bootstrap t) UCL				2.815		
1167	Maximum				16	95% KM (BCA) UCL				2.22		
1168	Mean				3.557	95% KM (Percentile Bootstrap) UCL				2.068		
1169	Median				3.567	95% KM (Chebyshev) UCL				3.304		
1170	SD				2.639	97.5% KM (Chebyshev) UCL				4.207		
1171	k star				1.534	99% KM (Chebyshev) UCL				5.98		
1172	Theta star				2.319							
1173	Nu star				135	Potential UCLs to Use						
1174	AppChi2				109.1	95% KM (t) UCL				2.022		
1175	95% Gamma Approximate UCL				4.4							
1176	95% Adjusted Gamma UCL				4.432							
1177	Note: DL/2 is not a recommended method.											
1178												
1179	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1180	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1181	For additional insight, the user may want to consult a statistician.											
1182												
1183												
1184	Result (kerosene)											



A	B	C	D	E	F	G	H	I	J	K	L		
1185													
1186	<b>General Statistics</b>												
1187	Number of Valid Observations					10	Number of Distinct Observations					6	
1188													
1189	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>							
1190	Minimum					7	Minimum of Log Data					1.946	
1191	Maximum					100	Maximum of Log Data					4.605	
1192	Mean					28.8	Mean of log Data					2.738	
1193	Median					8.5	SD of log Data					1.068	
1194	SD					38.14							
1195	Coefficient of Variation					1.324							
1196	Skewness					1.655							
1197													
1198													
1199	<b>Relevant UCL Statistics</b>												
1200	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>							
1201	Shapiro Wilk Test Statistic					0.6	Shapiro Wilk Test Statistic					0.696	
1202	Shapiro Wilk Critical Value					0.842	Shapiro Wilk Critical Value					0.842	
1203	<b>Data not Normal at 5% Significance Level</b>					<b>Data not Lognormal at 5% Significance Level</b>							
1204													
1205	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>							
1206	95% Student's-t UCL					50.91	95% H-UCL					86.6	
1207	<b>95% UCLs (Adjusted for Skewness)</b>					95% Chebyshev (MVUE) UCL						64.31	
1208	95% Adjusted-CLT UCL (Chen-1995)					55.38	97.5% Chebyshev (MVUE) UCL					81.21	
1209	95% Modified-t UCL (Johnson-1978)					51.96	99% Chebyshev (MVUE) UCL					114.4	
1210													
1211	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>							
1212	k star (bias corrected)					0.721	<b>Data do not follow a Discernable Distribution (0.05)</b>						
1213	Theta Star					39.96							
1214	MLE of Mean					28.8							
1215	MLE of Standard Deviation					33.93							
1216	nu star					14.41							
1217	Approximate Chi Square Value (.05)					6.855	<b>Nonparametric Statistics</b>						
1218	Adjusted Level of Significance					0.0267	95% CLT UCL					48.64	
1219	Adjusted Chi Square Value					5.972	95% Jackknife UCL					50.91	
1220							95% Standard Bootstrap UCL					47.48	
1221	Anderson-Darling Test Statistic					1.691	95% Bootstrap-t UCL					129.9	
1222	Anderson-Darling 5% Critical Value					0.751	95% Hall's Bootstrap UCL					188.2	
1223	Kolmogorov-Smirnov Test Statistic					0.392	95% Percentile Bootstrap UCL					47.4	
1224	Kolmogorov-Smirnov 5% Critical Value					0.274	95% BCA Bootstrap UCL					54.2	
1225	<b>Data not Gamma Distributed at 5% Significance Level</b>					95% Chebyshev(Mean, Sd) UCL						81.37	
1226							97.5% Chebyshev(Mean, Sd) UCL						104.1
1227	<b>Assuming Gamma Distribution</b>					99% Chebyshev(Mean, Sd) UCL						148.8	
1228	95% Approximate Gamma UCL					60.55							
1229	95% Adjusted Gamma UCL					69.5							
1230													
1231	<b>Potential UCL to Use</b>					Use 95% Chebyshev (Mean, Sd) UCL						81.37	
1232													
1233	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
1234	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
1235	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.												
1236													
1237													
1238	<b>Result (lead)</b>												
1239													
1240	<b>General Statistics</b>												
1241	Number of Valid Data					23	Number of Detected Data					22	
1242	Number of Distinct Detected Data					22	Number of Non-Detect Data					1	
1243							Percent Non-Detects					4.35%	
1244													
1245	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>							
1246	Minimum Detected					2.1	Minimum Detected					0.742	
1247	Maximum Detected					28	Maximum Detected					3.332	
1248	Mean of Detected					8.163	Mean of Detected					1.815	
1249	SD of Detected					6.672	SD of Detected					0.762	
1250	Minimum Non-Detect					6.7	Minimum Non-Detect					1.902	
1251	Maximum Non-Detect					6.7	Maximum Non-Detect					1.902	
1252													
1253													
1254	<b>UCL Statistics</b>												
1255	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>							
1256	Shapiro Wilk Test Statistic					0.824	Shapiro Wilk Test Statistic					0.946	
1257	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
1258	<b>Data not Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>							

A	B	C	D	E	F	G	H	I	J	K	L	
1259												
1260	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
1261	DL/2 Substitution Method					DL/2 Substitution Method						
1262	Mean					7.954	Mean					1.789
1263	SD					6.596	SD					0.755
1264	95% DL/2 (t) UCL					10.32	95% H-Stat (DL/2) UCL					11.39
1265												
1266	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1267	Mean					4.893	Mean in Log Scale					1.794
1268	SD					9.875	SD in Log Scale					0.751
1269	95% MLE (t) UCL					8.429	Mean in Original Scale					7.971
1270	95% MLE (Tiku) UCL					9.63	SD in Original Scale					6.584
1271							95% t UCL					10.33
1272							95% Percentile Bootstrap UCL					10.25
1273							95% BCA Bootstrap UCL					10.64
1274												
1275	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
1276	k star (bias corrected)					1.677	<b>Data appear Gamma Distributed at 5% Significance Level</b>					
1277	Theta Star					4.866						
1278	nu star					73.81						
1279												
1280	A-D Test Statistic					0.663	<b>Nonparametric Statistics</b>					
1281	5% A-D Critical Value					0.757	Kaplan-Meier (KM) Method					
1282	K-S Test Statistic					0.757	Mean					7.963
1283	5% K-S Critical Value					0.188	SD					6.449
1284	<b>Data appear Gamma Distributed at 5% Significance Level</b>						SE of Mean					1.377
1285							95% KM (t) UCL					10.33
1286	<b>Assuming Gamma Distribution</b>						95% KM (z) UCL					10.23
1287	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					10.33
1288	Minimum					2.1	95% KM (bootstrap t) UCL					11.16
1289	Maximum					28	95% KM (BCA) UCL					10.34
1290	Mean					8.011	95% KM (Percentile Bootstrap) UCL					10.36
1291	Median					4.7	95% KM (Chebyshev) UCL					13.97
1292	SD					6.559	97.5% KM (Chebyshev) UCL					16.56
1293	k star					1.726	99% KM (Chebyshev) UCL					21.67
1294	Theta star					4.642						
1295	Nu star					79.38	<b>Potential UCLs to Use</b>					
1296	AppChi2					59.86	95% KM (Chebyshev) UCL					13.97
1297	95% Gamma Approximate UCL					10.63						
1298	95% Adjusted Gamma UCL					10.85						
1299	<b>Note: DL/2 is not a recommended method.</b>											
1300												
1301	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
1302	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
1303	<b>For additional insight, the user may want to consult a statistician.</b>											
1304												
1305												
1306	<b>Result (mercury)</b>											
1307												
1308	<b>General Statistics</b>											
1309	Number of Valid Data					24	Number of Detected Data					19
1310	Number of Distinct Detected Data					14	Number of Non-Detect Data					5
1311							Percent Non-Detects					20.83%
1312												
1313	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
1314	Minimum Detected					0.013	Minimum Detected					-4.343
1315	Maximum Detected					0.046	Maximum Detected					-3.079
1316	Mean of Detected					0.0298	Mean of Detected					-3.566
1317	SD of Detected					0.00967	SD of Detected					0.349
1318	Minimum Non-Detect					0.09	Minimum Non-Detect					-2.408
1319	Maximum Non-Detect					0.1	Maximum Non-Detect					-2.303
1320												
1321	Note: Data have multiple DLs - Use of KM Method is recommen						Number treated as Non-Detect					24
1322	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
1323	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
1324												
1325	<b>UCL Statistics</b>											
1326	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>						
1327	Shapiro Wilk Test Statistic					0.964	Shapiro Wilk Test Statistic					0.958
1328	5% Shapiro Wilk Critical Value					0.901	5% Shapiro Wilk Critical Value					0.901
1329	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
1330												
1331	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
1332	DL/2 Substitution Method					DL/2 Substitution Method						

A	B	C	D	E	F	G	H	I	J	K	L
1333				Mean	0.0333					Mean	-3.463
1334				SD	0.011					SD	0.371
1335				95% DL/2 (t) UCL	0.0371				95% H-Stat (DL/2) UCL		0.0388
1336											
1337				Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
1338				<b>MLE method failed to converge properly</b>						Mean in Log Scale	-3.566
1339										SD in Log Scale	0.318
1340										Mean in Original Scale	0.0296
1341										SD in Original Scale	0.00885
1342										95% t UCL	0.0327
1343										95% Percentile Bootstrap UCL	0.0324
1344										95% BCA Bootstrap UCL	0.0327
1345											
1346				<b>Gamma Distribution Test with Detected Values Only</b>			<b>Data Distribution Test with Detected Values Only</b>				
1347				k star (bias corrected)	7.915	<b>Data appear Normal at 5% Significance Level</b>					
1348				Theta Star	0.00377						
1349				nu star	300.8						
1350											
1351				A-D Test Statistic	0.231	<b>Nonparametric Statistics</b>					
1352				5% A-D Critical Value	0.741					Kaplan-Meier (KM) Method	
1353				K-S Test Statistic	0.741					Mean	0.0298
1354				5% K-S Critical Value	0.199					SD	0.00941
1355				<b>Data appear Gamma Distributed at 5% Significance Level</b>						SE of Mean	0.00222
1356										95% KM (t) UCL	0.0336
1357				<b>Assuming Gamma Distribution</b>						95% KM (z) UCL	0.0335
1358				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.0337
1359				Minimum	0.013					95% KM (bootstrap t) UCL	0.0338
1360				Maximum	0.046					95% KM (BCA) UCL	0.0336
1361				Mean	0.0301					95% KM (Percentile Bootstrap) UCL	0.0334
1362				Median	0.0318					95% KM (Chebyshev) UCL	0.0395
1363				SD	0.00883					97.5% KM (Chebyshev) UCL	0.0437
1364				k star	9.77					99% KM (Chebyshev) UCL	0.0519
1365				Theta star	0.00309						
1366				Nu star	469	<b>Potential UCLs to Use</b>					
1367				AppChi2	419.8					95% KM (t) UCL	0.0336
1368				95% Gamma Approximate UCL	0.0337					95% KM (Percentile Bootstrap) UCL	0.0334
1369				95% Adjusted Gamma UCL	0.0339						
1370	<b>Note: DL/2 is not a recommended method.</b>										
1371											
1372	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>										
1373	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>										
1374	<b>For additional insight, the user may want to consult a statistician.</b>										
1375											
1376											
1377	<b>Result (phenanthrene)</b>										
1378											
1379	<b>General Statistics</b>										
1380				Number of Valid Data	44					Number of Detected Data	15
1381				Number of Distinct Detected Data	14					Number of Non-Detect Data	29
1382										Percent Non-Detects	65.91%
1383											
1384				<b>Raw Statistics</b>			<b>Log-transformed Statistics</b>				
1385				Minimum Detected	0.049					Minimum Detected	-3.016
1386				Maximum Detected	39					Maximum Detected	3.664
1387				Mean of Detected	6.131					Mean of Detected	-0.235
1388				SD of Detected	12.23					SD of Detected	2.232
1389				Minimum Non-Detect	0.074					Minimum Non-Detect	-2.604
1390				Maximum Non-Detect	0.48					Maximum Non-Detect	-0.734
1391											
1392	<b>Note: Data have multiple DLs - Use of KM Method is recommen</b>									Number treated as Non-Detect	37
1393	<b>For all methods (except KM, DL/2, and ROS Methods),</b>									Number treated as Detected	7
1394	<b>Observations &lt; Largest ND are treated as NDs</b>									Single DL Non-Detect Percentage	84.09%
1395											
1396	<b>UCL Statistics</b>										
1397	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>					
1398				Shapiro Wilk Test Statistic	0.558					Shapiro Wilk Test Statistic	0.923
1399				5% Shapiro Wilk Critical Value	0.881					5% Shapiro Wilk Critical Value	0.881
1400	<b>Data not Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>					
1401											
1402	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>					
1403				DL/2 Substitution Method						DL/2 Substitution Method	
1404				Mean	2.206					Mean	-1.26
1405				SD	7.542					SD	1.513
1406				95% DL/2 (t) UCL	4.118					95% H-Stat (DL/2) UCL	1.781

A	B	C	D	E	F	G	H	I	J	K	L	
1407												
1408	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1409	<b>MLE yields a negative mean</b>					Mean in Log Scale					-1.641	
1410						SD in Log Scale					1.821	
1411						Mean in Original Scale					2.186	
1412						SD in Original Scale					7.549	
1413						95% t UCL					4.099	
1414						95% Percentile Bootstrap UCL					4.217	
1415						95% BCA Bootstrap UCL					5.191	
1416												
1417	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
1418	k star (bias corrected)			0.309	<b>Data Follow Appr. Gamma Distribution at 5% Significance Level</b>							
1419	Theta Star			19.81								
1420	nu star			9.284								
1421												
1422	A-D Test Statistic			0.985	<b>Nonparametric Statistics</b>							
1423	5% A-D Critical Value			0.829	Kaplan-Meier (KM) Method							
1424	K-S Test Statistic			0.829	Mean							2.173
1425	5% K-S Critical Value			0.239	SD							7.466
1426	<b>Data follow Appr. Gamma Distribution at 5% Significance Level</b>					SE of Mean					1.165	
1427						95% KM (t) UCL					4.132	
1428	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL					4.089	
1429	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					4.087	
1430	Minimum			0.049	95% KM (bootstrap t) UCL					12.1		
1431	Maximum			39	95% KM (BCA) UCL					4.333		
1432	Mean			5.585	95% KM (Percentile Bootstrap) UCL					4.162		
1433	Median			4.134	95% KM (Chebyshev) UCL					7.252		
1434	SD			7.367	97.5% KM (Chebyshev) UCL					9.45		
1435	k star			0.731	99% KM (Chebyshev) UCL					13.77		
1436	Theta star			7.636								
1437	Nu star			64.36	<b>Potential UCLs to Use</b>							
1438	AppChi2			46.9	95% KM (t) UCL					4.132		
1439	95% Gamma Approximate UCL			7.663								
1440	95% Adjusted Gamma UCL			7.747								
1441	<b>Note: DL/2 is not a recommended method.</b>											
1442												
1443	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
1444	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
1445	<b>For additional insight, the user may want to consult a statistician.</b>											
1446												
1447												
1448	<b>Result (pyrene)</b>											
1449												
1450	<b>General Statistics</b>											
1451	Number of Valid Data			44	Number of Detected Data			17				
1452	Number of Distinct Detected Data			17	Number of Non-Detect Data			27				
1453					Percent Non-Detects			61.36%				
1454												
1455	<b>Raw Statistics</b>				<b>Log-transformed Statistics</b>							
1456	Minimum Detected			0.19	Minimum Detected			-1.661				
1457	Maximum Detected			49	Maximum Detected			3.892				
1458	Mean of Detected			7.705	Mean of Detected			0.749				
1459	SD of Detected			12.8	SD of Detected			1.727				
1460	Minimum Non-Detect			0.074	Minimum Non-Detect			-2.604				
1461	Maximum Non-Detect			0.48	Maximum Non-Detect			-0.734				
1462												
1463	Note: Data have multiple DLs - Use of KM Method is recommen				Number treated as Non-Detect			30				
1464	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			14				
1465	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			68.18%				
1466												
1467	<b>UCL Statistics</b>											
1468	<b>Normal Distribution Test with Detected Values Only</b>				<b>Lognormal Distribution Test with Detected Values Only</b>							
1469	Shapiro Wilk Test Statistic			0.645	Shapiro Wilk Test Statistic			0.915				
1470	5% Shapiro Wilk Critical Value			0.892	5% Shapiro Wilk Critical Value			0.892				
1471	<b>Data not Normal at 5% Significance Level</b>				<b>Data appear Lognormal at 5% Significance Level</b>							
1472												
1473	<b>Assuming Normal Distribution</b>				<b>Assuming Lognormal Distribution</b>							
1474	DL/2 Substitution Method				DL/2 Substitution Method							
1475	Mean			3.088	Mean			-0.779				
1476	SD			8.642	SD			1.636				
1477	95% DL/2 (t) UCL			5.278	95% H-Stat (DL/2) UCL			3.857				
1478												
1479	Maximum Likelihood Estimate(MLE) Method			N/A	Log ROS Method							
1480	<b>MLE yields a negative mean</b>				Mean in Log Scale							-1.64

	A	B	C	D	E	F	G	H	I	J	K	L
1481											SD in Log Scale	2.355
1482											Mean in Original Scale	3.021
1483											SD in Original Scale	8.666
1484											95% t UCL	5.217
1485											95% Percentile Bootstrap UCL	5.126
1486											95% BCA Bootstrap UCL	6.333
1487												
1488	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
1489						k star (bias corrected)	0.445	<b>Data appear Lognormal at 5% Significance Level</b>				
1490						Theta Star	17.32					
1491						nu star	15.13					
1492												
1493						A-D Test Statistic	1.001	<b>Nonparametric Statistics</b>				
1494						5% A-D Critical Value	0.8	Kaplan-Meier (KM) Method				
1495						K-S Test Statistic	0.8	Mean				
1496						5% K-S Critical Value	0.221	SD				
1497	<b>Data not Gamma Distributed at 5% Significance Level</b>					SE of Mean						
1498								95% KM (t) UCL				
1499	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL						
1500	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						
1501						Minimum	0.19	95% KM (bootstrap t) UCL				
1502						Maximum	49	95% KM (BCA) UCL				
1503						Mean	7.335	95% KM (Percentile Bootstrap) UCL				
1504						Median	6.302	95% KM (Chebyshev) UCL				
1505						SD	8.574	97.5% KM (Chebyshev) UCL				
1506						k star	0.877	99% KM (Chebyshev) UCL				
1507						Theta star	8.359					
1508						Nu star	77.22	<b>Potential UCLs to Use</b>				
1509						AppChi2	57.97	95% KM (Chebyshev) UCL				
1510						95% Gamma Approximate UCL	9.769					
1511						95% Adjusted Gamma UCL	9.865					
1512	<b>Note: DL/2 is not a recommended method.</b>											
1513												
1514	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
1515	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
1516	<b>For additional insight, the user may want to consult a statistician.</b>											
1517												
1518												
1519	<b>Result (selenium)</b>											
1520												
1521	<b>General Statistics</b>											
1522						Number of Valid Data	23				Number of Detected Data	10
1523						Number of Distinct Detected Data	7				Number of Non-Detect Data	13
1524											Percent Non-Detects	56.52%
1525												
1526	<b>Raw Statistics</b>						<b>Log-transformed Statistics</b>					
1527						Minimum Detected	0.17				Minimum Detected	-1.772
1528						Maximum Detected	1.1				Maximum Detected	0.0953
1529						Mean of Detected	0.638				Mean of Detected	-0.687
1530						SD of Detected	0.416				SD of Detected	0.765
1531						Minimum Non-Detect	0.26				Minimum Non-Detect	-1.347
1532						Maximum Non-Detect	0.62				Maximum Non-Detect	-0.478
1533												
1534	Note: Data have multiple DLs - Use of KM Method is recommen						Number treated as Non-Detect					
1535	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
1536	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
1537												
1538	<b>UCL Statistics</b>											
1539	<b>Normal Distribution Test with Detected Values Only</b>						<b>Lognormal Distribution Test with Detected Values Only</b>					
1540						Shapiro Wilk Test Statistic	0.797				Shapiro Wilk Test Statistic	0.853
1541						5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value	0.842
1542	<b>Data not Normal at 5% Significance Level</b>						<b>Data appear Lognormal at 5% Significance Level</b>					
1543												
1544	<b>Assuming Normal Distribution</b>						<b>Assuming Lognormal Distribution</b>					
1545						DL/2 Substitution Method					DL/2 Substitution Method	
1546						Mean	0.41				Mean	-1.147
1547						SD	0.339				SD	0.692
1548						95% DL/2 (t) UCL	0.532				95% H-Stat (DL/2) UCL	0.555
1549												
1550	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1551						Mean	0.62				Mean in Log Scale	-1.121
1552						SD	0.48				SD in Log Scale	0.659
1553						95% MLE (t) UCL	0.792				Mean in Original Scale	0.414
1554						95% MLE (Tiku) UCL	0.979				SD in Original Scale	0.337



	A	B	C	D	E	F	G	H	I	J	K	L
1555											95% t UCL	0.535
1556											95% Percentile Bootstrap UCL	0.528
1557											95% BCA Bootstrap UCL	0.536
1558												
1559	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
1560					k star (bias corrected)	1.647	<b>Data appear Gamma Distributed at 5% Significance Level</b>					
1561					Theta Star	0.387						
1562					nu star	32.94						
1563												
1564					A-D Test Statistic	0.713	<b>Nonparametric Statistics</b>					
1565					5% A-D Critical Value	0.735	Kaplan-Meier (KM) Method					
1566					K-S Test Statistic	0.735					Mean	0.408
1567					5% K-S Critical Value	0.269					SD	0.334
1568	<b>Data appear Gamma Distributed at 5% Significance Level</b>										SE of Mean	0.0758
1569											95% KM (t) UCL	0.538
1570	<b>Assuming Gamma Distribution</b>										95% KM (z) UCL	0.533
1571	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.536
1572					Minimum	0.17					95% KM (bootstrap t) UCL	0.568
1573					Maximum	1.1					95% KM (BCA) UCL	0.551
1574					Mean	0.639					95% KM (Percentile Bootstrap) UCL	0.543
1575					Median	0.67					95% KM (Chebyshev) UCL	0.738
1576					SD	0.281					97.5% KM (Chebyshev) UCL	0.881
1577					k star	4.004					99% KM (Chebyshev) UCL	1.162
1578					Theta star	0.16						
1579					Nu star	184.2	<b>Potential UCLs to Use</b>					
1580					AppChi2	153.8					95% KM (t) UCL	0.538
1581					95% Gamma Approximate UCL	0.765						
1582					95% Adjusted Gamma UCL	0.775						
1583	<b>Note: DL/2 is not a recommended method.</b>											
1584												
1585	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
1586	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
1587	<b>For additional insight, the user may want to consult a statistician.</b>											
1588												
1589												
1590	<b>Result (silver)</b>											
1591												
1592	<b>General Statistics</b>											
1593					Number of Valid Data	23					Number of Detected Data	12
1594					Number of Distinct Detected Data	7					Number of Non-Detect Data	11
1595											Percent Non-Detects	47.83%
1596												
1597	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
1598					Minimum Detected	0.054					Minimum Detected	-2.919
1599					Maximum Detected	2.5					Maximum Detected	0.916
1600					Mean of Detected	1.696					Mean of Detected	0.0244
1601					SD of Detected	0.958					SD of Detected	1.427
1602					Minimum Non-Detect	0.26					Minimum Non-Detect	-1.347
1603					Maximum Non-Detect	2.4					Maximum Non-Detect	0.875
1604												
1605	Note: Data have multiple DLs - Use of KM Method is recommen										Number treated as Non-Detect	22
1606	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	1
1607	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	95.65%
1608												
1609	<b>UCL Statistics</b>											
1610	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>						
1611					Shapiro Wilk Test Statistic	0.652					Shapiro Wilk Test Statistic	0.623
1612					5% Shapiro Wilk Critical Value	0.859					5% Shapiro Wilk Critical Value	0.859
1613	<b>Data not Normal at 5% Significance Level</b>					<b>Data not Lognormal at 5% Significance Level</b>						
1614												
1615	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
1616					DL/2 Substitution Method						DL/2 Substitution Method	
1617					Mean	1.041					Mean	-0.657
1618					SD	0.997					SD	1.337
1619					95% DL/2 (t) UCL	1.398					95% H-Stat (DL/2) UCL	2.978
1620												
1621					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
1622	<b>MLE method failed to converge properly</b>										Mean in Log Scale	-0.712
1623											SD in Log Scale	1.303
1624											Mean in Original Scale	0.996
1625											SD in Original Scale	1.01
1626											95% t UCL	1.358
1627											95% Percentile Bootstrap UCL	1.338
1628											95% BCA Bootstrap UCL	1.392

A	B	C	D	E	F	G	H	I	J	K	L	
1629												
1630	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>						
1631	k star (bias corrected)				0.903	<b>Data do not follow a Discernable Distribution (0.05)</b>						
1632	Theta Star				1.877							
1633	nu star				21.68							
1634												
1635	A-D Test Statistic				2.466	<b>Nonparametric Statistics</b>						
1636	5% A-D Critical Value				0.754	Kaplan-Meier (KM) Method						
1637	K-S Test Statistic				0.754	Mean				0.975		
1638	5% K-S Critical Value				0.252	SD				1.038		
1639	<b>Data not Gamma Distributed at 5% Significance Level</b>					SE of Mean						
1640						95% KM (t) UCL						
1641	<b>Assuming Gamma Distribution</b>					95% KM (z) UCL						
1642	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						
1643	Minimum				0.054	95% KM (bootstrap t) UCL						
1644	Maximum				2.5	95% KM (BCA) UCL						
1645	Mean				1.697	95% KM (Percentile Bootstrap) UCL						
1646	Median				1.696	95% KM (Chebyshev) UCL						
1647	SD				0.678	97.5% KM (Chebyshev) UCL						
1648	k star				1.815	99% KM (Chebyshev) UCL						
1649	Theta star				0.935							
1650	Nu star				83.48	<b>Potential UCLs to Use</b>						
1651	AppChi2				63.42	97.5% KM (Chebyshev) UCL						
1652	95% Gamma Approximate UCL				2.233							
1653	95% Adjusted Gamma UCL				2.279							
1654	<b>Note: DL/2 is not a recommended method.</b>											
1655												
1656	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>											
1657	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>											
1658	<b>For additional insight, the user may want to consult a statistician.</b>											
1659												
1660												
1661	<b>Result (toluene)</b>											
1662												
1663	<b>General Statistics</b>											
1664	Number of Valid Data				54	Number of Detected Data				5		
1665	Number of Distinct Detected Data				5	Number of Non-Detect Data				49		
1666						Percent Non-Detects				90.74%		
1667												
1668	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>						
1669	Minimum Detected				0.001	Minimum Detected				-6.908		
1670	Maximum Detected				0.02	Maximum Detected				-3.912		
1671	Mean of Detected				0.0078	Mean of Detected				-5.437		
1672	SD of Detected				0.00835	SD of Detected				1.268		
1673	Minimum Non-Detect				0.005	Minimum Non-Detect				-5.298		
1674	Maximum Non-Detect				0.053	Maximum Non-Detect				-2.937		
1675												
1676	Note: Data have multiple DLs - Use of KM Method is recommen					Number treated as Non-Detect				54		
1677	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0		
1678	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%		
1679												
1680	<b>Warning: There are only 5 Detected Values in this data</b>											
1681	<b>Note: It should be noted that even though bootstrap may be performed on this data set</b>											
1682	<b>the resulting calculations may not be reliable enough to draw conclusions</b>											
1683												
1684	<b>It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.</b>											
1685												
1686												
1687	<b>UCL Statistics</b>											
1688	<b>Normal Distribution Test with Detected Values Only</b>					<b>Lognormal Distribution Test with Detected Values Only</b>						
1689	Shapiro Wilk Test Statistic				0.838	Shapiro Wilk Test Statistic				0.928		
1690	5% Shapiro Wilk Critical Value				0.762	5% Shapiro Wilk Critical Value				0.762		
1691	<b>Data appear Normal at 5% Significance Level</b>					<b>Data appear Lognormal at 5% Significance Level</b>						
1692												
1693	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>						
1694	DL/2 Substitution Method					DL/2 Substitution Method						
1695	Mean				0.00437	Mean				-5.683		
1696	SD				0.00515	SD				0.56		
1697	95% DL/2 (t) UCL				0.00555	95% H-Stat (DL/2) UCL				0.00461		
1698												
1699	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1700	<b>MLE method failed to converge properly</b>					Mean in Log Scale						
1701						SD in Log Scale						
1702						Mean in Original Scale						

A	B	C	D	E	F	G	H	I	J	K	L
1703										SD in Original Scale	0.00301
1704										95% t UCL	0.00331
1705										95% Percentile Bootstrap UCL	0.00334
1706										95% BCA Bootstrap UCL	0.00365
1707											
1708	<b>Gamma Distribution Test with Detected Values Only</b>					<b>Data Distribution Test with Detected Values Only</b>					
1709					k star (bias corrected)	0.529	<b>Data appear Normal at 5% Significance Level</b>				
1710					Theta Star	0.0147					
1711					nu star	5.294					
1712											
1713					A-D Test Statistic	0.376	<b>Nonparametric Statistics</b>				
1714					5% A-D Critical Value	0.692	Kaplan-Meier (KM) Method				
1715					K-S Test Statistic	0.692	Mean				
1716					5% K-S Critical Value	0.364	SD				
1717	<b>Data appear Gamma Distributed at 5% Significance Level</b>						SE of Mean				
1718							95% KM (t) UCL				
1719	<b>Assuming Gamma Distribution</b>						95% KM (z) UCL				
1720	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				
1721					Minimum	0.001	95% KM (bootstrap t) UCL				
1722					Maximum	0.02	95% KM (BCA) UCL				
1723					Mean	0.00781	95% KM (Percentile Bootstrap) UCL				
1724					Median	0.00754	95% KM (Chebyshev) UCL				
1725					SD	0.00274	97.5% KM (Chebyshev) UCL				
1726					k star	6.774	99% KM (Chebyshev) UCL				
1727					Theta star	0.00115					
1728					Nu star	731.6	<b>Potential UCLs to Use</b>				
1729					AppChi2	669.8	95% KM (t) UCL				
1730					95% Gamma Approximate UCL	0.00853	95% KM (Percentile Bootstrap) UCL				
1731					95% Adjusted Gamma UCL	0.00855					
1732	<b>Note: DL/2 is not a recommended method.</b>										
1733											
1734	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>										
1735	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).</b>										
1736	<b>For additional insight, the user may want to consult a statistician.</b>										
1737											
1738											
1739	<b>Result (tph (as diesel))</b>										
1740											
1741	<b>General Statistics</b>										
1742					Number of Valid Observations	10				Number of Distinct Observations	7
1743											
1744	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>					
1745					Minimum	7				Minimum of Log Data	1.946
1746					Maximum	100				Maximum of Log Data	4.605
1747					Mean	33				Mean of log Data	2.921
1748					Median	9.5				SD of log Data	1.099
1749					SD	37.91					
1750					Coefficient of Variation	1.149					
1751					Skewness	1.316					
1752											
1753											
1754	<b>Relevant UCL Statistics</b>										
1755	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>					
1756					Shapiro Wilk Test Statistic	0.703				Shapiro Wilk Test Statistic	0.782
1757					Shapiro Wilk Critical Value	0.842				Shapiro Wilk Critical Value	0.842
1758	<b>Data not Normal at 5% Significance Level</b>					<b>Data not Lognormal at 5% Significance Level</b>					
1759											
1760	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>					
1761					95% Student's-t UCL	54.97				95% H-UCL	114
1762	<b>95% UCLs (Adjusted for Skewness)</b>					95% Chebyshev (MVUE) UCL					
1763					95% Adjusted-CLT UCL (Chen-1995)	58.05				97.5% Chebyshev (MVUE) UCL	102.4
1764					95% Modified-t UCL (Johnson-1978)	55.8				99% Chebyshev (MVUE) UCL	144.7
1765											
1766	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>					
1767					k star (bias corrected)	0.768	<b>Data do not follow a Discernable Distribution (0.05)</b>				
1768					Theta Star	42.95					
1769					MLE of Mean	33					
1770					MLE of Standard Deviation	37.65					
1771					nu star	15.37					
1772	Approximate Chi Square Value (.05)					7.516	<b>Nonparametric Statistics</b>				
1773					Adjusted Level of Significance	0.0267	95% CLT UCL				
1774					Adjusted Chi Square Value	6.585	95% Jackknife UCL				
1775							95% Standard Bootstrap UCL				
1776					Anderson-Darling Test Statistic	1.131	95% Bootstrap-t UCL				



A	B	C	D	E	F	G	H	I	J	K	L
1777	Anderson-Darling 5% Critical Value				0.748	95% Hall's Bootstrap UCL				62.69	
1778	Kolmogorov-Smirnov Test Statistic				0.339	95% Percentile Bootstrap UCL				54	
1779	Kolmogorov-Smirnov 5% Critical Value				0.274	95% BCA Bootstrap UCL				56.6	
1780	<b>Data not Gamma Distributed at 5% Significance Level</b>					95% Chebyshev(Mean, Sd) UCL				85.25	
1781						97.5% Chebyshev(Mean, Sd) UCL				107.9	
1782	<b>Assuming Gamma Distribution</b>					99% Chebyshev(Mean, Sd) UCL				152.3	
1783	95% Approximate Gamma UCL				67.46						
1784	95% Adjusted Gamma UCL				77						
1785											
1786	<b>Potential UCL to Use</b>					Use 95% Chebyshev (Mean, Sd) UCL				85.25	
1787											
1788	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>										
1789	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)</b>										
1790	<b>and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.</b>										
1791											
1792											
1793	<b>Result (tph (as gasoline))</b>										
1794											
1795	<b>General Statistics</b>										
1796	Number of Valid Observations				10	Number of Distinct Observations				6	
1797											
1798	<b>Raw Statistics</b>					<b>Log-transformed Statistics</b>					
1799	Minimum				7	Minimum of Log Data				1.946	
1800	Maximum				100	Maximum of Log Data				4.605	
1801	Mean				28.8	Mean of log Data				2.738	
1802	Median				8.5	SD of log Data				1.068	
1803	SD				38.14						
1804	Coefficient of Variation				1.324						
1805	Skewness				1.655						
1806											
1807											
1808	<b>Relevant UCL Statistics</b>										
1809	<b>Normal Distribution Test</b>					<b>Lognormal Distribution Test</b>					
1810	Shapiro Wilk Test Statistic				0.6	Shapiro Wilk Test Statistic				0.696	
1811	Shapiro Wilk Critical Value				0.842	Shapiro Wilk Critical Value				0.842	
1812	<b>Data not Normal at 5% Significance Level</b>					<b>Data not Lognormal at 5% Significance Level</b>					
1813											
1814	<b>Assuming Normal Distribution</b>					<b>Assuming Lognormal Distribution</b>					
1815	95% Student's-t UCL				50.91	95% H-UCL				86.6	
1816	<b>95% UCLs (Adjusted for Skewness)</b>					95% Chebyshev (MVUE) UCL				64.31	
1817	95% Adjusted-CLT UCL (Chen-1995)				55.38	97.5% Chebyshev (MVUE) UCL				81.21	
1818	95% Modified-t UCL (Johnson-1978)				51.96	99% Chebyshev (MVUE) UCL				114.4	
1819											
1820	<b>Gamma Distribution Test</b>					<b>Data Distribution</b>					
1821	k star (bias corrected)				0.721	<b>Data do not follow a Discernable Distribution (0.05)</b>					
1822	Theta Star				39.96						
1823	MLE of Mean				28.8						
1824	MLE of Standard Deviation				33.93						
1825	nu star				14.41						
1826	Approximate Chi Square Value (.05)				6.855	<b>Nonparametric Statistics</b>					
1827	Adjusted Level of Significance				0.0267	95% CLT UCL				48.64	
1828	Adjusted Chi Square Value				5.972	95% Jackknife UCL				50.91	
1829						95% Standard Bootstrap UCL				48.49	
1830	Anderson-Darling Test Statistic				1.691	95% Bootstrap-t UCL				130.1	
1831	Anderson-Darling 5% Critical Value				0.751	95% Hall's Bootstrap UCL				188.2	
1832	Kolmogorov-Smirnov Test Statistic				0.392	95% Percentile Bootstrap UCL				49.2	
1833	Kolmogorov-Smirnov 5% Critical Value				0.274	95% BCA Bootstrap UCL				54	
1834	<b>Data not Gamma Distributed at 5% Significance Level</b>					95% Chebyshev(Mean, Sd) UCL				81.37	
1835						97.5% Chebyshev(Mean, Sd) UCL				104.1	
1836	<b>Assuming Gamma Distribution</b>					99% Chebyshev(Mean, Sd) UCL				148.8	
1837	95% Approximate Gamma UCL				60.55						
1838	95% Adjusted Gamma UCL				69.5						
1839											
1840	<b>Potential UCL to Use</b>					Use 95% Chebyshev (Mean, Sd) UCL				81.37	
1841											
1842	<b>Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.</b>										
1843	<b>These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)</b>										
1844	<b>and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.</b>										
1845											

LEAD MODEL FOR WINDOWS Version 1.1

=====  
==

Model Version: 1.1 Build11  
User Name: Shawn Sager  
Date: 20 April 2012  
Site Name: Fort Stewart / Hunter Army Airfield - Savannah, Georgia  
Operable Unit: HAA-01 (Former Fire Training Area and Departure/Arrival Airfield Control Group  
(DACG) Chlorinated Solvents Area)  
Run Mode: Calculate Type 2 Risk Reduction Standard – input file

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==

\*\*\*\*\* Air \*\*\*\*\*

Indoor Air Pb Concentration: 30.000 percent of outdoor.  
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m <sup>3</sup> /day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

\*\*\*\*\* Diet \*\*\*\*\*

Age	Diet Intake(µg/day)
.5-1	2.260
1-2	1.960
2-3	2.130
3-4	2.040
4-5	1.950
5-6	2.050
6-7	2.220

\*\*\*\*\* Drinking Water \*\*\*\*\*

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580

6-7 0.590

Drinking Water Concentration: 4.000 µg Pb/L

\*\*\*\*\* Soil & Dust \*\*\*\*\*

Multiple Source Analysis Used

Average multiple source concentration: 150.000 µg/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700

Outdoor airborne lead to indoor household dust lead concentration: 100.000

Use alternate indoor dust Pb sources? No

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)
.5-1	200.000	150.000
1-2	200.000	150.000
2-3	200.000	150.000
3-4	200.000	150.000
4-5	200.000	150.000
5-6	200.000	150.000
6-7	200.000	150.000

\*\*\*\*\* Alternate Intake \*\*\*\*\*

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

\*\*\*\*\* Maternal Contribution: Infant Model \*\*\*\*\*

Maternal Blood Concentration: 1.000 µg Pb/dL

\*\*\*\*\*

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

\*\*\*\*\*

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.021	1.061	0.000	0.375
1-2	0.034	0.911	0.000	0.929
2-3	0.062	0.999	0.000	0.976
3-4	0.067	0.966	0.000	1.004
4-5	0.067	0.938	0.000	1.059
5-6	0.093	0.993	0.000	1.123
6-7	0.093	1.078	0.000	1.146

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
------	--------------------	----------------	---------------

.5-1	4.129	5.586	3.0
1-2	6.493	8.368	3.5
2-3	6.556	8.593	3.2
3-4	6.615	8.651	3.0
4-5	4.981	7.045	2.5
5-6	4.510	6.720	2.1
6-7	4.274	6.592	1.9

**Find Soil Pb Concentration** ✕

Select Age Group for Graph 0 to 84 months ▾

Parameter Change

Change Cutoff 10  $\mu\text{g/dl}$

Change GSD (Geometric Standard Deviation) 1.6

Probability of Exceeding the Cutoff (PC) 5 %

Soil and/or Dust Concentration 418 PPM

Find

Cancel

Help?

Please note

Depending on the values enter, calculating PRG may take a few moments.

TRW Homepage: <http://www.epa.gov/superfund/health/contaminants/lead/index.htm>

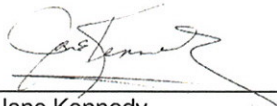
## Appendix K

ARCADIS Field Investigation  
Procedures

**Sampling and Analysis Plan (SAP) and  
Quality Assurance Project Plan (QAPP)**

Fort Stewart Military Reservation and Hunter Army Airfield,  
Georgia

February 2009



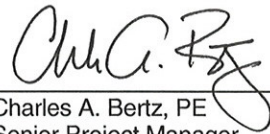
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---

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Charles A. Bertz, PE  
Senior Project Manager

**Sampling and Analysis Plan  
(SAP) and Quality Assurance  
Project Plan (QAPP)**

Fort Stewart Military Reservation  
and Hunter Army Airfield, Georgia

Prepared for:  
US Army Environmental Command

Prepared by:  
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Raleigh  
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Tel 919.854.1282  
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Our Ref.:  
GP08HAFS.SW00

Date:  
February 5, 2009

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<b>1. Introduction</b>	<b>1-1</b>
<b>2. Site Preparation and Mobilization Procedures</b>	<b>2-1</b>
2.1 Initial Coordination	2-1
2.2 Mobilization and Subcontractor Coordination	2-1
2.3 Utility Clearance	2-1
2.4 Site Reconnaissance	2-2
2.5 Field Operations Contingency Plans	2-2
2.6 On-Site ARCADIS Representative	2-3
2.7 Contractor Compliance and Permitting	2-3
2.8 Adherence to Technical Specifications	2-4
<b>3. Field Investigation Procedures</b>	<b>3-1</b>
3.1 Lithologic Logging	3-1
3.2 Direct Push Borings and Sample Collection	3-2
3.2.1 Soil Sample Collection	3-2
3.2.2 Groundwater Sample Collection	3-3
3.2.3 Membrane Interface Probe Borings	3-4
3.2.4 Temporary Piezometer Installation	3-4
3.2.5 Temporary Piezometer Fluid Gauging	3-5
3.2.6 Direct Push Boring Abandonment	3-6
3.2.7 Temporary Piezometer Abandonment	3-6
3.3 Drilling Techniques	3-6
3.3.1 Hollow-Stem Auger Techniques in Soil	3-6
3.3.2 Mud Rotary Drilling	3-7
3.3.3 Rotasonic Drilling Methodology	3-8
3.4 Collection of Samples for Geotechnical and Chemical Analyses	3-9
3.4.1 Geotechnical Samples in Soil and Unconsolidated Deposits	3-9
3.4.2 Geotechnical Samples in Sediment	3-10



3.4.3	Samples for Chemical Analyses	3-11
3.5	Monitoring Well Construction	3-12
3.5.1	Shallow and Intermediate Well Construction	3-12
3.5.2	Pre-pack Screen Monitoring Well Construction	3-14
3.5.3	Monitoring Well Construction Beneath a Confining or Semi-Confining Layer	3-14
3.5.4	Borehole and Well Abandonment	3-16
3.5.5	Temporary Well Abandonment	3-16
3.5.6	Soil Boring Abandonment	3-16
3.6	Groundwater Level Measurements and Sampling	3-17
3.6.1	Groundwater Level Measurements	3-17
3.6.2	Low-Flow Groundwater Purging and Sample Collection	3-18
3.6.3	Slug Test	3-21
3.6.4	Constant Rate Pump Test	3-22
3.6.5	LNAPL Bail Down Test	3-23
3.7	Test Pit Excavations	3-24
3.8	Sediment Sampling	3-24
3.8.1	Shallow Ditch Sediment Sampling	3-24
3.8.2	Deep Ditch Sediment Sampling	3-25
3.8.3	Shallow Stream Sediment Sampling	3-27
3.9	Surface Water Sampling	3-28
3.10	Field Analytical Measurements	3-30
3.11	Quality Control Samples	3-30
3.12	Field Equipment Decontamination	3-32
3.12.1	Cleaning Materials	3-32
3.12.2	Marking and Segregation of Used Field Equipment	3-33
3.12.3	Safety Procedures to be Utilized During Cleaning Operations	3-33
3.12.4	Storage of Field Equipment and Sample Containers	3-33

3.12.5	Cleaning Procedures	3-34
3.12.5.1	Drilling and Direct Push Equipment	3-34
3.12.5.2	Teflon™, Stainless Steel, or Glass Field Sampling Equipment	3-34
3.12.5.3	Other Sampling Equipment	3-35
3.12.5.4	Trace Organic Sampling Equipment	3-35
3.12.5.5	Field Analytical Equipment and Other Field Instruments	3-36
3.12.5.6	Ice Chests and Shipping Containers	3-36
3.12.6	Disposable Materials	3-36
3.13	Characterization and Disposal of Investigative Derived Wastes	3-37
3.13.1	Soils/Sediment/Waste	3-37
3.13.2	Water	3-37
3.14	Site Survey	3-37
<b>4.</b>	<b>Field Documentation Procedures</b>	<b>4-1</b>
4.1	Sample Designation	4-1
4.2	Field Activity Documentation	4-3
4.2.1	Utilities and Structures Checklist	4-4
4.2.2	Location Sketch	4-4
4.2.3	Boring/ Well Construction Logs	4-4
4.2.4	Water Level Measurement Form	4-4
4.2.5	Sample Key	4-4
4.2.6	Sampling Location Survey Summary	4-5
4.2.7	Water Sample Log	4-5
4.2.8	Groundwater Sampling Form	4-5
4.2.9	Well Sampling Summary	4-5
4.2.10	Water Level/Pumping Test Record	4-5
4.2.11	Soil/Sediment Sample Log	4-5
4.2.12	Soil Sampling Summary	4-6

4.2.13	Surface Water Sample Log	4-6
4.2.14	Field Instrument Calibration Form	4-6
4.2.15	Daily Log	4-6
4.2.16	Sample Label	4-7
4.2.17	Chain-of-Custody Form	4-7
4.2.18	Chain-of-Custody Seal	4-8
4.2.19	Bill of Lading	4-8
4.3	Chain-of-Custody Procedures	4-8
4.3.1	Transfer of Custody	4-9
4.3.2	Sample Preparation and Shipment	4-9
4.3.3	Laboratory Sample Receiving	4-9
<b>5.</b>	<b>References</b>	<b>5-1</b>

**Figure**

3-1	Well Schematic for Prepacked Screens
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**Appendices**

A	Site-Wide QAPP
B	Field Forms
	<ul style="list-style-type: none"> <li>• Utilities and Structures Checklist</li> <li>• Location Sketch</li> <li>• Boring/Well Construction Log</li> <li>• Well Construction Log (Unconsolidated)</li> <li>• Well Construction Log - Telescoping</li> <li>• Well Development Form</li> <li>• Geoprobe® Groundwater Sample Form</li> <li>• Well Sampling Summary</li> <li>• Water Level Measurement Form</li> <li>• Water Level/Pumping Test Record</li> <li>• Sample Key</li> </ul>

- Sampling Location Survey Summary
- Soil/Sediment Sample Log
- Soil Sampling Summary
- Groundwater Sample Form
- Surface Water Sample Log
- PID Calibration Form
- Field Instrument Calibration Log
- Daily Log
- Chain-of-Custody Record

**Acronyms and Abbreviations**

amsl	above mean sea level
ARCADIS	ARCADIS U.S., Inc.
ASTM	American Society for Testing and Materials
bgs	below ground surface
COC	chain of custody
DPW	Department of Public Works
FID	flame ionization detector
ft	feet
GAEPD	Georgia Environmental Protection Division
gpm	gallons per minute
GPS	global positioning system
HASP	Health and Safety Plan
HSRA	Hazardous Site Response Act
IDW	investigative derived waste
MIP	membrane interface probe
mL/min	milliliters per minute
MS/MSDs	matrix spike/matrix spike duplicates
NAPL	non-aqueous phase liquid
NTUs	nephelometric turbidity units
O.D.	outside diameter
ORP	oxidation reduction potential
OCCA	Official Code of Georgia Annotated
PBC	Performance Based Contract

PCB	polychlorinated biphenyl
PID	photoionization detector
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
TCLP	Toxicity Characteristic Leaching Procedure
UPC	Utility Protection Center
USEPA	United States Environmental Protection Agency
USCS	Unified Soil Classification System
VOC	volatile organic compound

## 1. Introduction

This Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) was prepared by ARCADIS U.S., Inc. (ARCADIS) to provide field personnel with detailed instructions and procedures regarding field activities to be performed in support of Resource Conservation and Recovery Act (RCRA) and Hazardous Site Response Act (HSRA) remedial activities and to document the performance of all environmental field activities at the Fort Stewart Military Reservation and Hunter Army Airfield in Georgia.

This site-wide SAP provides a detailed description of the field investigation methodologies that will be used to complete the RCRA and HSRA remedial process at the Sites included in ARCADIS' Performance Based Contract (PBC) contract. The QAPP, included as Appendix A, presents the policies, organization, objectives, functional activities, and specific quality assurance/ quality control (QA/QC) procedures. The QA/QC procedures will be employed by ARCADIS to ensure that all technical data generated are accurate and representative, and the data will be of known and usable quality for the intended purpose. Site-specific work plans that further define the scope of activities to be performed at each individual Site will reference this plan for the general procedures to be used in completing the prescribed field activities.

ARCADIS field personnel will use the procedures described in this SAP to produce accurate, comparable, and reproducible data for reduction and evaluation. This SAP is divided into four sections. A brief description of each section is provided below:

- **Section 1, Introduction** – Summarizes the purpose and organization of the plan.
- **Section 2, Site Preparation and Mobilization Procedures** – Describes the tasks to be performed prior to mobilization to the field, including notification and coordination requirements.
- **Section 3, Field Investigation Procedures** – Presents a detailed discussion of the procedures to be used in completing the field tasks, including information on drilling, well construction, sampling, decontamination, investigation derived waste, and the site survey.

- **Section 4, Field Documentation Procedures** – Outlines the methods to be used for sample designation, chain-of-custody (COC) procedures, and field documentation.

Throughout this SAP, reference is made to standard forms and logs used by ARCADIS field personnel to record field observations and measurements. Examples of each of these forms are provided in Appendix B of this SAP.



## 2. Site Preparation and Mobilization Procedures

Initial project coordination, subcontractor coordination, and utility clearance activities will be conducted prior to initiating the field sampling activities. These pre-mobilization activities are discussed in the following subsections.

### 2.1 Initial Coordination

The Fort Stewart and Hunter Army Airfield environmental staff will be notified at least 2 weeks before the start of any field work.

### 2.2 Mobilization and Subcontractor Coordination

The subcontractors, including drillers, laboratories, and surveyors, will be selected and contracts will be executed in advance of beginning the field activities.

### 2.3 Utility Clearance

Prior to mobilization, all underground utility lines, and other underground structures will be clearly marked. ARCADIS personnel will be responsible for making certain the underground utilities and structures are located and marked. ARCADIS is responsible for submitting a utility locate request through the Georgia Utility Protection Center (UPC). UPC will accept these locate request either by phone or internet. The phone number is (800) 282-7411. The UPC web address is [www.gaupc.com](http://www.gaupc.com) and click on IRTH login to make the request. In order to submit a request using the website, pre-registration will be required. The contractor must mark the boundaries of the proposed work site using either white paint, flags or stakes. Department of Public Works (DPW) will accept responsibility for accuracy of the locates pertaining to gas and fuel lines, water lines, electrical lines to include secondary electricity, airfield lighting, low voltage, fire systems, sewer lines, roof drain lines, storm drain lines, industrial waste lines, chilled water lines, high temperature water lines, irrigation systems, and DPW non-fiber computer lines. These requests will be forwarded to all utility companies with services present within the proposed work site.

Permits will be issued within 48 hours of the next business day following the receipt of the request by UPC. The permits will only be valid for 21 days and renewal requests should be submitted a minimum of 3 days prior to expiration. Requesting contractors are responsible for maintaining marks during the 21-day period. If, after acquiring a

permit, a utility is damaged during field activities, the appropriate utility company must be notified. DPW's utilities are listed above and the points of contact are:

Fort Stewart	Carletha Joyce	(912) 767-6669
HAAF	Tony West	(912) 315-5523

The contractor should be prepared to submit proof of a valid permit at that time.

ARCADIS personnel will be responsible for notifying the Fort Stewart and Hunter Army Airfield environmental office of planned intrusive activities at least 2 weeks prior to the initiation of field activities. Upon arrival at the installation, the field operations leader will check the proposed drilling, sampling, and trenching locations for marked underground utilities, other underground structures, and above-ground pipe racks or power lines. A Utilities and Structures Checklist (Appendix B) will be completed by the Field Operations Leader for each area to be sampled prior to commencement of field activities. A copy of the completed checklist will be retained in the ARCADIS project file.

**2.4 Site Reconnaissance**

Prior to startup of drilling or sampling activities in a particular area, field personnel will conduct a brief site reconnaissance to determine if any problems with the drilling or sampling locations will be encountered. The sampling locations will be sketched on the Location Sketch Form (Appendix B). In addition, at the start of field activities at each Site, the field personnel will notify the Fort Stewart and Hunter Army Airfield environmental staff of the work schedule, and sampling and drilling locations.

**2.5 Field Operations Contingency Plans**

If during the field program, any unforeseen problems or conditions are encountered that require re-evaluation or corrective action, such as, but not limited to, extreme precipitation events, site emergencies that require evacuation of field personnel, changes in site conditions, security problems, loss of power or communications, or community relations problems, the following contingencies will be put into place:

- For any problem or condition encountered by the field team, the team personnel will immediately notify the Fort Stewart and Hunter Army Airfield environmental staff and/or the ARCADIS Project Manager for direction or approval of corrective action.

- If the problem or condition requires downtime at the site and re-evaluation of any site conditions, assumptions made about the site conditions, or plans prepared for the site, the field team will contact the ARCADIS Project Manager and the Fort Stewart and Hunter Army Airfield environmental staff for consultation.
- If after consultation, the problem or condition continues, the field program will remain on hold until direction is received from the Fort Stewart and Hunter Army Airfield representative and/or ARCADIS Project Manager. The field program will not continue until the problem is resolved.
- Any time these contingency procedures are implemented, the following will be documented in the daily log of activities:
  - Problem or condition encountered;
  - Personnel involved;
  - Management personnel contacted;
  - Corrective actions taken, if any; and
  - Dates and times involved.

## **2.6 On-Site ARCADIS Representative**

A qualified ARCADIS representative will be on-site during all probing, drilling and sample collection activities. The ARCADIS representative will have in their possession a copy of the Site-Specific Work Plan and the associated Site-Wide Work Plans, including the SAP, QAPP, and Health and Safety Plan (HASP). The Site-Wide Work Plans encompass work at all Fort Stewart and Hunter Army Airfield PBC sites. The ARCADIS representative will also have on-site any equipment, tools, references, and documentation necessary to collect, describe, and document the information generated from the field activities.

## **2.7 Contractor Compliance and Permitting**

The contractors selected for this project shall comply with any and all installation, local, state, and federal health and safety regulations and requirements. The contractors are responsible, per ARCADIS' contractual agreements, for securing and/or complying with permits required by state or local authorities. The selected contractors will have the necessary license(s) or certifications required to perform such work in Georgia.

**2.8 Adherence to Technical Specifications**

All work performed by ARCADIS or a contractor, whether it be drilling, sampling, equipment decontamination or other related activities will be in accordance with the procedures described in this SAP, and properly and completely documented by the on-site ARCADIS representative on forms provided herein (Appendix B).

### 3. Field Investigation Procedures

A detailed discussion of the field procedures that will be employed to complete the field tasks is provided in the following sections. All field procedures are in accordance with the United States Environmental Protection Agency (USEPA) Field Branches Quality System Technical Procedures (USEPA, 2008).

All soil, groundwater, and surface water samples collected will be analyzed by a certified Georgia Laboratory as listed in the Site-Wide QAPP (Appendix A). Samples will be preserved according to the selected analytical method. Specific method preservation requirements, size and type of sample containers to be used, and holding times for each parameter are listed in the Site-Wide QAPP (Appendix A).

#### 3.1 Lithologic Logging

The lithology of the soil and bedrock samples collected will be described through visual observations of the soil/bedrock cores using the Unified Soil Classification System (USCS) and/or the American Society for Testing and Materials (ASTM) International Standard D 2488 for Description and Identification of Soils. The Boring/Well Construction Log (Appendix B) will be used to record lithologic logging observations. The following logging sequence will be used for the description of unconsolidated materials:

- Describe major soil type and percentage;
- Describe composition of the soil;
- Describe the moisture, texture, and color of the soil;
- Document other geologic observations such as bedding characteristics, structure and orientation, and primary and secondary permeability/porosity (if possible); and
- Document observations on drilling progress including sample interval loss and recovery.

### 3.2 Direct Push Borings and Sample Collection

Direct-push soil sampling consists of hydraulically pushing or driving a small diameter, hollow steel rod to a target depth and collecting a soil or groundwater sample. The equipment necessary for the collection of samples using the direct push technique is mounted on a regular van or truck for ease of mobility. The steel probe rods, 3 feet (ft) to 4 ft in length, are threaded for easy connection and have tight seals to provide a continuous length of rod. The rods are hydraulically driven or hammered to target depths. The steel rods can be driven to depths of up to 150 ft through unconsolidated sediments.

#### 3.2.1 Soil Sample Collection

The following procedures will be used during the collection of soil samples from direct push borings:

1. Record borehole location and intended sample depth intervals on the Boring/Well Construction Log (Appendix B).
2. Line the 3-ft or 4-ft steel soil sampler core barrel with an acetate, polyethylene or Teflon liner and attach sampler to end of steel rods.
3. Hydraulically push or drive the 3-ft or 4-ft soil sampler and rods to intended depth. Soil samples will be collected from intervals specified in the Site-Specific Work Plan.
4. Open the core barrel and disassemble revealing the soil core sample within the liner. Label the depths on each end of liner and mark the top and bottom to maintain proper core orientation
5. Remove a portion of the liner over the entire length of the core using an appropriate cutting tool.
6. Screen soils immediately in the field using a photoionization detector (PID) or flame ionization detector (FID) to document the levels of organic vapors present. To collect volatile organic headspace readings, place the soil sample in a sealed plastic bag approximately two-thirds full allowing for approximately 30 percent headspace. Place the bag in a dry area, which is as close to room temperature (70° F) as practical. After 10 minutes, use a PID or FID to measure the vapors that accumulate in the bag due to off-gassing from the sample. Base PID/FID usage on the target analytes. If a PID is used, select

the appropriate lamp based on the target analyte. Record the measurement on the Sample/Core Log.

7. Collect soil sample(s) for laboratory analysis. Don a clean pair of disposable gloves immediately prior to sample collection. VOC samples will be collected directly from the target depth interval of the soil core to minimize disturbance using an EnCore™ sampler or equivalent (Terra Core). Transfer the remaining soil from the target depth interval to a stainless steel bowl. Mix the soil using a stainless steel spoon until the sample is visually uniform. Remove any debris or larger rocks observed during mixing using the spoon. Collect non-VOC analysis samples from the bowl and place in appropriate sample container, label the container, and place on ice. Note on the field sample log the depth interval from which the sample aliquot was collected. The container and preservative requirements for soil samples are outlined in the Site-Wide QAPP (Appendix A). Double-bag the ice used for sample shipment in self-sealing bags prior to placement in the cooler.
8. Extract from the liners the portion of the soil core not submitted to the laboratory for analysis and use for logging purposes.
9. Describe the soil samples in the field. The lithology of the soil will be described by a qualified and experienced ARCADIS representative through visual observations of the soil core using the USCS or ASTM designation.
10. Place all soil cuttings in drums or roll-off box.
11. Properly decontaminate all down-hole sampling equipment prior to subsequent use in consecutive sample collection. Decontamination procedures are described in Section 3.12.

### 3.2.2 Groundwater Sample Collection

The following procedures will be used during the collection of shallow groundwater samples from direct push borings. When sampling for metals from direct push borings, both total and dissolved metals will be analyzed to assess the effect of turbidity on the sample results. Polychlorinated biphenyl (PCB) samples will not be collected from direct push borings.

1. Record sampling location and intended sample depth intervals on the Geoprobe® Groundwater Sampling Form (Appendix B).

2. Drive a stainless steel retractable screen attached to the bottom of the hollow steel rods to the target depth beneath the groundwater table. Target depths will be specified in the Site-Specific Work Plan for each Site.
3. Raise rods to approximately 2 to 4 ft to allow the screen to be exposed at the target depth, thus allowing collection of groundwater samples at the target depth.
4. Insert polyethylene or Tygon tubing (1/4-inch diameter) into the hollow rods to allow for collection of grab groundwater samples with a peristaltic pump or dedicated tubing with a check valve assemblage. The tubing with check valve method will be used as the sole means of collecting samples for volatiles organic analysis.
5. Don a clean pair of disposable gloves immediately prior to sample collection. Collect groundwater samples directly into laboratory-prepared, preserved sample bottles and place directly on ice. Fill the sample bottles in the following order: volatile organic compounds (VOCs) first, then remaining analytes.
6. Prepare sample containers according to the container and preservative requirements outlined in the QAPP (Appendix A). Include on the sample label the following: sample identifier, laboratory methodology requested, the sample matrix, date, time, project name, and name of sampler.

### 3.2.3 Membrane Interface Probe Borings

The Membrane Interface Probe (MIP) is a type of direct push tool, advanced by a standard direct push rig that logs both total VOC concentrations and soil conductivity with depth. The following procedures will be used during the completion of direct push borings using the MIP.

1. Record borehole location on the Boring/Well Construction Log (Appendix B).
2. Hydraulically push the MIP and rods to intended target depth, typically not greater than 60 ft below ground surface (bgs). Because the MIP probe cannot be hydraulically hammered, the MIP probe cannot be driven as deep as conventional Geoprobe<sup>®</sup> borings.

### 3.2.4 Temporary Piezometer Installation

Temporary piezometers may be installed in selected Geoprobe<sup>®</sup> groundwater boring locations in accordance with the Official Code of Georgia Annotated (OCGA) Well



Standards 12-5-134 (State of Georgia, 2008). The temporary piezometer installation procedures are discussed below.

1. After the collection of groundwater samples from the selected Geoprobe<sup>®</sup> groundwater borings, a temporary piezometer will be installed in the borehole and will be constructed with 10 ft sections of 1-inch to 1¼-inch diameter polyvinyl chloride (PVC) screen and riser.
2. The natural formation will be allowed to collapse around the piezometers.
3. The annular space around the upper 10 ft of the piezometer will be filled with granular bentonite and then hydrated to prevent possible interference from surface water leakage.
4. Because the piezometer is considered temporary, a concrete surface pad will not be installed. Unless otherwise approved by the Georgia Environmental Protection Division (GAEPD), temporary piezometers will be converted to permanent monitoring points or abandoned within 5 days.
5. Each piezometer will be closed with a PVC cap.

#### 3.2.5 Temporary Piezometer Fluid Gauging

Static fluid levels in each temporary piezometer will be gauged using an electronic water-level indicator. Fluid-level measurements will be documented on the Water Level Measurement Form (Appendix B) and will later be converted to mean sea level for reporting purposes.

The following procedures will be implemented when collecting fluid-level measurements:

1. Remove the piezometer cap and document the general condition of the piezometer. In areas where non-aqueous phase liquids (NAPLs) are known to exist or have been present in the past, a PID or FID will be used to check the well for build-up of potentially hazardous gases.
2. Measure static fluid-level elevation using an electronic water-level indicator from fixed reference point (generally the north side of the top of the PVC casing).
3. Repeat the measurements every 5 minutes until two consecutive measurements are obtained that are within 0.01 ft.

Fluid-level measurements will be referenced to a surveyed elevation point located on the top of the piezometer casing. All fluid-level measurements will be taken at least two times to check the reproducibility of the measurement data. If it is found that the measurement cannot be reproduced, a second set of data will be collected. Fluid levels will be collected until the data can be reproduced. This measurement validation process ensures the accuracy of the fluid-level data.

Equipment used to measure the fluid level will be properly decontaminated before first use and between use at each well using the procedures described in Section 3.12.

#### 3.2.6 Direct Push Boring Abandonment

Direct push soil borings installed at the site will be abandoned by allowing the saturated portion of the formation (i.e., unconsolidated sands and gravel) to collapse back into the 2-inch diameter borehole as the Geoprobe® rods are retracted. The upper 10 ft of the borehole will be plugged with granular bentonite and hydrated with potable water to make an impermeable seal.

#### 3.2.7 Temporary Piezometer Abandonment

After the well casing and screen materials from the temporary piezometers have been pulled out of the ground, the borehole will either be filled with granular bentonite or a high solids bentonite-cement slurry mix to within at least three feet of ground surface. If bentonite is used, it will be hydrated with potable water, and the remainder of the borehole will be filled with native soil or clay.

### 3.3 Drilling Techniques

All soil borings and monitoring wells will be drilled and installed by a Georgia licensed water well driller.

#### 3.3.1 Hollow-Stem Auger Techniques in Soil

Dependent on subsurface soil conditions at the Sites, shallow soil borings may be drilled using hollow-stem auger techniques (ASTM 1452). Soil samples can be collected continuously (if so scoped in a site-specific work plan) using a continuous sampler, or split-spoon sampler (ASTM 1586 and 1587) depending upon percent recovery realized using the continuous core sampler. The following steps outline the

procedures that will be used to drill a shallow borehole for geotechnical or analytical purposes and for the installation of a monitoring well.

1. Record borehole location on the Location Sketch form and intended sample depth intervals on a Boring/Well Construction Log (Appendix B).
2. Clean and assemble the continuous sampler. The continuous core sampler (5 ft in length by 6 inches outside diameter (O.D.) is advanced in the borehole ahead of the augers (8-inch O.D.) and retrieved through the hollow-stem portion of the augers after each 5 ft drilled.
3. Disassemble the core barrel, revealing the soil core sample. Screen the soil samples with a PID/FID and describe in the field using the logging method described in Section 3.1.
4. Collect discrete samples from the core sample based on field screening data (prior to logging) and place in laboratory-prepared glass jars for analytical purposes. The preservation and handling of the samples is discussed in Section 3.4.3.
5. If continuous core sampling is not possible due to the character of the subsurface material encountered, collect samples every 5 ft using a standard split-spoon sampler (2 ft by 2 inch O.D.). Attach the split spoon to the drill rods, insert within the hollow-stem auger, and drive into the unconsolidated deposits using a standard 140-pound drop hammer and rig-driven cathead. Record blow counts for each 6-inch penetration of the split spoon. Drive each split spoon a total of 24 inches.
6. Collect all soil cuttings generated during the drilling of the boreholes and store temporarily on plastic or in a drum or roll-off box while awaiting characterization.

### 3.3.2 Mud Rotary Drilling

The mud-rotary system consists of a drilling fluid mixture of potable water and bentonite that is pumped down the inside of the drill pipe, and then returned to the surface through the annulus between the drill pipe and the borehole wall. This fluid cools the drill bit, carries the cuttings to the surface, prevents excessive fluid loss into the formation, and

prevents the formation from collapsing. The drilling fluid flows into a mud pit where the cuttings settle out and then is pumped back down the drill rods.

The following steps outline the procedures that will be used for mud rotary drilling.

1. Record borehole location and intended sample depth intervals (if appropriate) on the Boring/Well Construction Log (Appendix B).
2. Drill the deep boreholes from the surface to 1 to 2 ft into the bedrock using a mud rotary drilling rig equipped with a six-inch bit and stabilizer. No formation sampling will be conducted in the deep boreholes.
3. Record any significant or sudden fluid loss or production and soil cutting observations from drilling mud on the Boring/Well Construction Log (Appendix B).
4. Terminate the borehole within the upper 1 to 2 ft of the bedrock surface, which will be determined by the detection of the bedrock fragments in the return mud.
5. Collect all drill cuttings generated during the deep borehole drilling and temporarily stage in either 55-gallon steel drums or a roll-off box while awaiting chemical characterization as discussed in Section 3.13.

### 3.3.3 Rotasonic Drilling Methodology

Monitoring wells and the soil borings (other than those drilled using direct push methods) will have the option to also be drilled using rotasonic drilling methods. The rotasonic drilling method uses a combination of rotary power, hydraulic pull down pressure, and mechanically generated oscillations to advance a dual line of drill pipe. The top mounted hydraulically powered drill head transmits the rotary power, hydraulic down pressure, and vibratory power directly to the dual line of pipe. The inner drill pipe, measuring from 3-inch to 9-inch I.D., contains a core bit and represents the core barrel sampler. The outer pipe, measuring 4 inches to 12 inches, is used to prevent the collapse of the borehole and is therefore used in the construction of monitoring wells from 1 inch to 8 inches in diameter. This combination of forces advances the inner core barrel sampler through typically difficult unconsolidated deposits and some consolidated formations without the use of mud or air.

Water is not necessary during drilling but may be used in small quantities to help lubricate the drill pipe as it is advanced. Drilling rates are equal to or greater than other conventional rotary methods when they include some method of continuous sampling. The inner drill pipe is always advanced in front of the outer drill pipe. Continuous core samples of 1 foot to 20 ft can be completed depending on job specifications and site conditions.

During typical borehole advancement, the first step is to advance the inner drill pipe and core bit about 6 ft or 10 ft into the ground. Once the inner drill pipe is set, the outer drill pipe is advanced down over the inner drill pipe to hold the boring open. The inner drill pipe is mechanically lifted by the drill head to the surface for core sample recovery. The core sample is vibrated out of the inner drill pipe into a plastic sheath or a stainless steel sample tray. The core sample also can be collected in a split stainless steel or a lexan core barrel liner. The inner drill pipe is then advanced to the top of the next sample interval. These steps are repeated until the desired total depth is reached. Installation of a well would be performed inside the outer drill pipe, which would be removed as the well materials are installed. This will keep the borehole walls from collapsing and ensure that a good sand pack is installed. Monitoring well construction details are discussed in Section 3.5.

All drilling and sampling equipment will be decontaminated according to the procedures outlined in Section 3.12 of this report between each borehole location.

### **3.4 Collection of Samples for Geotechnical and Chemical Analyses**

The procedures for the collection of soil samples during hollow stem auger drilling for geotechnical and chemical analyses are described below.

#### **3.4.1 Geotechnical Samples in Soil and Unconsolidated Deposits**

1. Record the soil sample location, depth, date and time of collection, sample identification, name of sampling personnel, and type of drilling and sampling equipment on the Boring/Well Construction Log (Appendix B).
2. Clean and assemble the continuous or split-spoon sampler. The sampler will be fitted with 6-inch long California (brass) rings or equivalent sampler liners, so that soil samples can be retrieved with minimum disturbance for geotechnical analyses.

3. Lower the sampler through the drill stem to the desired sampling depth. If using a split-spoon sampler, drive the sampler with a standard 140-pound hammer free-falling 30 inches in accordance with ASTM Method D1586. Record the number of blows per foot required to drive the split spoon.
4. After the continuous core barrel or split-spoon sampler is retrieved and opened, mark with indelible ink the depths of the sample at the top and bottom of each brass ring. Don a clean pair of disposable gloves immediately prior to sample collection. Using a stainless steel spatula or knife, cut the soil sample between the brass rings. Using plastic caps, cap each end of each ring. Label each ring with the appropriate sample designation.
5. The geotechnical samples do not have to be placed on ice or chilled.
6. Submit to geotechnical laboratory using COC procedures (Section 4.3).
7. From the remaining soil core, conduct field screening and describe soil sample lithology using procedures outlined in Section 3.1.
8. Alternate methodologies that may be used to obtain geotechnical samples, such as the use of a Shelby tube, will be described in the Site-Specific Work Plan for each Site.

#### 3.4.2 Geotechnical Samples in Sediment

The procedures for the collection of geotechnical samples from shallow and deep sediments are outlined below.

1. If standing water is located over the sampling location and a deep sediment sample is to be collected, then the upper sediment and surface water should be removed prior to sample collection. Drive a minimum 4-inch O.D. schedule 40 PVC blank casing into sediment sampling location. Place a wooden board on top of PVC casing while driving casing into sediment to prevent breaking the casing. Use peristaltic pump to remove surface water from casing.
2. If collecting the geotechnical sample at 1.5 to 2.0 ft bgs, remove overburden with a decontaminated stainless steel bucket auger to a depth just above top of sampling depth (i.e., 1.5 ft bgs).

3. Drive a decontaminated 1 to 2-inch diameter stainless steel soil sampler lined with a plastic or acetate liner to depth required. A disposable acetate or thin walled stainless steel soil probe may also be used.
4. If a gravelly substrate is encountered, a decontaminated bucket auger may be used to collect the sample from 1.5 to 2.0 ft bgs.
5. Cap the liner and retract the sampler. The sample core may not remain in the sampler or tube if the top is not capped.
6. Cap the bottom of the sample. If a liner is used, remove the liner from the sampler, then cap the bottom of the sample.
7. If freestanding water was also captured in the sampling tube or liner, remove the top cap and gently pour off the water without disturbing the sediment sample.
8. Don a clean pair of disposable gloves immediately prior to sample collection. If using a bucket auger to collect the geotechnical sample, remove sample from bucket and pack into laboratory container.
9. Document the sample on a Soil/Sediment Sample Log (Appendix B).
10. The geotechnical samples do not have to be placed on ice or chilled.
11. Submit to geotechnical laboratory using COC procedures (Section 4.3).

#### 3.4.3 Samples for Chemical Analyses

The procedures for collection of samples for chemical analyses are outlined below.

1. Record the soil sample location, depth, date and time of collection, sample identification, name of sampling personnel, and type of drilling and sampling equipment on the Boring/Well Construction Log (Appendix B).
2. Clean and assemble the continuous core barrel or split-spoon sampler.
3. Lower the sampler through the drill stem to the desired sampling depth. If using a split-spoon sampler, drive the sampler with a standard 140-pound

hammer free-falling 30 inches in accordance with ASTM Method D1586. Record the number of blows per foot required to drive the split spoon sampler.

4. After the continuous core barrel or split-spoon sampler is retrieved and opened, collect soil samples for chemical analysis. Don a clean pair of disposable gloves immediately prior to sample collection. Collect VOC samples directly from the core barrel or split spoon sampler using an EnCore™ sampler or equivalent (Terra Core) to minimize sample disturbance. Place the remaining soil sample volume into a stainless steel bowl. Mix the soil using a stainless steel spoon until the sample is visually uniform. Remove any debris or larger rocks from the soil during the mixing process using the spoon. Place the remaining soil samples into their appropriate containers. If the sample material is of size or consistency that an EnCore sampler cannot be used, place the material in a glass 4-ounce container. Immediately store the containers in a cooler on ice at 4° C. Complete the sample label for soil samples selected for analyses.
5. Document the sample on a Soil/Sediment Sample Log.

### 3.5 Monitoring Well Construction

#### 3.5.1 Shallow and Intermediate Well Construction

The shallow and intermediate wells will be installed in boreholes drilled using hollow-stem auger techniques. Monitoring well construction details will be documented on the appropriate Well Construction Log (Appendix B). No water will be introduced during monitoring well construction unless the borehole conditions require stabilization. If required, the water will be obtained from the Fort Stewart or Hunter Army Airfield potable water system.

1. The screened interval for all monitoring wells is anticipated to be 5- to 10 foot-sections of factory-milled 10-slot, 2-inch O.D., schedule 40 PVC screen, placed in the bottom of each well. The well screen attached to threaded, flush joint, 2-inch O.D., schedule 40 PVC casing will be inserted in the borehole through the minimum 6.25-inch O.D. hollow-stem auger.
2. The screened interval of the monitoring wells will be specified in the Site-Specific Work Plan for each Site.



3. PVC casing will be threaded to the screen and brought to a height of 3 ft above ground level for completion.
4. The annular space between the well and the borehole wall will be backfilled with a clean, graded, size 20 to 40 silica sand pack that will extend from the bottom of the borehole to a minimum of 2 ft above the top of the screened interval. The sand pack will be placed by tremie pipe from the bottom of the borehole through the hollow-stem augers to ensure complete placement around the well screen. The hollow stem auger will be retrieved as the sand pack is emplaced and can typically serve as the tremie pipe for filter pack placement.
5. Approximately 1 ft of very fine sand grade size 50 or smaller may be emplaced above the filter pack to prevent the migration of the bentonite slurry into the well screen.
6. A minimum thickness of 3 ft of bentonite pellets or chips will be placed on top of the filter pack as a seal. If the seal is within the unsaturated zone at the time of installation, granular bentonite will be placed in one-foot lifts, saturated with potable water, and allowed to hydrate. Hydration time will conform to the manufacturer's recommendations before further work on the well is performed.
7. The annular space from the top of the bentonite seal to within 1 foot beneath the frost line (approximately 30 to 36 inches bgs) will be filled with a cement and bentonite slurry containing high solids mixed to the manufacturer's specifications. Alternatively, cement/bentonite slurry consisting of 8 gallons water and 5 percent bentonite by weight per bag of Portland cement will be used, with a target density of 14 to 15 pounds per gallon. The bentonite slurry will be placed with a tremie pipe from the bottom of the annular area to be grouted to ensure proper placement of the slurry.
8. The remaining annular space near land surface will be filled with concrete. All wells will be completed above grade using a protective steel cover. A concrete apron will be installed around the cover. The apron will be a minimum of 2 ft by 2 ft and 6 inches in thickness, and shall be sloped to promote drainage away from the well. The wells will also be equipped with locking caps.

9. At selected locations, steel guard posts or protective barriers will be installed around the wells in a manner designed to prevent vehicles from accidentally damaging the well.

### 3.5.2 Pre-pack Screen Monitoring Well Construction

For shallow to intermediate monitoring wells where heaving (flowing) sands are expected to be encountered, an alternative method of monitoring well construction would include the use of pre-packed screens during well construction. Figure 3-1 shows the well schematic for the prepacked screens. The construction of these wells would follow the same steps detailed in Section 3.5.1 with the following exceptions.

1. The screened portion of the monitoring well will consist of 5- to 10-foot sections of pre-packed screen. In the case of 2-inch diameter well, the screen will have a 2.0-inch I.D. and a 3.63-inch O.D. Previous site investigations have shown that the 12-slot screen with a 10 by 20 sand pack will be more than adequate for construction of the monitoring well.
2. Formation material will be allowed to collapse around the screen upon removal of the augers to a point 2 ft above the screened interval.

### 3.5.3 Monitoring Well Construction Beneath a Confining or Semi-Confining Layer

Installation of monitoring wells beneath a confining or semi-confining layer is outlined in the procedures below. Monitoring well construction details will be documented on the appropriate Well Construction Log.

1. An 8-inch PVC casing will be set 1 foot into the top of the confining unit. The casing will then be grouted around the annulus of the casing to the land surface to seal off the casing from the aquifer. The grout will be allowed to set for a period of time in accordance with the manufacturer's specifications to ensure a proper seal is set.
2. Inside of the casing the bore hole will be completed through the confining layer to the aquifer below to the target depth.
3. Inside of the 8-inch casing, the well will be constructed with 2-inch threaded flush joint, Schedule 40 PVC casing and 2-inch threaded flush joint, Schedule 40 PVC, 0.010-inch continuously mill-slotted screen. Schedule 80 well material

- will be used for monitoring wells deeper than 100 ft. Pipe joint compound (glue) will not be used in constructing the monitoring wells. If the depth of the well is to be greater than 50 ft, centralizers above the screened interval may be used to aid in well construction.
4. Casing will be added to the well screen and brought from the top of the screened interval to a height of 3 ft above ground level for completion.
  5. The annular space between the well and the borehole wall will be backfilled with a clean, graded, size 20 to 40 silica (or alternative gradation based on site-specific data) sand pack that will extend from the bottom of the borehole to a minimum of 2 ft above the top of the screened interval. The sand pack will be placed by tremie pipe from the bottom of the borehole through the hollow-stem augers to ensure complete placement around the well screen.
  6. Approximately 1 ft of very fine sand may be emplaced above the filter pack to prevent the migration of the bentonite slurry into the well screen.
  7. A minimum thickness of 3 ft of bentonite pellets or chips will be placed on top of the filter pack as a seal. If the seal is within the unsaturated zone at the time of installation, the bentonite will be saturated with potable water and allowed to hydrate. Hydration time will conform to the manufacturer's recommendations before further work on the well is performed.
  8. The annular space from the top of the bentonite seal to within 1 foot beneath the frost line will be filled with a cement and bentonite slurry containing high solids mixed to the manufacturer's specifications. The bentonite slurry will be placed with a tremie pipe from the bottom of the annular area to be grouted to ensure proper placement of the slurry.
  9. The remaining annular space near land surface will be filled with concrete. All wells will be completed above grade using a protective steel cover. A concrete apron will be installed around the cover. The apron will be a minimum of 2 ft by 2 ft and 6 inches in thickness, and shall be sloped to promote drainage away from the well. The wells will also be equipped with locking caps.
  10. At selected locations, steel guard posts or protective barriers will be installed around the well in a manner designed to prevent vehicles from accidentally damaging the well.

#### 3.5.4 Borehole and Well Abandonment

A Georgia licensed water well driller will abandon all boreholes not used for monitoring well installation, temporary wells, or permanent wells in accordance with the OCGA Georgia Well Standards 12-5-134 (State of Georgia, 2008).

#### 3.5.5 Temporary Well Abandonment

Temporary wells will be abandoned by the following procedures.

1. The monitoring well riser pipe and well screen will be removed from each borehole. The riser pipe and screen will be decontaminated by steam cleaning at the designated decontamination area and will be discarded in a sanitary waste landfill.
2. The entire borehole will be grouted with a cement and bentonite slurry containing high solids mixed to the manufacturer's specifications. The bentonite slurry will be placed with a tremie pipe from the bottom of the annular area to be grouted to ensure proper placement of the slurry.
3. The abandoned borehole will be marked with a flag or stake.

#### 3.5.6 Soil Boring Abandonment

The procedures for abandoning boreholes are as follows:

1. The entire borehole will be grouted with a cement and bentonite slurry containing high solids mixed to the manufacturer's specifications. The bentonite slurry will be placed with a tremie pipe from the bottom of the annular area to be grouted to ensure proper placement of the slurry.
2. The abandoned borehole will be marked with a flag or stake to allow for surveying.

### 3.6 Groundwater Level Measurements and Sampling

#### 3.6.1 Groundwater Level Measurements

Water level measurements will be referenced to a surveyed elevation point located on the top of the well casing. This measurement point will be surveyed by a Certified Land Surveyor and referenced to ft above mean sea level (amsl). An electronic water level probe will be used to gauge the water level in the new wells, in addition to the existing monitoring wells and piezometers at the facility.

Water levels will be recorded in the new monitoring wells, existing monitoring wells and piezometers within 24 hours prior to each groundwater sampling event. The total well depth may also be measured at this time to determine if sediment has accumulated in the well thereby reducing the effective well depth. Water level measurements at each Site will begin with the upgradient wells (i.e., inferred least contaminated wells) and proceed to the downgradient wells (i.e., inferred most contaminated wells). Water-level measurements will be collected within a single 24-hour period and will be measured twice to check the reproducibility of the measurement data. This measurement validation helps ensure accuracy with regard to the water level data collection. The procedure for obtaining water level measurements is as follows:

1. Describe the area surrounding the well, whether or not the lock was secure (if applicable), if the well could have been impacted by surface water runoff, ambient weather conditions and other factors that could affect the final data analysis. This documentation is recorded on a Water Level Measurement Form) Appendix B).
2. Decontaminate the electronic water probe prior to initiating water level measurements and between all wells and piezometers. Decontamination procedures are described in Section 3.12.
3. Unlock the protective casing and remove the inner cap on the riser.
4. Check the probe to verify that it is operational, then lower down the monitoring well.
5. If the well is not vented, allow the water level to equilibrate for a few minutes prior to collecting the first measurement. Take fluid level measurements from a

fixed reference point (the north side of the top of the PVC riser) using an electric tape graduated in 0.01-foot intervals.

6. Repeat the measurements until two measurements are obtained that are within 0.01 ft.
7. Remove and decontaminate the probe, replace the inner cap, and lock the protective casing.

### 3.6.2 Low-Flow Groundwater Purging and Sample Collection

The following protocol has been developed to obtain groundwater samples that are representative of formation conditions and is intended for use in sampling monitoring wells during the field activities. New monitoring wells will not be sampled for at least 24 hours following non-stressful means of well development (e.g., purging with submersible pump or bailer) and 48 hours following stressful means of well development (e.g., air lift, surge and purge). Monitoring wells will be purged prior to collecting groundwater samples to ensure that representative formation water is being sampled. The monitoring wells will be purged and sampled in the same order as that for water-level measurements (upgradient to downgradient, or least contaminated to most contaminated where known based upon prior sampling results). Prior to introduction into the well, all non-dedicated equipment and materials will be decontaminated in accordance with the procedures outlined in Section 3.12.

The following procedures will be implemented when performing well purging prior to sample collection:

1. Put on clean latex or vinyl surgical gloves or nitrile gloves.
2. Unlock the metal protective casing, remove the well cap, and document the general condition of the well.
3. Determine static fluid-level elevation using electronic probe. Record on Groundwater Sampling Form (Appendix B).
4. Compute the volume of water in the well (0.162 gallon/foot for a 2-inch diameter well). The volume of water to be purged will be computed based on the total well depth recorded upon the completion of well installation. The total depth will be measured periodically during the monitoring program to determine if

sediment has accumulated in the well thereby reducing the effective well volume. If it is determined that sediment has accumulated in the well, then the new well depth will be used to compute the volume of water to be purged.

5. Insert the pre-cleaned bladder (or peristaltic) pump and tubing into the well to the midpoint of the well screen. Record installation time in field notes. Dedicated Teflon and/or PVC bailers may be used to facilitate sample collection where site conditions warrant, such as low recovery wells.
6. Start pump at the lowest possible flow rate and adjust the pumping rate to approximately 100 milliliters per minute (mL/min). Record pump start time in field notes. Verify the flow rate with the graduated cylinder or equivalent by collecting the water from the discharge line for one minute. Record results in field notes. Based on the recovery rate of the well, the pump may need to be raised or lowered to adequately purge the entire well column. Adjustments will be recorded in the field notes.
7. Monitor water level to verify that little or no drawdown (0 to 0.3 ft) is occurring in the well. If desired, the flow rate may be increased to up to 300 mL/min in more permeable formations as long as little or no drawdown is observed in the well. Record measurements and flow rates in field notes.
8. Obtain field parameter measurements (temperature, specific conductance, pH, dissolved oxygen, oxidation-reduction potential [ORP], and turbidity) every 5 minutes and record on the Groundwater Sample Log. Purge until the criteria listed below have been met (unless low well recovery precludes this):
  - The field parameters stabilize to within +/- 10 percent of three consecutive meter readings taken at least 5 minutes apart.
  - The measured turbidity is less than 10 nephelometric turbidity units (NTUs), unless low recovery precludes this.
9. Collect VOC samples for laboratory analysis (if required) at a low flow rate (100 mL/min) directly into the appropriate sample container. If a peristaltic pump is used, the downhole tubing will be filled using suction and removed from the well to prevent the sample from contacting the pump head. The pump speed is reduced and the direction reversed to push the sample out of the tubing and into the sample containers. Ensure that no air bubbles are present in the vial.

- Secure sample container lid and store sample containers in chilled cooler after filling out the sample label.
10. Collect additional samples for non-VOC analysis (collecting in the order of explosives, metals, and indicator parameters). If samples are being collected using a peristaltic pump following VOC sample collection, repeat steps 1 through 8. Collect non-VOC samples at low flow rate (100 mL/min). Flow rates of up to 500 mL/min can be used if all stabilization criteria are achieved. Unless specified in the site-specific work plan, metals samples will be collected unfiltered. If site conditions require filtration for metals analysis, an in-line 45 micron filter will be used. Secure sample container lids and store sample containers in chilled cooler.
  11. Complete sampling documentation on the Groundwater Sampling Form, record the collection date and time on the sample key, and fill out the Well Sampling Summary form (Appendix B).
  12. If inadequate water is present in the well to fill the required sample containers, return periodically within 24 hours until adequate sample volume is obtained and field parameters measured. Collect groundwater for individual analyses in the appropriate sample order. If required, collect VOCs and store first, then metals and other indicator parameters.
  13. If drawdown in the well cannot be maintained within the 0.3-foot requirement, sample collection will be performed after three well volumes of groundwater have been purged. Begin sample collection with VOC analysis unless otherwise noted in the site-specific work plan. For wells that purge dry before all of the samples are collected, allow the well to recover and then make one more attempt to collect the remaining samples within a 24-hour period.
  14. Turn off pump. Remove portable pump from well and decontaminate or dispose. Tubing will be left as dedicated tubing in the well or disposed of after use.
  15. Determine the total depth of the well. Compare the measurement of the total depth of the well with previous measurements and well construction log to determine available screen length. Record on water sampling log. If more than 20 percent of a well screen is occluded by sediment, the well must be redeveloped prior to collecting future groundwater quality samples. Samples



collected prior to the total well depth measurement will be representative only if the field data indicate that the well met stabilization criteria prior to sampling.

16. Replace cap on well and protective casing lock well.

### 3.6.3 Slug Test

This procedure defines the requirements for conducting a slug test in a monitoring well. The purpose of this procedure is to provide a uniform basis for conducting slug tests and to ensure the continuity between field personnel. A water level indicator will be used to measure the change in water levels versus time during the slug test. However, for slug tests completed in wells screened in very permeable formations, a transducer and data logger may be used to measure and record water level changes over time.

1. Open the locking and vented caps and inspect the wellhead. Note in particular the condition of the surveyed reference mark, if any.
2. Measure and record the static water level and the depth to the bottom of the well. Record this data on the Water Level/Pumping Test Record (Appendix B).
3. Lower the slug into the water until it is fully submerged. Allow the well to equilibrate to static water level.
4. Verify the static water level has been reestablished with an electronic water-level indicator.
5. Withdraw the slug quickly, but avoid surging. Record the time of withdrawal to the second. Start the stopwatch, if used, at the instant the slug is withdrawn.
6. Using an electronic water level indicator, measure and record the initial displacement of water as soon as the slug has been withdrawn.
7. Measure and record the rise in water level vs. time. Using the water-level indicator and a stopwatch, record depth-time data at the fastest rate possible for the first 5 minutes of well recovery. Generally the water levels should be recorded every 30 seconds for the first 5 minutes, then every minute for the next 5 minutes. Subsequent recording intervals may be adjusted to suit the rate of well recovery. An electronic data logger and pressure transducer may be used in lieu of manual water level measurements.

8. Continue recording depth-time data until the well has recovered to nearly the static water level or at least 90 percent of the static water level. If 90 percent of the static water level has not been achieved within 2 hours, then field personnel may return periodically within the next 24 hours to record the water level.
9. Record the time of test completion in the field data forms.
10. Decontaminate all equipment according to the procedures outlined in Section 3.12. Close and lock the well before leaving.

#### 3.6.4 Constant Rate Pump Test

1. Upon arriving at the site, collect a round of static water levels from all site monitoring wells. Record this data on the Water Level/Pumping Test Record (Appendix B).
2. Place the pump in the pumping well and connect to the electrical service. The pump discharge will be connected to 1) a control valve, 2) inline filter (optional), and 3) flow meter. Dependent on site conditions, treatment systems (i.e., flow-through vessels, carbon units) may be used prior to water storage or discharge.
3. Initiate a short step test beginning at 2 gallons per minute (gpm). The initial step test pumping rate may be altered depending on site specific conditions. The pumping rate will be increased in two subsequent steps (the amount of increase will be determined in the field based on the drawdown achieved at 2 gpm). Measure water levels in the pumping well and the three closest monitoring wells during the step test.
4. Based on the results of the step test, determine a pumping rate that will 1) achieve significant drawdown in the pumping well, and 2) will not result in dewatering the well during the pumping test.
5. Begin the pumping test after the water levels in the pumping well and observation wells have returned to static conditions.
6. Turn on the pump in the test well and operate at a constant rate during the remainder of the test.

7. Collect water levels at a logarithmic interval in the pumping well, monitoring wells within 100 ft of the pumping well, piezometers within 100 ft of the pumping well, and at least one background well. Collect the water levels using a handheld electronic water level indicator or through the use of pressure transducers.
8. After the test has been conducted for a period of 24 hours, evaluate the pump test data to determine if continuation of the pump test is justified. If so, continue the test for a total of 48 hours, or until the data indicate that asymptotic conditions were achieved.
9. When the determination has been made to stop the pumping test, initiate the recovery portion of the test.
10. After the pump has been shut off, measure water levels at a logarithmic interval in the pumping well, monitoring wells within 100 ft of the pumping well, piezometers within 100 ft of the pumping well, and the selected background well. Continue measurements until the water level in the pumping well has recovered at least 90 percent.

#### 3.6.5 LNAPL Bail Down Test

This procedure defines the requirements for conducting an LNAPL Bail Down Test in a monitoring well. The purpose of this procedure is to measure the thickness and depth to free product in the well as it recovers. The results of these tests are analyzed in accordance with techniques described in "How to Effectively Recover Free Product at Leaking Underground Storage Tank Sites," (EPA 510-R-96-001) to assist choice of potential free product recovery methods. The following steps will be used:

1. Measure the depth to LNAPL and groundwater.
2. Remove as much LNAPL from the well as possible using a weighted disposal bailer.
3. Measure the recovery rate of free product and groundwater using a hydrocarbon probe. Record the LNAPL thickness and recovery time in the well at regular intervals until the recovery rate has stabilized.
4. Determine 80 percent of the maximum LNAPL recovery thickness.

5. Interpolate the recovery time for 80 percent recovery.
6. Compute gallons per foot of LNAPL thickness in the well screen.
7. Compute the average recovery rate in gallons per day to 80 percent recovery.

### 3.7 Test Pit Excavations

The following procedures may be used to install test trenches, if deemed necessary to characterize waste materials.

1. Complete a trench to approximately 4 ft bgs with a track hoe or equivalent piece of excavation equipment.
2. Describe the profile of waste based on visual observations of the material removed from the trench and record on a Boring/Well Construction Log (Appendix B).
3. Backfill the trench with waste material after the trench has been completed.
4. Cover the trench with compacted soil.
5. Mark the trench area with a stake for surveying purposes.

### 3.8 Sediment Sampling

The following procedures will be used to collect sediment samples during the field activities at the Fort Stewart and Hunter Army Airfield.

#### 3.8.1 Shallow Ditch Sediment Sampling

1. Sediment samples will be collected with a decontaminated stainless steel trowel or hand auger. Decontamination procedures are outlined in Section 3.12. A stainless steel hand auger or trowel will be used to collect sedimentsoils from the 0 to 0.5-foot (6-inch) interval.
2. The sediment sample will be placed directly into a stainless steel bowl. The sediment will be mixed using a stainless steel spoon until the sample is

visually uniform. During the mixing process any debris or larger rocks will be removed using the spoon.

3. The sample will be transferred from the bowl into a laboratory-prepared sampling containers supplied by the laboratory.
4. The sample will be documented on a Soil/Sediment Sample Log and the Soil Sample Summary Form.

Surficial soil samples will be collected from ditch areas that may be dry or have no freestanding water at the time of sampling. The following dry ditch sediment sampling procedures should be used only if the ditch is dry or has no freestanding water:

1. Prior to sample collection, any rocks, vegetation or debris will be removed with a stainless steel trowel.
2. Surficial soil samples will be collected with a decontaminated stainless steel trowel or hand auger. Decontamination procedures are outlined in Section 3.13. A stainless steel hand auger or trowel will be used to collect soils from the 0 to 0.5-foot (6-inch) interval.
3. The soil sample will be placed directly into a stainless steel bowl. The soil will be mixed using a stainless steel spoon until the sample is visually uniform. During the mixing process any debris or larger rocks will be removed using the spoon.
4. The sample will then be transferred from the container into the laboratory-prepared sampling containers supplied by the laboratory. The sampling activities will be documented on a Soil/Sediment Sample Log and the Soil Sample Summary Form.
5. Following sampling, the sample location will be filled in and any removed rocks or vegetation replaced.

#### 3.8.2 Deep Ditch Sediment Sampling

1. Remove overburden with a decontaminated stainless steel bucket auger to just above the top of the prescribed sampling depth.

2. Drive a decontaminated 1 to 2-inch diameter stainless steel soil sampler lined with a plastic or acetate liner an additional 6 inches in depth. A disposable acetate or thin walled stainless steel soil probe may also be used.
3. Use a decontaminated bucket auger to collect the sample from 1.5 to 2.0 ft bgs if a gravelly substrate is encountered.
4. Cap the liner and retract the sampler. The sample core may not remain in the sampler or tube if the top is not capped.
5. Cap the bottom of the sample. If a liner is used, remove the liner from the sampler, then cap the bottom of the sample.
6. If freestanding water was also captured in the sampling tube or liner, remove the top cap and gently pour off the water without disturbing the sediment sample. Place the sediment sample directly into a stainless steel bowl. Mix the sediment using a stainless steel spoon until the sample is visually uniform. Remove any debris or larger rocks from the sediment during the mixing process using the spoon.
7. The sample will then be transferred from the container into the laboratory-prepared sampling containers supplied by the laboratory.
8. Document the sample on a Soil/Sediment Sample Log and the Soil Sample Summary Form.

Subsurface soil samples may be collected from ditch areas that may be dry or have no freestanding water at the time of sampling. The following dry ditch sediment sampling procedures described below should be used only if the ditch is dry or has no freestanding water:

1. Prior to sample collection, any rocks, vegetation or debris will be removed with a stainless steel trowel.
2. A decontaminated stainless steel hand auger will be used to collect soils from the prescribed depth interval. The collected soil sample will be placed directly into a stainless steel bowl. The soil will be mixed using a stainless steel spoon until the sample is visually uniform. During the mixing process any debris or larger rocks will be removed from the soil using the spoon.

3. The sample will then be transferred from the container into the laboratory-prepared sampling containers supplied by the laboratory. The sampling activities will be documented on a Soil/Sediment Sample Log and the Soil Sampling Summary Form.
4. Following sampling, the sample location will be filled in with surrounding sediment.

### 3.8.3 Shallow Stream Sediment Sampling

Stream sediment samples may be collected along predetermined transects upstream, adjacent to, and downstream of the area of interest in conjunction with surface water sampling for the characterization of the aquatic environment. Please note that the sediment samples may have to be collected by personnel outfitted with waders.

The sediment sampling procedures are described below and assume that all samples can be collected by personnel outfitted with waders that can access all sampling locations on a transect.

1. Position identification markers for the sediment and surface sampling locations along the stream bank prior to sampling. At each transect, mark and stake opposite banks of the stream to support a rope premarked at least at 10-foot intervals or measuring tape pulled taut across the stream slightly above water level. Each tape mark will become a station for a depth sounding of the river and a point for flow velocity measurements. For streams that are 10 ft in width or less, only one sampling station is required at the stream mid-point.
2. Measure the water velocity and flow using a current meter. Measure flow velocity at each station and at each 5-foot depth interval to the base of the stream. In every case, collect a flow measurement at the base and upper surface of the stream.
3. Briefly describe the substrate beneath each station as marked on the rope, such as silt, sand, gravel, and bedrock. In this manner, select the site for sediment sampling. Preferred sediment sample collection locations are areas of deposition, where fine-grained materials, such as clay, silt, or fine sand, collect. In addition, collect samples in pools, rather than riffles. The dredge sampler may not function properly if the substrate being sampled contains a large amount or large pieces of gravel.

4. Approach the sampling location from downstream to avoid disturbing the sediment prior to sampling.
5. Collect the sediment samples using an Ekman or Ponar dredge or equivalent. Gently advance the dredge approximately 6 inches into the sediment. The dredge closes with a messenger weight and the spring-loaded jaws shut to collect the sediment sample. A minimum of three aliquots will be collected at each sampling location.
6. Place the sediment samples directly into a clean stainless steel bowl. If VOC samples are to be collected, they should be taken directly from the sampling device using an EnCore™ sampler or equivalent (Terra Core). If the VOC samples cannot be collected from the sample device, they can be collected immediately after placement of the sediment in the stainless steel bowl. Following VOC sample collection, the remaining sediment will be mixed using a stainless steel spoon until the sample is visually uniform. During the mixing process any debris or larger rocks will be removed using the spoon.
7. Fill the appropriate laboratory jars for the non-VOC parameters specified in the Site-Specific Work Plan. Attach the lids and label appropriately. Complete the Soil Sample Summary Log (Appendix B).
8. With the remaining sediment sample, record the sediment characteristics, such as texture, odor, color, and other distinguishing factors on a Soil/Sediment Sample Log (Appendix B).
9. Remove the rope marking the transect, if not collecting deep sediment samples. Do not remove the stakes marking the transect. Survey the elevation of the stakes to a known elevation datum to provide a depth profile of the river.

### 3.9 Surface Water Sampling

Surface water samples may be collected along predetermined transects upstream, adjacent to, and downstream of the area of interest in conjunction with stream sediment sampling for the characterization of the aquatic environment. Please note that the surface water samples will have to be collected using a small boat or by personnel outfitted with waders. The optimum time to collect the surface water samples will be at a low stream flow so that personnel outfitted with waders can collect the samples.



Using a boat to collect the samples introduces special health and safety concerns and typically doubles the amount of time required to complete the task.

The surface water sampling procedures are described below and assume that all samples can be collected by personnel outfitted with waders that can access all sampling locations on a transect.

1. Follow steps 1 and 2 outlined in the stream sediment sampling procedure outlined in Sections 3.8.3.
2. At each transect, collect a surface water sample near the top of the water column with a clean Pyrex sampling cup or equivalent for field measurement of temperature, pH, specific conductance, and dissolved oxygen. An equivalent flow-through meter may also be used for each field parameter.
3. At locations that are deeper than 5 ft, collect the field measurements at each 5-foot depth interval using a Van Dorn or Kemmerer Type sampler.
4. Record the field measurements in a Surface Water Sample Log (Appendix B).
5. If the stream does not exhibit thermal or chemical stratification as determined by the field measurements (temperature and pH), collect a surface water sample with a clean Pyrex sampling cup or equivalent near the top of the water column. Immerse the Pyrex cup at an angle such that water gently flows in with minimal disturbance. Use the sample to fill laboratory-prepared sample bottles for analysis.
6. If the stream exhibits thermal or chemical stratification as determined by the field measurements (temperature and pH), then collect surface water samples every 5 ft using a Van Dorn or Kemmerer style water sampler.
7. Record the sampling location, date and time of collection, sample collection method, sample identification, sample preservative, methods of analysis, and initials of the sampling personnel on the Surface Water Sample Log (Appendix B).
8. Decontaminate the sampling equipment as described in Section 3.12.

### 3.10 Field Analytical Measurements

Several instruments may be used to collect field analytical data. These instruments include a pH meter, specific conductance meter, a thermometer, dissolved oxygen meter, and turbidity meter (nephelometer). The following equipment (including model number and manufacturer) will be used:

- pH meter (model SA-230) manufactured by Orion Research, Inc. or equivalent;
- Specific conductivity meter (model 0148-40) manufactured by Cole-Palmer Instrument Company or equivalent;
- Digital thermometer that meets the National Bureau of Standards requirements;
- Dissolved oxygen meter (model 810) manufactured by Orion Research, Inc. or equivalent; and
- Turbidity meter (model 800) manufactured by Engineered Systems or equivalent.

Field instruments will be calibrated at least once a day, and more often if conditions warrant. Calibration procedures will follow manufacturer's specifications and will be documented by field personnel on the Field Instrument Calibration Log (Appendix B).

### 3.11 Quality Control Samples

To monitor sampling and laboratory performance it may be necessary to collect several types of field QA/QC samples. The field QA/QC samples include trip blanks, equipment rinsate blanks, and field duplicates. The specific number and type of QA/QC samples that will be collected at each Site are outlined in the Site-Specific Work Plans and may be more or less than the criteria stated below based upon data quality objectives and professional judgment.

A trip blank is a container filled with distilled and organic-free water prepared in, and provided by, the analytical laboratory. A trip blank is sent from the analytical laboratory to the field-sampling site, and is returned to the laboratory for analysis. The trip blank results are used to evaluate whether contamination by VOCs occurred during shipment of samples and/or during container transport. One trip blank is required in each sample cooler transporting samples for VOC analysis.

An equipment rinsate blank is a sample of organic free water (for VOC analyses) poured into, or over, or pumped through the sampling device, collected in the sample bottle, and transported to the laboratory for analysis. Equipment rinsate blanks are used to assess the effectiveness of equipment decontamination procedures.

Equipment rinsate blanks are collected immediately after the equipment has been decontaminated. Equipment rinsate blanks are collected by gently pouring distilled or deionized water over selected clean non-dedicated equipment and collected for laboratory analysis. For example, the equipment rinsate blank for soil and sediment sampling programs will be collected by gently pouring distilled or deionized water over clean core barrels or soil core samplers. The equipment rinsate blank for surface water and groundwater sampling programs will be collected by gently pouring distilled or deionized water over clean non-dedicated bailers or sampling cups. Equipment rinsate blanks will be collected at a frequency of 5 percent of the field samples at critical points in the sampling program, such as the sampling of a background well or the end of the sampling program.

The frequency requirements for collecting equipment rinsate blanks are a minimum of five percent of the environmental samples. The blank shall be analyzed for all laboratory analyses requested for the environmental samples collected at the Site. When an analyte is detected in the equipment rinsate blank the appropriate validation flag, as described in the data validation section, shall be applied to all sample results from samples collected. It should be noted that the laboratory will supply the organic free water. A sample aliquot of the organic free water will be submitted for the analysis of all parameters of interest.

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical recovery techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field such that they cannot be identified (blind duplicate) as duplicate samples by laboratory personnel performing the analysis. Specific locations are designated for collection of field duplicate samples prior to the beginning of sample collection. A field duplicate will be collected at a rate of one per twenty samples or one per sampling event, if less than twenty samples.

Field duplicate sample results are used to assess precision, including variability associated with both the laboratory analysis and the sample collection process. Field duplicates will be collected at a frequency of 5 percent of samples collected. Analytical

results for field duplicate will be assessed during the data validation process. Specific locations will be designated for collection of field duplicate samples prior to the beginning of sample collection. Control limits for evaluation of precision for field duplicates will be 40 percent for aqueous samples and 70 percent for soil/sediment samples.

Laboratory quality assurance protocols including the performance of laboratory control samples and matrix spikes relating to method acceptance criteria are included in Section 2.7 of the Site-Wide QAPP (Appendix A). The QAPP also defines the data qualification guidelines for evaluating potential matrix interferences identified during matrix spike analyses. The parent and field duplicate sample will be included in all reporting.

### **3.12 Field Equipment Decontamination**

The cleaning procedures outlined in this section will be used by all personnel to clean sampling and other field equipment to prevent cross-contamination during separate phases of the investigation. Documentation regarding decontamination will be recorded on the Daily Log (Appendix B). Specific cleaning procedures are presented in the following section.

A decontamination area will be established where steam cleaning of the drilling and well construction equipment and materials can occur and containment and proper disposal of wash water is possible. An impervious decontamination area will be utilized and the water used to clean the equipment will be containerized for offsite disposal.

#### **3.12.1 Cleaning Materials**

The laboratory detergent used to wash the equipment will be a standard brand of phosphate-free laboratory-grade detergent such as Micro or Liquinox. The use of any other detergent must be justified and documented in the field logbooks and inspection or investigative reports.

Potable water is defined as tap water fit for human consumption from a known source. Deionized water is defined as tap water that has been treated by passing through a standard deionizing resin column. The deionized water should contain no metals or other inorganic compounds (i.e., at or above analytical detection limits). The brushes used to clean equipment as outlined in the following sections, will be stiff plastic bristled and will not be wire-wrapped.

### 3.12.2 Marking and Segregation of Used Field Equipment

Field or sampling equipment that needs to be repaired shall be identified with a tag indicating date repair requested, problem if known, personnel requesting repair, and if the equipment has been decontaminated. Field equipment needing cleaning or repairs will not be stored with clean equipment or sample containers. Field equipment and/or disposable sample containers that are not used during the course of an investigation may not be placed in storage without being recleaned unless it is the opinion of the field investigator that the materials have not become contaminated during the course of the field investigation. However, equipment and sample containers must be labeled as such.

### 3.12.3 Safety Procedures to be Utilized During Cleaning Operations

The materials used to implement the cleaning procedures outlined in this section can be dangerous if improperly handled. Caution must be exercised by all personnel, and all applicable safety procedures shall be followed. At a minimum, the following precautions will be taken in the field during these cleaning operations:

- Safety glasses with side shields or goggles, and latex or vinyl surgical gloves or nitrile rubber gloves will be worn during all cleaning operations;
- All rinsing operations will be conducted in the open (never in a closed room); and
- No eating, smoking, drinking, chewing, or any hand-to-mouth contact shall be permitted during cleaning operations.

### 3.12.4 Storage of Field Equipment and Sample Containers

Decontaminated field and sampling equipment will be stored in covered containers or wrapped in aluminum foil to minimize contamination. All decontaminated equipment, when not in use, will be kept in a designated storage area. Sampling equipment and sample containers will not be stored or transported with any gasoline, diesel, or other fuel containers or gasoline or diesel fuel powered equipment. Decontaminated equipment shall be clearly identified by labeling the wrapping material. Field equipment and reusable sampling containers requiring cleaning or repairs shall not be stored with clean equipment. Instead, equipment requiring repairs will be clearly identified and the repairs documented on the daily field log. Field equipment that requires cleaning

will be segregated from clean equipment and will be stored on plastic sheeting pending cleaning.

### 3.12.5 Cleaning Procedures

#### 3.12.5.1 *Drilling and Direct Push Equipment*

All drilling and direct push equipment used during completion of soil borings or installation of the monitoring wells will be steam-cleaned prior to initiating drilling or direct push activities. This will include, but is not limited to, the drill stem, augers, drill bits, direct push rods, core barrels, and tools utilized by the contractor.

The drill rig or direct push rig utilized for the installation of the borings and wells will be decontaminated at the decontamination area prior to the initiation of the drilling or direct push activities. The drill rig or direct push rig itself will not be decontaminated between soil boring or monitoring well locations. Augers and other drilling, direct push, or sampling equipment will be returned to the decontamination area to be cleaned after each use. Cleaning of equipment will be performed using a high-pressure steam cleaner to prevent cross-contamination of the soil borings and monitoring wells. Potable water for steam cleaning will be obtained from the installation water supply system.

Tools and equipment used to measure the depth of well completion materials and water levels (i.e., measuring tapes, electric/electronic probes, tampers, tremie pipes) also will be decontaminated by steam cleaning between well locations to avoid cross-contamination. All equipment and tools will be isolated from contact with the ground by placing them onto sheets of polyethylene plastic.

#### 3.12.5.2 *Teflon™, Stainless Steel, or Glass Field Sampling Equipment*

When Teflon™, stainless steel, or glass sampling equipment is used to collect samples that contain hard to remove materials, it may be necessary to steam clean the field equipment before proceeding with Step 1. If the field equipment cannot be cleaned utilizing these procedures, it should be discarded.

1. Wash equipment thoroughly with laboratory detergent and tap water using a plastic brush to remove any particulate matter or surface film.

2. Teflon™, stainless steel, or glass sampling equipment will be rinsed thoroughly with potable water from an approved onsite source.
3. Rinse thoroughly with analyte free water.
4. Rinse thoroughly with solvent. Do not solvent rinse PVC or plastic items.
5. Rinse thoroughly with organic/analyte free water. If organic/analyte free water is not available, equipment should be allowed to completely dry. Do not apply a final rinse with analyte water.
6. Wrap equipment completely with aluminum foil or store in Ziploc™ plastic bags to prevent contamination during storage and/or transport to the field.

#### 3.12.5.3 Other Sampling Equipment

Miscellaneous sampling equipment will be washed with laboratory detergent, rinsed with potable water, followed by a thorough deionized water rinse, and dried before being stored. This procedure is not used for any equipment utilized for the collection of samples for trace organic compounds analyses.

#### 3.12.5.4 Trace Organic Sampling Equipment

The following procedures are to be used for all sampling equipment used to collect routine samples undergoing trace organic or inorganic constituent analyses:

- Clean with tap water and soap using a brush if necessary to remove particulate matter and surface films. Equipment may be steam cleaned (soap and high pressure hot water) as an alternative to brushing. Sampling equipment that is steam cleaned should be placed on racks or saw horses at least two ft above the floor of the decontamination pad. PVC or plastic items should not be steam cleaned;
- Rinse thoroughly with tap water;
- Rinse thoroughly with analyte free water;
- Rinse thoroughly with solvent. Do not solvent rinse PVC or plastic items;

- Rinse thoroughly with organic/analyte free water. If organic/analyte free water is not available, equipment should be allowed to completely dry; and
- Remove the equipment from the decontamination area and cover with plastic. Equipment stored overnight should be wrapped in aluminum foil and covered with clean, unused plastic.

#### 3.12.5.5 *Field Analytical Equipment and Other Field Instruments*

The exterior of sealed, watertight equipment should be washed with a mild detergent (for example, liquid dishwashing detergent) and rinsed with tap water before storage. The interior of such equipment may be wiped with a damp cloth if necessary. Other field instrumentation should be wiped with a clean, damp cloth. Conductivity probes, pH meter probes, etc., should be rinsed with deionized water before storage.

#### 3.12.5.6 *Ice Chests and Shipping Containers*

If the ice chests (labeled accordingly for sampling use) and reusable containers that will be used to store or ship samples and sample containers are believed to be contaminated, the containers should be washed with laboratory detergent (interior and exterior) and rinsed with potable water and air dried before storage. In the event that an ice chest or other reusable container becomes severely contaminated with concentrated waste or suspected hazardous material, it shall be cleaned as thoroughly as possible, rendered unusable, and disposed of properly.

#### 3.12.6 Disposable Materials

Disposable materials generated from the decontamination and sampling activities will be contained in plastic garbage bags. These materials include, but are not limited to gloves, Tyvek suits, latex booties, paper and plastic. A waste determination will be made on a site by site basis for the disposable materials generated during the sampling programs. The waste determination will be based on both process knowledge of the contents of the site and on existing analytical data from the site, if available. The wastes will be disposed off-site in accordance with all applicable federal and state regulations.



### 3.13 Characterization and Disposal of Investigative Derived Wastes

Investigative derived wastes (IDW) including soil and waste cuttings and decontamination, development, and purge water will be collected and characterized with the procedures described below.

#### 3.13.1 Soils/Sediment/Waste

Soil, sediment, and waste cuttings (not including material excavated from test trenches during waste characterization) will be collected at the borehole and stockpiled on plastic sheeting or placed in appropriate containers, such as a roll-off box or 55-gallon drum for temporary storage. The temporarily stored solid material will be covered to prevent runoff.

Specific disposal options will be made on a site by site basis, taking into account the types of compounds known to be present, and will conform to applicable installation, local, state, and federal requirements.

#### 3.13.2 Water

Investigative derived water, which will consist of decontamination wash, well development, and purge water, will be temporarily containerized in a portable poly tank. Based on previous and/or current analyses, liquids that would not fail Toxicity Characteristic Leaching Procedure (TCLP) analysis will be properly disposed of in accordance with Georgia State laws. Disposal options will be evaluated on a site by site basis.

### 3.14 Site Survey

A site survey will be conducted by a registered land surveyor to measure elevations (X, Y, and Z coordinates) of any new monitoring wells. The north side of the top of the casing and the land surface adjacent to each well will be surveyed relative to mean sea level to the nearest 0.01 ft. The horizontal location of each monitoring point and well will also be determined relative to the Georgia state plane system and the Fort Stewart and Hunter Army Airfield installation grid to the nearest 1.0 foot. All surveying will be performed by a certified land surveyor, and will be tied into the existing on-site benchmark.

The location of each soil and waste boring, test pit location, sediment, surface water, and stream gauging location may also be surveyed by hand-held global positioning system (GPS) equipment, as conventional land surveying will be difficult to complete at these areas.

#### 4. Field Documentation Procedures

Information on the sample designation, field documentation, COC, and sample shipment activities are discussed in the following three sections.

##### 4.1 Sample Designation

A numbering system was developed for each type of environmental sample collected during the field investigation for the unique identification of each individual sample. This number system will provide a tracking procedure to allow ease of data retrieval, reduction, and evaluation, and to ensure that sample identifiers are not duplicated. The most important aspect of any sample numbering system that is developed is ensuring the uniqueness of an individual sample number. A listing of the sample identification numbers will be maintained by the project manager and the field task supervisor will ensure that it is universally applied to samples collected during the project.

The numbering system for this project consists of the following components described below:

- The Site number in the format "HA###" for Hunter Army Airfield and "FS###" for Fort Stewart;
- The location type;
- The sample number;
- Water and sediment sample IDs will end with the date (in "mmddy" format); or
- Soil samples will end with the depth range (in ft).

Blind duplicate samples will be labeled sequentially starting at 1 in the form D1(mmddy).

Examples of the numbering system are provided below:

- Surface water sample 1 taken from HAA-01 on November 8, 2009 would be: HA01SW001(110809);
- Surface soil sample 4 taken from FST-13 at a depth of 0 to 6 inches would be: FS13SS004(0-0.5).

The location type codes are listed below:

MW – monitoring well;  
TW – temporary well;  
SB – soil boring (by drilling);  
SS – surface soil by trowel or other hand collection method;  
SW – surface water by any collection method; and  
SE – sediment by any collection method.

In addition to the above nomenclature, the COC will be completed to include both the Sample Type and Sample Matrix using the codes defined below:

Acceptable sample type codes are listed below:

N = normal or primary sample;  
FD = field duplicate;  
EB = equipment blank;  
MS = matrix spike;  
SD = matrix spike duplicate; and  
TB = trip blank.

The sample matrix will be identified using the following codes:

SO = soil sample;  
SE = sediment sample;  
WG = groundwater;  
WS = surface water;  
WB = water collected from borehole or during Geoprobe<sup>®</sup> investigation; and  
WL = leachate.

Field duplicate samples will be given a unique number that is completely different from the original sample following the normal sample pattern. Duplicate samples will be labeled sequentially starting at 1 in the form D1(mmddyy). This number will be recorded in the field logbook, so that the duplicates can be identified at a later date. Samples collected with an additional volume for matrix spike/matrix spike duplicates (MS/MSDs) will be designated on the COC in the remarks column.

Equipment and trip blanks will be identified using the sample type code (i.e., EB or TB) followed by the date as MMDDYY. For trip blanks, if more than one trip blank is submitted to the laboratory on a given day, the sample code will be followed by the a number starting with 1. For example the second trip blank submitted on December 1, 2003 would be identified as follows: TB2(120103).

#### **4.2 Field Activity Documentation**

Documentation of field operations and sample custody is achieved through use of ARCADIS pre-printed forms and a bound field logbook. The field log consists of notes and drawings describing the location, field conditions, and method of sample collection and identification. Examples of the pre-printed forms that will be used for this project are provided in Appendix B.

All aspects of sample collection and handling as well as visual observations shall be documented on the forms or in the field logbooks. All sample collection equipment (where appropriate), field analytical equipment, and equipment utilized to make physical measurements shall be identified in the field logbooks. All calculations, results, and calibration data for field sampling, field analytical, and field physical measurement equipment shall be recorded on the forms or in the field logbooks.

In addition, the Field Operations Leader will fill out a daily site activity log that details the activities and/or issues that occurred that day.

All entries in field logbooks or the preprinted sampling logs shall be dated, legible, and contain accurate and inclusive documentation of an individual's project activities. At the end of each day's activity, or of a particular event as appropriate, all documents in the field will be secured by the Field Operations Leader for each task. Once completed, these field logbooks and/or preprinted forms will be maintained as a part of the project files.

All data forms will be completed in indelible black ink. Make an entry in each blank. Where there is no data entry, enter “UNK” for Unknown, “NA” for Not Applicable, or “ND” for Not Done. To change an entry, the person making the change will draw a single line through the mistake, add the correct information above or adjacent to it, and initial the change.

#### 4.2.1 Utilities and Structures Checklist

The Field Operations Leader will check the proposed drilling, sampling, and trenching locations for marked underground utilities, other underground structures and above-ground pipe racks or power lines. A Utilities and Structures Checklist will be completed by the Field Operations Leader for each area to be sampled prior to commencement of field activities.

#### 4.2.2 Location Sketch

All drilling, sampling, and trenching locations will be drawn on a Location Sketch, if a reasonable site map is not available for the area of interest.

#### 4.2.3 Boring/ Well Construction Logs

All soil borings, boreholes, and monitoring well installations completed by the field team will be documented on Boring/Well Construction Logs. The logs document the drilling location, drilling dates and times, drilling personnel, logging personnel, soil descriptions, sample depths, recovery, boring location and volatile organic vapor content. The log also documents the well identification, drilling method, development technique, well construction materials, material depths, and abandonment, if any.

#### 4.2.4 Water Level Measurement Form

All water level measurements will be recorded on a Water Level Measurement Form. The log identifies the measurement location, and measurement date and time.

#### 4.2.5 Sample Key

All samples to be collected will be recorded on the Sample Key. The form identifies all sample locations, sample date and time, and analytical parameters to be collected.

#### 4.2.6 Sampling Location Survey Summary

The sampling location survey summary is to be completed prior to field activities. It will provide northing, easting, and elevation information for site monitoring wells.

#### 4.2.7 Water Sample Log

All surface water samples collected by the field team will be documented on a Water Sample Log. The log identifies the sample identification, duplicate identification, if any, sampling times, location, equipment used, color, odor, appearance, sample parameters, container description, sample preservative, and sampling personnel.

#### 4.2.8 Groundwater Sampling Form

The results of field measurements while purging monitoring wells, prior to collecting a groundwater sample, will be recorded on the Groundwater Sampling Form. This form records time series measurements of conductivity, temperature, turbidity, redox potential, and dissolved oxygen. The form also provides a record of the volume of water purged prior to sample collection.

#### 4.2.9 Well Sampling Summary

A summary of the results of field measurements while purging monitoring wells, prior to collecting a groundwater sample, will be recorded on the Well Sampling Summary Form. This form records collection date and time and the final measurements of conductivity, temperature, turbidity, redox potential, and dissolved oxygen. The form also provides a record of the volume of water purged prior to sample collection.

#### 4.2.10 Water Level/Pumping Test Record

The data from slug tests and pumping tests completed in monitoring wells will be documented on a Water Level/Pumping Test Record. The log identifies the well the test is conducted in, the static water level, the initial displacement, and changes in the water level versus time.

#### 4.2.11 Soil/Sediment Sample Log

All soil samples collected by the field team will be documented on a Soil/Sediment Sample Log. The log identifies the sample identification number, soil type, duplicate

identification, if any, sampling times, depth and location of sample, sampling equipment used, color, odor, appearance, sample parameters, container description, sample preservative, and sampling personnel.

4.2.12 Soil Sampling Summary

All soil samples collected by the field team will be documented on Soil Sampling Summary form. The form identifies the sample identification, sampling times, depth and location of the sample.

4.2.13 Surface Water Sample Log

All surface water samples collected by the field team will be documented on a Surface Water Sample Log. The log identifies the sample identification, duplicate identification, if any, sampling times, sampling location, equipment used, color, odor, appearance, sample parameters, container description, sample preservative, and sampling personnel.

4.2.14 Field Instrument Calibration Form

The field team will record all daily calibration results for field instrumentation on the Field Instrument Calibration Form.

4.2.15 Daily Log

The Daily Log form is used by the Site Manager to record all pertinent sampling events, field observations or other information pertinent to the field effort. The following types of information are generally entered into the Daily Log:

- Date
- Client
- Field Location
- Ambient Weather Conditions
- Field Team
- Instrument Problems
- Site Visitors
- Delays
- Unusual Situations
- Well Damage
- Accidents
- Work Progress
- Quality Control
- Site Schedule



#### 4.2.16 Sample Label

All samples collected by the field team will be properly identified by labeling. Labels will be affixed to the sample bottle prior to the filling of the container(s). Labels are never affixed to lids or caps, although the sample identification information may be duplicated on the cap for ease of sample identification. The following labeling information is supplied for every sample bottle.

- Sample Identification Number
- Initials of Sample Collector
- Date and Time of Collection
- Project Number
- Project Location
- Requested Analyses

#### 4.2.17 Chain-of-Custody Form

The COC form is a multi-copy record, which documents the custody of the samples from sample collection through laboratory analysis. It has spaces for signatures of those receiving and relinquishing the samples. The sampler, the individual preparing the samples for shipment, and the receiving individual at the laboratory normally sign the form. An example of this form is provided in Appendix B.

The field personnel collecting the sample will fill out the COC forms. The COC process will be initiated upon sample collection. The field personnel who sign the form will be responsible for the samples until they are transferred to the custody of the laboratory or another custodian. Once the form has been completed, all remaining field sample identification spaces will be crossed through to prevent unauthorized addition of sample information.

The information required on the COC form includes the complete sample identification, date and time of sample collection, number of sample containers, analyses and method required, container type, project number, sample collection personnel, complete name, address, and telephone number of the person analytical reports will be sent to, turnaround time, and signatures of all sample custodians, excluding shippers, such as Federal Express. In addition, the method of shipment, courier name and air bill number must be included. The back copy of the form will be retained. The original form will accompany the sample shipment to the laboratory.

#### 4.2.18 Chain-of-Custody Seal

All coolers submitted to analytical laboratories containing samples collected during the field investigations will be sealed with two signed and dated COC seals. The seals ensure that the samples have not been tampered with during shipment.

#### 4.2.19 Bill of Lading

A bill of lading (air bill) documents receipt of the samples by the carrier. It is not possible for the carrier's representative to sign the COC because it is sealed in the ice chest. Bills of lading are kept on file as part of the sample COC documentation.

### 4.3 Chain-of-Custody Procedures

The primary objective of the COC process is to create an accurate written record that can be used to trace the possession and handling of the sample from the moment of its collection through analysis. A sample is considered to be in custody when one of the criteria listed below has been satisfied:

- The sample is in one's actual possession.
- The sample is in one's view after being in one's physical possession.
- The sample is in one's physical possession and is then locked up so that no one can tamper with it.
- The sample is kept in a secured area that is restricted to authorized personnel.

Strict COC procedures will be followed for all collection, handling, and shipping of environmental samples. The field personnel are responsible for the care and custody of the sample collected until the samples are properly and formally transferred to another person or a courier for shipment to the laboratory. To simplify the COC record, as few people as possible will handle the sample during the investigation or inspection and an inventory of the sample containers will be maintained.

A COC form will be completed for all samples collected. A separate COC record will be utilized for each cooler of samples shipped to each laboratory used during this investigation. During the data validation activities, it will be determined whether these procedures were adequately followed.

#### 4.3.1 Transfer of Custody

A COC form will accompany all samples. Prior to shipment or transfer of custody, all samples will be maintained in the custody of the Field Operations Leader. Upon transfer of custody, the Field Operations Leader will verify the information on each sample label and assure that each container is intact and sealed. The Field Operations Leader will then sign and date the COC form. The individuals receiving the samples shall sign, date, and note the time that they reviewed the samples on the COC form. This form documents transfer of custody of samples from the field investigator to another person to the laboratory.

#### 4.3.2 Sample Preparation and Shipment

All samples will be stored at approximately 4°C from immediately after collection until analysis. In the field and during transportation to the laboratory, samples will be kept in coolers on ice, not “blue ice”. Ice for coolers will be double-bagged in self-sealing plastic bags. Protective foam or Styrofoam packing will be used to minimize the risk of breakage during transport. When packaging samples for commercial transport, individual bottles will be wrapped separately in padded materials.

The samples are then placed in an ice chest, in direct contact with the ice, lined with a plastic trash bag or other barrier to prevent leakage and Styrofoam, bubble wrap, or similar packaging to prevent breakage. The top two copies of the original COC form will be placed in a plastic bag secured inside the shipping container closed with a chain-of-custody seal.

#### 4.3.3 Laboratory Sample Receiving

After the ice chests are delivered to the laboratory, the samples are logged in, the COC is signed, and the samples are checked for breakage or leakage. The temperature of the ice bath is checked. If the temperature exceeds 4°C or if any other problems are noted, this information is recorded on the COC and the Field Operations Leader or Project Manager will be notified of the problem.

## 5. References

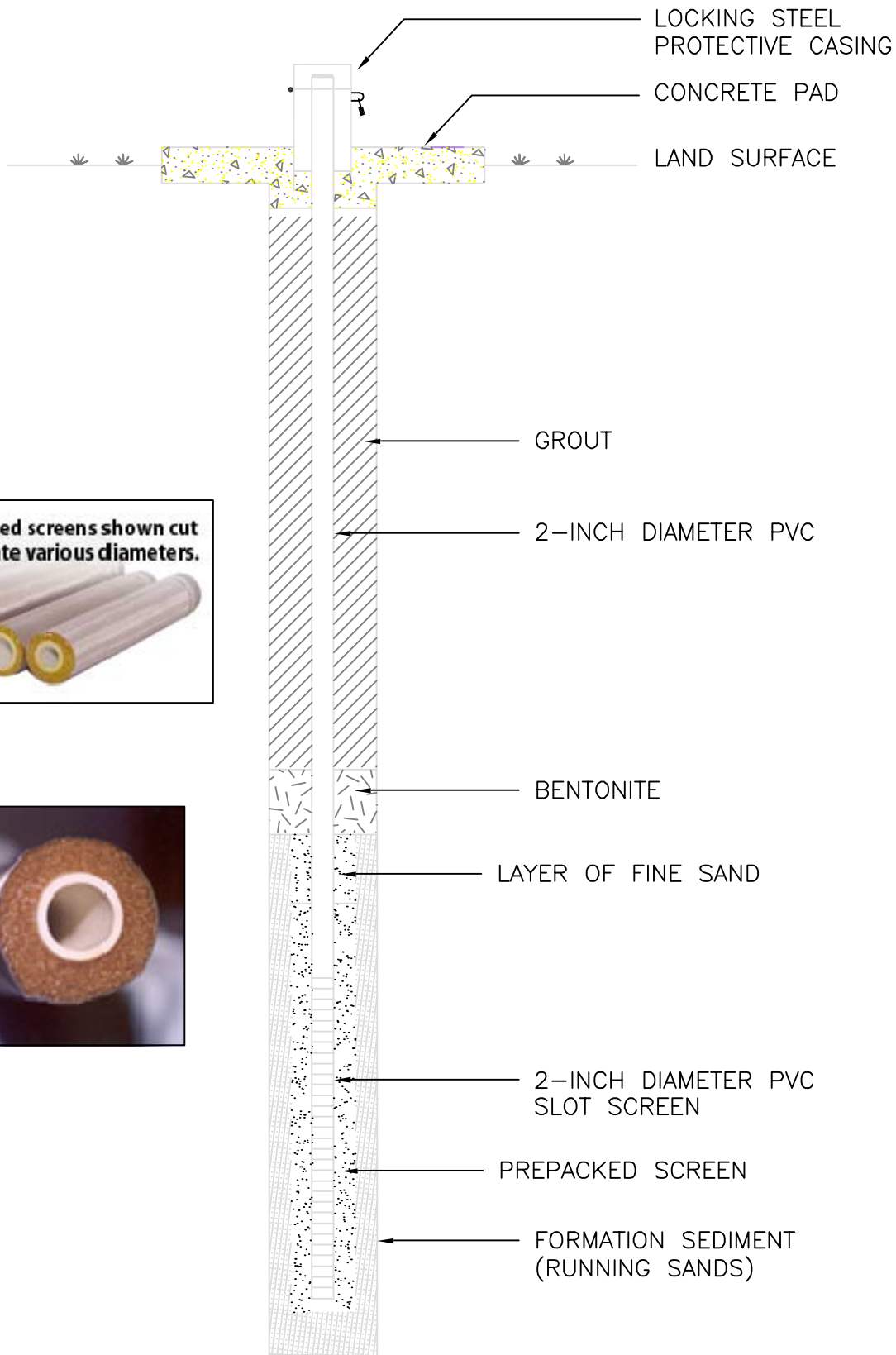
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Figure



NOT TO SCALE

ARCADIS

Appendix A

Site-Wide QAPP

# Appendix A:

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## **Quality Assurance Project Plan (QAPP)**

Fort Stewart Military Reservation and Hunter Army Airfield, Georgia

February 2009



ARCADIS



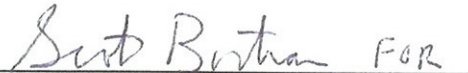
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**Appendix A: Quality Assurance  
Project Plan**

Fort Stewart Military Reservation  
and Hunter Army Airfield  
Georgia

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Our Ref.:  
GP08HAFS.SW00

Date:  
February 3, 2009

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<b>1. Project Management</b>	<b>1</b>
1.1 Project	1
Technical Staff	4
Laboratories	4
1.2 Problem Definition/Background	6
1.3 Project Description	6
1.4 Data Quality Objectives for Measurement Data	7
1.4.1 Precision, Accuracy, Representativeness, Completeness, and Comparability	7
1.4.2 Objectives for Laboratory Analyses	9
1.4.3 Objectives for Field Measurements	9
1.5 Specialized Training and Certification	10
1.6 Documents and Records	11
1.6.1 Document Control	11
1.6.2 Field Documentation	11
1.6.3.1 Corrections to Field Documentation	12
1.6.3.2 Photographs	12
1.6.3 Laboratory Data Reporting/Record Retention	12
1.6.4 Electronic Data Retention	13
<b>2. Data Generation and Acquisition Elements</b>	<b>14</b>
2.1 Sampling Process Design	14
2.2 Sampling Methods	14
2.3 Sample Handling and Custody	14
2.4 Sample Containers	15
2.5 Sample Preservation and Holding Times	15
2.6 Analytical Methods	16
2.6.1 Standard Laboratory Analytical Procedures	16
2.7 Elements of Quality Control	17

2.7.1	Laboratory Control Samples	18
2.7.2	Matrix Spike and Matrix Spike Duplicate	18
2.7.3	Surrogates	19
2.7.4	Internal Standards	19
2.7.5	Retention Windows	20
2.7.6	Method Blank	20
2.7.7	Equipment Blank	21
2.7.8	Trip Blank	21
2.7.9	Field Duplicates	21
2.8	Instrument/Equipment Testing, Inspection, and Maintenance	22
2.8.1	Maintenance Schedules	22
2.8.2	Spare Parts	22
2.9	Instrument/Equipment Calibration and Frequency	23
2.10	Inspection/Acceptance of Supplies and Consumables	23
2.11	Non-Direct Measurements	23
2.12	Data Management	24
2.12.1	Electronic Data Management	24
2.12.2	Field Data Review	25
2.12.3	Laboratory Data Review	25
2.12.3.1	Laboratory Internal Review	26
2.12.3.2	Analytical Report and Data Management	26
2.12.4	Archiving	27
<b>3.</b>	<b>Assessment and Oversight</b>	<b>28</b>
3.1	Assessment and Response Actions	28
3.1.1	Peer Review	28
3.2	Corrective Action	28
3.3	Performance and Data Quality Reports	29
<b>4.</b>	<b>Data Validation and Usability</b>	<b>30</b>

4.1	Data Review, Verification, and Validation	30
4.2	Verification and Validation Methods	30
4.2.1	Evaluation of Completeness	31
4.2.2	Evaluation of Compliance	32
	4.2.2.1 Tier 2 Verification	32
	4.2.2.2 Tier 3 Validation	33
4.2.3	Data Validation Reporting	34
4.2.4	Validation Reports	34
4.3	Reconciliation with Data Usability Requirements	35
<b>5.</b>	<b>References</b>	<b>37</b>

**Tables**

A-1	ARCADIS Technical Team Contact Information
A-2	Project Data Quality Objectives
A-3	Statistical Calculations
A-4	Field Data Quality Objectives and Field QC Collection Frequency
A-5	Method, Containers, Preservation, and Holding Times
A-6	Laboratory Quality Control Sample Frequency

**Figure**

A-1	Project Organization
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**Acronyms and Abbreviations**

Air Toxics	Air Toxics, Ltd.
ARCADIS	ARCADIS U.S., Inc.
AOC	Area of Concern
APM	Associate Project Manager
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
COC	Chain-of-Custody
DoD	Department of Defense
DQO	Data Quality Objectives
DQM	Data Qualification Module (Earthsoft <sup>®</sup> )
DRMO	Defense Reutilization Market Office
EB	Equipment blank
EDD	Electronic data deliverable
FHSO	Field Health and Safety Officer
GA EPD	Georgia Environmental Protection Division
GIS	Geographic Information System
HAAF	Hunter Army Airfield
HSP	Health and Safety Plan
HSRA	Hazardous Site Response Act
HSWA	Hazardous and Solid Waste Amendments
IRP	Installation Restoration Program
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
LTO	Laboratory Task Order
MDL	Method detection limit
Microseeps	Microseeps Laboratories, Inc.
MNA	Monitored natural attenuation
MS	Matrix spike
MSD	Matrix spike duplicate
NELAP	National Environmental Laboratory Accreditation Program
NFG	National Functional Guidelines
PARCC	Precision, accuracy, representativeness, completeness, and comparability

PBA	Performance Based Acquisition
PM	Project Manager
PMP	Project Management Plan
PT	Performance Testing
QA	Quality Assurance
QAO	Quality Assurance Officer
QAM	Quality Assurance Manual
QAPP	Quality Assurance Project Plan
QC	Quality Control
QCP	Quality Control Plan
% R	Percent recovery
RCRA	Resource Conservation and Recovery Act
RL	Reporting Limit
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SOPs	Standard Operating Procedures
SOW	Scope of Work
SWMU	Solid Waste Management Unit
TB	Trip blank
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USTMP	Underground Storage Tank Management Program
VOCs	Volatile organic compounds

## Introduction

The Installation Restoration Program (IRP) activities at Fort Stewart and Hunter Army Airfield (HAAF) are performed in accordance with the provisions of the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984. The Georgia Environmental Protection Division (GA EPD) issued Hazardous Waste Management Permit No. HW-045(S) which addresses the corrective action requirements for all Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) at Fort Stewart. Hazardous wastes generated at HAAF are transferred to the Fort Stewart Defense Reutilization Market Office (DRMO) yard. Corrective action activities performed at HAAF are executed under either the Georgia Hazardous Site Response Act (HSRA) or the Georgia Underground Storage Tank Management Program (USTMP). The goal of the Performance Based Acquisition (PBA) contract is to meet the corrective action requirements for all sites, as defined in the contract and summarized in the Project Management Plan (PMP) (ARCADIS 2008). The full scope of services for this contract is defined in the Contract W91ZLK-05-D-0015: Task 0003 as executed between the Army Environmental Command (USAEC) and ARCADIS U.S., Inc. (ARCADIS). All work performed under the contract will be consistent with all applicable regulatory requirements, and relevant Department of Defense (DoD) and Army policy.

This Quality Assurance Project Plan (QAPP) presents the policies, organization, functions, and Quality Assurance (QA) requirements designed to achieve the data quality objectives for additional contaminant delineation, groundwater monitoring, and remedial attainment to be performed in support of the environmental restoration as identified in the PBA contract. This QAPP has been prepared for use by field personnel, data quality reviewers, and laboratories who perform environmental activities to ensure that the data are scientifically valid and usable for the intended purpose. Analytical protocols and documentation requirements will ensure that the data are collected, reviewed, and analyzed in a consistent manner. The method performance criteria and the analytical laboratory quality management program, as well as the protocols set forth in this QAPP, will be employed to establish data usability.

The general guidelines followed in the preparation of this QAPP are presented in EPA Requirements for QAPPs for Environmental Data Operations, EPA QA/R-5 (United States Environmental Protection Agency [USEPA], March 2001). The EPA document was used as guidance and this QAPP presents only the applicable components. Other documents that have been referenced in this QAPP are presented in Section 5.



## **Quality Assurance Project Plan**

Fort Stewart Military Reservation  
and Hunter Army Airfield

Revision 0

Personnel participating in the work effort will review this document. All personnel are required to comply with procedures documented in this QAPP and supporting project documents to ensure usability of the data produced.



## 1. Project Management

### 1.1 Project

This section provides a description of the ARCADIS organizational structure of personnel involved with this project. The lines of authority are defined and key personnel identified for various activities of the project. The project organization is illustrated in Figure A-1. Table A-1 presents contact information for key ARCADIS personnel. The Project Manager will communicate with the client and regulatory agencies and oversee project execution. The Associate Project Manager and Site Managers will implement project tasks and coordinate with the technical personnel.

#### ARCADIS, Project Manager

**Mr. Charles A. Bertz, P.E.** The ARCADIS Project Manager (PM) is responsible for the overall implementation of the project. The Project Manager is responsible for allocating resources to assure successful execution and completion of the scope of work (SOW). Other duties, as required, may include:

- Approving project-specific procedures and internally prepared plans, drawings, and reports;
- Ensuring technical, schedule, and budget requirements are met;
- Coordinating manpower and other necessary resources with ARCADIS Assistant Project Manager, Site Managers, and technical personnel;
- Reviewing project progress;
- Reviewing all final documents, plans, and drawings; and
- Coordinating document delivery and attaining project milestones.

ARCADIS, Associate Project Manager

**Ms. Shelley Gibbons.** The ARCADIS Assistant Project Manager (APM) will support the Project Manager in contract management as well as task implementation, document preparation, personnel coordination, and budget management. Ms. Gibbons will perform a key role in ensuring compliance with quality performance objectives. Other duties, as required, may include:

- Coordinating schedules and deliverables with the Site Managers and the Project Manager;
- Ensuring project budget and deliverable schedule compliance;
- Assisting with quality program implementation and coordinating document preparation and submittals;
- Serving as the "collection point" for the project staff reporting any changes or deviations from the project work plan;
- Determining the significance of these changes or deviations to specific work plans and the appropriateness of reporting such items to the corresponding regulatory and facility representatives;
- Arranging subcontractor services; and
- Preparing status update reports and revisions to the project work plan.

ARCADIS, Site Managers

**Mr. Andy Davis, P.E. and Mr. Scott Bostian, P.E..** The ARCADIS Site Managers are principally responsible for overseeing day-to-day of task performance including all technical and administrative operations. Other duties required may include:

- Preparing the work plans;
- Selecting and monitoring technical staff;
- Assigning duties to the project staff and orienting the staff to the requirements of the project;
- Coordinating and scheduling field activity resources;

- Performing assessment and oversight duties as described in the PMP, Sampling and Analysis Plan (SAP), and QAPP;
- Reviewing and approving all final reports and other work products;
- Monitoring staff and subcontractor progress; and
- Distributing the QAPP to the ARCADIS technical staff.

ARCADIS, Quality Assurance Officer

**Mr. Kurt Beil, P.E..** The ARCADIS Quality Assurance Officer (QAO) is responsible for oversight of all QA/QC activities. He will remain independent of day-to-day direct project involvement, but will have the responsibility for ensuring that all project and task-specific QA/QC requirements are met. He will have direct access to corporate staff, as necessary, to resolve any QA/QC problems, disputes, or deficiencies. The QA Officer's duties include:

- Reviewing and approving the Site-Wide QAPP and site-specific work plans;
- Reviewing and approving substantive changes to the QAPP, SAP, and work plans;
- Reviewing any new work orders with the Project Manager to determine if the QAPP requires modification;
- Providing external review of field and analytical activities by performance of assessment and oversight duties as described in the QCP; and
- Conducting or delegating responsibility for field audits in conjunction with the corporate QA office and maintaining written records of those audits.

ARCADIS, Health and Safety Officer

**Mr. Sam Moyers.** The ARCADIS Health and Safety Manager reviews and internally approves the Health and Safety Plan (HSP) that will be designed to the specific needs and operations associated with this project. In consultation with the PM, the Health and Safety Manager will ensure that an adequate level of personal protection exists for anticipated potential hazards for field personnel. Identify the Field Health and Safety Officer (FHSO) for each field operation. On-site health and safety will be the responsibility of the FHSO. The FHSO will work in coordination with the PM and the

project Health and Safety Manager to ensure that all activities are conducted safely and in accordance with the HSPA as well as facility requirements.

ARCADIS, Project Chemist

**Ms. Jane Kennedy.** The Project Chemist is responsible for laboratory selection and oversight, data validation and verification, and hard copy and electronic analytical data oversight. The Project Chemist's specific duties include:

- Developing the Site-Wide QAPP and QA aspects of site-specific work plans;
- Providing external review of analytical activities by performance of assessment and oversight duties;
- Coordinating with the Project Manager, Task Managers, and laboratory management to ensure that QA objectives appropriate to the project are set and that laboratory and field personnel are aware of these objectives;
- Recommending, implementing, and/or reviewing corrective actions taken in the event of QA/QC failures in the laboratory or field;
- Reporting nonconformance with either QC criteria or QA objectives (including an assessment of the impact on data quality or work assignment objectives) to the appropriate managers; and
- Assisting with preparation of reports summarizing data quality.

Technical Staff

The technical staff for this program will be drawn from a pool of technical resources within ARCADIS. The technical staff will implement project and site tasks, analyze data, and prepare reports/support materials. All technical personnel assigned will be experienced professionals who possess the degree of specialization and technical competence required to perform the required work effectively and efficiently. All technical staff will be familiar with the HASP and all relevant Work Plans, standard operating procedures (SOPs), and policies applicable to the field work performed.

Laboratories

Independent laboratories providing analytical services will be chosen as appropriate for the various project requirements including routine monitoring, confirmation sampling,

remedial system monitoring, air analyses, and pilot/benchscale studies. Geotechnical laboratories may be selected based on project requirements and will be identified in the site-specific work plans. Selection criteria for geotechnical laboratories will be based on previous performance on ARCADIS projects or satisfactory recommendations.

Analytical chemistry laboratories shall be accredited under the National Environmental Laboratory Accreditation Program (NELAP) and in accordance with Georgia requirements for the project analytical parameters for which accreditation is available through the primary accrediting state. The laboratory QA programs will be reviewed by the ARCADIS Project Chemist, as appropriate. The laboratory will assign an experienced Project Manager to coordinate analytical support for field operations with the ARCADIS Field Operations Manager and Project Chemist.

The analytical chemistry laboratories will provide services under a specified SOW and contractual agreement with ARCADIS. This QAPP incorporates by reference the laboratory, reporting and detection limits, and quality control limits. SOPs will be evaluated by the project chemist to ensure that method performance is acceptable. Appropriate data will be uploaded to the electronic project database for use by the ARCADIS Project Manager and task managers.

The laboratory staff will include a qualified QA Manager, who reports directly to laboratory management independently of the technical operations of the laboratory, to oversee technical adherence to the laboratory QA programs and this QAPP.

The specific duties of the laboratory Project Manager and QA Manager include:

- Reviewing the QAPP and other project requirements to verify that analytical operations will meet project requirements as defined in the project documents;
- Documenting and implementing project QA/QC requirements in the laboratory and reviewing analytical data (10 percent for the QA Manager) to verify that the requirements were met;
- Reviewing receipt of all sample shipments and notifying the Project Chemist of any discrepancies within 1 day of receipt;
- Conducting internal laboratory audits to assess implementation of the laboratory Quality Assurance Manual (QAM) and procedures and providing written records of those audits;
- Rapidly notifying the Project Chemist regarding laboratory nonconformance with the QAPP or analytical QA/QC problems affecting project samples; and

- Coordinating with the project and laboratory management to implement corrective actions as required by the QAPP and internal laboratory QAM.

The principal contract laboratory QAM will be incorporated in this QAPP by reference when the laboratory subcontract is executed. Microseeps Laboratories, Inc. (Microseeps), will provide analytical support for the monitored natural attenuation (MNA) dissolved gas and biogeochemical parameters, and Air Toxics, Ltd. (Air Toxics), will provide analysis of air samples as required. The QAMs for these laboratories shall be retained by the ARCADIS Project Chemist. Ozark Underground Laboratories will provide dye tracer analyses associated with remedial system performance assessments.

Other Subcontractors

Other subcontractors will provide services under the direct supervision or direction of the ARCADIS Project Manager or Task Managers or appropriate designated staff. The drilling, surveying, geotechnical laboratory, and other subcontractors are responsible for performance in accordance with the individual subcontracts and applicable portions of the QAPP and Quality Control Plan (QCP) as defined in each subcontract package. Subcontractors are responsible for rapidly notifying the Site Manager regarding nonconformance with the QAPP or QA/QC problems encountered or observed. Subcontractors must coordinate with the Site Managers to implement corrective actions.

**1.2 Problem Definition/Background**

Detailed project information is included in the PMP, the SAP, and the PBA contract or, if necessary, will be included in the appropriate work plans that define a particular SOW to be completed.

**1.3 Project Description**

The field sampling program and field procedures are described in detail in the SAP, and therefore are not repeated in this QAPP. Additional work plans will be prepared as sampling and analytical requirements are defined. Any additional specific QA requirements will be included in specific plans.

The purpose of this QAPP is to provide field, laboratory, and quality assessment personnel with general instructions regarding activities to be performed before, during, and after each sampling effort to ensure generation of usable data. This QAPP

contains general and specific details regarding field sampling, laboratory analytical methods, and data management that apply to the Site. The collection and documentation of data will be performed as described in the following sections to ensure the quality of the collected data.

**1.4 Data Quality Objectives for Measurement Data**

Table A-2 presents the overall project Data Quality Objectives (DQOs). Additional analytical performance and data review DQOs include precision, accuracy, representativeness, completeness, and comparability (PARCC). These criteria represent qualitative and quantitative objectives that ensure the data are generated that are scientifically valid and usable for the intended purpose. As discussed in *USEPA Guidance on Systematic Planning Using the Data Quality Objectives Process; USEPA QA/G-4*, dated February 2006 and *USEPA Requirements for Quality Assurance Project Plans; USEPA QA/G-5*, dated March 2001, the DQOs are dependent on the intended uses of the data and are based on the premise that the ultimate use(s) of a particular data set should dictate the quantity and quality of these data. These DQOs in conjunction with criteria set forth in this QAPP will be used as a guide for data quality assessment by establishing analytical protocols and documentation requirements that will allow the analytical data to be collected, analyzed, and verified/validated in a consistent manner.

1.4.1 Precision, Accuracy, Representativeness, Completeness, and Comparability

The basis for assessing the elements of data quality is discussed in the following subsections. The contract analytical laboratory precision and accuracy QC limits will be incorporated into the QAPP and updated as appropriate.

**Precision** measures the reproducibility of repetitive measurements. It is strictly defined as the degree of mutual agreement among independent measurements as the result of repeated application of the same process under similar conditions.

Analytical precision is a measurement of the variability associated with duplicate (two) or replicate (more than two) analyses of the same sample in the laboratory and is determined by analysis of laboratory control samples/laboratory control sample duplicate (LCS/LCSD), matrix spikes/matrix spikes duplicate (MS/MSD), laboratory duplicates and field duplicates. If the recoveries of analytes in the LCS are comparable within established control limits, then laboratory precision is within limits. The contract laboratory control limits will be utilized to evaluate analytical precision.

Total precision is a measurement of the variability associated with the entire sampling and analysis process. It is determined by analysis of duplicate or replicate field samples and measures variability introduced by both the laboratory and field operations. Field duplicate samples and matrix duplicate spike samples are analyzed to assess field and analytical precision. Field duplicate samples will be collected at a minimum 5 percent frequency.

Duplicate results are assessed using the relative percent difference (RPD) between duplicate measurements. The formulas for the calculation of precision are provided in Table A-3 as RPD (used for two measurements), average RPD, relative standard deviation (RSD), and pooled RSD (used for more than two measurements). The proposed precision objective for soil and sediment field duplicates is an RPD of 70 percent and the precision objective for groundwater and surface water field duplicates is an RPD of 40 percent for all parameters analyzed.

**Accuracy** is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systematic error. It reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. Analytical accuracy is measured by determining the percent recovery (%R) of known target analyses that are spiked into a LCS to a control limit. For organic parameters analyzed by GC and GC/MS surrogate compound recoveries are also used to assess accuracy and method performance for each sample analyzed.

Both accuracy and precision are calculated for preparation or analytical batches, and the associated sample results are interpreted by considering these specific measurements. The formula for the calculation of accuracy is included in Table A-3 as %R from pure and sample matrices. Laboratory precision and accuracy control limits will be incorporated by reference into this QAPP upon selection of the contract laboratory.

**Representativeness** is achieved through use of the standard field, sampling, and analytical procedures. Representativeness is also determined or influenced by appropriate program design, with consideration of proper sampling locations and collection techniques.

**Completeness** is calculated for the aggregation of data for each analyte measured for any particular sampling event or other defined set of samples. The number of valid results divided by the number of possible individual analyte results, expressed as a percentage, determines the completeness of the data set. For completeness



requirements, valid results are all results not qualified with an "R" flag/reject or unusable data. For any instances of samples that could not be analyzed for any reason (e.g., holding time violations in which re-sampling and analysis were not possible, or samples spilled or broken), the numerator of this calculation becomes the number of valid results minus the number of possible results not reported.

The formula for calculation of completeness is presented, as follows:

$$\% \text{ completeness} = \frac{\text{number of valid results}}{\text{number of possible results}}$$

The completeness objective for sample matrices collected during these investigations will be at least 90 percent.

**Comparability** is the confidence with which one data set can be compared to another data set. The objective for this aspect of the QA/QC program is to produce data with the greatest possible degree of comparability. The number of matrices that are sampled and the range of field conditions encountered are considered in determining comparability. Comparability is achieved using standard methods for sampling and analysis, reporting data in standard units, and using standard and comprehensive reporting formats. Complete field documentation using standardized data collection forms shall support the assessment of comparability. Historical comparability is achieved through consistent use of methods throughout the project. EPA approved methods will be utilized for analytical chemistry determinations as available.

#### 1.4.2 Objectives for Laboratory Analyses

The laboratory DQOs include method performance and reporting consistent with criteria presented in the USEPA document entitled "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods," SW-846, Third Edition (as updated) the laboratory QAM and SOPs, this QAPP, and other applicable performance requirements published in EPA method guidance.

#### 1.4.3 Objectives for Field Measurements

Field measurement DQOs for precision, accuracy, and completeness criteria presented in Table A-4 are consistent with the industry acceptance criteria.

Trip blanks (TBs) will accompany samples to be analyzed for volatile organic compounds (VOCs). Field duplicate samples will be collected at a frequency of 5 percent for each analysis and each sample matrix collected. Equipment blanks (EBs) and additional sample volume for MS analysis will be collected at a minimum five percent frequency for each analysis. Temperature blanks will be placed in each sample cooler and the temperature recorded upon laboratory receipt. Frequency for collection of field QC samples is presented in Table A-4.

The field sampling team will also be responsible for collecting additional sample quantities at a frequency of five percent for MS and MSD analyses.

### **1.5 Specialized Training and Certification**

Training shall be provided to all project personnel to ensure compliance with the site specific Health and Safety Plan and technical competence in performing the work effort. Documentation of this training shall be maintained in the records of the contracted organizations. ARCADIS employees who participate in the types of activities defined in the Occupational Safety and Health Administration (OSHA) requirements under Code of Federal Regulations (CFR) 1910.120 complete the 40-hour health and safety training program. Each employee must successfully complete a minimum of 8 hours of refresher training annually to maintain the certification. Employee training records are maintained in the ARCADIS office where the employee resides. Any special requirements for personal possession of certification cards will be adhered to as program appropriate.

All analytical chemistry laboratories performing analyses will be required to maintain current NELAP accreditation for the parameters of interest if accreditation is available. Accreditation certificates, audit reports, and performance testing (PT) data will be reviewed by the Project Chemist, as appropriate to ensure that laboratory capabilities meet or exceed project requirements. Laboratories must also maintain internal training records for technical staff in accordance with standard laboratory practices and certification requirements. The laboratory will provide the applicable training records, including Initial Demonstration of Competence documentation, for review, as deemed necessary, by the ARCADIS Project Chemist.

All subcontractors and their employees will have current and applicable performance and certifications required to perform the assigned SOW. Subcontract agreements will include the specific training and certification requirements and applicable records will be reviewed as appropriate. Subcontractor training and certification documentation will be maintained at the subcontractors' offices.

## **1.6 Documents and Records**

The primary documentation for the project includes field records, analytical data packages, and summary reports. This section describes the level of documentation and record keeping for the central project file that will be maintained by the ARCADIS office in Raleigh, North Carolina.

### 1.6.1 Document Control

All planning documents will be clearly identified by the document title, revision number, date, and page number in the header of each document page. Planning documents currently in use will be reviewed on an annual basis and any necessary revisions or updates will be amended and distributed to each participating party. Documents prepared in support of the PBA contract will be prepared and distributed as required.

Original field records and laboratory analytical data will be maintained in the ARCADIS Raleigh, NC office.

### 1.6.2 Field Documentation

Field documentation will include field logbook or daily logs, field sampling logs, instrument calibration logs, and data forms as necessary to provide sufficient information to allow review of field conditions, performance, and sample collection, to evaluate potential impacts to sample and data integrity, and to enable participants to reconstruct events that occurred during the field operations when necessary. Daily logs will also document any deviations from the SAP, QAPP, site or task specific work plans or other applicable planning documents and describe the rationale for the changes.

All entries will be made in waterproof ink, and the time of the entry will be recorded. The top of each page of the field documents will contain the date that the entries on that page were recorded. No pages will be removed from a bound logbook for any reason. Additional details on field documentation are provided in the SAP.

All documentation associated with field activities will be retained in the project file in accordance with the document retention policy stated in this QAPP and the QCP as applicable to the document type.

#### 1.6.3.1 Corrections to Field Documentation

As with all bound data logbooks, no pages will be removed for any reason. If corrections are necessary on any field documentation, they will be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside it. The correction must be initialed and dated. As necessary, corrected errors will include a footnote explaining the correction.

#### 1.6.3.2 Photographs

Photographs will be taken as directed by the Site Manager. Documentation by a photograph will ensure the validity as a visual representation of an existing situation. A log will be developed to track the media that the photos are filed on (e.g., compact disc, floppy disk). Photographs, as developed or transferred to electronic media, shall be compiled into a photograph log and information recorded in field notebooks added to the log with appropriate photographs.

#### 1.6.3 Laboratory Data Reporting/Record Retention

Analytical data reports for all samples will be prepared by the laboratory as a Level II Data Package. The Level II Data Packages will include a fully-executed COC Record, sample receipt checklist, cross-reference table of field samples with laboratory sample number, preparation and analytical batch numbers, analytical results, collection and analysis dates and times, reporting limits (RLs), dilution factors, surrogate recoveries, method blank data. Summary QC data will be provided for LCS, MS accuracy and precision, laboratory replicate precision, laboratory control limits. The analytical report shall include the method detection limits (MDL), and the quantitative RLs. Appropriate data flags identifying any QC result reported outside control limits and an explanation of all data flags applied by the laboratory. The case narrative will present an explanation of all QC results reported outside control limits and samples analyzed at dilutions where all results are non-detect.

Where detailed data validation is required, analytical data reports will include the following items in addition to the elements of the Level II data package, sample aliquots, final extract volumes, run logs, quantitation reports, ion spectra, chromatograms, batch identification report clearly linking all QC results to field sample results, and instrument calibration and tuning information. The laboratory report will include copies of any nonconformance or corrective action forms associated with data generation. This level of analytical report components will be defined as a Level IV data package.

The RLs will be corrected for percent moisture (soils only) and all dilution factors. Any compounds found less than the RL, but greater than the MDL will be reported and qualified with a “J” flag as estimated. Soils will be reported on a dry weight basis.

The laboratory will provide an electronic data deliverable (EDD) that matches all data reported on the hard copy analytical report. Electronic data report requirements are described in Section 2.12.

The laboratory is required to retain all information associated with the analytical operations for samples associated with this project for a minimum of 6 years.

#### 1.6.4 Electronic Data Retention

Electronic data and media retention policies will correlate with hard copy data retention at the laboratories as well as other points of electronic data generation. Additionally, electronic data will be subject to back-up routines that will enable recovery of data that may become corrupted or lost due to instrument, computer, and/or power failures. Electronic media will be stored in climate-controlled areas to minimize potential for degradation. Storage areas will be access limited.

## **2. Data Generation and Acquisition Elements**

### **2.1 Sampling Process Design**

The sampling process design will be presented in future work plans and in the SAP.

### **2.2 Sampling Methods**

The field sampling procedures, sampling methods and equipment are also discussed in detail in the associated SAP. Calibration will be documented on a Field Equipment Calibration form, where each instrumented calibrated is identified along with the date, time, calibration reading, and field staff initials. The field sampling methods are referenced in the following section.

### **2.3 Sample Handling and Custody**

Procedures to insure the custody and integrity of the samples begin at the time of sampling and continue through transport, sample receipt, preparation, analysis and storage, data generation and reporting, and sample disposal. Records concerning the custody and condition of the samples are maintained in field and laboratory records. All samples will be uniquely identified, labeled, and documented in the field at the time of collection and recorded on the Chain-of-Custody (COC) form. Samples collected for laboratory QC will be clearly identified on the COC (e.g. MSs). Details for completing the COC are included in Section 4.2.17 of the SAP. Field custody procedures are presented in Section 4.3 of the SAP.

Samples collected in the field will be transported to the laboratory or field testing site as expeditiously as possible. Samples requiring preservation at 4 degrees +/- 2 degrees Celsius (°C) will be packed in ice or chemical refrigerant to keep them cool during collection and transportation. Any concerns and/or deviations will be reported to the contractor immediately.

Once the samples reach the laboratory, they will be checked against information on the COC form for anomalies. The condition, temperature, and appropriate preservation of the samples will be recorded by the laboratory on a sample receipt checklist, and will be made part of the permanent project custody records. The occurrence of any anomalies in the received samples and their resolution shall be documented in laboratory records. All sample information shall then be entered into the laboratory tracking and data management system. The laboratory PM shall review the log-in for accuracy and compliance with project requirements. Procedures ensuring internal

laboratory COC shall also be implemented and documented by the laboratory. Specific instructions concerning the analysis specified for each sample shall be communicated to the analysts. Analytical batches shall be created, and laboratory QC samples shall be introduced into each batch.

While in the laboratory, samples shall be stored in limited access, temperature controlled areas. Refrigerators, coolers and freezers used for sample storage will be monitored for temperature 7 days a week. Acceptance criteria for the temperatures of the refrigerators and coolers are 4°C to 2°C. Acceptance criteria for the temperatures of the freezers shall be less than 0°C. All of the cold storage areas shall be monitored by thermometers that have been calibrated with a NIST traceable thermometer. As indicated by the findings of the calibration, correction factors shall be applied to each thermometer. Records that include acceptance criteria shall be maintained. Samples shall be stored separately from standards. Samples shall be stored after analysis until disposed of in accordance with applicable local, state, and federal regulations. Disposal records shall be maintained by the laboratory. SOPs describing sample control, custody, and disposal shall be maintained by the laboratory.

#### **2.4 Sample Containers**

The volumes and containers required for the sampling activities are listed in Table A-5. The laboratory will provide new, pre-cleaned sample containers. The laboratory shall use an approved specialty container supplier that prepares the containers in accordance with USEPA bottle preparation procedures. TBs will be transported to the site inside the same cooler/box as the VOC vials.

Sample container lids will not be mixed. All sample lids must stay with the original containers as provided by the supplier. Bottle lids (with any associated bottle) exhibiting cracks, splits, or chips shall be appropriately discarded.

#### **2.5 Sample Preservation and Holding Times**

New and pre-preserved (as appropriate) containers obtained from the laboratory shall be used for all samples requiring preservation. Chemicals used by the laboratory for preservation will be reagent-grade chemicals. The laboratory shall maintain traceability records for all preservatives in the event of potential contamination of samples. The laboratory must ensure that preservatives used in containers supplied will not expire within the anticipated time of sample collection completion. Each bottle received from the laboratory must be clearly labeled with the type of chemical preservative in the bottle and the test parameters that will be determined from the sample collected in the

container. Sample containers will not be stored at the site for longer than 30 days. Bottle orders and any additional preservative requirements will be submitted to the laboratory 5 working days prior to commencement of field operations to allow supplies of clean, fresh containers and preservatives to be shipped to the facility.

Sample preservation will be verified on receipt at the laboratory with the exception of aqueous VOC samples. VOC sample preservation shall be verified prior to analysis. The preservation or pH check will be recorded on the sample receipt form or other appropriate logbook. If the samples are improperly preserved, a corrective action form will be submitted to the laboratory project manager for follow-up action. The laboratory will notify the ARCADIS Site Manager or Project Chemist to implement corrective actions in the field to ensure sufficient preservative is added at the time of sample collection.

Sample holding times will be based on published USEPA guidance and will be calculated for the date and time of collection. A list of preservatives and holding times for each type of analysis are presented in Table A-5. Additional preservation requirements and holding times for non-target analyses are listed in 40 CFR Part 136. Preservatives and holding times not listed in Table A-5 applicable to a specific task will be listed in the applicable SAP or work plan.

## **2.6 Analytical Methods**

The primary analytical methods anticipated to be utilized for samples collected Table A-5. All methods will be USEPA approved/published. Additional USEPA approved methods, which may be utilized, are published in references listed below. Specific performance criteria, including QA protocols, for each analytical method, are documented in the published methods, laboratory SOPs, and the laboratory QAM. The QAM for each analytical laboratory performing work be reviewed as part of the procurement process and laboratory SOPs will be examined during onsite audits or as necessary. QAM is a generic term for the laboratory QA document, which describes the laboratory program to ensure data of known quality are generated. The contracted laboratory QAM will be incorporated by reference into this QAPP upon execution of the contract for analytical support.

### 2.6.1 Standard Laboratory Analytical Procedures

All standard analytical methods performed will be USEPA approved. The analytical methods are referenced in:



- *Test Methods for Evaluating Solid Waste, Physical Chemical Methods*, 3rd edition, SW-846, 1997.
- 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act*, and
- *Methods for Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, Revised March 1983.

The laboratory will perform all methods in accordance with the appropriate USEPA-approved methods and the laboratory specific SOPs for compliance with this QAPP and other project-specific requirements. The laboratory shall have method specific SOPs for all methods performed. The SOPs will detail method set-up, calibration, performance, and reporting criteria in accordance with SOP preparation under NELAP guidance and requirements. Method performance will be in strict compliance with the SOP and referenced method. Laboratory SOPs will include any modifications to the published method and will indicate actual performance protocols performed by the laboratory. The laboratory will update SOPs in accordance with NELAP requirements. The ARCADIS Project Chemist must approve any changes to the method performance acceptance criteria

The laboratory must notify the Project Chemist of any updated or revised RLs or performance control criteria prior to initiation of field operations. Required sample or extract dilutions to complete the analyses within method performance criteria may impact RLs. All required sample dilutions will be noted in the analytical report and explained in the case narrative. The laboratory shall make every effort to report all compounds/analytes at the lowest technically achievable limit to meet the risk screening standard requirements. The changes/elevations in limits will be evaluated to determine potential impact on DQOs. Any additional methods required for future projects will be specified in the SAP or Work Plan.

## 2.7 Elements of Quality Control

This section presents QC requirements relevant to analysis of environmental samples that shall be followed. The purpose of this QC program is to produce data of known quality that satisfy the project objectives and that meet or exceed the requirements of the standard methods of analysis. This program provides a mechanism for ongoing control and evaluation of data quality measurements through the use of QC materials.

Laboratory QC samples (e.g., blanks and LCSs) shall be included in the preparation batch with the field samples. Preparation batch is a number of samples (not to exceed 20 samples) similar in composition (matrix) and that are extracted or digested at the same time and with the same lot of reagents. MS and MSD samples do not count as environmental samples. The term analytical batch also extends to cover samples that do not need separate extraction or digestion (e.g., VOCs analysis by purge and trap). The identity of each preparation batch will be unambiguously reported with the analyses so that a reviewer can identify the QC samples and the associated environmental samples. The type of QC samples and the frequency of use of these samples are discussed in the following section. The laboratory will provide spike results from site-specific field samples of groundwater and soil, not from another client or site. Additional QC samples may be added to those required by the method to ensure accurate and precise data. The frequency of analysis of laboratory QC samples is presented in Table A-6.

#### 2.7.1 Laboratory Control Samples

The LCS is analyte free water (aqueous samples) or clean sand (soil/sediment matrix) spiked with known concentrations of specific analytes. The LCS shall be carried through the complete sample preparation and analysis procedure. The LCS is used to evaluate each preparation batch and to determine if the method is in statistical control. One LCS will be included with every analytical batch. All target analytes will be spiked in the LCS.

In accordance with method criteria and laboratory SOPs, an LCS analyte outside the recovery acceptance limit mandates corrective action unless the out of control scenario does not impact data usability. Where corrective action is required and after the system problems have been resolved with system control re-established, all samples in the analytical batch will be reanalyzed for the out of control analyte(s). When an analyte in an LCS exceeds the upper or lower control limit and no corrective action is performed, the appropriate validation flag, as described in the data validation section, will be applied to all affected results. LCS results will be compared to the laboratory LCS control limits.

#### 2.7.2 Matrix Spike and Matrix Spike Duplicate

An MS is an aliquot of sample spiked with known concentrations of specific compounds. The spiking occurs prior to sample preparation and analysis. The laboratory will provide the results at a minimum of one MS and one MSD sample for every 20 environmental samples. The MS and MSD samples will be designated on the

chain of custody (COC) form. Additional sample quantities will be collected so that MS and MSD analyses can be performed on the environmental samples collected at the Site. The full list of target analytes will be spiked into the samples utilized for the MS and MSD.

An MS is used to document the bias of a method in a given sample matrix. MS and MSD results are used to evaluate the matrix effect, not to control the analytical process. The recoveries of analytes in the MS/MSD will be compared to the laboratory QC acceptance limits 2. If the recoveries for the MS or the MSD are outside the QC acceptance limits, sample data will be evaluated by the Project Chemist to determine extent of impact.

### 2.7.3 Surrogates

Surrogates are organic compounds that are similar to the target analyte(s) in chemical composition and behavior in the analytical process, but that are not normally found in environmental samples. Surrogates are used to evaluate accuracy, method performance, and extraction efficiency. Surrogates are added to samples, controls, and blanks, in accordance with the method requirements.

When the recovery of a surrogate is outside the acceptance limits, corrective action steps must be taken. After the system problems have been resolved and system control has been re-established, the sample is re-prepared and re-analyzed. Re-preparation and re-analysis is not required if the laboratory is able to provide objective evidence with the case narrative of the final report documenting matrix interference (that is, unresolved co-eluting peaks on reconstructed ion chromatograms, or observations about visibly oily samples). If corrective actions are not performed or are ineffective, the appropriate validation flags are applied to the sample results. Re-extractions will be done within the holding times. Laboratory surrogate recovery limits will be included in each analytical report.

### 2.7.4 Internal Standards

Internal Standards (ISs) are measured amounts of certain compounds added after preparation or extraction of a sample. They are used in an IS calibration method to correct sample results affected by column injection losses, purging losses, or viscosity effects. ISs are added to samples, controls, and blanks, in accordance with the method requirements.

When the IS results are outside of the acceptance limits, corrective actions shall be performed. After the system problems have been resolved and system control has been re-established, samples analyzed while the system was malfunctioning are re-analyzed. If corrective actions are not performed, the appropriate validation flag, as described in the data validation section of this QAPP.

#### 2.7.5 Retention Windows

Retention time windows are used in GC analysis for qualitative identification of analytes. They are calculated from replicate analyses of a standard on multiple days. The procedure and calculation method are given in SW-846 Method 8000A.

When the retention time is outside of the acceptance limits, corrective actions will be performed. After the system problems have been resolved and system control has been re-established, samples analyzed since the last acceptable retention time check are re-analyzed. If corrective actions are not performed, the appropriate validation flag, as described in the validation section, will be applied to the sample results.

#### 2.7.6 Method Blank

A method blank is an analyte free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank will be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process. A method blank will be included in every analytical batch and representative for each sample matrix.

The presence of analytes in a method blank at concentrations greater than the MDL or RL for common laboratory contaminants indicates a need for corrective action. Corrective actions will be performed to eliminate the source of contamination prior to proceeding with analysis. After the source of contamination has been eliminated, all samples in the analytical batch will be re-prepared and re-analyzed. No analytical data will be corrected for the presence of analytes in blanks. When an analyte is detected in the method blank, but not in the associated samples, no corrective action is necessary. When an analyte is detected in the blank and in the associated samples and corrective actions are not performed, the appropriate validation flag, as described in the data validation section, will be applied to the sample results.

#### 2.7.7 Equipment Blank

An EB is a sample of organic free water (for VOCs analyses) poured into, or over, or pumped through the sampling device, collected in the sample bottle, and transported to the laboratory for analysis. EBs are used to assess the effectiveness of equipment decontamination procedures.

EBs are collected immediately after the equipment has been decontaminated. The frequency requirements for collecting EBs are a minimum of five percent of the environmental samples. The blank shall be analyzed for all laboratory analyses requested for the environmental samples collected at the Site. When an analyte is detected in the EB the appropriate validation flag, as described in the data validation section, shall be applied to all sample results from samples collected. It should be noted that the laboratory will supply the organic free water. A sample aliquot of the organic free water will be submitted for the analysis of all parameters of interest.

#### 2.7.8 Trip Blank

The TB consists of a VOC sample vial filled in the laboratory with ASTM Type II reagent grade water, transported to the sampling site, handled like an environmental sample and returned to the laboratory for analysis. TBs are not opened in the field. TBs are prepared only when VOC samples are taken and are analyzed only for VOC analytes. TBs are used to assess the potential introduction of contaminants from sample containers or during the transportation and storage procedures.

When an analyte is detected in the TB the appropriate validation flag as described in the validation section, shall be applied to all sample results from samples in the cooler with the affected TB. One TB of either soil or liquid matrix shall accompany each cooler of samples submitted to the laboratory for VOC analysis.

#### 2.7.9 Field Duplicates

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical recovery techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field such that they cannot be identified (blind duplicate) as duplicate samples by laboratory personnel performing the analysis. Specific locations are designated for collection of field duplicate samples prior to the beginning of sample collection.

Field duplicate sample results are used to assess precision, including variability associated with both the laboratory analysis and the sample collection process. Field duplicates will be collected at a frequency of 5 percent of samples collected. Analytical results for field duplicate will be assessed during the data validation process. Specific locations will be designated for collection of field duplicate samples prior to the beginning of sample collection. Control limits for evaluation of precision for field duplicates will be 40 percent for aqueous samples and 70 percent for soil/sediment samples.

## **2.8 Instrument/Equipment Testing, Inspection, and Maintenance**

Field equipment testing (calibration) and inspection will be completed daily and documented on the daily calibration form. Field equipment maintenance will be completed on an as needed basis.

Maintenance responsibilities for laboratory instruments are assumed by the respective Laboratory Facility Manager. The managers then establish maintenance procedures and schedules for each major equipment item. This responsibility may be delegated to field or laboratory personnel, although the managers retain responsibility for ensuring adherence to the prescribed protocols. All field instrument/equipment will be inspected prior to the project initiation.

### **2.8.1 Maintenance Schedules**

The effectiveness of any maintenance program depends to a large extent on adherence to specific maintenance schedules for each major equipment item. Other maintenance activities are conducted as needed. Manufacturers' recommendations provide the primary basis for the established maintenance schedules, and manufacturers' service contracts provide the primary maintenance for many major instruments.

### **2.8.2 Spare Parts**

Along with a schedule for maintenance activities, an adequate inventory of spare parts is required to minimize equipment downtime. The inventory includes those parts (and supplies) that are subject to frequent failure, have limited useful lifetimes, or cannot be obtained in a timely manner should failure occur.

Field sampling task leaders and the respective laboratory managers are responsible for maintaining an adequate inventory of spare parts. In addition to spare parts and

supply inventories, the contractor shall maintain an in house source of backup equipment and instrumentation.

### **2.9 Instrument/Equipment Calibration and Frequency**

Field equipment will be calibrated at the frequency recommended by the manufacturer's specifications and/or described by the analytical method.

Analytical instruments will be calibrated in accordance with the procedure specified in the analytical methods. All analytes that are reported shall be present in the initial and continuing calibrations, and these calibrations must meet the acceptance criteria specified in the analytical method. Records of standard preparation and instrument calibration will be maintained by the laboratory. Records shall unambiguously trace the preparation of standards and their use in calibration and quantitation of sample results. Instrument calibration will be checked using all of the analytes. All calibration criteria will satisfy SW-846 requirements at a minimum. The initial calibration will be checked at the frequency specified in the methods using materials prepared independently of the calibration standards.

### **2.10 Inspection/Acceptance of Supplies and Consumables**

The laboratory will inspect supplies and consumables prior to their use in analysis. The materials description in the methods of analysis shall be used as a guideline for establishing the acceptance criteria for these materials. Introduction of interfering compounds into the analytical process will be monitored by analysis of method blanks. Purity and efficiency of reagents shall be monitored by analysis of LCSs. An inventory and storage system for these materials will assure use before manufacturers' expiration dates and storage under safe and chemically compatible conditions.

Sample containers will be laboratory supplied. All containers will be certified clean and the certificates will be retained by the laboratory. Containers are stored in clean areas to prevent exposure to fuels, solvents, and other contaminants.

### **2.11 Non-Direct Measurements**

Non-direct measurement data will be entered into the project file. Data will be entered from forms, tables and data packages as presented in the documents/reports. All data entry will be peer reviewed prior to finalization.

## 2.12 Data Management

The data reduction, review, reporting, and validation procedures described in this section will ensure that (1) complete documentation is maintained, (2) transcription and data reduction errors are minimized, (3) the data are reviewed and documented, and (4) the reported results are qualified, as necessary. Laboratory data reduction and verification procedures are required to ensure that the overall objectives of analysis and reporting meet method and project specifications.

### 2.12.1 Electronic Data Management

Data management protocols track samples and results from work plan implementation to the final report. The field data include approved work planning tables, labels, field sampling forms, COC, and logbooks. Geographic coordinates will be generated for all sample locations in electronic format. The Field Operations Leader or designee will review all field data for accuracy. Field data will be collected using portable data acquisition (PDA) devices or manually entered into a database or spreadsheet.

The laboratory will provide an EDD for all analytical reports. The EDD will be in the format required for the project environmental database and include, at a minimum, the following information:

- Laboratory information – Laboratory name, client name, laboratory work order, client project number, and date received;
- Sample information – Laboratory project number, sample identification, laboratory sample identification, date sampled, time sampled, matrix;
- Analytical Data – Sample Delivery Group (SDG), test code, test name, analyte, analyte type, sample type, CAS number, date and time prepared, date and time analyzed, preparation batch identification, analytical batch identification, result, laboratory qualifier, MDL, RL, and dilution factor; and
- QC Data – All fields provided for analytical data will also be populated for method blanks, surrogates for all samples, LCS, MS/MSD, and laboratory replicates. QC sample data will also include QC Sample Type, recoveries, RPDs, control limits, and any associated qualifiers. Calibration data are not required.



The Project Chemist, Data Manager, or designee will review approximately 5 percent of electronic laboratory and field data to verify the results against the hard copy and check for transcription errors. A greater than 15 percent discrepancy rate in two consecutive datasets will require additional review and verification. Electronic data will match the hard copy data for all results. Significant figures and rounding routines may differ slightly based on the program utilized to generate hard copy reports and electronic files, but may not differ to the point of impacting data integrity or usability. The results will be transferred to a centralized database. The ARCADIS Data Manager or data validator will add any data qualifiers. The Data Manager will generate data tables for the project team as required. The Project Chemist and Site Manager will resolve discrepancies between the planned activities and actual data collected and document the findings in the data report. The central database will be stored in a secure area with access limited to data management specialists designated by the Project Manager. The central database will be electronically linked to a geographic information system/computer-aided design (GIS/CAD) systems, risk assessment programs, and other final data user models and statistical programs. Data users may enter additional electronic data such as risk-based criteria for comparison of the results. This data will be stored in separate tables in the database and linked to the actual results. Any data from outside sources will include a description of the data, a reference to the source, and the date updated. The outside data will be checked prior to use in order to verify that the most current values are used.

#### 2.12.2 Field Data Review

All field data and the required forms will be reviewed by the author prior to submittal to the Site Manager or designee for review. Any field forms or documentation requiring amendments and/or corrections will be clearly documented on the corresponding day's field form or logs and initialed. Corrections will be made by a single line, followed by initials. The Site Manager or designee will verify the field review then submit the documents for data entry and/or retention in the project file.

#### 2.12.3 Laboratory Data Review

The analytical laboratory will perform a series of internal reviews/audits prior to submittal of the final data package.

#### 2.12.3.1 Laboratory Internal Review

In each laboratory analytical section, the analyst performing the tests shall review 100 percent of the data. After the analyst's review has been completed, 100 percent of the data shall be reviewed independently by a senior analyst or by the supervisor of the respective analytical section using the same criteria.

Data qualifiers shall be added by the laboratory supervisor of the respective analytical section, after the first and second level of laboratory data reviews have been performed. Analytical batch comments shall be added to the first page/Case Narrative of the data report packages to explain any non-conformance or other issues. When data are qualified, the laboratory supervisor shall apply a final qualifier to any data that have been affected by multiple qualifiers. This final qualifier shall reflect the most severe qualifier that was applied to the data, that is, all data will have only one data qualifying flag associate with it.

The laboratory QA section shall review 10 percent of the completed data packages, and the laboratory project manager shall perform a sanity check review on all the completed data packages. The laboratory shall apply appropriate data qualifying flags to any impacted field sample including field QC samples.

The laboratory will submit the analytical data package and EDD to ARCADIS via email and on compact disk. The analytical report will be complete and signed and submitted in portable document format (pdf). The EDD shall be prepared in accordance with the protocols defined by ARCADIS for input into the electronic data management system.

#### 2.12.3.2 Analytical Report and Data Management

Upon submittal of the data package (report and EDD), the data will be logged in by the data manager as received and the EDD loaded into the project database. The Data Manager will forward the analytical data to the Project Chemist or designee for review and validation in accordance with Section 3 of this QAPP. The data package, at a minimum, will be reviewed to assure completeness and that the EDD matches the report. Once the analytical data package is determined to be final and complete and as validated, the data with any applicable data qualifiers will be added to the project database. Any data validation reports will be submitted to the Data Manager archiving with the analytical report. The data will then be available for distribution to the project team. Upon completion, the analytical data package, EDD, and validation report will be submitted to the project file.

#### 2.12.4 Archiving

The laboratory shall maintain electronic and hardcopy records sufficient to re-create each analytical event conducted for a minimum of 6 years. Data will be accessible within 7 working days upon request. ARCADIS will retain the project files for at least 6 years.

### **3. Assessment and Oversight**

#### **3.1 Assessment and Response Actions**

Assessment activities include management and assessments, technical systems audits, and performance evaluations. Management assessments include routinely scheduled meetings and conference calls to evaluate staff utilization. Assignment of qualified personnel to projects, maintenance of schedules and budgets, and quality of project deliverables are verified as part of these assessments. Performance evaluations are used to ensure that trained and qualified staff is utilized for the project. Technical assessment activities include peer review, data quality reviews, and technical system audits (i.e., laboratory and field). Technical systems audits include review and evaluation of field and laboratory performance to assess the implementation of quality programs and directives specifically for the project. Procedures for assessment and audit of data quality are described in Section 4 of this QAPP. Procedures for peer review and technical assessments are summarized briefly below. Both the overall and direct technical assessment activities may result in the need for corrective action. The procedure for corrective action response is summarized below.

##### **3.1.1 Peer Review**

All project deliverables including work plans, SAPs, draft and final reports, and technical memoranda will be peer reviewed by ARCADIS. The peer review process provides for a critical evaluation of the deliverable by an individual or team to determine whether the deliverable will meet the established criteria, DQOs, technical standards, and contractual obligations. The PM or APM will assign peer reviewers, depending on the nature and complexity of the project, when the publication schedule is established. The PM will be responsible for ensuring all peer reviewers participate in the review process and approve all final deliverables. The QA Manager is responsible for verifying that project documents were generated in accordance with the project requirements.

#### **3.2 Corrective Action**

Corrective actions will be implemented as necessary to insure that project activities are performed and data are generated in accordance with the project quality documents. In conjunction with the QA Manager and Project Chemist, the Project Manager and Site Managers are responsible for initiating and implementing corrective action in the field and in the office. The laboratory project manager, in conjunction with the laboratory technical staff and QA manager, is responsible for implementing corrective action in

the laboratory. It is the combined responsibility to insure that all analytical procedures are followed as specified and that the data generated meet the prescribed acceptance criteria. Specific corrective actions necessary will be clearly documented in the logbooks or analytical reports.

In all cases in which corrective actions of field procedures are required, a written report describing the nature of the problem, an evaluation of the cause, if known, and the action taken will be prepared by the ARCADIS Site Manager or the ARCADIS QAO. The report will be distributed to the ARCADIS PM, the ARCADIS QAO (if not preparing the report), and the ARCADIS Project Director.

Any corrective actions taken by the contract laboratory will be reported to the ARCADIS Project Chemist. The laboratory will include in each data package a discussion of the problems encountered and corrective actions taken. In addition, the laboratory will maintain a file that documents all corrective actions taken. Reports of corrective actions undertaken during laboratory analysis will be documented, as appropriate, in the Data Validation Report.

### **3.3 Performance and Data Quality Reports**

**Data Validation Reports** - Data validation reports will be completed by the Project Chemist as soon as possible after receipt of the data from the laboratory (i.e., the goal is within 3 weeks). Impacts on the usability of the data will be tracked by adding qualifiers to individual data points as described in Section 4.

Serious analytical problems will be reported immediately to the ARCADIS Project Chemist by the laboratory PM. The ARCADIS Project Chemist will notify the ARCADIS Site Manager and PM to evaluate necessity for resampling or additional sample collection. Time and type of corrective action (if needed) will depend on the severity of the problem and will be related to overall project importance of the data points. Corrective actions may include altering procedures in the field, conducting an audit, resampling or modifying laboratory protocol.

**Project Status Reports** - Project status reports are completed by the PM to document the overall assessment of the project on a monthly basis. The Project Status Report tracks the overall quality of performance relative schedule, budgets and other issues.

#### 4. Data Validation and Usability

The general procedures for data validation and usability are described below. These procedures will be adapted, if necessary, to meet project-specific or activity-specific requirements. Data validation and usability criteria set forth in this QAPP shall be followed unless otherwise amended in the SAPs or Work Plans which will address any modifications to data review criteria not included in this QAPP.

##### 4.1 Data Review, Verification, and Validation

Data generated will be reviewed for conformance with the QAPP, SAP and other applicable work plans, as well as specific project requirements. QA information provided by the laboratory will be evaluated relative to the methods performed, the laboratory SOPs, the laboratory QAM, COC requests, Laboratory Task Orders (LTOs) or similar directive document, and this QAPP, as appropriate. The laboratory will be responsible for internal review of all calibrations, raw data, and calculations. The final analytical report will be reviewed by the laboratory PM and other appropriate laboratory management personnel for compliance with the above listed documents including peer and supervisory review prior to releasing data to ARCADIS.

The ARCADIS Project Chemist and data validation team will perform additional verification and validation of laboratory data to assess the quality and usability of the data generated. Field record review will include instrument calibration logs, sampling logs, COC records, field notes, and field parameter results. The field information assessment will evaluate the potential for impact to sample integrity and chemical data quality.

Chemical analytical data collected will be reviewed and, as appropriate, qualified using guidelines established in the USEPA National Functional Guidelines (NFGs) modified to incorporate method and project-specific requirements. The analytical data review will be performed under either of two levels: Tier 2 or Tier 3. The frequency and components included in each tier are defined in Sections 4.2.2.1 and 4.2.2.2.

##### 4.2 Verification and Validation Methods

The data review scheme for analytical results from the receipt of the analytical data through the validated report is described below. The laboratory is responsible for performing internal data review. The data review by the analytical laboratory will include 100 percent analyst review, 100 percent peer review, and 100 percent review by the laboratory project manager to verify that all project-specific requirements are

met. The laboratory QA Officer will perform a review on 10 percent of the data packages. All levels of laboratory review will be fully documented and available for review if requested or if a laboratory audit is performed.

After receipt from the laboratory, project data will be verified and validated by ARCADIS or experienced contract personnel using the following steps.

#### 4.2.1 Evaluation of Completeness

The Project Chemistry Team will verify the following report content for all data, as appropriate, for the required level of data validation:

- Laboratory information matches the field information;
- Fully executed COC records;
- Report completeness and conformance with COC, LTO, QAPP, Site-Specific Work Plan, and other project requirements;
- Case narrative describing any out-of-control events and summarizing analytical observation or non-conformances;
- Sample receipt information;
- Data report forms;
- QA/QC summary data;
- Initial and continuing calibration information (Tier 3 validation);
- Instrument tuning data (Tier 3 validation);
- Quantitation reports (Tier 3 validation);
- Batch and/or run logs (Tier 3 validation);
- Chromatograms (Tier 3 validation); and
- Documentation of any QC problems.

If the data package is incomplete, the Project Chemist will contact the laboratory, which must provide all missing information within a reasonable timeframe (i.e., 1 to 2 days).

#### 4.2.2 Evaluation of Compliance

The data validation procedures are briefly outlined below:

- Electronic checking routines (Tier I validation) will be utilized to check 100 percent of the field and laboratory QC data (LCS, MS/MSD, blanks) to verify that holding times and acceptance and performance criteria were met and to note any anomalous values. Appropriate data qualifiers (Section 4.3) will be applied to the data where deficiencies are identified;
- All chemistry data generated with the exception of waste characterization, storm water discharge, and remedial system operational monitoring will undergo a Tier 2 validation. Initially, one SDG for each matrix will undergo the detailed Tier 3 validation to ensure laboratory performance;
- All data will be checked to ensure all analytical problems and corrections are reported in the case narrative and that appropriate laboratory qualifiers are added; and
- For any problems identified, review concerns with the laboratory, obtain additional information if necessary, and check all related data to determine the extent of the error. Data qualifiers will be applied to the analytical results to indicate potential limitations on data usability.

The data validation team will follow qualification guidelines in USEPA *Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review*, EPA 540/R-99/008, October 1999; USEPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA 540/R-01/008, July 2002; USEPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA 540/R-04/004, October 2004; Laboratory QAM; Laboratory Methods; and the QAPP with performance criteria based on the published analytical methods and laboratory established control limits.

##### 4.2.2.1 Tier 2 Verification

Tier 2 data verification includes a review of all sample documentation coupled with electronic data screening and manual review. The analytical report will be assessed for completeness and for compliance with COC requests, LTO, SAP, and any additional work plan documents. The electronic data compliance will be conducted utilizing the EQUIS Data Qualification Module (DQM), a module within the Earthsoft suite of environmental data management products. All analytical data will be managed within



the EQUIS Chemistry database via electronic uploading of laboratory data. The DQM is written in Visual Basic for the EQUIS database and checks for the following parameters:

- Blank contamination;
- MS and MSD recoveries;
- MS/MSD RPD;
- LCS and LCSD recoveries;
- LCS/LCSD RPDs (when available);
- Surrogate recoveries;
- Field duplicate RPDs; and
- Holding times.

The DQM routines apply appropriate qualifiers to the data. Select manual reviews will verify appropriate qualifier application. Data Qualifiers will not be manually applied to original hard copy analytical reports. The validation reports will be included with any submittal of analytical reports to agencies or other required party

#### *4.2.2.2 Tier 3 Validation*

One SDG for each matrix collected during the initial phases of the project will undergo a detail data validation which will include the complete Tier 2 assessment and review of the additional following information relative to target compounds/analytes:

- Instrument tune;
- Initial calibration;
- Continuing calibration;
- Interference check standards (metals only);
- Serial dilutions (metals only);
- Quantitation reports;

- Internal standard area (organics only);
- Retention times (as applicable by method);
- Chromatograms (as applicable by method);
- Ion spectra for compound identification;
- Data transcription from instrument report to hard copy report; and
- A subset of calculations will be verified for each sample.

#### 4.2.3 Data Validation Reporting

The Project Chemist will perform the following reporting functions:

- Alert the QA Manager and the Site Manager to any QC problems, obvious anomalous values, or discrepancies between the field and laboratory data and resolve any issues;
- Discuss QC problems in a data validation memo for each laboratory report;
- Review the laboratory EDD and electronic field data, enter the data qualifiers into the database, and oversee preparation of analytical data summary tables. The tables will summarize those samples and analytes for which detectable concentrations were exhibited as well as complete analytical summary tables. The tables will include field QC samples; and
- Prepare a summary of the quality control information at the completion of all field and laboratory efforts for the site. The report will summarize planned versus actual field and laboratory activities and data usability concerns.

The Project or Task Manager provides the final Data Quality Assessment during the technical review of the data report.

#### 4.2.4 Validation Reports

Reports will be generated for each data package or combination of data packages for a single sampling event to record the results of the validation effort. The reports will identify all deficiencies and the impact on the results. The data validator or the Database Manager will append qualifiers generated during the verification/validation

process to the EQUIS database and a summary table of the data qualifiers will be included with the analytical report.

#### 4.3 Reconciliation with Data Usability Requirements

For routine assessments of data quality, ARCADIS will implement the data verification/validation procedures described in Section 4.2 and assign appropriate data qualifiers to indicate limitations on the data. The Project Chemist will be responsible for evaluating precision, accuracy, representativeness, comparability, and completeness of the data using procedures described in Section 1.4. Any deviations from the analytical DQOs for the project will be documented in the data verification/validation memo and provided to the data users for the project. The Project Chemist will work with the final users of the data in performing data quality assessments. The data quality assessment may include some or all the following steps:

- Data that are determined to be incomplete or not usable for the project will be discussed with the project team. If critical data points are involved which impact the ability to complete the project objectives, the data users will report immediately to the Site Manager. The Site Manager will discuss the resolution of the issue with the ARCADIS Project Manager and implement the necessary corrective actions (for example, resampling);
- Data that are non-detect but have RLs elevated due to blank contamination or matrix interference will be compared to screening values (see Appendices B and C). If RLs exceed the screening values, then the results will be handled as appropriate for data use; and
- Data qualified as estimated will be utilized if it is determined that the data are useable for their intended purpose. If an estimated result is close to a screening value, then there is uncertainty in any conclusions as to whether the result exceeds the screening value. The data user must evaluate the potential uncertainty in developing recommendations for the site. If estimated results become critical data points in making final decisions on the site, the Site Manager should evaluate the use of the results and may consider the data point incomplete.

In the validation process there are two types of data validation codes that may be applied, those related to identification (confidence concerning the presence or absence of compounds) and those related to quantitation. Each of the standard data validation codes is defined below:

R	Data point is unusable due to serious deficiencies in analytical and QC criteria. The presence or absence of the analyte/compound cannot be verified
UB	Not detected substantially above the level reported in laboratory or field blanks. For organics - 5X (10X for common lab contaminants) or for metals - 10X. Data point considered non-detect at the value qualified.
U	Analyte/Compound not detected. The associated value indicates the concentration above which the result would be considered a quantitative value.
J	Reported value is considered an approximate concentration.
UJ	Analyte/compound not detected above the quantitation limit. However, the reported quantitation limit is approximate.

The ultimate data assessment process involves comparing analytical results to screening values and background concentrations to determine whether the contamination present is site related (i.e., above background levels) or significant (i.e., above screening values). Additional data assessment may be performed on site-by-site basis. Any additional procedures for data quality assessment will be provided in the OU-Specific Work Plan.

## 5. References

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ARCADIS

**Tables**

<b>Table 1: ARCADIS Technical Team Contact Information</b>		
<b>Name and Contact Information</b>	<b>Telephone/E-Mail</b>	<b>Project Function</b>
<p>Chuck Bertz, P.E.  ARCADIS U.S., Inc.  801 Corporate Center Dr., Suite 300  Raleigh, NC 26707</p>	<p>Phone: 919-854-1282 ext. 187  Cell: 919-607-3498  <a href="mailto:chuck.bertz@arcadis-us.com">chuck.bertz@arcadis-us.com</a></p>	<p>ARCADIS Project Manager</p>
<p>Shelley Gibbons  ARCADIS U.S., Inc.  30 Patewood Dr. ,Suite 155  Greenville, SC 29615</p>	<p>Phone: 864-987-3914  Cell: 864-704-3752  <a href="mailto:shelley.gibbons@arcadis-us.com">shelley.gibbons@arcadis-us.com</a></p>	<p>ARCADIS Associate Project Manager</p>
<p>Kurt Beil  ARCADIS U.S., Inc.  6 Terry Drive Suite 300  Newtown, PA 18940</p>	<p>Phone: 267-685-1800  Cell: 215-680-2310  <a href="mailto:kurt.beil@arcadis-us.com">kurt.beil@arcadis-us.com</a></p>	<p>ARCADIS QA Manager</p>
<p>Scott Bostian, P.E.  ARCADIS U.S., Inc.  801 Corporate Center Dr., Suite 300  Raleigh, NC 26707</p>	<p>Phone: 919-854-1282  Cell: 919-417-2643  <a href="mailto:curtis.bostian@arcadis-us.com">curtis.bostian@arcadis-us.com</a></p>	<p>ARCADIS Site Manager</p>
<p>Andrew Davis  ARCADIS U.S., inc.  30 Patewood Dr. ,Suite 155  Greenville, SC 29615</p>	<p>Phone: 864-987-3917  Cell: 864-561-5833  <a href="mailto:andrew.davis@arcadis-us.com">andrew.davis@arcadis-us.com</a></p>	<p>ARCADIS Site Manager</p>
<p>Jane Kennedy  ARCADIS U.S., Inc.  3850 N. Causeway Blvd.  Metairie, LA 70002</p>	<p>Phone: 504-832-4174 ext 106  Cell: 225-205-8256  <a href="mailto:jane.kennedy@arcadis-us.com">jane.kennedy@arcadis-us.com</a></p>	<p>ARCADIS Project Chemist</p>
<p>Sam Moyers  ARCADIS U.S., Inc.  114 Lovell Rd., Suite 202  Knoxville, TN</p>	<p>Phone: 865-675-6700  Cell: 865-621-2117  <a href="mailto:sam.moyers@arcadis-us.com">sam.moyers@arcadis-us.com</a></p>	<p>ARCADIS Health and Safety Manager</p>
<p>Janet Christy  ARCADIS U.S., Inc.  6 Terry Drive, Suite 300  Newtown, PA 18940</p>	<p>Phone: 864-906-5001  Cell: 864-906-5001  <a href="mailto:janet.christy @arcadis-us.com">janet.christy @arcadis-us.com</a></p>	<p>ARCADIS Database Manager</p>

Table A-2. Data Quality Objectives for Site Characterization.

Data Quality Objective	Project Specific Action
Problem statement	<p>Historical activities have contributed to environmental impacts to surface and subsurface soil, surface water and groundwater at the military facilities.</p> <p>The project goals include delineation of environmental impacts and achieving remedy in place or response complete in accordance with the timeline set forth in the performance based contract. To achieve these goals, characterization activities shall be performed in accordance with the sampling and analysis plans, implementation of remedial actions, monitoring of remedial performance, and confirmation of attainment of clean-up goals.</p>
Identify the decisions	<ul style="list-style-type: none"> <li>• Do constituent concentrations exceed the screening criteria?</li> <li>• Has the Site been delineated?</li> <li>• What remedial system will be used to reduce constituent concentrations?</li> <li>• Does the remedial system meet the performance goals?</li> </ul>
Identify the inputs to the decision	<ul style="list-style-type: none"> <li>• Complete additional delineation sampling and compare identified CoC data to screening levels; and define extent of contamination.</li> <li>• Design and implement remedial systems</li> <li>• Monitor remedial system performance</li> <li>• Confirm reduction in contaminant levels to below clean-up goals.</li> </ul>
Develop the decision rule	<ul style="list-style-type: none"> <li>• If soil and groundwater quality data indicate concentrations above screening levels, the affected media will be addressed by additional site investigation to delineate the nature and extent of impact to the affected media.</li> <li>• When the Site is delineated, the soil and groundwater quality data will be evaluated to determine if an active remediation is required to reduce the concentrations below the clean-up goals.</li> <li>• If the remedial system does not meet the performance goals, modifications to the existing system and/or an additional or alternative remedial system will be implemented.</li> </ul>
Specify limits on decision errors	<p>Data quality and usability will be determined in accordance with the criteria set forth in the QAPP. Rejected data will not be used for decision-making purposes.</p>

CoC Constituent of Concern.  
QAPP Quality Assurance Project Plan.



Table A-3 Statistical Calculations

Statistical	Symbol	Formula	Definition	Uses
Mean	X	$\frac{\left(\sum_{i=1}^n x_i\right)}{n}$	Measure of central tendency	
Standard Deviation	S	$S_x = \left(\frac{n\sum\chi^2 - (\sum\chi)^2}{n(n-1)}\right)^{1/2}$	Measure of relative scatter of the data	
Relative Standard Deviation		$(S / \bar{X}) \times 100$	Relative standard deviation, adjusts for magnitude of observations	Used to assess precision for replicate results
Pooled RSD	RSD <sub>p</sub>	$\left(\frac{\sum_{i=1}^n (RSDi)^2 dfi}{\sum_{i=1}^n dfi}\right)^{1/2}$	Measure of overall variability of a series	Used to assess overall performance for compounds with multiple measurements
Relative Percent Difference	RPD	$\left(\frac{X_1 - X_2}{(X_1 + X_2) / 2}\right) \times 100$	Measure of variability that adjusts for the magnitude of observations	Used when there are only two observations; mathematically related to RSD

Table A-3 Statistical Calculations

Statistical	Symbol	Formula	Definition	Uses
Average Relative Percent Difference	RPD	$\frac{RPD}{n}$	Average relative percent difference - analogous to pooled RSD for duplicate measurements	Used to assess overall performance for compounds with multiple measurements
Confidence Interval	CI	$\frac{X \pm t(\alpha, n - 1)^S}{n^{1/2}}$	Interval about X that contains the true value, with probability $\alpha$	Assign intervals or error bars to measurement data
Percent Recovery	R	$\left(\frac{X_{meas}}{X_{true}}\right) \times 100$	Recovery of spiked compound in pure matrix	Recovery of Quality Control check sample, method spikes
Percent Recovery	R	$\frac{\left(\begin{matrix} \text{value of} & \text{value of} \\ \text{spiked} & \text{unspiked} \\ \text{sample} & \text{sample} \end{matrix}\right)}{\text{Value of added spike}} \times 100$	Recovery of spiked compound in sample matrix	Matrix spike and matrix spike/matrix spike duplicate recovery

X = Observation (concentration)  
 n = Number of observations  
 df = Degrees of freedom, usually  
 t = Statistical from students' "t" distribution

Table A-4. Field Quality Control Sample Collection Guidelines.

QC Sample	Description
Field Duplicate	One per matrix per 20 samples for each analysis.
Equipment Rinsate Blank	One per equipment set per 20 samples collected for each analysis. Only equipment sets that are dedicated or disposed of do not require equipment blanks.
Trip Blank	One per shipment for each cooler in which samples for volatile analysis are shipped. Trip blanks are analyzed for all volatile methods designated for the samples. Trip blanks are shipped for both solid and aqueous matrices.
Field Blank	One per 20 samples collected for each analysis if/when field conditions warrant evaluation of air borne contaminants. Collection decision by the Site Manager.

Field Analyses Data Quality Objectives				
Parameter	Method	Precision	Accuracy % Recovery	Completeness %
pH	150.1	0.05 units	±0.2 units	95
Conductivity	120.1	7.6 umhos/cm	±2%	95
Temperature	--	0.1°C	±2°C	95
Calibration Frequency				
Analysis	Initial Calibration	Calibration Check	Sample Duplicate	
pH	Daily	Every 4 Hours	Daily	
Conductivity	Daily	Every 4 Hours	Daily	
Turbidity	Daily	Every 4 Hours	Daily	

QA                    Quality Assurance  
umhos/cm        micromhos per centimeter

Table A-5. Summary of Methods, Containers, Preservatives, and Holding Times.

Parameter	Matrix	Preparation Method	Analytical Method <sup>(a)</sup>	Container <sup>(b)</sup>	Preservative	Holding Time <sup>(c)</sup>
<b>Organic and Metals Methods</b>						
VOCs	Water	5030, 5032	8260	4 x 40-mL vial with Teflon-lined septum	pH < 2 with HCl, Cool 4°C	14 days
	Water	5030, 5032	8260	4 x 40-mL vial with Teflon-lined septum	If effervescence is observed, eliminate HCl preservative and Cool 4°C	7 days
	Solid	5035	8260	3 x Encore™ OR 2 x Sodium Bisulfate vial and 1 x Methanol vial	Cool 4°C	48 hours to preservation for Encore™, then 14 days to analysis
SVOCs	Water	3510, 3520 <sup>(d)</sup>	8270 (Low Level)	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
	Solid	3540, 3550 <sup>(d)</sup>	8270 (Low Level)	1 x 4-oz or 8-oz G	Cool 4°C	14 days to extraction and 40 days to analysis
PAHs	Water	3510, 3520 <sup>(d)</sup>	8270 SIM)	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
	Solid	3540, 3525 <sup>(d)</sup>	8270 SIM	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
Organochlorine Pesticides	Water	3510, 3520 <sup>(d)</sup>	8081/608	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
	Solid	3540, 3550 <sup>(d)</sup>	8081	1 x 4-oz or 8-oz G	Cool 4°C	14 days to extraction and 40 days to analysis
Organochlorine Herbicides	Water	8151 <sup>(d)</sup>	8151	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
	Solid	8151 <sup>(d)</sup>	8151	1 x 4-oz or 8-oz G	Cool 4°C	14 days to extraction and 40 days to analysis
Metals (except Mercury)	Water	3005, 3010	6010/6020	1 x 500mL HDPE	pH < 2 with HNO <sub>3</sub> , Cool 4°C	6 months
	Solid	3050, 3051	6010	1 x 8-oz G	Cool 4°C	6 months
Mercury	Water	NA	7470	1 x 500mL HDPE	pH < 2 with HNO <sub>3</sub> , Cool 4°C	28 days
	Solid	NA	7471	1 x 8-oz G	Cool 4°C	28 days

Table A-5. Summary of Methods, Containers, Preservatives, and Holding Times.

Parameter	Matrix	Preparation Method	Analytical Method <sup>(a)</sup>	Container <sup>(b)</sup>	Preservative	Holding Time <sup>(c)</sup>
Total Petroleum Hydrocarbons as GRO	Water	5030, 5032	8015 Modified	4 x 40-mL vial with Teflon-lined septum	pH < 2 with HCl, Cool 4°C	14 days
	Solid	5035	8015 Modified	3 x Encore™ OR 2 x Sodium Bisulfate vial and 1 x Methanol vial	Cool 4°C	48 hours to preservation for Encore™, then 14 days to analysis
Total Petroleum Hydrocarbons as DRO/ORO	Water	3510, 3520 <sup>(d)</sup>	8015 Modified	2 x 1-L amber G	Cool 4°C <sup>(e)</sup>	7 days to extraction and 40 days to analysis
	Solid	3540, 3550 <sup>(d)</sup>	8015 Modified	1 x 4-oz or 8-oz G	Cool 4°C	14 days to extraction and 40 days to analysis
<b>Waste Characterization Parameters</b>						
TCLP Metals <sup>(f)</sup> (including Mercury)	Solid Waste Material	1311 for Leach/ 3005, 3010	6010 and 7470 (for Leachate)	1 x 8-oz wide-mouth G	Cool 4°C	28 days from collection to Leach; 28 days to analysis of Leachate
TCLP VOCs <sup>(f)</sup>	Solid Waste Material	1311 for Leach/ 5030	8260 for Leachate	1 x 4-oz G packed full	Cool 4°C	14 days from collection to Leach; 14 days to analysis of Leachate when preserved with HCl to pH < 2
TCLP SVOCs <sup>(f)</sup>	Solid Waste Material	1311 for Leach/ 3510, 3520	8270 for Leachate	1 x 8-oz wide-mouth G	Cool 4°C	14 days from collection to Leach; 40 days to analysis of Leachate
TCLP Pesticides <sup>(f)</sup>	Solid Waste Material	1311 for Leach/ 3510, 3520	8081 for Leachate	1 x 8-oz wide-mouth G	Cool 4°C	14 days from collection to Leach; 40 days to analysis of Leachate
TCLP Herbicides <sup>(f)</sup>	Solid Waste Material	1311 for Leach/ 8151	8151 for Leachate	1 x 8-oz wide-mouth G	Cool 4°C	14 days from collection to Leach; 40 days to analysis of Leachate
Ignitability	Aqueous Waste	NA	1010	500 mL G	NA	NA
	Solid Waste Material	NA	ASTM D-92	1 x 8-oz wide-mouth G	NA	NA

Table A-5. Summary of Methods, Containers, Preservatives, and Holding Times.

Parameter	Matrix	Preparation Method	Analytical Method <sup>(a)</sup>	Container <sup>(b)</sup>	Preservative	Holding Time <sup>(c)</sup>
Reactivity	Aqueous Waste	NA	USEPA Region 4 Guidance for Sulfide	500 mL HDPE	pH > 9 with 2 mL ZnAc and NaOH, Cool 4°C	7 days
	Aqueous Waste	NA	9010/9012/9014 for Cyanide	1 x 120 mL HDPE	pH > 12 with NaOH	14 days
	Solid Waste Material	NA	USEPA Region 4 Guidance for Sulfide	1 x 8-oz wide-mouth G	Cool 4°C	7 days
	Solid Waste Material	NA	9010/9012/9014 for Cyanide	1 x 1-L HDPE	Cool 4°C	Sulfide 7 days
Corrosivity (pH)	Aqueous Waste	NA	9040	120 mL HDPE	NA	24 hours
	Solid Waste Material	NA	9045	1 x 8-oz wide-mouth G	NA	24 hours
<b>General Chemistry Parameters</b>						
Alkalinity	Water	NA	SM 2320 B	500 mL HDPE	Cool 4°C	14 days
Ammonia	Water	NA	SM 4500-NH3 D	500 mL HDPE	pH < 2 with H <sub>2</sub> SO <sub>4</sub> , Cool 4°C	28 days
Biochemical Oxygen Demand (BOD)	Water	NA	405.1	1 x 1-L HDPE	Cool 4°C	48 hours
Chloride	Water	NA	SM4500-CL/300.0/9056	500 mL HDPE/ 2 x 40 mL vial	Cool 4°C	28 days
Cyanide	Water	NA	9010/9012/9014	1 x 120 mL HDPE	pH > 12 with NaOH, Cool °4C	14 days
	Solid	NA	9010/9012/9014	1 x 4-oz or 8-oz G	Cool 4°C	14 days
Hardness	Water	NA	SM 2340B/6010	500 mL HDPE	Cool 4°C for 130.2/ pH < 2 with HNO <sub>3</sub> , Cool 4°C for 6010	6 months
Nitrate	Water	NA	353.2/300.0/9056	120 mL HDPE/	Cool 4°C	2 days
Nitrite	Water	NA	353.2/300.0/9056	120 mL HDPE/	Cool 4°C	2 days
Nitrate/Nitrite	Water	NA	353.2	500 mL HDPE	pH < 2 with H <sub>2</sub> SO <sub>4</sub>	28 days

Table A-5. Summary of Methods, Containers, Preservatives, and Holding Times.

Parameter	Matrix	Preparation Method	Analytical Method <sup>(a)</sup>	Container <sup>(b)</sup>	Preservative	Holding Time <sup>(c)</sup>
Phosphate	Water	NA	365.3/300.0/9056	500 mL HDPE/ 2 x 40 mL vial	pH < 2 with H <sub>2</sub> SO <sub>4</sub>	28 days
Sulfate	Water	NA	ASTM 516- 90/300.0/9056	500 mL HDPE/ 2 x 40 mL vial	Cool 4°C	28 days
Sulfide	Water	NA	SM 4500-SULFIDE	1-L HDPE	2 mL ZnAc and NaOH to pH > 9, Cool 4°C	7 days
Total Dissolved Solids (TDS)	Water	NA	SM 2540C	500 mL HDPE	Cool 4°C	7 days
Total Suspended Solids (TSS)	Water	NA	SM 2540D	1-L HDPE	Cool 4°C	7 days
Total Organic Carbon (TOC)	Water	NA	415.2/9060	500 mL HDPE	pH < 2 with HCl or H <sub>2</sub> SO <sub>4</sub> , Cool 4°C	28 days
Dissolved Organic Carbon (DOC)	Water	NA	415.2/9060	500 mL HDPE	AFTER FILTRATION: pH < 2 with HCl or H <sub>2</sub> SO <sub>4</sub> , Cool 4°C	28 days
Chemical Oxygen Demand	Water	NA	410.4	500 mL HDPE	pH < 2 with H <sub>2</sub> SO <sub>4</sub>	28 days

(a) The 8000 series methods will be used for assessment and remediation; the 600 series methods will be used only for wastewater.

(b) Sample volumes may be combined for parameters where preservatives are the same and adequate sample volume is supplied to the laboratory. Volumes listed are based on sample containers and not minimum volumes required for some of the General Chemistry Parameters listed. All other volumes are minimum volumes required to be submitted to the laboratory.

(c) Maximum holding time allowed from date of collection.

(d) Cleanup methods may be applicable if matrix interference is encountered. Cleanup methods may include alumina (Method 3610), florisil (Method 3620), silica gel (Method 3630), gel permeation chromatography (GPC) (Method 3640), and sulfur (Method 3660). Selection of appropriate method is based on nature of interference and target compounds.

(e) If residual chlorine is present, requires sodium thiosulfate in each sample container.

(f) Waste Characterization addresses solid (soils, drilling mud) material analysis for waste disposal purposes. Liquid (aqueous or organic) wastes will be characterized using the appropriate methods for determination of total constituent concentrations in accordance with waste disposal requirements under the Resource Conservation and Recovery Act (RCRA). TCLP analyses will be performed as required on wastes containing > 0.5% solids in accordance with RCRA waste characterization and disposal requirements.

°C – Degrees Centigrade.  
DRO – Diesel Range Organics  
GRO – Gasoline Range Organics  
H<sub>2</sub>SO<sub>4</sub> – Sulfuric acid.  
HCl – Hydrochloric acid.  
HDPE – High Density Polyethylene.

HNO<sub>3</sub> – Nitric acid.  
L – Liter.  
mL – Milliliter.

NA – Not Applicable.  
NaOH – Sodium hydroxide.  
ORO – Oil Range Organics  
PAHs – Polycyclic Aromatic Hydrocarbons  
SVOCs – Semivolatile Organic Compounds.  
TAL – Target Analyte List.  
TCL – Target Compound List.  
TCLP – Toxicity Characteristic Leaching Procedure.  
VOCs – Volatile Organic Compounds.  
ZnAc – Zinc acetate.



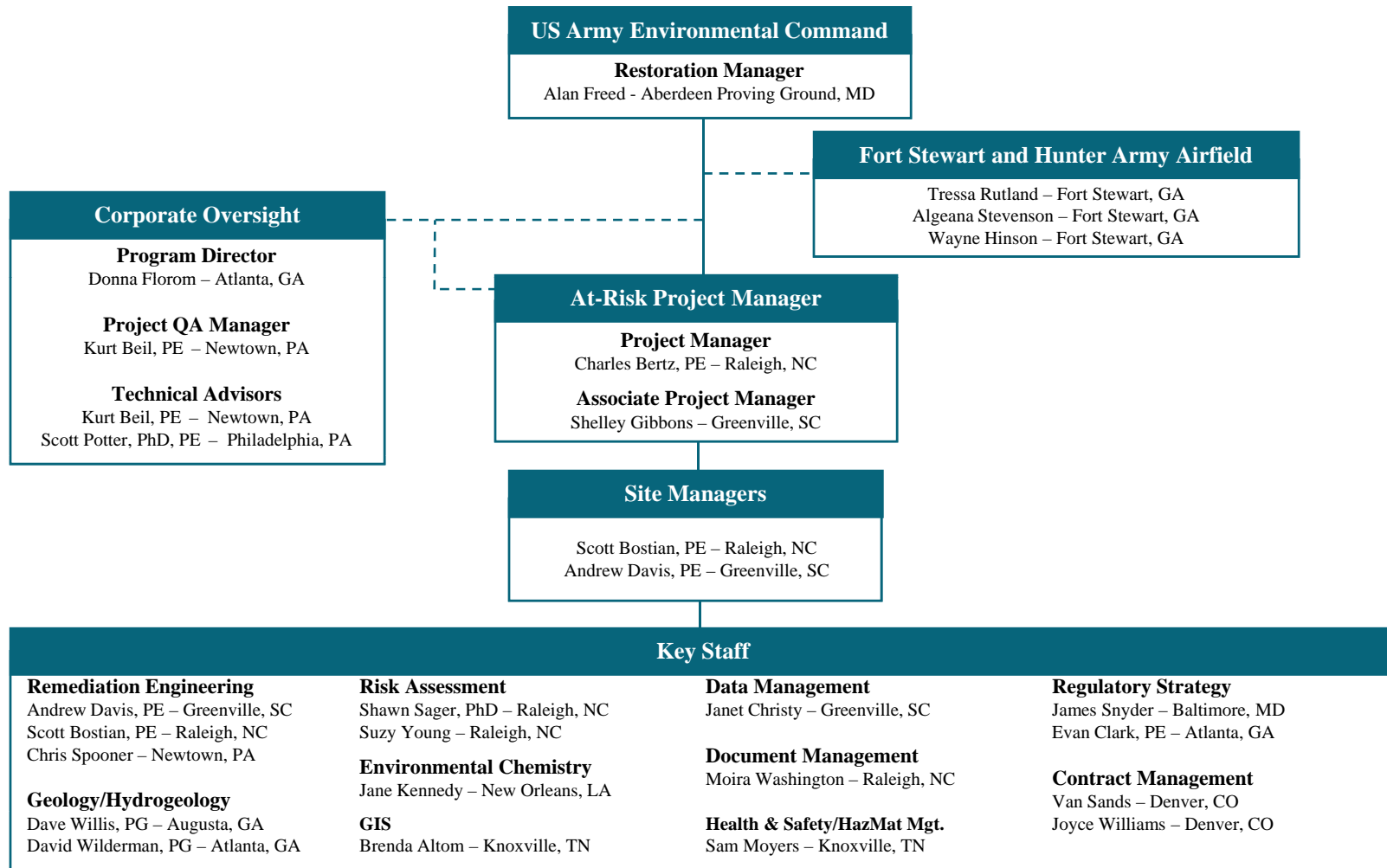
Table A-6. Laboratory Quality Control Sample Analysis Guidelines.

QC Sample	Description
Method Blank	One per matrix per preparation batch for each analysis.
Lab Replicate	One per matrix per preparation batch for each analysis.
Laboratory Control Sample/ Laboratory Control Sample Duplicate (LCS/LCSD)	One LCS per matrix per preparation batch for each analysis. LCSD performance is optional.
Surrogate Spiking	All samples analyzed for organic methods as method and Standard Operating Procedure (SOP) appropriate.
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One pair per matrix per preparation batch for each analysis. The spike solution will contain a broad range of the analytes of concern, but may not contain all due to incompatibility, interaction, breakdown, availability, or multi-component compounds. The overall frequency of MS/MSD on the project samples must be at least 1 set per 20 samples.

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**Figures**

**Figure A-1**  
**Project Organization**  
 Environmental Restoration PBA  
 Fort Stewart and Hunter Army Airfield  
 Georgia



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Appendix B

Field Forms

# ARCADIS

## Utilities and Structures Checklist

Project: Fort Stewart / Hunter Army Airfield

Prepared By: \_\_\_\_\_

Location: \_\_\_\_\_

Date: \_\_\_\_\_

**Instructions:** This checklist must be completed by an ARCADIS staff member as a safety measure to insure that all underground utility lines, other underground structures, as well as aboveground power lines are clearly marked out in the area selected for boring or excavation. **DRILLING OR EXCAVATION WORK MAY NOT PROCEED UNTIL LINES ARE MARKED AND THIS CHECKLIST HAS BEEN COMPLETED.** Arrangements for underground utility markouts are best made at the time of the preliminary site visit to allow client and/or utility company sufficient time. Keep completed checklist and maps onsite; send copy to Project Manager.

**Assignment of Responsibility:** ARCADIS is responsible for having underground utilities and structures located and marked. Preferably, the utilities themselves should mark out the lines.

**Emergency Procedures:** Follow emergency procedures outlined in site-specific Health and Safety Plan.

### Utilities and Structures

Type	Not Present	Present	How Marked? (flags, paint, wooden stakes, etc.)
Natural Gas Line			
Electric Power Line			
Telephone Cable			
Sewer Line			
Storm Drain			
Water Line			
Steam Line			
Petroleum Product Lines			
Product Tank			
Septic Tank/Drain Field			
Overhead Power Line			

### Name and Affiliation of person who marked or cleared underground lines or structures

\_\_\_\_\_  
ORGANIZATION

\_\_\_\_\_  
NAME

\_\_\_\_\_  
PHONE

### Comments:

# ARCADIS Location Sketch

Well(s) \_\_\_\_\_ Project No. GP08HAFS Page \_\_\_\_\_ of \_\_\_\_\_

Site Location \_\_\_\_\_

Prepared by \_\_\_\_\_

(Locate all wells, borings, etc. with reference to three permanent reference points: tape all distances: clearly label all wells, roads, and permanent features)





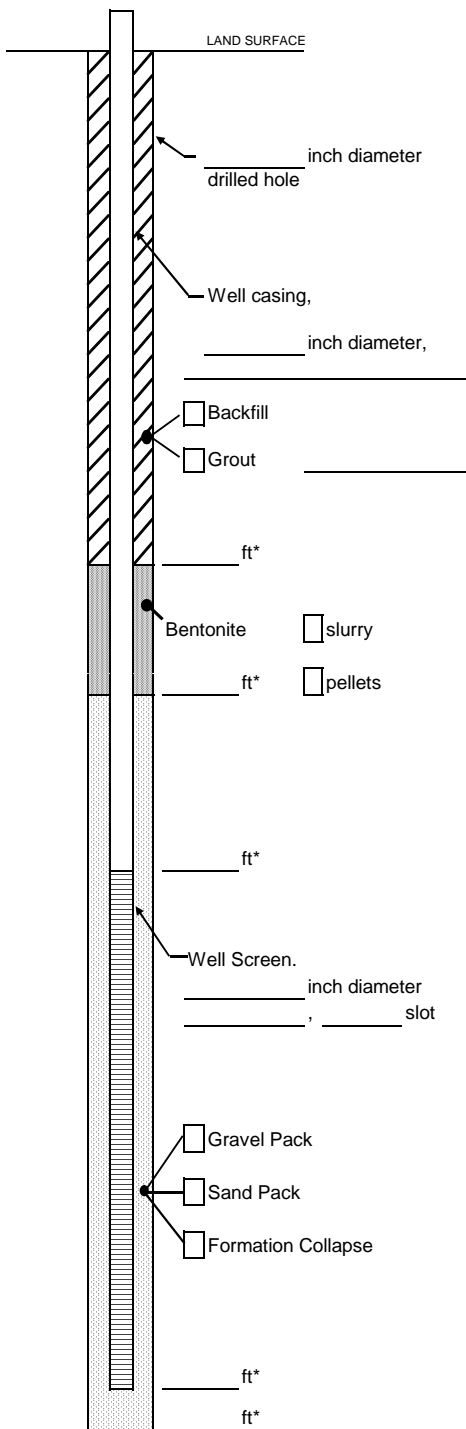




**ARCADIS**

**Well Construction Log**

(Unconsolidated)



Measuring Point is  
Top of Well Casing  
Unless Otherwise Noted.

\* Depth Below Land Surface

Project GP08HAFS Well \_\_\_\_\_

Town/City \_\_\_\_\_

County \_\_\_\_\_ State GA

Permit No. \_\_\_\_\_

Land-Surface (LS) Elevation and Datum:

\_\_\_\_\_ feet  Surveyed

Estimated

Installation Date(s) \_\_\_\_\_

Drilling Method \_\_\_\_\_

Drilling Contractor \_\_\_\_\_

Drilling Fluid \_\_\_\_\_

Development Technique(s) and Date(s)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Fluid Loss During Drilling \_\_\_\_\_ gallons

Water Removed During Development \_\_\_\_\_ gallons

Static Depth to Water \_\_\_\_\_ feet below M.P..

Pumping Depth to Water \_\_\_\_\_ feet below M.P.

Pumping Duration \_\_\_\_\_ hours

Yield \_\_\_\_\_ gpm Date \_\_\_\_\_

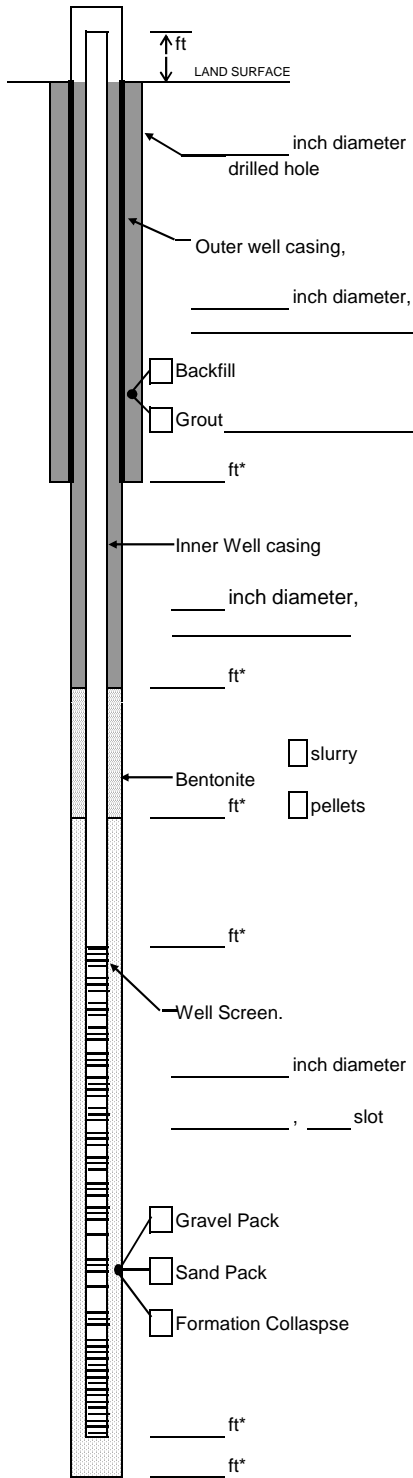
Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose Monitoring

Remarks \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Prepared by \_\_\_\_\_



Project \_\_\_\_\_ Well \_\_\_\_\_  
 Town/City \_\_\_\_\_  
 County \_\_\_\_\_ State \_\_\_\_\_  
 Permit No. \_\_\_\_\_

Land-Surface Elevation and Datum:  
 \_\_\_\_\_ feet  Surveyed  
 Estimated

Installation Date(s) \_\_\_\_\_  
 Drilling Method \_\_\_\_\_  
 Drilling Contractor \_\_\_\_\_  
 Drilling Fluid \_\_\_\_\_

Development Technique(s) and Date(s)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Fluid Loss During Drilling \_\_\_\_\_ gallons  
 Water Removed During Development \_\_\_\_\_ gallons  
 Static Depth to Water \_\_\_\_\_ feet below M.P.  
 Pumping Depth to Water \_\_\_\_\_ feet below M.P.  
 Pumping Duration \_\_\_\_\_ hours  
 Yield \_\_\_\_\_ gpm Date \_\_\_\_\_  
 Specific Capacity \_\_\_\_\_ gpm/ft

Well Purpose \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Remarks \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Measuring Point is  
 Top of Well Casing  
 Unless Otherwise Noted.  
 \* Depth Below Land Surface

Prepared by \_\_\_\_\_

**ARCADIS**  
**Well Development Form**

Project/No.	<u>GP08HAFS</u> <u>Fort Stewart/HAAF</u>	Well ID	_____	Date	_____
Screened Interval	_____	Measuring Point Description	_____	Well Materials:	<u>   </u> PVC <u>   </u> St. Steel
Static Water Level	_____	Casing Diameter (in)	_____	Pump On	_____
Total depth	_____	Boring Diameter (in)	_____	Pump Off	_____
Water Column	_____	Development Method:		Pump Intake	_____
Gallons Per Foot	_____	Centrifugal _____		Volume Purged (g)	_____
Gallons in Casing/Boring	_____	Submersible _____		Development Criteria:	<u>X</u> Boring Vol. <u>   </u> Casing Vol. <u>X</u> Parameters
		Bailed _____		Developed By:	_____
		Other _____			

Time	Minutes Relapsed	Rate (gpm) or (ML)	DTW (ft)	Gallons Purged	pH	Cond. (umhos) (ms/cm)	Turb (NTUs)	Redox (mV)	Diss. O2 (mg/L)	TEMP. (C) or (F)	Remarks

Boring/Casing Volumes  
 2" = 0.16   3" = 0.37   4" = 0.65   6" = 1.47   8" = 2.61   10" = 4.08   12" = 5.88

# ARCADIS

## Geoprobe Groundwater Sampling Form

Project No. GP08HAFS Boring ID: DP-  
 Site Location: Fort Stewart / Hunter Army Airfield Date Sampled \_\_\_\_\_  
 Site Description \_\_\_\_\_  
 Weather \_\_\_\_\_  
 Duplicate/QA/QC: \_\_\_\_\_

### Purging/Sample Collection Information

Casing Material: St. Steel Geoprobe rods Purge Method: (circle one) Bailer Peristaltic Check Valve  
 Casing Diameter: Geoprobe rods Sample Method: (circle one) Slotted Rods Retractable Screen

Sample ID Boring ID-GW (depth)	Sample Time	Water Column	Gallons/ Foot	Volume Purged	Turbidity	Color	Odor	Lab	Other

### Lab Analysis

Constituents Sampled	Container Description	Preservative

Remarks \_\_\_\_\_  
 \_\_\_\_\_

Sample Personnel \_\_\_\_\_

Purge volume = Water Column (ft) x 0.02  
 Water Column = Sample Depth - Depth to Water

**WELL SAMPLING SUMMARY**

<i>ARCADIS Project Number: GP08HAFS</i>		<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr.min)</i>	<i>Initial Depth to Water (ft btoc)</i>	<i>Well Volume (gallons)</i>	<i>Total Depth (ft)</i>	<i>Total Volume Removed (gallons)</i>	<i>Final</i>							<i>Comment</i>		
<i>Project Name: Fort Stewart / HAAF</i>								<i>Sample ID</i>	<i>Location ID</i>	<i>pH</i>	<i>Cond. (umhos)</i>	<i>Temp. (oC)</i>	<i>Turb. (NTU)</i>	<i>ORP</i>		<i>DO</i>	<i>TDS</i>
<i>Sampler:</i>																	
<i>Sample ID</i>	<i>Location ID</i>																

( ) = Enter the collection date within the parenthesis (ie. 011904)

**ARCADIS**  
**Water Level Measurement Form**

Project No: GP08HAFS

Date: \_\_\_\_\_

Location: Fort Stewart / Hunter Army Airfield

Recorded By: \_\_\_\_\_

Well Number	Time	TOC Elevation (ft)	Static Depth to Water (ft btoc)	Duplicate Reading (ft btoc)	GW Elevation (ft msl)	Total Depth (ft btoc)	Comments

ft btoc Feet below top of casing.







**Sample Key**

ARCADIS Project Number: GP08HAFS Project Name: Fort Stewart / Hunter Army Airfield Sampler: Laboratory:		Collection Date (mm/dd/yy)	Collection Time (hr:min)	Analysis/Parameters													Sample Type	Matrix Code	Location Description	Chain of Custody	Parent Sample ID	Comment			
				Lab										Field											
				TOC (9060)	Aluminum (6010B)	Metals (App IX) (6010B)	SVOCs (8270C)	VOCs (8260B)	Alkalinity (310.1)	Pesticides (8081A)	Hex Chrome (7196A)	Total Iron (6010)	Carbon Dioxide (AM20G)	Sulfate (9056)	Nitrate and Nitrite (9056)	Chlorides (9056)							Methane, Ethane, and Ethene (AM20G)	pH	DO, ORP, temp., turbidity, conductivity
Sample ID	Location ID																								

(            ) = Enter the collection date within the parenthesis (ie. 011904)

\* If more than one TB is collected in one day then name the Trip Blanks sequentially (ie. TB1(            ), TB2(            ), etc.)

\*\*The time on the COC needs to be the same for MS/MSD as the parent sample.

**SAMPLING LOCATION SURVEY SUMMARY**

ARCADIS Project Number: GP08HAFS			Ground Elevation (ft. AMSL)	Top of Casing Elevation		Depth-to-Water Reference Elevation (ft. AMSL)	Comment
Project Name: Fort Stewart / Hunter Army Airfield				Inner (ft. AMSL)	Protective/Outer (ft. AMSL)		
Sampler:							
Laboratory:							
<i>Location</i>	<i>Easting*</i>	<i>Northing*</i>					

\* - Please provide reference for the coordinate system used.

# ARCADIS

## Soil/Sediment Sample Log

Project/Site Location Fort Stewart / Hunter Army Airfield Project No. GP08HAFS

Sample No. \_\_\_\_\_ Duplicate/QA/QC \_\_\_\_\_

Date \_\_\_\_\_ Weather \_\_\_\_\_

Site Description \_\_\_\_\_

Sampling Method and Material Geoprobe MacroCore with liner, stainless steel sampling spoon

Sample ID Boring ID-SO (depth)	Sample Time	Soil Class.	Soil Description (Color, description, moisture, odor, etc.)	PID/FID Reading	Offsite Lab Analysis?

**Lab Analysis**

Constituents Sampled	Container Description	Preservative

Remarks \_\_\_\_\_

Sample Personnel \_\_\_\_\_

**SOIL SAMPLING SUMMARY**

<i>ARCADIS Project Number: GP08HAFS</i>		<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr.min)</i>	<i>Estimated Ground Elevation (ft. AMSL)</i>	<i>Sample Start Depth (ft bgs)</i>	<i>Sample End Depth (ft bgs)</i>	<i>Comment</i>
<i>Project Name: Fort Stewart / HAAF</i>							
<i>Sampler:</i>							
<i>Laboratory:</i>							
<i>Sample ID</i>	<i>Location ID</i>						

Note: Sample ID = Location ID(Sample Start Depth-Sample End Depth)

# ARCADIS

## Groundwater Sampling Form

Site Location: Fort Stewart/HAAF Project No. GP08HAFS Well ID: \_\_\_\_\_  
 Date: \_\_\_\_\_ Sampled By: \_\_\_\_\_  
 Sampling Time: \_\_\_\_\_ Recorded By: \_\_\_\_\_  
 Weather: \_\_\_\_\_ Duplicate/QA/QC: \_\_\_\_\_

### Instrument Identification

Instrument:	PID	Water Quality Meter(s)
Serial #:		

### Purging Information

Casing Material: \_\_\_\_\_ Purge Method:(circle one) Submersible Centrifugal Bladder Bailer Peristaltic  
 Casing Diameter: \_\_\_\_\_ Screen Interval: From: \_\_\_\_\_ To: \_\_\_\_\_  
 Total Depth: \_\_\_\_\_ Pump Intake Setting: \_\_\_\_\_  
 Depth to Water: \_\_\_\_\_ Volumes to be Purged: \_\_\_\_\_  
 Water Column: \_\_\_\_\_ Total Volume Purged: \_\_\_\_\_  
 Gallons/Foot: \_\_\_\_\_ Pump On: \_\_\_\_\_ Off: \_\_\_\_\_  
 Gallons in Well: \_\_\_\_\_

### Field Parameter Measurements During Purging

Time	Minutes Elapsed	Rate (gpm or ml)	Volume Purged	Depth to Water	Turbidity (NTUs)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C or °F)	Diss. Oxygen	Comments

### Observations During Sampling

Well Condition: \_\_\_\_\_ Purge Water Disposal: \_\_\_\_\_  
 Color: \_\_\_\_\_ Turbidity(qualitative): \_\_\_\_\_  
 Odor: \_\_\_\_\_ Other (OVA, HNU,etc.): \_\_\_\_\_

Constituents Sampled	Container Description	
	From Lab _____	ARCADIS _____ Preservative

Boring/Casing Volumes  
 2" = 0.16 4" = 0.65



ARCADIS

### SURFACE WATER SAMPLE LOG

Sample ID \_\_\_\_\_ Project/No. \_\_\_\_\_  
 Date \_\_\_\_\_ Sampling Personnel \_\_\_\_\_  
 Time \_\_\_\_\_  
 Weather \_\_\_\_\_

#### DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body \_\_\_\_\_  
 Depth of Water \_\_\_\_\_ Velocity \_\_\_\_\_  
 Other Comments \_\_\_\_\_  
 Substrate Description \_\_\_\_\_  
 Location \_\_\_\_\_

Description of Nearby Vegetation \_\_\_\_\_

#### FIELD PARAMETERS:

Sample Method \_\_\_\_\_  
 Sample Description \_\_\_\_\_  
 \_\_\_\_\_  
 Temperature (°C/°F) \_\_\_\_\_ pH \_\_\_\_\_  
 Dissolved Oxygen \_\_\_\_\_ SC \_\_\_\_\_  
 Salinity \_\_\_\_\_

#### CONTAINER DESCRIPTION: From \_\_\_\_\_ Lab \_\_\_\_\_

Bottle Type	Analysis	Preservative
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**ARCADIS**  
**CALIBRATION FORM**  
**PHOTOIONIZATION DETECTOR**

**Project:** Fort Stewart / Hunter Army Airfield

**Location:** \_\_\_\_\_

**PID Model:** Multi Rae

**Pre-Use Calibration**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm

5 minute (minimum) warm up in ambient air: YES  NO

Battery indicator reading (e.g., 10 through +20): \_\_\_\_\_

Instrument zeroed (ambient air): YES  NO

Span gas pressure (e.g., 30 psi minimum to 300 psi):

Calibration gas used is 100 ppm Isobutylene/air: YES  NO

Benzene Referenced: YES  NO

Calibration Value: \_\_\_\_\_

**Post-Use Calibration**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm

Ambient air reading (e.g., 0 ppm): \_\_\_\_\_ ppm

Battery indicator reading (e.g., 10 through +20): \_\_\_\_\_

Calibration Value: \_\_\_\_\_

Comments and description of work activities performed during monitoring:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calibrated by: \_\_\_\_\_



ARCADIS

### Field Instrument Calibration Log

Project Name/Number \_\_\_\_\_ Date \_\_\_\_\_  
Calibrating Personnel \_\_\_\_\_ Instrument \_\_\_\_\_  
Time of Initial Calibration \_\_\_\_\_ Weather \_\_\_\_\_

Calibrant	Initial Reading	Adjusted Reading	Final Reading	Time	Temperature
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____







Appendix L

CSR Checklist

## Compliance Status Report Review Checklist

<b>Site Name:</b>	Former Fire Training Area and DAACG Chlorinated Solvents Area			<b>HSI # :</b>	10395
<b>City/County:</b>	Hunter Army Airfield, Savannah, Chatham County			<b>CSR Date:</b>	June 2011 / March 2012
<b>PRP:</b>	Ft. Stewart/HAAF	<b>Revision No. (if applicable):</b>		<b>Consultant</b>	ARCADIS U.S., Inc.

<b>Release to Soil?</b>	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<b>Release to Groundwater:</b>	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
<b>Soil RRS Certification:</b>	Type 1	Type 2	Type 3	Type 4	Type 5	<input checked="" type="radio"/> Cannot certify
<b>GW RRS Certification:</b>	Type 1	Type 2	Type 3	Type 4	Type 5	<input checked="" type="radio"/> Cannot certify

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or N	Location in CSR (i.e. pg.)
391- 3-19-.06(3)(b)(1)	A description of each known source which has contributed to or is contributing to a release at the site including:		Section 4.3
391- 3-19-.06(3)(b)(1)(i)	Source name, number, or other descriptor;		Section 4.3
391- 3-19-.06(3)(b)(1)(ii)	Location of source on a map (minimum scale of 1" = 200');		Figure 4-2
391- 3-19-.06(3)(b)(1)(iii)	Name of each regulated substance released from each source;		Table 6-1
391- 3-19-.06(3)(b)(1)(iv)	Chronology of each source of a release; and		Section 4.2.1
391- 3-19-.06(3)(b)(1)(v)	If source is an engineered structure or waste management unit, a description of the function, design, dimensions, capacity and operation of the source, including as-built construction diagrams		NA

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
	where available.		
<b>Releases to Soil</b>			
391- 3-19-.06(3)(b)(2)	Complete definition of horizontal and vertical extent of soil contamination to background. Background shall be determined using samples representative of soil conditions not affected by a release of a regulated substance. In support of the definition of the extent of contamination, the CSR shall include, at a minimum:		See Section 5.10 and Figures 5-4 through 5-19
391- 3-19-.06(3)(2)(b)(i)	General approach used;		Section 5
391- 3-19-.06(3)(b)(2)(ii)	Analytical parameters selected and the rationale for selection;		Section 5
391- 3-19-.06(3)(b)(2)(iii)	Map of minimum scale of 1" = 200' showing location of all sampling points by sample number, and vertical cross-sections where appropriate. Concentrations of constituents should be indicated by isoconcentration lines.		Figures 5-1, 5-4 thru 5-19, Appendix B
391- 3-19-.06(3)(b)(2)(iv)	Sampling and analysis procedures including:		Section 5, App. B, K
391- 3-19-.06(3)(b)(2)(iv)(I)	Sampling equipment and collection techniques;		Sections 5.10.2
391- 3-19-.06(3)(b)(2)(iv)(II)	Field analytical or measurement techniques including make and model of equipment and calibration schedule and type;		Section 5, Appendix B, C, D & K
391- 3-19-.06(3)(b)(2)(iv)(III)	Sample handling and preservation techniques;		Sections 5.10.2
391- 3-19-.06(3)(b)(2)(iv)(IV)	Equipment decontamination procedures;		Appendix K
391- 3-19-.06(3)(b)(2)(iv)(V)	Chain-of-custody procedures;		Section 5.10.2
391- 3-19-.06(3)(b)(2)(iv)(VI)	Lab techniques including references to analytical methods, including QA/QC procedures;		Section 5.10.2 Appendix G
391- 3-19-.06(3)(b)(2)(v)	A description of any statistical procedures used to evaluate the data;		NA
391- 3-19-.06(3)(b)(2)(vi)	Procedures used to establish background soil concentrations; and		Appendix E

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
391- 3-19-.06(3)(b)(2)(vii)	Narrative and tabular summary of all pertinent field data and the results of all final lab analyses that are supported by sufficient QA/QC control data to validate the results.		Tables 5-3, 5-4 Appendix A
<b>Releases to Groundwater</b>			
391- 3-19-.06(3)(b)(3)	Complete definition of horizontal and vertical extent of groundwater contamination to background. Background shall be determined using samples representative of groundwater conditions not affected by a release of a regulated substance. In support of the definition of the extent of contamination, the CSR shall include, at a minimum:		Figures 5-22 thru 5-35, Appendix E
391- 3-19-.06(3)(b)(3)(i)	Analytical parameters selected and the rationale for selection;		Section 5.10.1 App. A, 5.10.3
391- 3-19-.06(3)(b)(3)(ii)	A description of methods used to characterize sub-surface geology;		Section 4.2.2
391- 3-19-.06(3)(b)(3)(iii)	A description of methods used to characterize vertical and horizontal groundwater flow gradients, flow rates, and flow directions;		Section 5.10
391- 3-19-.06(3)(b)(3)(iv)	Methods used to determine hydraulic conductivities and other pertinent hydrogeological characteristics, including a description of any slug and/or aquifer tests;		Appendix J
391- 3-19-.06(3)(b)(3)(v)	A description of groundwater monitoring well locations, and their installation and construction methods, including:		Appendix D Figure 4-2
391- 3-19-.06(3)(b)(3)(v)(I)	A map (minimum scale 1"= 200') depicting all existing well locations including a survey of each well=s surface reference point and the elevation of its top-of-casing;		Figure 4-2 Table 5-2, 5-5
391- 3-19-.06(3)(b)(3)(v)(II)	Type of well casing material;		App. C Table 5-2
391- 3-19-.06(3)(b)(3)(v)(III)	Description of well intake design including screen slot size and length, filter pack materials and length, and method of filter pack emplacement;		Appendix D
391- 3-19-.06(3)(b)(3)(v)(IV)	Method used to seal the well from the surface and any other features designed to prevent or minimize downward migration of		Appendix D

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
	contaminants along the well annulus; and		
391- 3-19-.06(3)(b)(3)(v)(V)	Description of methods and procedures used to develop the wells.		Appendix B
391- 3-19-.06(3)(b)(3)(vi)	Description of all sampling and analysis procedures used including:		
391- 3-19-.06(3)(b)(3)(vi)(I)	Procedures and timing for measuring groundwater elevations for each sampling event;		Appendix K
391- 3-19-.06(3)(b)(3)(vi)(II)	Well evacuation procedures including well volume evacuated prior to sampling;		Appendix I
391- 3-19-.06(3)(b)(3)(vi)(III)	Sample withdrawal techniques, sampling equipment and materials;		Section 5.10.3, Appendix F
391- 3-19-.06(3)(b)(3)(vi)(IV)	Sample handling and preservation techniques;		Section 5.10.3, Appendix F
391- 3-19-.06(3)(b)(3)(vi)(V)	Equipment decontamination procedures;		Section 5.10.3, Appendix F
391- 3-19-.06(3)(b)(3)(vi)(VI)	Chain-of-custody procedures;		Section 5.10.3, Appendix F
391- 3-19-.06(3)(b)(3)(vi)(VII)	Lab techniques including references to analytical methods, including QA/QC procedures;		Appendix H
391- 3-19-.06(3)(b)(3)(vii)	Description of procedures used to determine background groundwater concentrations;		NA
391- 3-19-.06(3)(b)(3)(viii)	Map (minimum scale of 1" = 200') or less depicting the horizontal extent of contamination. Concentrations should be indicated by isoconcentration lines.		Figures 5-22 thru 5-35
391- 3-19-.06(3)(b)(3)(ix)	Map (minimum scale of 1" = 200') or less depicting the potentiometric surface of groundwater;		Figures 5-20, 5-21
391- 3-19-.06(3)(b)(3)(x)	Maps and vertical cross-sections of appropriate scale depicting concentrations for all contaminants superimposed upon site stratigraphic features and monitoring wells; and		Figure 5-28a thru 28d
391- 3-19-.06(3)(b)(3)(xi)	Narrative and tabular summary of all pertinent field data and the results of all final lab analyses that are supported by sufficient		Section 5.10.3.1, Appendix G

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
	QA/QC control data to validate the results.		
<b>ADDITIONAL REQUIREMENTS</b>			
391- 3-19-.06(3)(b)(4)	A description of any human or environmental receptors who may have been or could potentially be exposed to a release at the site.		Section 7
391- 3-19-.06(3)(b)(5)	A description of all properties which are part of the site including the address and location of such property, its legal description, and the property owners name, address and telephone number.		Section 4
391- 3-19-.06(3)(b)(6)	The name, address, and telephone number of any other person who may be a responsible party for the site and a description of the type and amount of regulated substances such party may have contributed to a release.		Section 4.4.3
391- 3-19-.06(3)(b)(7)	A summary of previous actions taken to eliminate, control or minimize any potential risk at the site, including actions taken to comply with the risk reduction standards.		Sections 5.4, 5.7
391- 3-19-.06(3)(b)(10)	Attached to the front of the CSR, concise statement of the findings of the report presented in plain language, immediately followed by the certification required by 391-3-19-.06(4)(a).		Executive Summary
391-3-19-.06(4)(a)	The CSR shall include a compliance certification regarding the responsible partys own determination as to the status of a site or any individual property at a site with regard to the applicable risk reduction standards for all regulated substances evaluated by the CSR.		Section 1
391-3-19-.06(4)(b)	The CSR certification shall be signed by the applicable person described in Items 1 - 4 of .03(6)(c). Where the CSR is submitted for two or more cooperating responsible parties, the certification may be signed by a duly authorized representative of said responsible parties.		Section 1
391-3-19-.06(4)(c)	Any person signing the certification of compliance shall make the certification specified in the Rules.		Section 1



RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
391- 3-19-.06(5)(a)	Within 7 days of submitting the CSR, RP shall publish a notice in both a major local newspaper of general circulation and the legal organ of the local governments in whose jurisdiction the site is located, announcing that such a report is available for inspection by the general public, including:		Section 9
391- 3-19-.06(5)(a)(1)	The name, address, and location of the site as it appears on the HSI, and, if the plan applies to less than the full site, the street address and owner's name of the applicable properties;		Section 4
391- 3-19-.06(5)(a)(2)	The statement provided in this section;		Section 9
391- 3-19-.06(5)(a)(3)	Announcement of a 30-day comment period and the name, address, and phone number of the EPD contact person to whom written or oral comments can be made;		Section 9
391- 3-19-.06(5)(a)(4)	Name, address, and phone number of the RP or its designated contact person; and		Section 4.3.3
391- 3-19-.06(5)(a)(5)	Location where the report may be viewed or copied.		Section 9
391- 3-19-.06(5)(e)	Within 7 days of submitting the CSR to EPD, the RP shall provide to the county government in the county in which the site is located and to the government of any city in whose jurisdiction the site is located the same information required above.		Section 9
391-3-19-.07(4)	For corrective action to be in compliance with these standards, the following common elements are required:		
391-3-19-.07(4)(a)	Removal of all free product to the extent practicable.		Section 5.4
391-3-19-.07(4)(b)	No soil remaining in place shall exhibit the hazardous waste characteristics of ignitability, corrosivity, or reactivity.		Sections 5.4, 5.7
391-3-19-.07(4)(c)	Shall not allow exposure to concentrations which would cause food chain contamination, damage to soils or to biota which could impair the use of the soils for agricultural or silvicultural purposes, adverse effects on vegetation or wildlife, or the accumulation of vapors in		Section 8

RULE SECTION	DESCRIPTION OF REQUIREMENT	Y or E	Location in CSR (i.e. pg.)
	buildings or other structures which pose a threat to human health and the environment.		
391-3-19-.07(4)(d)	Shall protect the waters of the State from releases that would cause surface water to exceed the Georgia in-stream water quality standards.		Section 8
391-3-19-.07(4)(e)	If the detection limit and/or the background concentration for a regulated substance is greater than the concentration specified in any risk reduction standard, the greater of the detection limit or background shall be used for determining compliance with the risk reduction standards.		Section 7

\_\_\_\_\_ Groundwater work certified by a geologist, etc.

\_\_\_\_\_ Corrective Action Plan included.

Additional Notes:

**CONSTITUENTS OF CONCERN - SOIL**

Constituent	CAS No.	Notification Concentration	RRS: Type _____	In compliance with RRS?	
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no

**CONSTITUENTS OF CONCERN - GROUNDWATER**

<b>Constituent</b>	<b>CAS No.</b>	<b>MCL</b>	<b>RRS: Type _____</b>	<b>In compliance with RRS?</b>	
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no
				yes	no