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Final Revised Corrective Action Plan – Part B with 2008 Annual Report

Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Savannah, Georgia
Facility ID No. 9-025085*2

July 9, 2009

ARCADIS
Infrastructure, environment, buildings

DOCUMENT 21

ARCADIS

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Final Revised Corrective Action Plan – Part B with 2008 Annual Report

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(Release #2)
Former Building 8060
Facility ID No. 9-025085*2
Hunter Army Air Field

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U.S. Army Environmental Command

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Tables

Figures

Appendices

Acronyms

ACL	Alternate Concentration Limit
ATL	Alternate Threshold Level
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, And Xylenes
CAP	Corrective Action Plan
cm/s	Centimeter per second
COPC	Chemical of Potential Concern
CPT	Cone Penetrometer technology
DAACG	Departure/Arrival Air Control Group
DAF	Dilution Attenuation Factor
DPT	Direct Push Technology
EFR	Enhanced Fluid Recovery
E_h	Electrode Potential
EPA	Environmental Protection Agency
ft	feet
ft/min	feet per minute
F&T	Fate and Transport
GA EPD	Georgia Environmental Protection Division
gpm	Gallons per minute
GUST	Georgia Underground Storage Tank
g/L	grams per liter
h	Height
HAAF	Hunter Army Airfield
ISCO	In-situ Chemical Oxidation
IWQS	In-Stream Water Quality Standard
Lbs	pounds
LIF	Laser Induced Fluorescence
mg/kg	milligram per kilogram
mg/L	milligram per Liter
µg/L	microgram per Liter
MPE	Multiphase Extraction
n_m	Mobile Porosity
NAPL	Non-aqueous phase liquid

Acronyms (continued)

NTU	Nephelometric Turbidity Unit
ORC	Oxygen Releasing Compound
PAH	Polyaromatic Hydrocarbon
PID	Photo Ionization Detector
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
ROI	Radius of Injection
SAIC	Science Applications International Corporation
SOD	Soil Oxidant Demand
STL	Soil Threshold Level
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
UST	Underground Storage Tank
USTMP	Underground Storage Tank Management Program
V	Volume
VE	Vacuum Extraction

CORRECTIVE ACTION PLAN-PART B

Facility Name: Former Pumphouse #1 (Release #2) Street Address: Former Building 8060, near Taxiway 3

Facility ID: 9-025085*2 City: Hunter Army Airfield County: Chatham Zip Code: 31409

Latitude: 32° 00′ 54″ Longitude: 81° 08′ 26″

Submitted by UST Owner/Operator:		Prepared by Consultant/Contractor:	
Name:	Tressa Rutland/ Environmental Branch	Name:	Charles Bertz
Company:	U. S. Army/HQ 3d, Inf. Div. (Mech)	Company:	ARCADIS
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I. PLAN CERTIFICATION:

A. UST OWNER/OPERATOR

I hereby certify that the information contained in this plan and in all the attachments is true, accurate, and the plan satisfies all criteria and requirements of rule 391-3-15-09 of the Georgia Rules for Underground Storage tank Management.

Name: Tressa Rutland

Signature:_____ Date:_____

B. REGISTERED PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST CERTIFICATION

I hereby certify that I have directed and supervised the fieldwork and preparation of this plan in accordance with State Rules and Regulations. As a registered professional geologist and/or professional engineer, I certify that I am a qualified groundwater professional, as defined by the Georgia State Board of Professional Geologists. All of the information and laboratory data in this plan and in all of the attachments are true, accurate, complete, and in accordance with applicable State Rules and Regulations.

Name: Scott Bostian, PE

Signature: Scott Bostian

Date: 7/9/09

GEORGIA REGISTERED PE026133 PROFESSIONAL ENGINEER CURTIS SCOTT BOSTIAN 7/9/09

Check all boxes that apply. Attach supporting documentation, i.e. narrative, figures, tables, maps, boring/well logs, etc., for all items checked. Supporting documentation should be three-hole punched and prepared in conformity with the guidance document "Underground Storage Tank (UST) Release: Corrective Action Plan-Part B (CAP-B) Content", GUST 7B.

II. SITE INVESTIGATION REPORT

[X] **Not Applicable** **The extent of contamination, and the local & site hydrogeology requirements have been fulfilled under the CAP Part A, therefore additional SIR reporting is not necessary.**

[ ] **Extent of Contamination:**

[ ] Soil [ ] Groundwater [ ] Free Product [ ] Surface water

[ ] **Local and Site Hydrogeology:**

[ ] Documentation of Local Groundwater Conditions

[ ] Stratigraphic Boring Logs

[ ] Stratigraphic Cross Sections

[ ] Referenced or Documented Calculations of Relevant Aquifer Parameters

[ ] Direction of Groundwater Flow

[ ] Table of Monitoring Well Data

[ ] Potentiometric Map

[ ] Flow Net Superimposed on a Base Map

III. REMEDIAL ACTION PLAN

A. Corrective Action Completed or In-Progress:

[ ] Not Applicable

[X] Recovery/Removal of Free Product (Non-Aqueous Phase Hydrocarbons)

[ ] Remediation/Treatment of Contaminated Soils

[ ] Other (specify)

_____

_____

B. Objectives of Corrective Action:

[ ] No Further Action

[X] Remove Free Product That Exceeds One-Eighth Inch

[ ] Remediate Groundwater Contamination That Exceeds:

[ ] Maximum Contaminant Levels (MCLs)

OR

[ ] In-stream Water Quality Standards

B. Objectives of Corrective Action (CONTINUED):

[ ] Remediate Soil Contamination That Exceeds:

[ ] Threshold Values Listed In Table A

OR

☐ Threshold Values Listed In Table B

OR

☐ Alternate Threshold Levels (ATLs) (Reference CAP A App. I)

☒ Provide Risk-Based Corrective Action (Reference CAP B App. I):

☒ Remediate Soil and/or Groundwater Contamination That Exceeds Alternate Concentration Limits (ACLs) and Monitor Residual Contaminants

OR

☐ Monitor Soil and/or Groundwater Contamination That Exceeds Levels In Rule -- 391-3-15-.09(3).

C. **Design and Operation of Corrective Action Systems:**

☒Soil ☒Groundwater ☒Free Product ☐Surface water ☐Not Applicable

D. **Implementation (MUST INCLUDE THE FOLLOWING):**

NOTE: If No Further Action is proposed and none of the following apply, a brief explanation must be provided with the signed Certificate of Completion.

- Milestone schedule for proposed site activities

- Inspection and preventive maintenance schedule for all specialized remediation equipment

AND / OR

Monitoring/sampling and reporting plan for measuring interim progress and project completion

- Plan to decommission equipment/wells and close site

IV. **PUBLIC NOTICE:**

☐ Not Applicable **The Corrective Action Objectives submitted and approved under the CAP-Part A have not changed.**

☐ Certified Letters to Adjacent, Potentially Affected Property Owners and Local Officials

☒ Legal Notice in Newspaper, as approved by EPD

☐ Other EPD-approved Method (specify) _____

V. **CLAIM FOR REIMBURSEMENT** (For GUST Trust Fund sites only)

☒ Not Applicable (specify) _____

_____

☐ GUST Trust Fund Application - (attach if applicable)

☐ Cost Proposal:

☐ A Total of All Costs Incurred To Date (MUST INCLUDE THE FOLLOWING):

- ▶ Invoices and Proofs-of-Payment For All Costs Incurred To Date
- ▶ Invoices itemized on the GUST-4D
- ▶ All Non-Eligible Costs Clearly Identified as such
- ▶ Incurred Costs Itemized per GUST-92 form or EPD provided form/specifications

☐ A Total of Estimated Costs To Complete Corrective Action

- ▶ Estimated Costs Itemized per GUST-92 form or EPD provided form or specifications

☐ Total Project Costs

☐ Proposed Schedule For Reimbursement

☐ Lump Sum Payment Upon Completion Of Corrective Action

OR

☐ Interim Payments With Final Payment Upon Completion

OR

☐ EPD Established Payment Schedule

2. Site Investigation Report

Former Underground Storage Tanks (USTs) 30 through 39 and 50 at former Pumphouse #1, Facility ID #9-025085 were located near former Building 8060 at Hunter Army Airfield (HAAF), Savannah, Georgia (Figure 2-1). Former Pumphouse #1 was an aviation-gas fuel island located along the east-west taxiway of HAAF that was used from about 1953 until the early 1970s. It consisted of ten 25,000-gallon USTs and a 50,000-gallon underground defueling tank. The pumphouse was inactive from the 1970s to 1995, when eight of the 25,000-gal USTs were removed. The 50,000-gallon defueling tank and two of the 25,000-gallon tanks remained in-place, partially under the pumphouse structure. In 1998, the pumphouse structure was removed, along with the two remaining 25,000-gallon USTs. The 50,000-gallon defueling tank was closed in-place. The piping from the boundary of the pumphouse facility to the bulk fuel farm was also drained, pigged, and grouted in-place.

Various closure activities and Corrective Action Plan (CAP)–Part A and CAP–Part B investigations were performed at the former Pumphouse #1 site between 1995 and 2000. The former Pumphouse #1 investigations covered an area south of the active taxiway. CAP–Part A and CAP–Part B investigations were conducted at the Departure/Arrival Air Control Group (DAACG) facility in 1995 and 1996, respectively. These investigations covered the active tarmac north of the active taxiway. Review of the analytical data from all of the investigations indicated that it was necessary to combine the DAACG facility data and the former Pumphouse #1 data to document the nature and extent of contamination. As a result, the former Pumphouse #1 CAP–Part B Report (SAIC 2000) combined the results of all the investigations into a single report, which was submitted to the Georgia Environmental Protection Division (GA EPD) in August 2000 and subsequently approved.

As indicated in the former Pumphouse #1 CAP–Part B Report, two distinct and separate plumes are located within the vicinity of the former Pumphouse #1 site. Release #1 is an area of soil and groundwater contamination located near the DAACG facility that is in the vicinity of former Fuel Pits 1A and 1B, located approximately 900 feet west of former Building 8060 (i.e., Pumphouse #1). Release #2 is an area of soil and groundwater contamination located near the former Pumphouse #1 facility and former Fuel Pits 1C and 1D, located approximately 200 feet north of the former Tank Pits. The CAP-Part B stated that based on proximity, a release from Former Fuel Pit 1C was apparently responsible for the contamination associated with Release #2. During the CAP–Part B investigation activities, the horizontal and vertical extent of petroleum-related contamination in soil and groundwater was determined for both areas of contamination. The corrective actions

at Release #1 and Release #2 are being addressed separately.

For the Former Pumphouse #1 tank pit area (Release #2), the CAP–Part B Report recommended semiannual monitoring of eight wells (i.e., D-MW5, D-MW6, P1-MW1, P1-MW2, P1-MW18, P1-MW19, P1-MW22, and P1-MW23) for benzene, toluene, ethylbenzene, and xylenes (BTEX). The CAP–Part B Report was approved by GA EPD in December 2000. Per the CAP-Part B, semiannual monitoring and annual reporting began in September 2001 and has continued to date. The termination goal for this monitoring is demonstrating benzene concentrations in groundwater are below the alternate concentration limit (ACL) of 285 microgram per liter (µg/L) for two consecutive sampling events. The CAP-Part B also stated that once the benzene ACL has been achieved at the Former Pumphouse #1 tank pit area, three confirmatory soil samples would be collected to confirm that soil meets the alternate threshold levels (ATLs) for benzene and chrysene of 9.3 milligram per kilogram (mg/kg) and 2.1 mg/kg, respectively.

An additional investigation was conducted in 2003 to further delineate the horizontal and vertical extent of the free product in the subsurface at Release #1 and Release #2 using cone-penetrometer-technology (CPT) equipment with laser induced fluorescence (LIF) detection. The results of the investigation were presented in the Data Summary Report for the 2003 Free Product CPT Investigation, which was also included as an appendix in the Third Annual Monitoring Only Report (SAIC 2005).

The corrective actions that were described in the CAP–Part B Addendum #1 (SAIC 2001) and Addendum #2 (SAIC 2006a) were specific to Release #1 and are not discussed further.

To address free product, absorbent socks were installed, removed and replaced on a bimonthly basis from January 2002 through March 2005. Beginning in June 2005, vacuum extraction (VE) activities were initiated on approximately 50 wells located throughout the Release #1 and Release #2 areas.

In May 2006, six injection wells were installed around the Pumphouse #1 tank pit area for the injection of oxygen-releasing compound (ORC) to enhance the degradation of the BTEX compounds. Quarterly ORC injection through the six injection wells plus six existing monitor wells and performance monitoring was conducted from July 2006 through April 2007. The results were reported in the Fifth Annual Monitoring Only Report (SAIC 2007). The report stated that site contaminant levels were not significantly reduced through the injection of ORC over the 1-year period and that there were apparently two areas that are serving as potential sources

at the site: the former Pumphouse #1 tank pit area and the area under the taxiway near the fuel pits.

Semiannual monitoring was performed in January 2008 and additional soil and groundwater samples were collected with Direct Push Technology (DPT) in January 2008. The results of these activities were included in the Sixth Annual Monitoring Only Report (SAIC 2008). Also included in the Sixth Annual Report were Enhanced Fluid Recovery (EFR) results from October 2007 and January 2008.

Semiannual sampling was conducted in July 2008 and semiannual monitoring scheduled for January 2009 was performed in December 2008. The results of the monitoring activities conducted in July and December 2008 are included in this report. Results from the January 2008 semiannual monitoring and additional investigation are also presented to provide a comprehensive overview of current site conditions.

This Revised CAP–Part B Report is being submitted to the GA EPD Underground Storage Tank Management Program (USTMP) to convey investigation and monitoring data for the 2008 Annual Monitoring Only Report and to present a proposed change to the corrective action strategy for the former Tank Pit area (Release #2).

2.1 Regional, Local, and Site Hydrogeology

A discussion of the regional, local, and site hydrogeology was presented in previous CAP–Part B Reports and is summarized below.

2.1.1 Groundwater Usage

According to the *Groundwater Pollution Susceptibility Map of Georgia* (GA EPD 1992), the former Pumphouse #1 site, Facility ID #9-025085 is located within an area of average or higher groundwater pollution susceptibility. Nine water supply wells are located within the confines of the HAAF area. These wells have the potential to provide up to 3,890 gallons per minute (gpm) of water to occupants of the HAAF installation (SAIC 2000).

2.1.2 Aquifer Description

The hydrogeology in the vicinity of HAAF is mostly influenced by two aquifer systems, the Principal Artesian (Floridan) Aquifer and the surficial aquifer (Miller

1990). The Principal Artesian Aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina to Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer, approximately 800 feet (ft) in total thickness, is composed primarily of Tertiary-age limestone, including the Bug Island Formation, the Ocala Group, and the Suwannee Limestone. Groundwater from the Floridan is used primarily for drinking water (Arora 1984).

The confining layer for the Floridan Aquifer is the phosphatic clay of the Miocene-aged Hawthorn Group. There are minor occurrences of aquifer material within the Hawthorn Group; however, they have limited utilization (Miller 1990). The surficial aquifer overlies the Hawthorn confining unit.

The surficial aquifer consists of widely varying amounts of sand and clay, ranging from 55 to 150 ft in thickness. This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 to 10 ft below ground surface (bgs) (Miller 1990). Groundwater in the surficial aquifer system is under unconfined, or water table, conditions. Locally, however, thin clay beds create confined or semi-confined conditions.

Groundwater encountered at HAAF Pump House #1 UST investigation sites is part of the surficial aquifer system. Based on the facts that all public and non-public water supply wells draw water from the Floridan Aquifer and that the Hawthorn confining unit separates the Floridan Aquifer from the surficial aquifer, it is concluded that there is no hydraulic interconnection between HAAF UST sites (and associated plumes) and water supply withdrawal points (SAIC 2000). Historic groundwater elevations are included in Table 2-1.

2.1.3 Surface Water

The water resources survey conducted during the CAP–Part B site investigation was presented in the CAP– Part B Report (SAIC 2000) and CAP–Part B Addendum #1 Report (SAIC 2002a). Surface water bodies at HAAF include Hallstrom Lake, Lamar Canal, Buckhalter Canal, Springfield Canal, Pond 29 located northwest of Buildings 336 and 232, and an unnamed pond located along the southeastern boundary of the HAAF installation. Several unnamed drainage canals and ditches exist throughout HAAF. Most of these canals drain southwest into the Little Ogeechee River, which is part of the Lower Ogeechee watershed. The remaining drainage canals located on the eastern side of the HAAF installation flow east and eventually drain into the Vernon River, which is located southeast of the HAAF installation. Surface water bodies at HAAF and adjacent areas are not used as public water supplies. The

ponds and lakes, as well as Lamar Canal, are perennial, whereas most of the drainage canals and ditches are intermittent. Most of the drainage canals are at least partially enclosed in culverts (SAIC 2000).

2.1.4 Site Stratigraphy

The lithology encountered at the site is predominantly a white, pale brown, or light gray, very fine to medium-grained sand, with variable silt and clay content. Generally, the samples with higher silt and clay content were within a few feet of the surface. Less silt and clay content was noted with depth. The boring log of deep well P1-MW40 indicates an increasing clay content from approximately 26 to 30 ft bgs, becoming a clayey, coarse-grained sand/gravel at 30 ft bgs. (SAIC 2000)

2.1.5 Referenced or Documented Calculations

The following referenced or documented calculations were performed to support the CAP-Part B Site Investigation and were included in the CAP-Part B (SAIC 2000).

Disturbed soil samples were collected from eight monitor wells for grain size analysis. In addition, undisturbed soil samples were collected from four monitor wells and a soil boring to determine selected engineering properties of the unsaturated zone at the site. The engineering properties that were measured included moisture content, porosity, specific gravity, bulk density and permeability.

Slug tests were conducted on two shallow and one deep well and evaluated using AQTESOLVE software. The calculated hydraulic conductivity values were 1.32×10^{-2} feet per minute (ft/min) (6.7×10^{-3} centimeters per second (cm/s)) and 1.75×10^{-2} ft/min (8.9×10^{-3} cm/s) in the shallow wells and 4.5×10^{-3} ft/min (2.3×10^{-3} cm/s) in the deep well. The average hydraulic conductivity based on slug test data is 1.17×10^{-2} ft/min (6.0×10^{-3} cm/s).

Aquifer testing (8-hour step test) was performed to determine the optimum pumping rate for the well. Pumping data yielded a transmissivity of 0.4035 ft^2/min assuming a saturated aquifer thickness of 60 ft. The recovery data produced a transmissivity of 0.089 ft^2/min assuming a saturated thickness of 60 ft. (SAIC 2000)

2.1.6 Direction of Groundwater Flow

Historical water level measurements (Table 2-1) were taken during monitoring events to evaluate the directional flow in groundwater. Groundwater in the vicinity of the

former Release #2 area was determined to flow generally to the south. Groundwater potentiometric surface measurements taken in January 2008, July 2008, and December 2008 are presented on Figures 2-2, 2-3, and 2-4, respectively.

2.2 Horizontal and Vertical Extent of Contamination

The horizontal and vertical extent of petroleum-related contamination in soil and groundwater was delineated by activities performed during the previous investigations at the former Pumphouse #1 site and the DAACG facility, which were documented in the CAP–Part B Report (SAIC 2000) and CAP–Part B Addendum #1 Report (SAIC 2002a). In September/October 2003, additional activities were performed with CPT equipment with fluorescence detection to delineate the horizontal and vertical extent of the free product at both Release #1 and Release #2. Subsequently, additional data has been obtained through semiannual sampling of monitor wells and a supplemental investigation using DPT that was conducted in January 2008. A summary of the results from these investigations is presented below.

2.2.1 Delineation of Soil Contamination

In the vicinity of the former Pumphouse #1 Tank Pit area (Release #2), the horizontal extent of petroleum-related contamination in soil was determined during the CAP-Part B site investigation and was discussed in detail in the CAP–Part B Report (SAIC 2000). Benzene, ethylbenzene, toluene, xylenes, benzo(b)fluoranthene and chrysene exceeded the applicable Georgia Underground Storage Tank (GUST) Soil Threshold Levels (STLs) (i.e., Table B, Column 1) and were identified as chemicals of potential concern (COPCs) for soil at Release #2. Only benzene and chrysene exceeded their respective ATLs.

The CAP-Part B Report stated that there was an area of contamination located 1 to 2 feet above the water table with the center of the source area located north of the Former Fuel Pit 1C. The samples with concentrations exceeding the ATLs were collected from the capillary fringe above the soil/water interface.

In January 2008, supplemental investigation activities were conducted to further delineate subsurface soil contamination at the site. Subsurface soil samples were collected from 35 direct-push borings at the site and analyzed for BTEX. One soil sample was collected from each boring at the depth interval with the highest photoionization detector (PID) reading. The soil samples were analyzed for BTEX using the U.S. Environmental Protection Agency (EPA) Method 8021B/8260B. The

analytical results from the soil sampling are presented in Table 2-2 and Figure 2-5.

The analytical results of the January 2008 supplemental investigation are summarized below (SAIC 2008).

- Benzene was detected in 8 of 35 soil samples at concentrations ranging from 0.0569J to 0.801 milligrams per kilogram (mg/kg). None of the sample concentrations or detection limits exceeded the ATL.
- Toluene was detected in 24 of 35 soil samples at concentrations ranging from 0.0312J to 125J mg/kg. None of the samples exceeded the ATL.
- Ethylbenzene was detected in 31 of 35 soil samples at concentrations ranging from 0.00301J to 66J mg/kg. None of the samples exceeded the ATL.
- Total xylenes were detected in 33 of 35 soil samples at concentrations ranging from 0.000687J to 370J mg/kg. None of the samples exceeded the ATL.

Subsurface soil sampling in January 2008 indicated that the benzene concentrations in soil were below the ATL of 9.3 mg/kg. Samples were not analyzed for polyaromatic hydrocarbons (PAHs), specifically chrysene. As previously noted, chrysene was detected in soil at concentrations exceeding the ATL during the CAP-Part B investigation.

2.2.2 Delineation of Groundwater Contamination

In the vicinity of the former Tank Pit area (Release #2), the vertical and horizontal extent of the plume was initially delineated in the CAP-Part B site investigations and was discussed in detail in the CAP–Part B Report (SAIC 2000). Benzene, ethylbenzene, toluene, benzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and naphthalene were identified as COPCs for groundwater. Based on the results of fate & transport (F&T) modeling, ACLs were calculated for these constituents. An ACL of 285 micrograms/liter (µg/L) was proposed for benzene in groundwater and subsequently approved by GA EPD. Benzene was the only constituent in the Release #2 area to exceed its In-Stream Water Quality Standard (IWQS) and ACL during the site investigations.

During the semiannual sampling events from 2001 through 2007, benzene was the only COPC to exceed the IWQS or ACL. None of the other constituents were detected at concentrations that exceeded the respective ACL or IWQS. Benzene concentrations in monitor wells D-MW5, P1-MW2 and P1-MW19 have consistently exceeded the ACL of 285 µg/L. Concentrations in wells installed for ORC injection

exceeded the ACL in areas near former building 8060 and near former fuel pit 1C and the former UST 50 (SAIC 2007). During the eleventh semiannual sampling event in July 2007, the benzene concentrations in D-MW5R, P1-MW19 and CPT wells P1-CPT7, P1-CPT17, P1-CPT19, and P1-CPT22 exceeded the ACL of 285 µg/L (Figure 2-6). The CPT wells with benzene concentrations above the ACL are also in the areas previously identified as impacted. The July 2007 results are illustrated in Figure 2-6.

During the twelfth semiannual sampling event in January 2008, eight monitor wells in the semiannual monitoring program (i.e., D-MW5R, D-MW6R, P1-MW1, P1-MW2, P1-MW19, P1-MW-21, P1-MW22, and P1-MW23) were sampled for analysis of BTEX using EPA Method 8021B/8260B. In addition, supplemental investigation activities were conducted to delineate groundwater contamination at the site. Groundwater samples were collected from 35 direct-push borings at the site and analyzed for BTEX. Benzene was detected in 41 of 43 groundwater samples at concentrations ranging from 0.424J to 3,760 µg/L. The benzene concentrations in monitor wells D-MW5R, P1-MW2, P1-MW19, and 11 direct-push borings (P1-DB-04, P1-DB-05, P1-DB-06, P1-DB-07, P1-DB-08, P1-DB-13, P1-DB-18, P1-DB-19, P1-DB-22, P1-DB-23, and P1-DB-35) exceeded the ACL of 285 µg/L. The benzene concentrations in D-MW5R, D-MW6R, P1-MW2, P1-MW19, P1-MW23, and 16 direct-push borings exceeded the IWQS of 51 µg/L. None of the other constituents exceeded the respective ACL (SAIC 2008). The analytical results are provided in Table 2-3 and Appendix A and illustrated in Figure 2-7.

During the thirteenth semiannual sampling event in July 2008, eight monitor wells in the semiannual monitoring program (i.e., D-MW5R, D-MW6R, P1-MW1, P1-MW2, P1-MW19, P1-MW21, P1-MW22, and P1-MW23) were sampled for analysis of BTEX using EPA Method 8021B/8260B. Benzene was detected in 8 of 8 groundwater samples at concentrations ranging from 2.98 to 2,090 µg/L. The benzene concentrations in D-MW5R, P1-MW2, and P1-MW19 exceeded the ACL of 285 µg/L. The benzene concentrations in D-MW5R, P1-MW2, P1-MW19, and P1-MW23 exceeded the IWQS of 51 µg/L. None of the other constituents exceeded the respective ACL. The analytical results are provided in Table 2-3 and Appendix B and illustrated in Figure 2-8.

The fourteenth semiannual sampling event was conducted in December 2008. Eight monitor wells in the semiannual monitoring program (i.e., D-MW5R, D-MW6R, P1-MW1, P1-MW2, P1-MW19, P1-MW21, P1-MW22, and P1-MW23) were sampled for analysis of BTEX using EPA Method 8021B/8260B. All groundwater samples collected were analyzed by a certified laboratory as listed in the Site-Wide Quality Assurance

Project Plan (QAPP) (ARCADIS 2008). Field laboratory data included quality control samples and all data were reviewed by the project chemistry team. All data reported by Shealy Laboratory were evaluated in accordance with the Level II validation protocols set forth in the Site-Wide QAPP (ARCADIS 2008). Field parameters from each well that was sampled are provided in Table 2-4. The analytical results are provided in Table 2-3 and Appendix C and illustrated in Figure 2-9. Analytical results from the sampling event are summarized below.

- Benzene was detected in 6 of 8 groundwater samples at concentrations ranging from 29 to 1,700 µg/L. The concentrations in two samples exceeded the IWQS of 51 µg/L and in three samples exceeded the ACL of 285 µg/L.
- Toluene was detected in all eight groundwater samples at concentrations ranging from 1.2 to 16,000 µg/L. The concentrations did not exceed the ACL.
- Ethylbenzene was detected in all eight groundwater samples at concentrations ranging from 7.7 to 1,700 µg/L. The concentrations did not exceed the IWQS or ACL.
- Total xylenes were detected detected in all eight groundwater samples at concentrations ranging from 13 to 8,600 µg/L. There is no ACL or IWQS for total xylenes.

The benzene concentrations in the most contaminated wells over time are plotted on Figure 2-10.

2.2.3 Delineation of Free Product

Free product was identified at the former Fuel Pit 1A/DAACG area (Release #2) in September 2001. The free product was observed in wells D-MW5, P1-MW2, P1-MW3, and P1-MW22 at thicknesses ranging from 0.02 to 0.49 ft. The horizontal extent of the free product was bounded by existing wells at the site. Following the CAP–Part B investigation, the interim corrective action consisted of free product recovery in the wells via absorbent socks, which were first installed in November 2001. The absorbent socks were utilized from November 2001 through May 2005.

In September/October 2003, additional activities were performed with CPT equipment with fluorescence detection to delineate the horizontal and vertical extent of the free product at both Release #1 and Release #2. The Release #2 investigation concluded that the likely zones of nonaqueous-phase liquid (NAPL) contamination tend to occur between 6 and 13 ft bgs, which is in the vicinity of the water table and smear zone, at a thickness ranging from 1 to 5 ft. At three locations

there was NAPL detected below the water table at approximately 20 to 25 ft bgs (SAIC 2005).

Beginning in June 2005, VE activities were initiated on approximately 50 wells located throughout Release #1 and Release #2. The quantity of the water/product mixture varied from well to well. However, in general the amount of free product removed from each well was very small. In January 2006, the vacuum truck activities were modified from bimonthly to quarterly and focused on the wells with free product accumulation. As a result, only a few wells were pumped in January 2006, but for approximately 8 hr per well (SAIC 2006b). Measurements conducted during the vacuum extraction activities for Release #2 are presented in Table 2-5. Free product was not observed in any of the wells associated with Release #2 prior to or following the vacuum extraction activities in June 2005 through January 2006.

In July 2007, no measurable free product was observed at any of the wells associated with Release #2 and EFR activities were not conducted. In October 2007, free product was measured in one well in the Release #2 area. Well P1-MW2, had 0.01 ft of measurable product and EFR activities were performed on this well for 8 hours. In January 2008, free product was measured at two wells (P1-MW2 and P1-MW22, 0.01 ft each) and EFR activities were performed on each well for 8 hours. A summary of the vacuum activities for Release #2 is presented in Table 2-5. Prior to groundwater sampling activities on January 27, 2008, no free product was observed at the site. In July 2008, free product was observed in wells P1-MW2 and P1-MW3 at a thickness of 0.02 ft and 0.01 ft, respectively. In December 2008, no measurable free product was detected at any of the wells associated with Release #2.

The free product thickness recorded in Monitor Wells P1-MW2 and P1-MW3 versus groundwater elevation is plotted in Figures 2-12 and 2-13 respectively.

2.2.4 Delineation of Surface Water and Sediment Contamination

Results from the surface water and sediment samples collected during the CAP–Part B investigation were discussed in the CAP–Part B Report (SAIC 2000). Two surface water samples (P1-SWS-11 and P1-SWS-12) were collected in July 2007 from diffusion samplers installed within the saturated sediment of the drainage ditch located approximately 500 ft south of the source areas. The samples were analyzed for BTEX using EPA Method 8021B/8260B. Benzene was detected in P1-SW-11 and 12 at concentrations of 357 and 0.457J µg/L respectively. The benzene concentration in surface water sample P1-SWS-11 exceeded the IWQS of 51 µg/L

and the ACL of 285 µg/L. In the same sample, toluene was detected at 11,900 µg/L, ethylbenzene at 1,640 µg/L and total xylenes at 8,990 µg/L. The toluene concentration exceeded the IWQS. The analytical results are provided in Table 2-3.

Two surface water samples (P1-SWS-11 and P1-SWS-12) were collected in December 2008 from the drainage ditch located south of the site and analyzed for BTEX using EPA Method 8021B/8260B. Benzene was detected at concentrations of 2.4 and 24 µg/L, toluene at concentrations of 16 and 51 µg/L, ethylbenzene at concentrations of 26 and 33 µg/L and total xylenes at concentrations of 88 and 370 µg/L. All concentrations were below the IWQS. The analytical results are provided in Table 2-3 and illustrated in Figure 2-8.

3. Remedial Action Plan

3.1 Corrective Action Completed or in Progress

3.1.1 Recovery/Removal of Free Product

Free product was discovered at the Release #2 location in September 2001 and absorbent socks were used for product recovery from 2001 through May 2005. Free product was removed from various wells using EFR from June 2005 through July 2006 and April 2007 through January 2008. Prior to groundwater sampling activities on January 27, 2008, no free product was observed at the site. In July 2008 free product was observed in wells P1-MW2 and P1-MW3 at a thickness of 0.02 ft and 0.01 ft, respectively. In December 2008, no measurable free product was observed at any of the monitor wells associated with Release #2.

3.1.2 Remediation/Treatment of Contaminated Backfill Material and Native Soil

No contaminated backfill material or native soil associated with the former Tank Pit area (Release #2) has been excavated, remediated, or treated. Soil disposition during the tank removals in the late 1990s is unknown.

3.2 Objectives of Corrective Action

A primary objective of groundwater remedial activities is to decrease residual mass to a point where natural attenuation mechanisms, as opposed to active remedial measures, become the long-term remedial strategy. Remedy implementation will be optimized through pre-design activities to limit treatment to areas where it will be most effective based on the hydrogeology and nature/extent of hydrocarbon (i.e., benzene) impact. Plume impact on surface water in the canal will be mitigated to comply with the IWQS.

3.2.1 Remove Free Product That Exceeds One-Eighth Inch at the Former Tank Pit/Fuel Pit 1C Area (Release #2)

Free product will be addressed such that no well contains free product in excess of 1/8 inch in thickness. Free product in excess of 1/8 inch has been detected only sporadically in monitor wells and the maximum thickness measurement since April 2007 was 0.2 ft. Recovery results have indicated very little mobile (recoverable) mass. Liquid levels will be measured during future monitoring events to confirm the absence of free product at a thickness greater than one-eighth inch. Activities utilizing a vacuum truck will be invoked as the corrective action if free product is detected in recoverable quantities.

3.2.2 Remediate Groundwater Contamination at the Former Tank Pit/Fuel Pit 1C Area (Release #2)

The objectives of the corrective action for groundwater are to reduce the concentrations of the contaminants of concern to below ACLs approved in the CAP-Part B (SAIC 2000). Benzene has historically been the only COPC that exceeds ACL or IWQS concentrations.

A corrective action for groundwater was implemented in 2006, when an oxygen-releasing compound (PermeOx® Plus) was injected into the subsurface to promote aerobic conditions. Six wells located throughout the Release #2 area that were not part of the semiannual monitoring only program or quarterly free product removal were utilized as injection wells. These wells were D-CPT-4, D-CPT-20, D-CPT-2I, D-CPT-23, D-CPT-24, and D-CPT-25. Six additional injection wells (P1-J1 through P1-J6) were installed at the site in May 2006. The wells had 10 ft screens and were screened across the water table with the goal that approximately 7 ft of screen would be located below the water table. PermeOx® Plus was injected into the 12 wells on a quarterly basis for a period of 1 year. Performance monitoring of four wells (D-MW5, P1-MW2, P1-MW21, and P1-MW22) for BTEX was conducted prior to each quarterly injection (SAIC 2008). Subsequent reports stated that site contaminant levels were not significantly reduced through the injection of ORC and that the results indicated that there are two areas that are serving as potential sources in the Release #2 area: the former Pumphouse #1 tank pit area and the area under the taxiway near the Fuel Pits. The oxygen demand from this source mass and from natural sources was such that the oxygen delivery rate from a slow release oxygen compound was insufficient for a source area application.

Recent data indicate that dissolved benzene concentrations continue to exceed the ACL and that benzene is attenuating very slowly. The plume of impacted groundwater at the site is presented in Figures 2-6, 2-7, 2-8 and 2-9. The variation of benzene concentrations with time is presented on Figure 2-10. In addition, BTEX is impacting the surface water in the canal down gradient of the source.

3.2.3 Remediate Soil Contamination at the Former Tank Pit/Fuel Pit 1C (Release #2)

The objective of the corrective action is to reduce concentrations of soil contaminants exceeding ATLs approved in the CAP-Part B (SAIC 2000). Data from subsurface soil sampling in January 2008 indicated that the benzene concentrations in soil are below the ATL of 9.3 mg/kg. The other COPC that exceeded the ATL was chrysene. Samples taken in January 2008 were not analyzed for PAHs. After free product and groundwater goals are achieved, additional soil samples will be taken to determine

compliance with approved ATL goals for chrysene.

3.2.4 Provide Risk-Based Corrective Action

A risk-based approach was used in the CAP–Part B Report (SAIC 2000) to identify COPCs for soil and groundwater and to develop ATLs and ACLs for various constituents. The results of the risk screening for Release 2 were presented in the CAP–Part B Report (SAIC 2000). The ATLs and ACLs developed for the COPCs and subsequently approved by GA EPD in 2000 are listed in Table 2-6. Due to the proximity of Releases 1 and 2, the most conservative F&T modeling results were used for developing one set of ACLs and ATLs for both areas of contamination in the CAP-Part B (SAIC 2000). F&T modeling using the analytical AT123D model was revised in the Second and Fourth Annual Monitoring Only Reports but a change to the ACL for benzene was not proposed. The F&T modeling was revised as part of the Fifth Annual Monitoring Only Report (SAIC 2007). As part of this modeling, the plume was determined to be more complex than previously modeled and three dimensional numerical models MODFLOW and MT3DMS were used to simulate groundwater flow and benzene transport respectively. Based on the revised modeling results, the dilution attenuation factor (DAF) for benzene was calculated to be 37.5 at the drainage ditch. Since ATLs and ACLs were calculated using the most conservative DAF of the two separate plumes, the revised DAF was not used and the benzene ACL was not revised.

3.2.5 Conclusions and Recommendations

The following conclusions are based on the results discussed above:

- Recent thickness measurements indicate that very little mobile free product remains.
- Recent dissolved concentrations indicate that the groundwater impacted above ACLs includes the area around and north of former fuel pit 1C and east of former building 8060, the same areas previously identified in the CAP-Part B.
- Based on soil samples from January 2008, petroleum VOC concentrations in soil are below ATLs. Samples were not analyzed for PAHs to determine concentrations of chrysene, the other COPC previously detected above the ATL.

3.3 Design and Operation of Corrective Action

3.3.1 Basis for Selection

The two priorities for selection of a remediation strategy are: 1) rapidly mitigating impacts to canal surface water; and 2) reducing the source mass that could extend the remediation timeframe. The proposed remediation will be applied to two source areas and one area for mitigation of surface water impacts. The areas relative to the groundwater plume are illustrated in Figure 3-1. The source area associated with the Former Fuel Pit 1C and Defueling Tank is presented with more detail in Figure 3-2a. The source area associated with Former Building 8060 Tank Pits is presented in Figure 3-2b. The area where surface water impacts will be addressed is presented with more detail in Figure 3-2c.

3.3.1.1 Sodium Persulfate

Remedial options for source mitigation were limited because a portion of the source is located under the active tarmac. Also, addition of electron acceptors (oxygen, sulfate) was not considered favorable given the known source mass load and the demonstrated inadequacy of a slow release oxygen compound for source areas at this site. Biosparge, which likely would be effective in some areas of the site, was not selected because of the difficultly of implementation and ongoing operation and maintenance in the fuel pit area adjacent to and under the tarmac (Figure 3-2a). A substantial portion of the source mass is located in this area and not addressing the mass in that area would result in an extensive remediation timeframe. The proposed remedy for the source mass causing the groundwater impacts consists of the implementation of In-situ Chemical Oxidation (ISCO) to achieve the remedial objectives outlined in Section 3-2. EFR events may be performed to address the free product reduction requirement on an as-needed basis.

ISCO is a well-demonstrated remedial technique that uses a chemical oxidant to rapidly degrade aqueous-phase contaminants. Sodium persulfate is a strong oxidant with a demonstrated ability to oxidize benzene. It is relatively stable and therefore can be delivered at greater distances from the point of injection than other oxidants, such as catalyzed hydrogen peroxide. Persulfate salts dissociate in aqueous solutions to form the persulfate anion ($S_2O_8^{2-}$), which has an electrode potential (E_h) of 2.12 V. Persulfate's E_h is comparable to that of ozone (2.1 V) and is greater than that of hydrogen peroxide (1.8 V). Its low density and low affinity for soil sorption provides for density-driven distribution throughout the subsurface treatment area and therefore greater contact with the target contaminant and a greater percent utilization of the injected oxidant. Persulfate performance can be enhanced by activating the solution to

produce sulfate radicals ($\cdot SO_4^-$) and hydroxyl radicals ($\cdot OH$), both highly reactive and short-lived species (E_h of 2.6 V and 2.8 V, respectively). Activation can be accomplished via reaction with ferrous iron present in the formation, or by engineered activation methods such as the addition of a base, heat, or chelated metal. The remediation of BTEX should not require engineered activation of the persulfate. However, this option is available should it become necessary to increase the oxidation efficiency in target areas with high concentrations of benzene (or residual NAPL) that are found to be recalcitrant to the unactivated formulation.

The remedial design concept is presented below and will be preceded by the pre-design field data collection necessary to effectively design an appropriate and efficient oxidant delivery network.

3.3.1.2 Calcium Peroxide

Remedial options for mitigating the migration of benzene to the drainage canal surface water pending source remediation include intercepting the dissolved plume with oxygenated water to stimulate aerobic biodegradation. Aerobic conditions can be engineered via a biosparge curtain or via other chemical means to increase oxygen content within the water, such as the use of oxygen release compounds. Since the source mass will be aggressively addressed with persulfate and the timeframe for plume interception will be shortened in the down gradient portion of the plume adjacent to the canal, injection of chemicals that slowly release oxygen (e.g. magnesium peroxide, calcium peroxide, sodium percarbonate) is preferred over biosparge. These compounds can slowly release oxygen over an extended time making oxygen available over a longer period, preventing kinetic limitation. Given the relatively low flux of petroleum hydrocarbons and slow groundwater velocity expected in the downgradient portion of the plume approaching the canal, the residence times should be sufficient to allow for aerobic biodegradation as a barrier.

The most important physico-chemical properties of 3 possible slow release ORC's are listed in Table 3-1. The comparison shows that calcium peroxide releases the most oxygen. Furthermore, CaO_2 has a low solubility (in comparison with sodium percarbonate) thus being less reactive. This will enable it to release its oxygen more slowly over the course of several months. Sodium percarbonate releases its oxygen more rapidly because of its higher solubility resulting in a less efficient use of the released oxygen. Because of the higher oxygen content and its slow release characteristics, calcium peroxide is chosen to stimulate the biological breakdown.

Calcium peroxide (CaO_2) slowly releases oxygen when in contact with water according to the following reaction:

$2\ CaO_2 + 2\ H_2O \rightarrow 2\ Ca(OH)_2 + O_2$

The speed at which oxygen is released is determined by physical and chemical properties of the medium (e.g. pH and temperature). When CaO_2 is exposed to a lower pH, H_2O_2 can be generated according to the following reaction:

$CaO_2 + 2\ H^+ \rightarrow Ca^{2+} + H_2O_2$

H_2O_2 releases oxygen according to the following reaction:

$2\ H_2O_2 \rightarrow 2\ H_2O + O_2$

Directly around the injection wells, little H_2O_2 will be generated due to the higher pH generated by the presence of calcium hydroxide and peroxide. This ensures an efficient release of oxygen. As a consequence of the low solubility in water of CaO_2 (<0.1 gram per liter (g/L) @ 20 °C), an oxygen release period of more than 6 months (Solvay) is typical.

3.3.2 Pre-Design Field Data Collection

Baseline biogeochemical sampling and analysis will be conducted. The data will be primarily focused on optimizing the application of sodium persulfate but will also be applied to aid in designing the calcium peroxide barrier. A baseline biogeochemical sampling event will be conducted consisting of samples from approximately 6 wells, 2 from each source area and 2 outside the impacted area. Samples from these wells will be analyzed for the parameters listed in Table 3-2 including total and dissolved iron, manganese, carbonate alkalinity, sulfate, total organic carbon, chemical oxygen demand, nitrate, total dissolved and suspended solids. Field parameters will consist of at a minimum dissolved oxygen, pH, oxidation reduction potential, conductivity and temperature. Baseline sampling will include obtaining samples for analysis of BTEX from the 8 wells designated for semiannual sampling plus approximately 4 wells that are proximate to source areas but have not been recently sampled.

Extensive sampling has been conducted previously to evaluate the vertical and horizontal distribution of BTEX in soil and groundwater. Numerous sampling events have confirmed the distribution of groundwater impacts and the 2003 CPT investigation and 2008 DPT investigation confirmed source mass is located north of Fuel Pit 1C and east of the former Building 8060. As is typical, the majority of the source mass is located in the smear zone. However, the 2003 investigation revealed that in two areas source mass may be located at approximately 20 ft bgs (10 ft below water level).

Impacted groundwater was identified farther to the northwest during the January 2008 investigation and an additional monitor well is proposed in this area. An additional permanent monitor well is also recommended to define the northeast extent of the plume. The locations of the additional monitor wells in Area A are shown on Figure 3-3a.

Matrix demand testing is planned for selected soil and groundwater (slurry) samples to evaluate the soil oxidant demand (SOD). Naturally occurring minerals and organic molecules in addition to the contaminants of interest that may react with persulfate will determine oxidant demand. Matrix demand tests are performed on uncontaminated samples of soil and groundwater to estimate the concentration of persulfate that will be consumed by the oxidizable components of the geological matrix and groundwater during a given treatment time. The testing will be performed at ARCADIS' laboratory in Durham, North Carolina.

Because of the well documented oxidation reaction of persulfate with BTEX, treatability testing requirements will be minimal. Samples for treatability testing will be taken from contaminated areas. The initial phase of treatability testing will include an assessment of unactivated persulfate at a concentration in the probable range of 1 percent to 5 percent to examine the treatment efficiency as a function of dose concentration. Dosing with chelated iron activation, alkaline activation, or activation with hydrogen peroxide may also be performed to evaluate suitability for the site and approximate field-scale oxidant dosing schemes.

Injection wells will be installed in the injection target areas A and B located as depicted in Figures 3-3a and 3-3b in the vicinity of the former Fuel Pit 1C and former Building 8060 respectively. The initial injection in the former Fuel Pit 1C area will be through a new injection well installed between D-MW5R and P1-CPT20 as shown on Figure 3-3a. The initial injection in the area east of the former Building 8060 will be through a new well installed between P1-J3 and P1-MW2 as shown on Figure 3-3b. Injection wells will be designed with well screens that bracket the water table (generally present at 9 to 10 ft bgs) and extend approximately 5 feet into the vadose zone areas to more efficiently address the smear zone. When possible, persulfate injections will occur during high water table conditions as the most efficient means of making contact with the smear zone relative to flooding the smear zone. The depth of the screen interval will be determined by estimated location of target mass and will typically be 15 to 20 ft bgs. Surrounding MW and CPT wells will be used as observation well locations as depicted on Figures 3-3a and 3-3b. Wells located within 10 feet of the injection well will be used as dose-response wells to verify the volume of injection solution required to achieve the target radius of injection (ROI) of 10 feet. Wells outside of the 10-foot ROI will be used to monitor (1) the movement of persulfate

outside of the injection zone, (2) treatability of BTEX using persulfate, and (3) persulfate reaction kinetics and potential secondary water quality effects in the oxidation zone.

The data from the initial injection will be utilized to verify the previously estimated relationship between injection volume and delivery radius in both targeted treatment areas (i.e., where current benzene concentrations exceed 1 milligram per liter [mg/L] or previous investigations have indicated the presence of source mass). The results of the initial injections will be evaluated to ensure adequate distribution of oxidant during remediation. The refined understanding of the optimal concentration, required volumes and viable injection flow rates will then be used to optimize the methods employed for the additional applications (e.g., injection volumes, oxidant concentrations, etc.). Distribution of persulfate will be tracked through field measurements of persulfate ions and conductivity. Movement of persulfate and conductivity will be utilized to confirm groundwater flow rates and directions. This will support evaluation of reagent migration and anticipated trends in dissolved-phase concentrations downgradient of the treatment area(s).

Temporary monitor wells will be placed if needed to refine the injection target zone. Any temporary wells will be 2-inch I.D. pre-packed wells installed using DPT and screened across the water table. The need for these wells will be determined based on initial injection results and would be installed to provide the additional data density necessary to mitigate the unnecessary injection of oxidant. Conventional well installation methods (hollow stem auger, sonic, etc.) would be used if multi-purpose wells are needed.

A permit application will be submitted to the Underground Injection Control (UIC) Division of Georgia EPD to allow the initial injection for the performance evaluation phase. The permit will be obtained before the initial injection is initiated. A copy of the UIC Permit Pilot Test Notification is included in Appendix E. After the data from the initial injection are collected and evaluated, a full UIC Permit Application will be prepared as an addendum to this CAP – Part B.

The volume of solution required to achieve breakthrough at an assumed 10-foot ROI dose-response well is estimated using the following equation:

$$V_{inj} = ROI^2 \times \pi \times h \times n_m \times \left(\frac{7.481\ gal}{ft^3} \right)$$

where:

V_{inj} = volume of injection (gal)

ROI = radius of injection (e.g., 10 feet)

h = height of injected fluid column (15 feet)

n_m = mobile porosity

The volume of solution required to achieve breakthrough at the 10-foot ROI depends on the mobile porosity of the formation. The following table shows the relationship between mobile porosity, injection volume, and amount of sodium persulfate and water required to mix injection solution containing 5 percent persulfate by weight (50 g/L) over a 15-foot screened interval with an assumed ROI of 10 feet. The persulfate concentration that will be used in the pilot study will be determined by the laboratory SOD testing, and will likely be at or below this value with the initial target concentration in the 1 to 2 percent range. A range of approximately 1 to 5 percent should also be effective for full-scale application, and will allow flexibility in the injection approach so that areas of the BTEX plume can be adaptively targeted with appropriate oxidant dosing. The initial injection will use unactivated persulfate. Depending on the outcome of the initial study, this range may be adjusted or augmented with activation chemistry suitable for the site. The actual concentration range will be defined in the UIC permit.

	n_m = 0.05	**n_m = 0.1**	**n_m = 0.15**	**n_m = 0.20**
Injection volume (gallons)	1,763	3,525	5,288	7,050
Mass of sodium persulfate (lb)	774	1,547	2,321	3,095

The injection rate will likely range from approximately 1 to 2 gpm under gravity-feed conditions. Injection solution will be prepared in batches immediately prior to introducing into the injection well. A stock solution of clean water will be provided in the existing 20,000-gallon tank. This water will be used to fill a 500-gallon tote, where sodium persulfate will be added and fully mixed prior to injection. The injection will continue until a concentration representing 50 percent of the initial injection solution strength (i.e., conductivity reaches half the concentration measured in the tank) and a plateau in electrical conductivity is observed in dose-response wells.

Groundwater monitoring parameters and analysis methods are detailed in Table 3-2. Monitoring will be performed according to the schedule outlined in Tables 3-3a and 3-

3b. The scope of the breakthrough and post-breakthrough monitoring includes the following:

- Electrical conductivity, pH, and persulfate sampling and field testing in all monitor wells for six months (twice for the first week, weekly for weeks 2 to 4, and biweekly for months 1 to 3).
- Vertical profile of pH and electrical conductivity within the screened intervals of all monitor wells using a hand-held water quality probe.
- Analysis of comprehensive water quality parameters in the first, second, third, and sixth months after the injection.

3.3.3 Remediation Design

Data collected from the laboratory and initial injection events will be reviewed to evaluate changes in the remedial design necessary to achieve the remedial goals. This review will include the number and construction specifications for injection wells, anticipated concentration and volume of oxidant solution, number of injection events needed to reach remedial goals, a schedule of injection events, a remediation health and safety plan, and performance monitoring requirements and schedule. All well installation, development and sampling will be conducted in accordance with the approved Sampling and Analysis Plan and Quality Assurance Project Plan (ARCADIS 2008) and GA EPD requirements.

In the event that free product is observed in monitor wells at levels that would make ISCO cost-prohibitive or where pretreatment would be effective in shortening the duration of the planned ISCO events, EFR may be utilized. EFR events use multi-phase extraction (MPE) recovery techniques. MPE is a generic term used to describe the simultaneous extraction of soil vapor and liquid from the smear zone with the goal of dewatering the smear zone to recover free product, water, and vapor. Currently, the presence of free product is rare in monitor wells. However, the extent of free product will be verified periodically during monitoring events and during remediation activities such as pre-design sampling.

3.3.3.1 Sodium Persulfate

Approximately 12 persulfate injection wells will be installed into the surficial water-bearing unit as depicted on Figures 3-3a and 3-3b. The wells would be designed with an approximate transverse spacing of 20 feet, assuming a minimum ROI of 10 feet. In the direction of groundwater flow, the downgradient injection wells would be spaced on 30-foot centers. This is based on an estimated groundwater travel time of 10 feet over a two-month duration (the time over which unactivated persulfate is assumed to remain

active) with a hydraulic gradient of 0.008 ft/ft. These wells will be installed to target benzene concentrations in the unconfined water table above 1 mg/L where source mass is indicated by historical data. Additional injection wells may be installed where necessary to achieve the remedial objectives. The injection wells will be constructed using threaded-joint materials with polyvinyl chloride (PVC) solid casing construction. Each well will be constructed consistent with the typical injection well schematic provided on Figure 3-4. Typically, the well will be fitted with a 2-inch-diameter, 5 to 15 or 5 to 20-foot-long, 0.010-inch slot size, stainless steel V-wire or PVC wire wrapped screen. The well screen length will be determined based on vertical profiling data collected during the earlier investigations at the site. The screen sections will be attached to chemically compatible riser material that extends to the ground surface. Each well will be completed in a flush-mounted, traffic-bearing vault sufficiently sized to allow attachment of pressure fittings and to accommodate gauges and related injection equipment. Well tags or markers will be fitted to each well for permanent identification.

3.3.3.2 Calcium Peroxide

In order to ensure an adequate oxygen distribution, calcium peroxide will be injected in two rows perpendicular to groundwater flow. Injection points will be 10 feet apart and the two rows will be offset by 5 feet as depicted in Figure 3-3c. Existing monitor well P1-MW19 will be used to monitor the progress of the remediation. Calcium peroxide will be injected as slurry. The slurry will be prepared by mixing approximately 65 pounds (lbs) calcium peroxide and 300 gallons of tap water. The slurry will be prepared on site. The goal for injection quantity of calcium peroxide at each injection location will adjusted based on the biogeochemical data and actual aquifer injection capacity. Additional water may be added to facilitate diluting the calcium peroxide in order to more easily inject the solution. Following delivery of calcium peroxide solution, approximately 125 gallons minimum of clean water will be injected to help is dispersing the solution away from the injection point.

3.3.3.3 Permanent Groundwater Monitor Wells

Two groundwater monitor wells will be installed to monitor plume distribution and ISCO performance as depicted on Figure 3-3a. Numerous existing wells will be utilized for characterization of groundwater quality near the injection areas and will support performance monitoring over the remediation period. Any new monitor wells will be constructed in much the same manner as illustrated on Figure 3-4, although threaded-joint, Schedule 40, PVC well casing and screen materials will be used and there will be no adaptors fitted to the well for injection connections.

Each monitor well will be fitted with a 5- to 20-foot-long, 0.010-inch, machine-slotted, PVC well screen. Well depth may vary depending on estimated contaminant distribution. The screen will be placed in the borehole with the intention to have approximately 5 feet of screen extending into the unsaturated zone to allow observation of floating layers and mounding effects of the injection events. The screen will be attached to solid PVC riser material that extends to the ground surface. Each well will be completed in a flush-mounted, traffic-bearing manhole. Watertight locking caps and well tags will be fitted to each well. Well tags or markers will be fitted to each well for permanent identification.

3.4 Implementation

ISCO implementation will occur at the injection wells shown on Figures 3-3a and 3-3b with the intent of targeting groundwater containing benzene at concentrations above 1 mg/L where source mass is indicated. The initial implementation phase will include installing all persulfate injection wells and additional monitor wells illustrated in Figures 3-3a and 3-3b. The initial implementation phase will include injection of calcium peroxide in Area C as illustrated on Figure 3-3c and injection of sodium persulfate into one well in Area A and one well in Area B as illustrated in Figures 3-3a and 3-3b. The data from the limited initial persulfate injection will be utilized to refine the plan for subsequent full scale injection. The initial injection of calcium peroxide will provide rapid mitigation of potential surface water impacts. Installation of temporary features to facilitate oxidant mixing and delivery will also be performed. An overview of the project implementation elements include:

- Obtaining a UIC Permit for injection and construction activities in the initial phase of implementation.
- Installing permanent flush-mounted wells for the purpose of persulfate injection with the screened intervals aligned to intercept the most impacted portion of the aquifer.
- Installing at least two additional monitor well for plume monitoring. The screen sections of these wells will be dependent on injection well screen intervals.
- Performing a baseline groundwater sampling event that consists of collecting samples for analysis of biogeochemical parameters and BTEX.
- If needed, performing enhanced fluid recovery extraction events to remove free product in areas where it is identified as a safety precaution prior to persulfate injection as well as a remedial objective of reducing free product thickness to less than 1/8 inch.

- Injecting slurried calcium peroxide into the water table and smear zone to effectively intercept the plume migrating to the drainage canal. Additional injection(s) may be performed depending on BTEX concentration trends from the source and dissolved oxygen concentrations.
- Constructing a mobile mixing and injection system for use in injection events. This system will be designed to be capable of injecting into multiple locations at once. Injection water will be amended with the sodium persulfate and activator (if required) and injected. This will maximize injection production and minimize the time needed to complete the injection process. At the end of each day of injections, the trailer will be moved to a secure location in accordance with HAAF direction.
- Performing an initial persulfate injection event and additional events as needed for the active phase of remediation. Anticipated concentrations of sodium persulfate solution in the 1 to 5 percent range combined with an activator (if required) will be injected on a periodic basis (anticipated to range between four months and six months apart). Focused ISCO treatment will be optimized during implementation relative to the quantities of reagents needed, volumes of solution to be injected, injection schedules, and labor requirements to administer the technology.
- Performing post-injection performance monitoring events to verify that oxidant distribution is adequate to achieve design criteria needed to meet remedial goals. This monitoring will begin following the first injection event. The periodicity of monitoring events will depend largely on the rate of oxidant consumption and associated rate at which BTEX is eliminated from the aquifer.

3.4.1 Milestone Schedule

A milestone schedule for the proposed corrective action has been prepared. A chart showing milestone activities and anticipated duration is provided in Figure 3-5. Fort Stewart will notify GA EPD USTMP of any significant changes to the schedule and will provide GA EPD USTMP with an updated chart, as necessary.

3.4.2 Progress Reporting

Performance Reports will be submitted to GA EPD that will summarize the sampling, injection and/or monitoring activities. At a minimum, the Performance Report will consist of a table summarizing the activities and analytical data and a proposal for subsequent activities. In addition, annual reports will be submitted to GA EPD that will summarize all remediation and monitoring activities for the preceding year.

Petition for permanent closure (i.e., completion report) will be submitted upon approval of the final progress report when Release #2 reaches GA EPD-approved

closure criteria. GA EPD will provide final approval for decommissioning the monitor wells. Decommissioning of the monitor wells will be completed in accordance with the U.S. Army Corps of Engineers (USACE) design manual for monitor wells. Decommissioning will comply with all applicable state and federal standards. The following certification will be submitted to GA EPD within 30 days of submittal of the final progress report:

> I hereby certify that the Corrective Action Plan–Part B, dated , 20 , for Hunter Army Airfield, Former Pumphouse #1 site (Release #2), Facility ID 9-025085*2, including any and all certified amendments/addenda thereto, has been implemented in accordance with the schedules, specifications, sampling programs, and conditions contained therein and that the plan's stated objectives have been met.
>
> _____
>
> Signature (Owner/Operator)

3.4.3 Inspection Schedule and Preventative Maintenance Program

All associated field equipment and supplies with direct application to injection activities will be inspected by field personnel prior to each use and monitored during the event to ensure proper functionality. Any suspect equipment will not be used and will be replaced. Any questionable performance issues while performing injections will be brought to the project manager's attention immediately for recommendations as to a proper course of action. Appendix F contains an excerpt from an ISCO remediation procedure and pertinent safety-related information regarding chemical handling and injection. A comprehensive health and safety plan will be maintained and utilized during the performance of this remedial project. Preventive maintenance inspection criteria include:

- Injection chemical mix tank concentrations – daily using persulfate field kit
- Injection hose and piping for leaks or notable deterioration. All process lines shall be pressure tested for leaks prior to the addition of oxidant or activator at the outset of each of the three planned full-scale injection events – daily prior to use
- Injection equipment valves, flowmeters, pressure gauges – daily for proper operation and leaks at fittings
- Containment area, delivery and storage area for adequate access, stability, and absence of impediments to level loading, emergency response equipment (personal protective equipment quantity and adequacy for use, eye wash

equipment, emergency water supply operation), site security and chemical storage area, chemical hazard communication labeling and placarding – daily

- Injection well pressure and flow – hourly during periods of injection at every injection well and manifold

3.4.4 Periodic Monitoring

Prior to initiating injections, as part of the pre-design data collection effort, a baseline groundwater sampling event will be performed as previously described. Post-injection performance monitoring events will be undertaken to verify that oxidant distribution is adequate to achieve design criteria needed to meet remedial goals. This monitoring will begin following the first injection event. The frequency of monitoring events will depend largely on the rate of oxidant consumption and associated rate at which BTEX is eliminated from the aquifer. BTEX samples will be collected from up to 15 monitor wells for each sampling event. Conventional low-flow sampling techniques will be used to collect biogeochemical parameters, such as persulfate, ferrous iron, dissolved oxygen, pH, and conductivity, during the post-injection monitoring events. Depending on the results and associated data density, the injection wells may be used for performance monitoring provided that sufficient time has elapsed from an injection event so that formation groundwater not impacted from oxidant injection is sampled. The proposed monitoring schedule during and after persulfate injection is presented in Tables 3-3a and 3-3b. Semiannual sampling events will be conducted in accordance with the schedule currently approved by EPD for the site. All sampling will conducted in accordance with the approved Sampling and Analysis Plan and Quality Assurance Project Plan (ARCADIS 2008) and GA EPD requirements.

3.4.5 Effectiveness of Corrective Action

The progress of the corrective action will be evaluated using baseline data and post-injection performance monitoring data. Oxidant distribution and consumption rate and the rate of BTEX elimination will be determined to assess the effectiveness of the corrective action. Liquid level measurements in the site monitor wells will be measured to ensure free product thickness is less than 1/8 inch. Groundwater samples from monitor well P1-MW-19 will be analyzed for BTEX and dissolved oxygen concentration and surface water samples will be analyzed for BTEX concentration to ensure that the impacts to surface water in the canal are mitigated.

3.4.6 Confirmatory Soil Sampling Program

No excavation of soil is planned. Therefore, confirmatory sampling associated with excavation of soil will not be performed. Confirmatory sampling of soil contamination

that previously exceeded the benzene ATL of 9.3 mg/kg has been completed and all concentrations were below ATLs. Confirmatory soil samples for chrysene will be taken after groundwater goals are achieved.

3.4.7 Stockpiled Bulk Soil Sampling

No stockpiled soil will be generated by this corrective action. Therefore, no soil sampling will be conducted.

3.4.8 Monitoring Only Termination Conditions

As previously stated in the CAP, the following conditions are required prior to termination of monitoring only program:

- Concentrations of benzene in groundwater must be at or below the ACL
- Concentrations of benzene and chrysene in soil must be at or below their respective ATLs prior to termination of the monitoring only program
- Product removal activities have reached a quantifiable goal agreed to by GA EPD and HAAF

Once these conditions are met, the remedial system and monitoring may be terminated regardless of the site ranking score.

3.4.9 Post-Completion Site Restoration Activities

As the remediation is currently planned, no modifications will be made to the Release #2 area because no permanent equipment or systems will be located at the site. Monitoring and injection wells will be properly abandoned in accordance with the Georgia EPD Manual for Ground Water Monitoring once a "No Further Action" notification is received from the EPD.

4. Public Notification

The former Pumphouse #1 site is located entirely within the confines of HAAF, which is part of the Fort Stewart Military Reservation, a federal facility. The U. S. Government owns all of the property contiguous to the site. The Fort Stewart DPW has complied with the public notice requirements defined by GA EPD guidance by publishing an announcement in the *Savannah Morning News* on April 1 and 8, 2001. When GA EPD and HAAF agree that the free product removal part of the corrective action has been completed, an updated public notice will be made.

5. Claim for Reimbursement

HAAF is a federally owned facility and has funded the investigation for the former Pumphouse #1 site (Release #2), Facility ID #9-025085*2 using U. S. Department of Defense Environmental Restoration Funds. Application for GUST Trust Fund reimbursement is not being pursued at this time.

6. References

ARCADIS 2008. Sampling and Analysis Plan and Quality Assurance Project Plan, *Hunter Army Airfield, Georgia*, November.

Science Applications International Corporation (SAIC) 2008. Sixth Annual Monitoring Only Report for Former Pumphouse #1, Building 8060, Facility ID # 9-025085, Hunter Army Airfield, Georgia, September.

SAIC 2007. Fifth Annual Monitoring Only Report for Former Pumphouse #1, Building 8060, Facility ID # 9-025085, Hunter Army Airfield, Georgia, October.

SAIC 2006b. 2004-2005 Free Product Removal Report for Former Pumphouse #1, Release #1, Building 8060, Facility ID # 9-025085*1, Hunter Army Airfield, Georgia, April.

SAIC 2006a. Corrective Action Plan-Part B Addendum #2 for Former Pumphouse #1, Building 8060, Facility ID # 9-025085, Hunter Army Airfield, Georgia, July.

SAIC 2005. Third Annual Monitoring Only Report for Former Pumphouse #1, Building 8060, Facility ID # 9-025085, Hunter Army Airfield, Georgia, June.

SAIC 2002b. First Annual Monitoring Only Report for Former Pumphouse #1, Building 8060, Facility ID # 9-025085, Hunter Army Airfield, Georgia, August.

SAIC 2002a. Corrective Action Plan–Part B Addendum #1 for Former Pumphouse #1, Facility ID # 9-025085, Building 8060, Hunter Army Airfield, Georgia, September.

SAIC 2000. Corrective Action Plan–Part B for Former Pumphouse #1, Facility ID #9-025085, Building 8060, Hunter Army Airfield, Georgia, August.

Miller, James A. 1990. *Groundwater Atlas of the United States*, U. S. Department of the Interior, U. S. Geological Survey, Hydrologic Inventory Atlas 730G.

GA EPD (Georgia Environmental Protection Division) 1992. *Groundwater Pollution Susceptibility Map of Georgia.*

Arora, Ram 1984. *Hydrologic Evaluation for Underground Injection Control in the Coastal Plain of Georgia,* Department of Natural Resources, Environmental Protection Division, Georgia Geological Survey.

APPENDIX A

Laboratory Data

January 2008 Supplemental Investigation

Note: Original data and Chain of Custody were submitted in 6th Annual Monitoring Only Report.

ARCADIS

APPENDIX B

Laboratory Data

July 2008 Semiannual Monitoring

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APPENDIX C

Laboratory Data

December 2008 Annual Monitoring

Note: Lab provides analytical data in electronic form only. Original COC is included.

ARCADIS

APPENDIX D

Site Ranking Form

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APPENDIX E

Pilot Test UIC Form

ARCADIS

APPENDIX F

ARCADIS Remediation Procedure
ARC RSE-002: In Situ Chemical Oxidation

Table 2-1
Historical Groundwater Elevations
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Corrective Action Plan–Part B Investigation – 1999							
D-MW-05	11/1/1999	37.98	6.5 – 16.5	--	9.48	0	28.50
D-MW-06	11/1/1999	37.71	6.0 – 16.0	--	9.36	0	28.35
D-MW-07	11/1/1999	38.16	5.8 – 15.8	--	9.92	0	28.24
P1-MW-01	11/1/1999	36.28	6.8 – 16.8	--	10.81	0	25.47
P1-MW-02	11/1/1999	37.34	7.0 – 17.0	--	10.31	0	27.03
P1-MW-03	11/1/1999	37.24	6.0 – 16.0	--	8.71	0	28.53
P1-MW-18	11/1/1999	35.92	9.5 – 19.5	--	10.47	0	25.45
P1-MW-19	11/1/1999	37.76	9.0 – 19.0	--	12.29	0	25.47
P1-MW-20	11/1/1999	36.98	7.0 – 17.0	--	9.80	0	27.18
P1-MW-22	11/1/1999	37.28	6.0 – 16.0	--	8.83	0	28.45
P1-MW-23	11/1/1999	37.75	7.0 – 17.0	--	9.55	0	28.20
P1-MW-24	11/1/1999	36.12	29.5 – 34.5	--	9.76	0	26.36
P1-MW-40	11/1/1999	37.3	3.8 – 33.8	--	9.01	0	28.29
First Semiannual Sampling Event – September 2001							
D-MW-05	9/5/2001	37.98	6.5 – 16.5	10.83	11.32	0.49	27.09 [a]
D-MW-06	9/5/2001	37.71	6.0 – 16.0	--	10.71	0	27.00
D-MW-07	9/5/2001	38.16	5.8 – 15.8	--	11.21	0	26.95
P1-MW-01	9/5/2001	36.28	6.8 – 16.8	--	10.87	0	25.41
P1-MW-02	9/5/2001	37.34	7.0 – 17.0	10.98	11.05	0.07	26.35 [a]
P1-MW-03	9/5/2001	37.24	6.0 – 16.0	10.29	10.31	0.02	26.95 [a]
P1-MW-18	9/5/2001	35.92	9.5 – 19.5	--	11.16	0	24.76
P1-MW-19	9/5/2001	37.76	9.0 – 19.0	--	12.75	0	25.01
P1-MW-20	9/5/2001	36.98	7.0 – 17.0	--	10.92	0	26.06
P1-MW-22	9/5/2001	37.28	6.0 – 16.0	10.50	10.52	0.02	26.78 [a]
P1-MW-23	9/5/2001	37.75	7.0 – 17.0	--	10.92	0	26.83
P1-MW-24	9/5/2001	36.12	29.5 – 34.5	--	10.56	0	25.56
P1-MW-40	9/5/2001	37.3	3.8 – 33.8	--	10.52	0	26.78
Absorbent Sock Replacement – November 2001							
D-MW-05 [b]	11/8/2001	37.98	6.5 – 16.5	10.96	11.32	0.36	26.98 [a]
D-MW-06 [c]	11/8/2001	37.71	6.0 – 16.0	--	10.77	0	26.94
P1-MW-02 [b]	11/8/2001	37.34	7.0 – 17.0	11.05	11.08	0.03	26.29 [a]
P1-MW-03	11/8/2001	37.24	6.0 – 16.0	NR	NR	NR	NR
P1-MW-22	11/8/2001	37.28	6.0 – 16.0	NR	NR	NR	NR
Absorbent Sock Replacement – January 2002							
D-MW-05 [b]	1/18/2002	37.98	6.5 – 16.5	11.52	11.52	sheen	26.46
D-MW-06 [c]	1/18/2002	37.71	6.0 – 16.0	--	11.18	0	26.53
P1-MW-02 [b]	1/18/2002	36.28	6.8 – 16.8	11.49	11.49	sheen	24.79
P1-MW-03 [b]	1/18/2002	37.24	6.0 – 16.0	10.84	10.84	sheen	26.40
P1-MW-22 [c]	1/18/2002	37.28	6.0 – 16.0	--	11.07	0	26.21

*Source: Thirteenth Semiannual Monitoring Only Report Former Pumphouse #1, Release #2 (SAIC, 2009)

NOTES:

AMSL - Above mean sea level

BGS - Below ground surface

BTOC - Below top of casing

NR - Not recorded

a - The groundwater elevation was corrected using a density of 880 kg/m3 for the product.

b - The absorbent sock was placed or replaced in the well on the date of the measurements.

c - The absorbent sock was not placed in the well on the date of the measurements.

d - Wells D-MW-05 and D-MW-06 were destroyed in May 2002 when the tarmac was upgraded. These two wells were reinstalled in October 2002.

e - Science Applications International Corporation was not under contract to change out absorbent socks from August 2003 to May 2004.

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Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Second Semiannual Sampling Event – March 2002							
D-MW-05 [b]	3/14/2002	37.98	6.5 – 16.5	10.95	10.95	sheen	27.03
D-MW-06 [c]	3/14/2002	37.71	6.0 – 16.0	--	10.75	0	26.96
D-MW-07	3/14/2002	38.16	5.8 – 15.8	--	11.14	0	27.02
P1-MW-01	3/14/2002	36.28	6.8 – 16.8	--	10.38	0	25.90
P1-MW-02 [b]	3/14/2002	37.34	7.0 – 17.0	--	10.51	0	26.83
P1-MW-03 [b]	3/14/2002	37.24	6.0 – 16.0	--	10.16	0	27.08
P1-MW-18	3/14/2002	35.92	9.5 – 19.5	--	10.89	0	25.03
P1-MW-19	3/14/2002	37.76	9.0 – 19.0	--	12.50	0	25.26
P1-MW-20	3/14/2002	36.98	7.0 – 17.0	--	10.43	0	26.55
P1-MW-22 [c]	3/14/2002	37.28	6.0 – 16.0	--	10.18	0	27.10
P1-MW-23	3/14/2002	37.75	7.0 – 17.0	--	10.69	0	27.06
P1-MW-24	3/14/2002	36.12	29.5 – 34.5	--	10.38	0	25.74
P1-MW-40	3/14/2002	37.3	3.8 – 33.8	--	10.26	0	27.04
Absorbent Sock Replacement – May 2002							
D-MW-05 [c]	5/17/02	37.98	6.5 – 16.5	--	11.52	0	26.46
D-MW-06 [c]	5/17/02	37.71	6.0 – 16.0	--	11.18	0	26.53
P1-MW-02 [c]	5/17/02	36.28	6.8 – 16.8	--	11.65	0	24.63
P1-MW-03 [c]	5/17/02	37.24	6.0 – 16.0	--	10.89	0	26.35
Absorbent Sock Replacement – June 2002							
D-MW-05	6/7/2002	[d]	[d]	[d]	[d]	[d]	[d]
D-MW-06 [c]	6/7/2002	[d]	[d]	[d]	[d]	[d]	[d]
P1-MW-02 [c]	6/7/2002	37.34	7.0 – 17.0	--	10.96	0	26.38
P1-MW-03 [b]	6/7/2002	37.24	6.0 – 16.0	10.96	11.04	0.08	26.27 [a]
P1-MW-22 [c]	6/7/2002	37.28	6.0 – 16.0	--	10.54	0	26.74
Absorbent Sock Replacement – July 2002							
D-MW-05	7/11/2002	[d]	[d]	[d]	[d]	[d]	[d]
D-MW-06 [c]	7/11/2002	[d]	[d]	[d]	[d]	[d]	[d]
P1-MW-02 [c]	7/11/2002	37.34	7.0 – 17.0	--	8.93	0	28.41
P1-MW-03 [b]	7/11/2002	37.24	6.0 – 16.0	--	8.29	0	28.95
P1-MW-22 [c]	7/11/2002	37.28	6.0 – 16.0	--	8.24	0	29.04
Absorbent Sock Replacement – August 2002							
D-MW-05	8/13/2002	[d]	[d]	[d]	[d]	[d]	[d]
D-MW-06	8/13/2002	[d]	[d]	[d]	[d]	[d]	[d]
P1-MW-02 [c]	8/13/2002	37.34	7.0 – 17.0	--	9.72	0	27.62
P1-MW-03 [b]	8/13/2002	37.24	6.0 – 16.0	--	8.78	0	28.46
P1-MW-22 [c]	8/13/2002	37.28	6.0 – 16.0	--	8.88	0	28.40

*Source: Thirteenth Semiannual Monitoring Only Report Former Pumphouse #1, Release #2 (SAIC, 2009)

NOTES:

AMSL - Above mean sea level
BGS - Below ground surface
BTOC - Below top of casing
NR - Not recorded
a - The groundwater elevation was corrected using a density of 880 kg/m3 for the product.
b - The absorbent sock was placed or replaced in the well on the date of the measurements.
c - The absorbent sock was not placed in the well on the date of the measurements.
d - Wells D-MW-05 and D-MW-06 were destroyed in May 2002 when the tarmac was upgraded. These two wells were reinstalled in October 2002.
e - Science Applications International Corporation was not under contract to change out absorbent socks from August 2003 to May 2004.

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Absorbent Sock Replacement – September 2002							
D-MW-05	9/24/2002	d	d	d	d	d	d
D-MW-06	9/24/2002	d	d	d	d	d	d
P1-MW-02 c	9/24/2002	37.34	7.0 – 17.0	--	10.28	0	27.06
P1-MW-03 b	9/24/2002	37.24	6.0 – 16.0	--	9.21	sheen	28.03
P1-MW-22 b	9/24/2002	37.28	6.0 – 16.0	9.41	9.42	0.01	27.87 a
Absorbent Sock Replacement – October 2002							
D-MW-05	10/20/2002	d	d	d	d	d	d
D-MW-06	10/20/2002	d	d	d	d	d	d
P1-MW-02 c	10/20/2002	37.34	7.0 – 17.0	--	8.88	0	28.46
P1-MW-03 b	10/20/2002	37.24	6.0 – 16.0	--	8.33	0	28.91
P1-MW-22 b	10/20/2002	37.28	6.0 – 16.0	--	8.27	0	29.01
Absorbent Sock Replacement – December 2002							
D-MW-05R	12/20/2002	d	d	d	d	d	d
D-MW-06R	12/20/2002	d	d	d	d	d	d
P1-MW-02 c	12/20/2002	37.34	7.0 – 17.0	--	9.43	0	27.91
P1-MW-03 b	12/20/2002	37.24	6.0 – 16.0	--	8.63	0	28.61
P1-MW-22 b	12/20/2002	37.28	6.0 – 16.0	--	8.77	0	28.51
Third Semiannual Sampling Event – January 2003							
D-MW-05R c	1/23/2003	38.18	4.6 – 14.6	--	10.24	0	27.94
D-MW-06R c	1/23/2003	37.79	4.8 – 14.8	--	9.31	0	28.48
P1-MW-01	1/23/2003	36.28	6.8 – 16.8	--	10.78	0	25.50
P1-MW-02 c	1/23/2003	37.34	7.0 – 17.0	--	10.26	0	27.08
P1-MW-03 b	1/23/2003	37.24	6.0 – 16.0	--	9.31	0	27.93
P1-MW-18	1/23/2003	35.92	9.5 – 19.5	--	11.48	0	24.44
P1-MW-19	1/23/2003	37.76	9.0 – 19.0	--	13.30	0	24.46
P1-MW-20	1/23/2003	36.98	7.0 – 17.0	--	10.51	0	26.47
P1-MW-21	1/23/2003	37.29	7.0 – 17.0	--	10.61	0	26.68
P1-MW-22 b	1/23/2003	37.28	6.0 – 16.0	--	9.49	0	27.79
P1-MW-23	1/23/2003	37.75	7.0 – 17.0	--	10.07	0	27.68
P1-MW-24	1/23/2003	36.12	29.5 – 34.5	--	10.58	0	25.54
P1-MW-40	1/23/2003	37.3	3.8 – 33.8	--	10.46	0	26.84
Absorbent Sock Replacement – February 2003							
D-MW-05R c	2/18/2003	38.18	4.6 – 14.6	--	10.51	0	27.67
D-MW-06R c	2/18/2003	37.79	4.8 – 14.8	--	9.98	sheen	27.81
P1-MW-02 c	2/18/2003	37.34	7.0 – 17.0	10.74	10.75	0.01	26.60 a
P1-MW-03 b	2/18/2003	37.24	6.0 – 16.0	9.55	9.56	0.01	27.69 a
P1-MW-22 b	2/18/2003	37.28	6.0 – 16.0	sheen	9.93	sheen	27.35

*Source: Thirteenth Semiannual Monitoring Only Report Former Pumphouse #1, Release #2 (SAIC, 2009)

NOTES:

AMSL - Above mean sea level

BGS - Below ground surface

BTOC - Below top of casing

NR - Not recorded

a - The groundwater elevation was corrected using a density of 880 kg/m3 for the product.

b - The absorbent sock was placed or replaced in the well on the date of the measurements.

c - The absorbent sock was not placed in the well on the date of the measurements.

d - Wells D-MW-05 and D-MW-06 were destroyed in May 2002 when the tarmac was upgraded. These two wells were reinstalled in October 2002.

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Absorbent Sock Replacement – March 2003							
D-MW-05R [b,c]	3/20/2003	38.18	4.6 – 14.6	--	9.23	0	28.95
D-MW-06R [c]	3/20/2003	37.79	4.8 – 14.8	--	9.02	0	28.77
P1-MW-02 [c]	3/20/2003	37.34	7.0 – 17.0	--	8.81	sheen	28.53
P1-MW-03 [b]	3/20/2003	37.24	6.0 – 16.0	--	7.93	0	29.31
P1-MW-22 [b]	3/20/2003	37.28	6.0 – 16.0	--	8.07	0	29.21
Absorbent Sock Replacement – April 2003							
D-MW-05R [b,c]	4/24/2003	38.18	4.6 – 14.6	--	8.88	0	29.30
D-MW-06R [c]	4/24/2003	37.79	4.8 – 14.8	--	8.61	0	29.18
P1-MW-02 [c]	4/24/2003	37.34	7.0 – 17.0	--	8.66	0	28.68
P1-MW-03 [b]	4/24/2003	37.24	6.0 – 16.0	--	7.80	sheen	29.44
P1-MW-22 [b]	4/24/2003	37.28	6.0 – 16.0	--	7.79	sheen	29.49
Absorbent Sock Replacement – May 2003							
D-MW-05R [c]	5/17/2003	38.18	4.6 – 14.6	--	9.48	0	28.70
D-MW-06R [c]	5/17/2003	37.79	4.8 – 14.8	--	9.04	0	28.75
P1-MW-02 [c]	5/17/2003	37.34	7.0 – 17.0	--	9.79	0	27.55
P1-MW-03 [b]	5/17/2003	37.24	6.0 – 16.0	--	8.56	0	28.68
P1-MW-22 [b]	5/17/2003	37.28	6.0 – 16.0	--	8.80	0	28.48
Fourth Semiannual Sampling Event – June 2003							
D-MW-05R [c]	6/21/2003	38.18	4.6 – 14.6	--	9.63	0	28.55
D-MW-06R [c]	6/21/2003	37.79	4.8 – 14.8	--	9.33	0	28.46
P1-MW-01	6/21/2003	36.28	6.8 – 16.8	--	10.26	0	26.02
P1-MW-02 [c]	6/21/2003	37.34	7.0 – 17.0	--	9.44	0	27.90
P1-MW-03 [b]	6/21/2003	37.24	6.0 – 16.0	--	8.48	0	28.76
P1-MW-18	6/21/2003	35.92	9.5 – 19.5	--	11.13	0	24.79
P1-MW-19	6/21/2003	37.76	9.0 – 19.0	--	13.20	0	24.56
P1-MW-20	6/21/2003	36.98	7.0 – 17.0	--	9.54	0	27.44
P1-MW-21	6/21/2003	37.29	7.0 – 17.0	NR	NR	NR	NR
P1-MW-22 [b]	6/21/2003	37.28	6.0 – 16.0	--	8.72	0	28.56
P1-MW-23	6/21/2003	37.75	7.0 – 17.0	--	9.33	0	28.42
P1-MW-24	6/21/2003	36.12	29.5 – 34.5	--	10.33	0	25.79
P1-MW-40	6/21/2003	37.3	3.8 – 33.8	--	8.68	0	28.62
Absorbent Sock Replacement – June 2003							
D-MW-05R [c]	6/24/2003	38.18	4.6 – 14.6	--	9.53	0	28.65
D-MW-06R [c]	6/24/2003	37.79	4.8 – 14.8	--	9.18	0	28.61
P1-MW-02 [c]	6/24/2003	37.34	7.0 – 17.0	9.29	9.30	0.01	28.05 [a]
P1-MW-03 [b]	6/24/2003	37.24	6.0 – 16.0	--	8.44	0	28.80
P1-MW-22 [b]	6/24/2003	37.28	6.0 – 16.0	--	8.58	0	28.70

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Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Absorbent Sock Replacement – July 2003 [c]							
D-MW-05R [c]	7/20/2003	38.18	4.6 – 14.6	--	10.02	0	28.16
D-MW-06R [c]	7/20/2003	37.79	4.8 – 14.8	--	9.56	0	28.32
P1-MW-02 [c]	7/20/2003	37.34	7.0 – 17.0	--	10.38	0	26.96
P1-MW-03 [b]	7/20/2003	37.24	6.0 – 16.0	--	9.08	0	28.16
P1-MW-22 [b]	7/20/2003	37.28	6.0 – 16.0	--	9.43	0	27.85
Absorbent Sock Replacement – June 2004							
D-MW-05R [b]	6/20/2004	38.18	4.6 – 14.6	11.22	11.31	0.09	26.94 [a]
D-MW-06R [c]	6/20/2004	37.79	4.8 – 14.8	--	10.75	0	27.04
P1-MW-02 [b]	6/20/2004	37.34	7.0 – 17.0	10.98	11.12	0.14	26.34 [a]
P1-MW-03 [b]	6/20/2004	37.24	6.0 – 16.0	--	10.15	0	27.09
P1-MW-22 [b]	6/20/2004	37.28	6.0 – 16.0	--	10.40	0	26.88
Fifth Semiannual Sampling Event – July 2004							
D-MW-05R [b]	7/17/2004	38.18	4.6 – 14.6	--	10.28	0	27.90
D-MW-06R [c]	7/17/2004	37.79	4.8 – 14.8	--	9.88	0	27.91
P1-MW-01	7/17/2004	36.28	6.8 – 16.8	--	10.51	0	25.77
P1-MW-02 [b]	7/17/2004	37.34	7.0 – 17.0	9.81	9.82	0.01	27.53 [a]
P1-MW-03 [b]	7/17/2004	37.24	6.0 – 16.0	--	9.17	0	28.07
P1-MW-18	7/17/2004	35.92	9.5 – 19.5	--	11.32	0	24.60
P1-MW-19	7/17/2004	37.76	9.0 – 19.0	--	13.30	0	24.46
P1-MW-20	7/17/2004	36.98	7.0 – 17.0	--	10.01	0	26.97
P1-MW-21	7/17/2004	37.29	7.0 – 17.0	NR	NR	NR	NR
P1-MW-22 [b]	7/17/2004	37.28	6.0 – 16.0	--	9.16	0	28.12
P1-MW-23	7/17/2004	37.75	7.0 – 17.0	--	9.87	0	27.88
P1-MW-24	7/17/2004	36.12	29.5 – 34.5	--	11.02	0	25.10
P1-MW-40	7/17/2004	37.3	3.8 – 33.8	--	9.33	0	27.97
Absorbent Sock Replacement – August 2004							
D-MW-05R [b]	8/20/2004	38.18	4.6 – 14.6	--	10.05	0	28.13
D-MW-06R [c]	8/20/2004	37.79	4.8 – 14.8	--	9.64	0	28.15
P1-MW-02 [b]	8/20/2004	37.34	7.0 – 17.0	--	9.59	0	27.75
P1-MW-03 [b]	8/20/2004	37.24	6.0 – 16.0	--	8.92	0	28.32
P1-MW-22 [b]	8/20/2004	37.28	6.0 – 16.0	--	8.98	0	28.30
Absorbent Sock Replacement – September 2004							
D-MW-05R [b]	9/18/2004	38.18	4.6 – 14.6	--	8.46	0	29.72
D-MW-06R [c]	9/18/2004	37.79	4.8 – 14.8	--	9.20	0	28.59
P1-MW-02 [b]	9/18/2004	37.34	7.0 – 17.0	--	8.77	0	28.57
P1-MW-03 [b]	9/18/2004	37.24	6.0 – 16.0	7.16	7.17	0.01	30.08 [a]
P1-MW-22 [b]	9/18/2004	37.28	6.0 – 16.0	--	8.08	0	29.20

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Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Absorbent Sock Replacement – October 2004							
D-MW-05R [b]	10/15/2004	38.18	4.6 – 14.6	--	9.52	0	28.66
D-MW-06R [c]	10/15/2004	37.79	4.8 – 14.8	--	9.20	0	28.59
P1-MW-02 [b]	10/15/2004	37.34	7.0 – 17.0	--	9.35	0	27.99
P1-MW-03 [b]	10/15/2004	37.24	6.0 – 16.0	--	8.24	0	29.00
P1-MW-22 [b]	10/15/2004	37.28	6.0 – 16.0	--	8.48	0	28.80
Absorbent Sock Replacement – November 2004							
D-MW-05R [b]	11/20/2004	38.18	4.6 – 14.6	--	10.25	0	27.93
D-MW-06R [c]	11/20/2004	37.79	4.8 – 14.8	--	9.74	0	28.05
P1-MW-02 [b]	11/20/2004	37.34	7.0 – 17.0	--	10.29	0	27.05
P1-MW-03 [b]	11/20/2004	37.24	6.0 – 16.0	--	9.33	0	27.91
P1-MW-21 [c]	11/20/2004	37.29	7.0 – 17.0	10.67	10.68	0.01	26.62 [a]
P1-MW-22 [b]	11/20/2004	37.28	6.0 – 16.0	--	9.51	0	27.77
Absorbent Sock Replacement – December 2004							
D-MW-05R [b]	12/16/04	38.18	4.6 – 14.6	--	10.70	0	27.48
D-MW-06R [c]	12/16/04	37.79	4.8 – 14.8	--	10.13	0	27.66
P1-MW-02 [b]	12/16/04	37.34	7.0 – 17.0	--	10.83	0	26.51
P1-MW-03 [b]	12/16/04	37.24	6.0 – 16.0	--	9.97	0	27.27
P1-MW-21 [c]	12/16/04	37.29	7.0 – 17.0	--	11.24	0	26.05
P1-MW-22 [b]	12/16/04	37.28	6.0 – 16.0	--	10.05	0	27.23
Sixth Semiannual Sampling Event – January 2005							
D-MW-05R [b]	1/14/2005	38.18	4.6 – 14.6	sheen	10.88	sheen	27.30
D-MW-06R [c]	1/14/2005	37.79	4.8 – 14.8	--	10.52	0	27.27
P1-MW-01	1/14/2005	36.28	6.8 – 16.8	--	11.60	0	24.68
P1-MW-02 [b]	1/14/2005	37.34	7.0 – 17.0	sheen	11.15	sheen	26.19
P1-MW-03 [b]	1/14/2005	37.24	6.0 – 16.0	sheen	10.02	sheen	27.22
P1-MW-18	1/14/2005	35.92	9.5 – 19.5	--	12.17	0	23.75
P1-MW-19	1/14/2005	37.76	9.0 – 19.0	--	14.01	0	23.75
P1-MW-21	1/14/2005	37.29	7.0 – 17.0	sheen	11.54	sheen	25.75
P1-MW-22 [b]	1/14/2005	37.28	6.0 – 16.0	sheen	10.32	sheen	26.96
P1-MW-23	1/14/2005	37.75	7.0 – 17.0	--	10.83	0	26.92
Absorbent Sock Replacement – February 2005							
D-MW-05R [b]	2/15/2005	38.18	4.6 – 14.6	--	11.02	0	27.16
D-MW-06R [c]	2/15/2005	37.79	4.8 – 14.8	--	10.41	0	27.38
P1-MW-02 [b]	2/15/2005	37.34	7.0 – 17.0	--	11.40	0	25.94
P1-MW-03 [b]	2/15/2005	37.24	6.0 – 16.0	--	10.21	0	27.03
P1-MW-21 [b]	2/15/2005	37.29	7.0 – 17.0	sheen	11.77	sheen	25.52
P1-MW-22 [b]	2/15/2005	37.28	6.0 – 16.0	sheen	10.55	sheen	26.73

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Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Absorbent Sock Replacement – March 2005							
D-MW-05R [b]	3/16/2005	38.18	4.6 – 14.6	7.50	7.50	0	30.68
D-MW-06R [c]	3/16/2005	37.79	4.8 – 14.8	10.04	10.04	0	27.75
P1-MW-02 [b]	3/16/2005	37.34	7.0 – 17.0	10.85	10.85	0	26.49
P1-MW-03 [b]	3/16/2005	37.24	6.0 – 16.0	9.56	9.56	0	27.68
P1-MW-21 [b]	3/16/2005	37.29	7.0 – 17.0	11.20	11.20	0	26.09
P1-MW-22 [b]	3/16/2005	37.28	6.0 – 16.0	9.97	9.97	0	27.31
Seventh Semiannual Sampling Event – July2005							
D-MW-05R [c]	7/16/2005	38.18	4.6 – 14.6	--	8.95	0	29.23
D-MW-06R [c]	7/16/2005	37.79	4.8 – 14.8	--	8.63	0	29.16
P1-MW-01	7/16/2005	36.28	6.8 – 16.8	--	10.21	0	26.07
P1-MW-02 [c]	7/16/2005	37.34	7.0 – 17.0	--	9.17	0	28.17
P1-MW-03 [c]	7/16/2005	37.24	6.0 – 16.0	--	7.92	0	29.32
P1-MW-18	7/16/2005	35.92	9.5 – 19.5	--	11.18	0	24.74
P1-MW-19	7/16/2005	37.76	9.0 – 19.0	--	13.13	0	24.63
P1-MW-21	7/16/2005	37.29	7.0 – 17.0	--	9.65	0	27.64
P1-MW-22 [c]	7/16/2005	37.28	6.0 – 16.0	--	8.15	0	29.13
P1-MW-23	7/16/2005	37.75	7.0 – 17.0	--	8.90	0	28.85
Eighth Semiannual Sampling Event – January 2006							
D-MW-05R	1/15/2006	38.18	4.6 – 14.6	--	9.78	0	28.40
D-MW-06R	1/15/2006	37.79	4.8 – 14.8	--	9.35	0	28.44
P1-MW-01	1/15/2006	36.28	6.8 – 16.8	--	10.74	0	25.54
P1-MW-02	1/15/2006	37.34	7.0 – 17.0	--	10.16	0	27.18
P1-MW-03	1/15/2006	37.24	6.0 – 16.0	--	8.85	0	28.39
P1-MW-18	1/15/2006	35.92	9.5 – 19.5	--	11.60	0	24.32
P1-MW-19	1/15/2006	37.76	9.0 – 19.0	--	13.25	0	24.51
P1-MW-21	1/15/2006	37.29	7.0 – 17.0	--	10.47	0	26.82
P1-MW-22	1/15/2006	37.28	6.0 – 16.0	--	9.05	0	28.23
P1-MW-23	1/15/2006	37.75	7.0 – 17.0	--	9.91	0	27.84
Ninth Semiannual Sampling Event – July 2006							
D-MW-05R [b]	7/18/2006	38.18	4.6 – 14.6	--	10.75	0	27.43
D-MW-06R [c]	7/18/2006	37.79	4.8 – 14.8	--	10.15	0	27.64
P1-MW-01	7/18/2006	36.28	6.8 – 16.8	--	11.38	0	24.90
P1-MW-02 [b]	7/18/2006	37.34	7.0 – 17.0	11.07	11.09	0.02	26.27 [a]
P1-MW-03 [b]	7/18/2006	37.24	6.0 – 16.0	sheen	9.94	sheen	27.30
P1-MW-18	7/18/2006	35.92	9.5 – 19.5	--	11.69	0	24.23
P1-MW-19	7/18/2006	37.76	9.0 – 19.0	--	13.53	0	24.23
P1-MW-21	7/18/2006	37.29	7.0 – 17.0	--	11.47	0	25.82
P1-MW-22 [b]	7/18/2006	37.28	6.0 – 16.0	--	10.30	0	26.98
P1-MW-23	7/18/2006	37.75	7.0 – 17.0	--	10.65	0	27.10

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Performance Monitoring Event – October 2006							
D-MW-05R [b]	10/23/2006	38.18	4.6 – 14.6	--	11.31	0	26.87
D-MW-06R [c]	10/23/2006	37.79	4.8 – 14.8	10.65	10.68	0.03	27.14 [a]
P1-MW-02 [b]	10/23/2006	37.34	7.0 – 17.0	11.50	11.56	0.06	25.83 [a]
P1-MW-03 [b]	10/23/2006	37.24	6.0 – 16.0	10.51	10.54	0.03	26.73 [a]
P1-MW-18	10/23/2006	35.92	9.5 – 19.5	--	11.88	0	24.04
P1-MW-19	10/23/2006	37.76	9.0 – 19.0	--	13.70	0	24.06
P1-MW-21	10/23/2006	37.29	7.0 – 17.0	--	11.88	0	25.41
P1-MW-22 [b]	10/23/2006	37.28	6.0 – 16.0	10.35	11.86	0.01	26.43 [a]
Tenth Semiannual Sampling Event – January 2007							
D-MW-05R	1/17/2007	38.18	4.6 – 14.6	--	10.99	0	27.19
D-MW-06R	1/17/2007	37.79	4.8 – 14.8	--	10.41	0	27.38
P1-MW-01	1/17/2007	36.28	6.8 – 16.8	--	11.20	0	25.08
P1-MW-02 [b]	1/17/2007	37.34	7.0 – 17.0	10.87	11.05	0.18	26.45 [a]
P1-MW-03	1/17/2007	37.24	6.0 – 16.0	--	10.05	0	27.19
P1-MW-17	1/17/2007	35.78	6.0 – 16.0	--	9.07	0	26.71
P1-MW-18	1/17/2007	35.92	9.5 – 19.5	--	11.66	0	24.26
P1-MW-19	1/17/2007	37.76	9.0 – 19.0	--	13.50	0	24.26
P1-MW-20	1/17/2007	26.98	7.0 – 17.0	--	11.07	0	25.91
P1-MW-21	1/17/2007	37.29	7.0 – 17.0	--	11.28	0	26.01
P1-MW-22	1/17/2007	37.28	6.0 – 16.0	--	10.30	0	26.98
P1-MW-23	1/17/2007	37.75	7.0 – 17.0	--	10.68	0	27.07
P1-MW-24	1/17/2007	36.12	29.5 – 34.5	--	11.06	0	25.06
P1-MW-40	1/17/2007	37.30	3.8 – 33.8	--	10.19	0	27.11
	Performance Monitoring Event – April 2007						
D-MW-05R	4/19/2007	38.18	4.6 – 14.6	--	11.14	0	27.04
D-MW-06R	4/19/2007	37.79	4.8 – 14.8	--	10.46	0	27.33
P1-MW-01	4/19/2007	36.28	6.8 – 16.8	--	11.48	0	24.80
P1-MW-02 [b]	4/19/2007	37.34	7.0 – 17.0	11.04	11.98	0.94	26.19 [a]
P1-MW-03	4/19/2007	37.24	6.0 – 16.0	--	10.31	0	26.93
P1-MW-17	4/19/2007	35.78	6.0 – 16.0	--	9.46	0	26.32
P1-MW-18	4/19/2007	35.92	9.5 – 19.5	--	11.77	0	24.15
P1-MW-19	4/19/2007	37.76	9.0 – 19.0	--	13.61	0	24.15
P1-MW-20	4/19/2007	36.98	7.0 – 17.0	--	11.41	0	25.57
P1-MW-21	4/19/2007	37.29	7.0 – 17.0	--	11.63	0	25.66
P1-MW-22	4/19/2007	37.28	6.0 – 16.0	--	10.60	0	26.68
P1-MW-23	4/19/2007	37.75	7.0 – 17.0	--	10.94	0	26.81
P1-MW-24	4/19/2007	36.12	29.5 – 34.5	--	11.22	0	24.90
P1-MW-40	4/19/2007	37.30	3.8 – 33.8	--	10.45	0	26.85

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Eleventh Semiannual Monitoring Event and Vacuum Extraction Activities – July 2007							
D-MW-05R	7/13/2007	38.18	4.6 – 14.6	--	10.31	0	27.87
D-MW-06R	7/13/2007	37.79	4.8 – 14.8	sheen	9.83	sheen	27.96
P1-MW-01	7/13/2007	36.28	6.8 – 16.8	--	10.73	0	25.55
P1-MW-02	7/13/2007	37.34	7.0 – 17.0	--	10.27	0	27.07
P1-MW-03	7/13/2007	37.24	6.0 – 16.0	--	9.38	0	27.86
P1-MW-17	7/13/2007	35.78	6.0 – 16.0	--	8.18	0	27.60
P1-MW-18	7/13/2007	35.92	9.5 – 19.5	--	11.23	0	24.69
P1-MW-19	7/13/2007	37.76	9.0 – 19.0	--	13.12	0	24.64
P1-MW-20	7/13/2007	36.98	7.0 – 17.0	--	10.46	0	26.52
P1-MW-21	7/13/2007	37.29	7.0 – 17.0	--	10.64	0	26.65
P1-MW-22	7/13/2007	37.28	6.0 – 16.0	--	9.55	0	27.73
P1-MW-23	7/13/2007	37.75	7.0 – 17.0	--	10.06	0	27.69
P1-MW-24	7/13/2007	36.12	29.5 – 34.5	--	10.61	0	25.51
P1-MW-40	7/13/2007	37.30	3.8 – 33.8	--	9.50	0	27.80
Twelfth Semiannual Monitoring Event and Vacuum Extraction Activities – January 2008							
D-MW-05R	1/27/2008	38.18	4.6 – 14.6	--	9.80	0	28.38
D-MW-06R	1/27/2008	37.79	4.8 – 14.8	--	9.36	0	28.43
P1-MW-01	1/27/2008	36.28	6.8 – 16.8	--	10.21	0	26.07
P1-MW-02	1/27/2008	37.34	7.0 – 17.0	--	9.68	0	27.66
P1-MW-03	1/27/2008	37.24	6.0 – 16.0	--	8.82	0	28.42
P1-MW-17	1/27/2008	35.78	6.0 – 16.0	--	7.25	0	28.53
P1-MW-18	1/27/2008	35.92	9.5 – 19.5	--	10.87	0	25.05
P1-MW-19	1/27/2008	37.76	9.0 – 19.0	--	12.90	0	24.86
P1-MW-20	1/27/2008	36.98	7.0 – 17.0	--	9.93	0	27.05
P1-MW-21	1/27/2008	37.29	7.0 – 17.0	--	10.00	0	27.29
P1-MW-22	1/27/2008	37.28	6.0 – 16.0	--	8.98	0	28.30
P1-MW-23	1/27/2008	37.75	7.0 – 17.0	--	9.57	0	28.18
P1-MW-24	1/27/2008	36.12	29.5 – 34.5	--	10.09	0	26.03
P1-MW-40	1/27/2008	37.30	3.8 – 33.8	--	9.01	0	28.29

*Source: Thirteenth Semiannual Monitoring Only Report Former Pumphouse #1, Release #2 (SAIC, 2009)

NOTES:

AMSL - Above mean sea level

BGS - Below ground surface

BTOC - Below top of casing

NR - Not recorded

a - The groundwater elevation was corrected using a density of 880 kg/m3 for the product.

b - The absorbent sock was placed or replaced in the well on the date of the measurements.

c - The absorbent sock was not placed in the well on the date of the measurements.

d - Wells D-MW-05 and D-MW-06 were destroyed in May 2002 when the tarmac was upgraded. These two wells were reinstalled in October 2002.

e - Science Applications International Corporation was not under contract to change out absorbent socks from August 2003 to May 2004.

Table 2-1
Historical Groundwater Elevations
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well Number	Date of Measurement	Top of Casing Elevation (ft AMSL)	Screened Interval (ft BGS)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft AMSL)
Thirteenth Semiannual Monitoring Event – July 2008							
D-MW-05R	7/16/2008	38.18	4.6 – 14.6	--	11.01	0	27.17
D-MW-06R	7/16/2008	37.79	4.8 – 14.8	--	10.36	0	27.43
P1-MW-01	7/16/2008	36.28	6.8 – 16.8	--	11.43	0	24.85
P1-MW-02	7/16/2008	37.34	7.0 – 17.0	11.20	11.22	0.02	26.14
P1-MW-03	7/16/2008	37.24	6.0 – 16.0	10.16	10.17	0.01	27.08
P1-MW-17	7/16/2008	35.78	6.0 – 16.0	--	9.40	0	26.38
P1-MW-18	7/16/2008	35.92	9.5 – 19.5	--	11.63	0	24.29
P1-MW-19	7/16/2008	37.76	9.0 – 19.0	--	13.55	0	24.21
P1-MW-20	7/16/2008	36.98	7.0 – 17.0	--	11.30	0	25.68
P1-MW-21	7/16/2008	37.29	7.0 – 17.0	--	11.57	0	25.72
P1-MW-22	7/16/2008	37.28	6.0 – 16.0	--	10.51	0	26.77
P1-MW-23	7/16/2008	37.75	7.0 – 17.0	--	10.84	0	26.91
P1-MW-24	7/16/2008	36.12	29.5 – 34.5	--	11.08	0	25.04
P1-MW-40	7/16/2008	37.30	3.8 – 33.8	--	10.33	0	26.97
Fourteenth Semiannual Monitoring Event – December 2008							
D-MW-05R	12/15/2008	38.18	4.6 – 14.6	--	10.03	0	28.15
D-MW-06R	12/15/2008	37.79	4.8 – 14.8	--	9.55	0	28.24
P1-MW-01	12/15/2008	36.28	6.8 – 16.8	--	10.69	0	25.59
P1-MW-02	12/15/2008	37.34	7.0 – 17.0	--	10.21	0	27.13
P1-MW-03	12/15/2008	37.24	6.0 – 16.0	--	9.14	0	28.10
P1-MW-17	12/15/2008	35.78	6.0 – 16.0	--	8.14	0	27.64
P1-MW-18	12/15/2008	35.92	9.5 – 19.5	--	11.19	0	24.73
P1-MW-19	12/15/2008	37.76	9.0 – 19.0	--	9.35	0	28.41
P1-MW-20	12/15/2008	36.98	7.0 – 17.0	--	10.49	0	26.49
P1-MW-21	12/15/2008	37.29	7.0 – 17.0	--	10.57	0	26.72
P1-MW-22	12/15/2008	37.28	6.0 – 16.0	--	9.38	0	27.90
P1-MW-23	12/15/2008	37.75	7.0 – 17.0	--	9.98	0	27.77
P1-MW-24	12/15/2008	36.12	29.5 – 34.5	--	10.43	0	25.69
P1-MW-40	12/15/2008	37.30	3.8 – 33.8	--	9.35	0	27.95

NOTES:
AMSL - Above mean sea level
BGS - Below ground surface
BTOC - Below top of casing
NR - Not recorded
a - The groundwater elevation was corrected using a density of 880 kg/m3 for the product.
b - The absorbent sock was placed or replaced in the well on the date of the measurements.
c - The absorbent sock was not placed in the well on the date of the measurements.
d - Wells D-MW-05 and D-MW-06 were destroyed in May 2002 when the tarmac was upgraded. These two wells were reinstalled in October 2002.
e - Science Applications International Corporation was not under contract to change out absorbent socks from August 2003 to May 2004.

Table 2-2
Soil Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
Supplemental Investigation (Release #2) – January 2008							
P1-DB-01	AN0128	1/11/2008	4.0 – 5.6	0.0899 UJ	0.0899 UJ	0.0899 UJ	0.100 J
P1-DB-02	AN0229	1/11/2008	4.0 – 5.7	0.108 UJ	0.108 UJ	0.105 J	0.263 J
P1-DB-03	AN0329	1/12/2008	8.0 – 10.5	0.110 U	0.110 U	0.0807 J	0.524 =
P1-DB-04	AN0429	1/13/2008	8.0 – 9.2	0.48 J	41 =	19.9 =	84 =
P1-DB-05	AN0529	1/12/2008	5.5 – 7.0	0.235 J	13.1 J	3.33 J	13.6 J
P1-DB-06	AN0629	1/12/2008	4.0 – 6.4	0.801 =	42.3 =	17 =	59.3 =
P1-DB-07	AN0729	1/12/2008	5.3 – 6.6	0.124 U	1.75 =	7.48 =	30.2 =
P1-DB-08	AN0829	1/12/2008	5.3 – 6.6	0.0803 J	4.68 =	2.32 =	10.4 =
P1-DB-09	AN0929	1/13/2008	8.0 – 9.5	0.103 UJ	0.0312 J	0.103 UJ	0.0527 J
P1-DB-10	AN1029	1/13/2008	4.0 – 6.0	0.0569 J	0.0444 J	0.277 J	0.822 J
P1-DB-11	AN1129	1/13/2008	8.0 – 9.5	0.0679 J	0.116 UJ	0.173 J	1.5 J
P1-DB-12	AN1229	1/13/2008	5.5 – 7.0	0.297 UJ	5.63 J	9.93 J	44.1 J
P1-DB-13	AN1329	1/11/2008	5.6 – 7.2	0.127 UJ	0.847 J	0.465 J	1.97 J
P1-DB-14	AN1429	1/11/2008	8.0 – 10.4	0.118 UJ	0.228 J	1.08 J	4.11 J
P1-DB-15	AN1529	1/14/2008	8.0 – 9.8	0.620 U	44.4 =	25.2 =	122 =
P1-DB-16	AN1629	1/14/2008	5.5 – 7.0	1.14 U	11.7 =	13.9 =	134 =
P1-DB-17	AN1729	1/14/2008	5.7 – 7.4	0.602 U	8.47 =	17.5 =	107 =
P1-DB-18	AN1829	1/14/2008	4.0 – 5.6	0.110 UJ	0.719 J	0.206 J	1.07 J
P1-DB-19	AN1929	1/11/2008	4.0 – 5.6	0.142 J	8.26 J	1.34 J	5.17 J
P1-DB-20	AN2029	1/10/2008	5.7 – 7.4	2.74 R	125 J	66 J	370 J
P1-DB-21	AN2129	1/10/2008	5.6 – 7.3	0.247 UJ	16.7 J	9.1 J	48 J
P1-DB-22	AN2229	1/10/2008	4.0 – 5.7	0.111 UJ	3.48 J	2.28 J	14.1 J
P1-DB-23	AN2329	1/11/2008	8.0 – 9.9	0.646 J	124 J	41.9 J	159 =
P1-DB-24	AN2429	1/10/2008	6.0 – 8.0	0.122 UJ	2.64 J	3.33 J	21.9 J
P1-DB-25	AN2529	1/10/2008	8.0 – 9.6	0.00103 U	0.00103 U	0.00103 U	0.00103 U
P1-DB-26	AN2629	1/10/2008	8.0 – 10.5	0.0012 UJ	0.0012 UJ	0.0012 UJ	0.0012 UJ
P1-DB-27	AN2729	1/10/2008	6.0 – 8.0	0.119 UJ	0.203 J	2.31 J	24.8 J
P1-DB-28	AN2829	1/10/2008	8.0 – 10.0	0.228 UJ	0.0697 J	2.04 J	24.9 J
P1-DB-29	AN2929	1/10/2008	8.0 – 10.0	0.45 UJ	1.98 J	13 J	72.2 J
P1-DB-30	AN3029	1/9/2008	8.0 – 10.0	0.114 UJ	0.114 UJ	0.0802 J	1.1 J
P1-DB-31	AN3129	1/9/2008	8.0 – 10.2	0.109 UJ	0.109 UJ	0.544 J	6.06 J
P1-DB-32	AN3229	1/9/2008	9.6 – 10.7	0.00112 U	0.00112 U	0.000301 J	0.000687 J
P1-DB-33	AN3329	1/9/2008	10.0 – 12.0	0.11 U	0.11 U	0.111 =	1.98 =
P1-DB-34	AN3429	1/9/2008	9.5 – 11.0	0.46 UJ	11.6 J	15.2 J	79.1 J
P1-DB-35	AN3529	1/9/2008	11.0 – 12.0	0.108 UJ	0.108 UJ	0.226 J	1.38 J
Soil Threshold Levels (Table B, Column 1)				0.017	115	18	700
Alternate Threshold Levels				9.3	479	187	893

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Italics values exceed alternate threshold limits

mg/kg - miligram pre kilogram

Laboratory Qualifiers:

U - Indicates the compound was not detected at the concentration reported

J - Indicates the value of the compound is an estimated value

= - Indicates the compound was detected at the concentration reported

Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Selected Wells from the Corrective Action Plan–Part A Investigation (Release #2) – 1996 [a]							
P1-MW-01	HT4-MW01	12/9/1996	**500 U**	**16,000 =**	1,900 =	9,500 =	27,400
P1-MW-02	HT4-MW02	12/9/1996	***1,100 =***	**25,000 =**	1,400 =	5,900 =	33,400
Selected Wells from the Corrective Action Plan–Part B Investigation (Release #2) – 1997 [a]							
P1-MW-18	MW1801	5/30/1997	4.2 J	57 =	19 =	110 =	190.2
P1-MW-19	MW1901	5/29/1997	***630 =***	1,900 =	530 =	2,400 =	5,460
P1-MW-22	MW2201	5/29/1997	**160 =**	80 J	200 =	6,200 =	6,660
P1-MW-23	MW2301	5/30/1997	**110 =**	62 =	180 =	1,100 =	1,452
Selected Wells from the Corrective Action Plan–Part B Investigation (Release #2) – 1999 [a]							
D-MW-05	H833MW0502	11/3/1999	***3,400 =***	2,000 =	1,200 =	5,250 =	11,850
P1-MW-01	PH1MW0102	11/3/1999	17 J	**6,500 =**	1,800 =	10,000 =	16,800
P1-MW-02	PH1MW0202	11/3/1999	***1,000 =***	**19,000 =**	1,600 =	7,700 =	28,300
P1-MW-18	PH1MW1802	11/3/1999	25 U	530 =	370 =	1,650 =	2,300
P1-MW-19	PH1MW1902	11/3/1999	**200 =**	**6,400 =**	1,800 =	7,800 =	15,100
P1-MW-22	PH1MW2202	11/3/1999	**250 U**	250 U	150 J	8,300 =	8,250
P1-MW-23	PH1MW2302	11/3/1999	***330 =***	110 =	830 =	3,720 =	4,360
Selected Wells from the Corrective Action Plan–Part B Investigation (Release #2) – 2000 [a]							
D-MW-05	AK0512	2/23/2000	***4,580 =***	**6,860 =**	1,560 =	5,800 =	18,800
First Semiannual Monitoring Event (Release #2) – September 2001							
D-MW-05	AK0522	9/6/2001	***3,970 =***	**7,490 =**	1,390 =	5,040 =	17,890
D-MW-06	AK0622	9/6/2001	***428 =***	844 =	1,010 =	4,080 =	6,362
P1-MW-01	AN0122	9/6/2001	**200 U**	**7,930 =**	**2,120 =**	8,290 =	18,340
P1-MW-02	AN0222	9/6/2001	***932 =***	**21,200 =**	1,470 =	6,050 =	29,652
P1-MW-18	AN1822	9/6/2001	0.22 J	24.3 =	14.5 =	43.6 =	82.62
P1-MW-19	AN1922	9/6/2001	***832 =***	5,830 =	1,200 =	4,510 =	12,372
P1-MW-22	AN2222	9/6/2001	**91.9 =**	67.4 U	178 =	6,350 =	6,687.30
P1-MW-23	AN2322	9/6/2001	***661 =***	70.8 U	975 =	4,630 =	6,336.80
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	—	—

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

NRC - No regulatory Criteria

Laboratory Qualifiers:

U - Indicates the compound was not detected at the concentration reported

J - Indicates the value of the compound is an estimated value

= - Indicates the compound was detected at the concentration reported

Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Second Semiannual Monitoring Event (Release #2) – March 2002							
D-MW-05	AK0532	3/15/2002	***3,380*** =	1,220 =	1,340 =	4,940 =	10,880
D-MW-06	AK0632	3/15/2002	***288*** =	421 =	705 =	2,850 =	4,264
P1-MW-01	AN0132	3/14/2002	2.5 =	1,910 =	1,900 =	9,440 =	13,252.50
P1-MW-02	AN0232	3/14/2002	***1,030*** =	**25,800 J**	1,440 =	5,620 =	33,890
P1-MW-18	AN1832	3/14/2002	1 U	38.2 =	30.0 =	118 =	186
P1-MW-19	AN1932	3/14/2002	***510*** =	5,410 =	972 =	3,710 =	10,602
P1-MW-22	AN2232	3/14/2002	**123** =	100 U	112 =	6,480 =	6,715
P1-MW-23	AN2332	3/14/2002	***510*** =	50 U	818 =	4,180 =	5,508
Third Semiannual Monitoring Event (Release #2) – January 2003							
D-MW-05R	AK0542	1/25/2003	***3,800*** =	**6,900** =	1,360 =	4,650 =	16,710
D-MW-06R	AK0642	1/25/2003	***342*** =	1,440 =	1,140 =	4,000 =	6,922
P1-MW-01	AN0142	1/25/2003	4.5 J	**7,830** =	**2,270** =	10,900 =	21,004.50
P1-MW-02	AN0242	1/25/2003	***714*** =	**19,700** =	1,640 =	6,820 =	28,874
P1-MW-18	AN1842	1/25/2003	1 U	36.5 =	61.3 =	169 =	266.8
P1-MW-19	AN1942	1/25/2003	***682*** =	1,510 =	988 =	4,130 =	7,310
P1-MW-22	AN2242	1/25/2003	**78.2** =	50 U	156 =	6,050 =	6,284.20
P1-MW-23	AN2342	1/25/2003	***709*** =	127 =	1,080 =	4,210 =	6,126
Fourth Semiannual Monitoring Event (Release #2) – June 2003							
D-MW-05R	AK0552	6/21/2003	***2,590*** =	1,530 =	881 =	3,300 =	8,301
D-MW-06R	AK0652	6/21/2003	***520*** =	137 =	1,260 =	3,830 =	5,747
P1-MW-01	AN0152	6/21/2003	**100 U**	**6,560** =	2,080 =	10,800 =	19,440
P1-MW-02	AN0252	6/21/2003	***1,020*** =	**26,200** =	1,990 =	7,760 =	36,970
P1-MW-18	AN1852	6/21/2003	2 U	85.9 =	157 =	446 =	688.9
P1-MW-19	AN1952	6/21/2003	***876*** =	2,230 =	1,470 =	5,180 =	9,756
P1-MW-22	AN2252	6/21/2003	**126** =	9 J	90.2 =	6,340 =	6,565.20
P1-MW-23	AN2352	6/21/2003	***542*** =	140 =	1,290 =	5,050 =	7,022
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	---	---

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

NRC - No regulatory Criteria

Laboratory Qualifiers:

U - Indicates the compound was not deteeted at the concentration reported

J - Indicates the value of the compound is an estimated value

= - Indicates the compound was deteeted at the concentration reported

Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Fifth Semiannual Monitoring Event (Release #2) – July 2004							
D-MW-05R	AK0562	7/16/2004	***3,160*** =	1,020 =	925 =	4,630 =	9,735
D-MW-06R	AK0662	7/16/2004	**177** =	45 =	396 =	3,450 =	4,068
P1-MW-01	AN0162	7/16/2004	5.6 =	4,180 =	1,800 =	8,910 =	14,895
P1-MW-02	AN0262	7/16/2004	***654*** =	**22,000** =	2,030 =	8,040 =	32,724
P1-MW-18	AN1862	7/16/2004	1 U	74.1 =	110 =	370 =	554.1
P1-MW-19	AN1962	7/16/2004	***571*** =	**6,170** =	1,630 =	6,390 =	14,761
P1-MW-22	AN2262	7/16/2004	40.7 =	39.1 U	85.7 =	5,400 =	5,565.50
P1-MW-23	AN2362	7/16/2004	***360*** =	24.0 =	544 =	3,400 =	4,328
Sixth Semiannual Monitoring Event (Release #2) – January 2005							
D-MW-05R	AK0572	1/14/2005	***1,810 J***	164 J	688 J	3,240 J	5,902
D-MW-06R	AK0672	1/14/2005	**222 J**	183 J	657 J	3,360 J	4,422
P1-MW-01	AN0172	1/14/2005	6.4 =	4,220 J	1,420 J	6,690 J	12,336.40
P1-MW-02	AN0272	1/14/2005	***762 J***	**19,200 J**	1,420 J	5,630 J	27,012
P1-MW-18	AN187	1/14/2005	2.8 J	141 J	42.5 J	147 J	333.3
P1-MW-19	AN1972	1/14/2005	***402 J***	1,320 J	1,040 J	3,800 J	6,562
P1-MW-22	AN2272	1/14/2005	**52.8** =	12.5 U	82.5 J	8,430 J	8,565.30
P1-MW-23	AN2372	1/15/2004	***660*** =	38.9 =	694 =	3,240 =	4,632.90
Seventh Semiannual Monitoring Event (Release #2) – July 2005							
D-MW-05R	AK0582	7/16/2005	***3,360*** =	734 =	893 =	4,030 =	9,017
D-MW-06R	AK0682	7/16/2005	***289*** =	159 U	545 =	3,430 =	4,264
P1-MW-01	AN0182	7/16/2005	4.2 =	3,140 =	1,990 =	11,100 =	16,234.20
P1-MW-02	AN0282	7/16/2005	***724*** =	**19,300** =	1,590 =	6,770 =	28,384
P1-MW-18	AN1882	7/16/2005	1 U	18.3 =	38.8 =	118 =	175.1
P1-MW-19	AN1982	7/16/2005	***500*** =	1,790 =	1,540 =	5,830 =	9,660
P1-MW-22	AN2282	7/16/2005	43.7 =	28.0 U	61.3 =	2,700 =	2,805
P1-MW-23	AN2382	7/16/2005	**129** =	31.0 U	474 =	1,750 =	2,353
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	---	---

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

NRC - No regulatory Criteria

Laboratory Qualifiers:

U - Indicates the compound was not detected at the concentration reported

J - Indicates the value of the compound is an estimated value

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Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Eighth Semiannual Monitoring Event (Release #2) – January 2006							
D-MW-05R	AK0592	1/16/2006	***3,060*** =	369 =	918 =	4,380 =	8,727
D-MW-06R	AK0692	1/16/2006	***315*** =	67.5 =	880 =	5,220 =	6,482.50
P1-MW-01	AN0192	1/16/2006	4 =	3,250 =	2,030 =	11,100 =	16,384
P1-MW-02	AN0292	1/16/2006	***943*** =	**20,300** =	**2,400** =	10,800 =	34,443
P1-MW-18	AN1892	1/16/2006	1 U	9.6 =	22.8 =	75.8 =	108.2
P1-MW-19	AN1992	1/16/2006	***333*** =	2,590 =	1,890 =	7,850 =	12,663
P1-MW-22	AN2292	1/16/2006	**57.5** =	10.7 =	65.1 =	5,250 =	5,383.30
P1-MW-23	AN2392	1/16/2006	***442*** =	35.9 =	875 =	4,580 =	6,032.90
Ninth Semiannual Monitoring Event (Release #2) – July 2006							
D-MW-05R	AK0502	7/20/2006	***3,480*** =	155 =	995 =	4,260 =	8,890
D-MW-06R	AK0602	7/20/2006	**129** =	56.8 U	735 =	4,130 =	5,050
P1-MW-01	AN0102	7/20/2006	20 U	2,690 =	1,880 =	8,580 =	13,150
P1-MW-02	AN0202	7/20/2006	***970*** =	**24,500** =	1,880 =	7,770 =	35,120
P1-MW-18	AN1802	7/20/2006	1 U	10.3 =	13.9 =	54.7 =	78.9
P1-MW-19	AN1902	7/20/2006	***371*** =	3,220 =	1,810 =	7,130 =	12,531
P1-MW-21	AN2102	7/20/2006	**64.4** =	182 =	377 =	991 =	1,614.40
P1-MW-22	AN2202	7/20/2006	**58.7** =	20 U	74.2 =	5,530 =	5,662.90
P1-MW-23	AN2302	7/20/2006	***527*** =	27.9 U	754 =	4,410 =	5691
P1-J1	AN0118	7/20/2006	**69.5** =	292 =	1,040 =	5,060 =	6,461.50
P1-J2	AN0218	7/20/2006	**268** =	3,230 =	1,430 =	5,860 =	10,788
P1-J3	AN0318	7/20/2006	***900*** =	**17,600** =	1,570 =	6,670 =	26,740
P1-J4	AN0418	7/20/2006	***729*** =	**10,700** =	1,390 =	5,190 =	18,009
P1-J5	AN0518	7/20/2006	***601*** =	**15,000** =	1,620 =	6,870 =	24,091
P1-J6	AN0618	7/20/2006	**114** =	1,900 =	967 =	3,040 =	6,021
Performance Monitoring Event – October 2006							
D-MW-05R	AK05A2	10/23/2006	***3,900*** =	357 =	1,370 =	5,610 =	11,137
P1-MW-02	AN02A2	10/23/2006	***622*** =	**22,800** =	2,060 =	8,230 =	33,712
P1-MW-21	AN21A2	10/23/2006	**56.8** =	2,240 =	486 =	1,320 =	4,102.80
P1-MW-22	AN22A2	10/23/2006	**58.1** =	15.2 J	77.6 =	7,000 =	7,150.90
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	---	---

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

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Laboratory Qualifiers:

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Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Tenth Semiannual Monitoring Event (Release #2) – January 2007							
D-MW-05R	AK05B2	1/17/2007	***3,900*** =	1,080 =	1,260 =	5,540 =	11,780
D-MW-06R	AK06B2	1/17/2007	37.5 =	47.8 =	573 =	3,790 =	4,448.30
P1-MW-01	AN01B2	1/17/2007	6.56 =	2,090 =	1,570 =	7,530 =	11,196.56
P1-MW-02	AN02B2	1/22/2007	***1,070*** =	**19,600 J**	1,600 =	6,240 =	28,510
P1-MW-18	AN18B2	1/17/2007	1 U	10.8 =	44 =	150 =	204.8
P1-MW-19	AN19B2	1/17/2007	***376*** =	2,710 =	1,860 =	7,000 =	11,946
P1-MW-21	AN21B2	1/22/2007	3.23 =	5.56 =	226 =	663 =	897.79
P1-MW-22	AN22B2	1/17/2007	35.5 =	12.5 =	55.1 =	2,000 =	2,103.10
P1-MW-23	AN23B2	1/17/2007	**88.6** =	9.18 J	189 =	1,530 =	1,816.70
P1-J1	ANJ128	1/17/2007	**59.7** =	138 =	707 =	2,530 =	3,434.70
P1-J2	ANJ228	1/17/2007	**245** =	1,480 =	1,420 =	5,860 =	9,005
P1-CPT-09	AP0928	1/23/2007	***785*** =	**23,400** =	1,540 =	6,660 =	32,385
P1-J4	ANJ428	1/22/2007	***1,160*** =	**20,800** =	1,600 =	6,230 =	29,790
P1-J5	ANJ528	1/17/2007	***379*** =	**14,100** =	1,590 =	6,040 =	22,109
P1-J6	ANJ628	1/22/2007	**68** =	248 =	326 =	514 =	1,156
Performance Monitoring Event – April 2007							
D-MW-05R	AK05C2	4/21/2007	***3,870 J***	292 =	1,320 J	4,190 =	9,672
P1-MW-02	AN02C2	4/21/2007	***525*** =	**17,800** =	1,780 =	6,380 =	26,485
P1-MW-21	AN21C2	4/21/2007	2.14 =	6.35 =	334 =	401 =	743.49
P1-MW-22	AN22C2	4/21/2007	26.5 =	3 =	51.4 =	4,580 =	4,660.90
Eleventh Semiannual Monitoring Event (Release #2) – July 2007							
D-MW-05R	AK05D2	7/14/2007	***2,520 J***	189 J	692 J	3,800 J	7201
D-MW-06R	AK06D2	7/13/2007	49.5 =	18.8 J	371 =	3,070 =	3509.3
P1-MW-01	AN01D2	7/13/2007	7.77 =	962 J	683 J	3,650 J	5302.77
P1-MW-02	AN02D2	7/19/2007	**163** =	**6,380** =	997 =	4,020 =	11560
P1-MW-03	AN03D2	7/15/2007	**184 J**	1,260 J	843 J	5,990 J	8277
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	---	-----

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

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Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Eleventh Semiannual Monitoring Event (Release #2) – July 2007							
P1-MW-17	AN17D2	7/15/2007	1 U	1 U	1 U	1.52 =	1.52
P1-MW-18	AN18D2	7/15/2007	2 U	38.6 =	55.7 =	331 =	425.3
P1-MW-19	AN19D2	7/14/2007	***452*** =	4,050 =	1750 =	6,910 =	13162
P1-MW-20	AN20D2	7/15/2007	0.319 J	1.18 U	0.301 J	2.52 =	3.14
P1-MW-22	AN22D2	7/14/2007	18.1 =	12.7 U	60.5 =	3,000 =	3078.6
P1-MW-23	AN23D2	7/14/2007	27.5 =	5.74 =	175 =	896 =	1104.24
P1-MW-36	AN36D2	7/15/2007	1 U	1 U	1 U	0.374 J	0.374
P1-MW-40	AN40D2	7/15/2007	17.2 =	1.46 U	4.37 =	48.4 =	69.97
P1-CPT-07	AP0738	7/15/2007	***728 J***	1,770 J	560 J	2,110 J	5168
P1-CPT-17	AP1738	7/15/2007	***906*** =	**12,000** =	579 =	2,700 =	16185
P1-CPT-19	AP1938	7/15/2007	***1,830*** =	3,910 =	298 =	2,270 =	8308
P1-CPT-22	AP2238	7/15/2007	***471*** =	989 =	186 =	1,310 =	2956
P1-SWS-11	AN1119	7/19/2007	***357*** =	**11,900** =	1,640 =	8,990 =	8308
P1-SWS-12	AN1219	7/19/2007	***0.457 J*** =	1 U	0.255 J	4.25 =	2956
Twelfth Semiannual Monitoring Event (Release #2) – January 2008							
D-MW-05R	AK05E2	1/28/2008	***3,760*** =	148 =	596 =	4,460 =	8,964
D-MW-06R	AK06E2	1/28/2008	**109** =	49.6 =	657 =	3,920 =	4,735.60
P1-MW-01	AN01E2	1/28/2008	2.14 =	1,590 =	1,580 =	9,680 =	12,852
P1-MW-02	AN02E2	1/28/2008	***457*** =	**13,800** =	1,450 =	6,050 =	21,757
P1-MW-19	AN19E2	1/28/2008	***461*** =	1,620 =	1,380 =	5,640 =	9,101
P1-MW-21	AN21E2	1/28/2008	0.567 J	9.45 U	361 =	811 =	1172
P1-MW-22	AN22E2	1/28/2008	32.6 =	6.81 U	28.1 =	2,190 =	2,250.70
P1-MW-23	AN23E2	1/28/2008	**72.1** =	36.9 =	495 =	1,940 =	2,544
Supplemental Investigation (Release #2) – January 2008							
P1-DB-01	AN0128	1/11/2008	20.7 =	22.8 =	7.95 =	96.1 =	147.55
P1-DB-02	AN0228	1/11/2008	16.7 =	14.2 =	27.4 =	94 =	152.3
P1-DB-03	AN0328	1/12/2008	15.2 =	5.88 =	189 =	815 =	1,025.08
P1-DB-04	AN0428	1/13/2008	***514*** =	4,420 J	937 =	3,330 =	9,201
P1-DB-05	AN0528	1/12/2008	***1,910*** =	**11,200** =	752 =	2,700 =	16,562
P1-DB-06	AN0628	1/12/2008	***2,200*** =	1,860 =	1,190 =	4,170 =	9,420
P1-DB-07	AN0728	1/12/2008	***333*** =	1,070 =	363 =	1,070 =	2,836
P1-DB-08	AN0828	1/12/2008	***588*** =	556 =	1,210 =	4,570 =	6,924
P1-DB-09	AN0928	1/13/2008	1 U	3.71 =	1.2 =	4.48 =	9.39
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	---	---

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

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Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Supplemental Investigation (Release #2) – January 2008							
P1-DB-10	AN1028	1/13/2008	**280 =**	1,060 J	721 =	2,390 =	4,451
P1-DB-11	AN1128	1/13/2008	5.01 J	0.656 J	9.03 J	10.2 J	24.896
P1-DB-12	AN1228	1/13/2008	**280 =**	915 =	1,550 J	4,540 =	7,285
P1-DB-13	AN1328	1/11/2008	***1,210 =***	**14,300 =**	1,160 =	3,820 =	20,490
P1-DB-14	AN1428	1/11/2008	**116 =**	84.9 =	612 =	1,830 =	2,642.90
P1-DB-15	AN1528	1/14/2008	7.06 =	2,030 =	858 =	4,460 =	7,355.06
P1-DB-16	AN1628	1/14/2008	9.13 =	297 =	384 =	2,040 =	2,730.13
P1-DB-17	AN1728	1/14/2008	5.51 =	1,020 =	1,210 =	6,980 =	9,215.51
P1-DB-18	AN1828	1/14/2008	***810 =***	**25,400 =**	1,480 =	5,650 =	33,340
P1-DB-19	AN1928	1/11/2008	***463 =***	**6,440 =**	1,230 =	4,130 =	12,263
P1-DB-20	AN2028	1/10/2008	**63 =**	**12,200 =**	1,360 =	5,470 =	19,093
P1-DB-21	AN2128	1/10/2008	**188 =**	**8,930 =**	1,020 =	4,410 =	14,548
P1-DB-22	AN2228	1/10/2008	***915 =***	**19,800 =**	1,380 =	6,030 =	28,125
P1-DB-23	AN2328	1/11/2008	***1,160 =***	**22,100 =**	1,180 =	3,990 =	28,430
P1-DB-24	AN2428	1/10/2008	40.1 =	**11,700 =**	1,420 =	5,670 =	18,830.10
P1-DB-25	AN2528	1/10/2008	2.08 =	4.15 =	9.01 =	8.63 =	23.87
P1-DB-26	AN2628	1/10/2008	1.71 =	11.5 =	54.1 J	191 J	258.31
P1-DB-27	AN2728	1/10/2008	0.424 J	163 =	227 =	1,500 =	1,890.42
P1-DB-28	AN2828	1/10/2008	**120 =**	5,020 =	1,520 =	7,990 =	14,650
P1-DB-29	AN2928	1/10/2008	28.6 =	2,510 =	1,070 =	4,910 =	8,518.60
P1-DB-30	AN3028	1/9/2008	2.21 =	2,500 =	1,630 =	8,640 =	12,772.21
P1-DB-31	AN3128	1/9/2008	25.5 =	3,130 =	1,570 =	8,630 =	13,355.50
P1-DB-32	AN3228	1/9/2008	7.18 =	1,500 =	1,380 =	5,840 =	8,727.18
P1-DB-33	AN3328	1/9/2008	2.7 =	2,520 =	884 =	5,000 =	8,406.70
P1-DB-34	AN3428	1/9/2008	1 U	1,670 =	1,630 =	8,210 =	11,510
P1-DB-35	AN3528	1/9/2008	***598 =***	**11,700 =**	1,470 =	6,000 =	19,768
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	—	—

Source: Sixth Annual Monitoring Only Report (SAIC, 2008)

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

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Laboratory Qualifiers:

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Table 2-3
Groundwater Analytical Results
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Thirteenth Semiannual Monitoring Event (Release #2) – July 2008							
D-MW-05R	AK05F2	7/16/2008	***2,090=***	65.1=	568=	3,110=	5,833
D-MW-06R	AK06F2	7/16/2008	44.4=	28.2=	890=	4,280=	5,242.6
P1-MW-01	AN01F2	7/16/2008	6.02=	1,330=	2,000=	9,080=	12,416.02
P1-MW-02	AN02F2	7/16/2008	***614=***	**17,200=**	**2,200=**	8,970=	29,004
P1-MW-19	AN19F2	7/16/2008	***518=***	1,490=	1,630=	6,630=	10,268
P1-MW-21	AN21F2	1/28/2008	2.98=	1.37=	249=	622=	875.35
P1-MW-22	AN22F2	7/16/2008	24.6=	7.32=	77.8=	4,650=	4,759.72
P1-MW-23	AN23F2	7/16/2008	**71=**	10.6=	144=	1,280=	1,505.6
Fourteenth Semiannual Monitoring Event (Release #2) – December 2008							
D-MW-05R	D-MW-05R (121708)	12/17/2008	***1,700***	74	290	1,800 J	3,864
D-MW-06R	D-MW-06R (121708)	12/17/2008	**84**	34	510	2,500 J	3,128
P1-MW-01	P1-MW-01 (121708)	12/17/2008	10 U	1,100	1,700	8,600 J	11,400
P1-MW-02	P1-MW-02 (121708)	12/17/2008	***520***	**16,000**	1,700	6,900 J	25,120
P1-MW-18	P1-MW-18 (121708)	12/17/2008	0.5 U	1.2	7.7	13 J	22
P1-MW-19	P1-MW-19 (121708)	12/17/2008	***420***	1,300	1,700	6,500 J	9,920
P1-MW-22	P1-MW-22 (121708)	12/17/2008	29	18	95	3,900 J	4,042
P1-MW-23	P1-MW-23 (121708)	12/17/2008	**88**	17	180	1,500 J	1,785
P1-SWS-11	P1-SWS-11 (121808)	12/18/2008	24	51	26	370	471
P1-SWS-12	P1-SWS-12 (121808)	12/18/2008	2.4	16	33	88	139
In-Stream Water Quality Standard (GA EPD Chapter 391-3-6)			51	5,980	2,100	NRC	NRC
Alternate Concentration Limit			285	800,000	114,800	—	—

Notes:

Bold values exceed IWQS

Italics values exceed alternate threshold limits

ug/L - microgram per Liter

BTEX - Benzene, toulene, ethylbenzene, and xylenes

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Table 2-4
Field Parameters in Monitor Wells - December 2008
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Sample ID	Turbidity (NTUs)	pH (SU)	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)
D-MW5R	5.89	5.55	156	23.57	0.67
D-MW6R	1.93	5.32	128	23.8	0.36
P1-MW1	1.24	4.72	64	21.84	0.32
P1-MW2	2.29	4.44	52	20.93	0.72
P1-MW18	1.38	4.68	31	23.33	0.34
P1-MW19	1.26	4.61	45	22.99	0.43
P1-MW22	24.1	5.67	224	21.22	0.39
P1-MW23	1.32	4.96	72	24.53	0.36
P1-SWS-11	--	4.2	50	17.91	1.77
P1-SWS-12	--	3.62	49	18.92	1.52

Notes:
NTU - Nephelometric Turbidity Units
SU - Standard Unit
mg/L - milligram per Liter
uS/cm - microsiemens per centimeter

Table 2-5
Summary of Enhanced Fluid Recovery
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well ID	Date	Initial Product Level (ft BGS)	Initial Water Level (ft BGS)	Product Thickness (ft)	Final Product Level (ft BGS)	Final Water Level (ft BGS)	Product Removed (~gal)	Total Volume Removed (~gal)
Former Pumphouse #1 Tank Pit Area (Release #2) – June 2005								
D-MW-05R	6/17/2005	--	9.2	0	--	9.2	none	25
D-MW-06R	6/17/2005	--	8.81	0	--	8.81	none	25
P1-MW-01	6/17/2005	--	10.48	0	--	dry	none	2
P1-MW-02	6/17/2005	--	9.45	0	--	9.45	none	7
P1-MW-03	6/17/2005	--	8.13	0	--	8.13	none	trace
P1-MW-21	6/17/2005	--	9.91	0	--	dry	none	15
P1-MW-22	6/17/2005	--	8.37	0	--	8.37	none	15
P1-CPT-2	6/17/2005	--	8.01	0	--	8.01	none	trace
P1-CPT-3	6/17/2005	--	dry	0	--	dry	none	0
P1-CPT-7	6/17/2005	--	9.3	0	--	9.3	none	5
P1-CPT-8	6/17/2005	--	dry	0	--	dry	none	0
P1-CPT-11	6/17/2005	--	dry	0	--	dry	none	0
P1-CPT-17	6/17/2005	--	9.63	0	--	dry	none	7
P1-CPT-18	6/17/2005	--	9.68	0	--	dry	none	3
							Total Volume Removed (gal)	104
Former Pumphouse #1 Tank Pit Area (Release #2) – August 2005								
D-MW-05R	8/24/2005	--	9.61	0	--	9.15	sheen	25
D-MW-06R	8/24/2005	--	9.19	0	--	9.02	sheen	40
P1-MW-01	8/25/2005	--	10.98	0	--	10.76	sheen	30
P1-MW-02	8/25/2005	--	10.17	0	--	10.15	sheen	50
P1-MW-03	8/25/2005	--	8.71	0	--	8.89	sheen	50
P1-MW-21	8/25/2005	--	10.7	0	--	10.45	sheen	30
P1-MW-22	8/25/2005	--	9.15	0	--	dry	sheen	55
P1-CPT-2	8/25/2005	--	dry	0	--	8.71	sheen	20
P1-CPT-3	8/24/2005	--	7.02	0	--	dry	none	0
P1-CPT-7	8/25/2005	--	9.94	0	--	9.25	none	10
P1-CPT-8	8/24/2005	--	8.15	0	--	dry	none	0
P1-CPT-11	8/25/2005	--	dry	0	--	dry	none	<1
P1-CPT-17	8/25/2005	--	10.36	0	--	9.1	sheen	5
P1-CPT-18	8/25/2005	--	9.31	0	--	9.55	sheen	10
							Total Volume Removed (gal)	326

Notes:
ft - feet
bgs - below ground surface
gal - gallons

Table 2-5
Summary of Enhanced Fluid Recovery
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well ID	Date	Initial Product Level (ft BGS)	Initial Water Level (ft BGS)	Product Thickness (ft)	Final Product Level (ft BGS)	Final Water Level (ft BGS)	Product Removed (~gal)	Total Volume Removed (~gal)
Former Pumphouse #1 Tank Pit Area (Release #2) – October 2005								
D-MW-05R	10/13/2005	--	9.16	0	--	9.47	sheen	55
D-MW-06R	10/13/2005	--	8.87	0	--	6.16	sheen	55
P1-MW-01	10/13/2005	--	9.57	0	--	9.7	sheen	55
P1-MW-02	10/13/2005	--	8.71	0	--	9.04	sheen	55
P1-MW-03	10/12/2005	8.05	8.05	sheen	8.29	8.29	sheen	60
P1-MW-21	10/13/2005	--	9.07	0	--	9.42	sheen	55
P1-MW-22	10/13/2005	8	8	sheen	8.37	8.37	sheen	55
P1-CPT-2	--	7.8	7.8	sheen	8.21	8.21	sheen	55
P1-CPT-3	--	--	7.26	0	--	6.05	none	0
P1-CPT-7	--	--	8.36	0	--	8.55	sheen	35
P1-CPT-8	--	--	8.18	0	--	8.06	sheen	1
P1-CPT-11	--	--	dry	--	--	9.05	0.25	2
P1-CPT-17	--	--	8.77	0	8.69	8.69	0.25	10
P1-CPT-18	--	--	8.85	0	--	8.98	0.35	35
							Total Volume Removed (gal):	528
Former Pumphouse #1 Tank Pit Area (Release #2) – January 2006								
D-MW-05R	1/11/2006	--	9.71	0	--	--	--	--
D-MW-06R	1/11/2006	--	9.25	0	--	--	--	--
P1-MW-01	1/11/2006	--	10.61	0	--	--	--	--
P1-MW-02	1/11/2006	9.91	9.91	sheen	--	--	--	--
P1-MW-03	1/11/2006	--	8.75	0	--	--	--	--
P1-MW-21	1/11/2006	--	10.32	0	--	--	--	--
P1-MW-22	1/11/2006	--	9.02	0	--	--	--	--
P1-CPT-2	1/11/2006	--	8.63	0	--	--	--	--
P1-CPT-3	1/11/2006	--	dry	0	--	--	--	--
P1-CPT-7	1/11/2006	--	9.83	0	--	--	--	--
P1-CPT-8	1/11/2006	--	dry	0	--	--	--	--
P1-CPT-11	1/11/2006	--	dry	0	--	--	--	--
P1-CPT-17	1/11/2006	--	10.06	0	--	--	--	--
P1-CPT-18	1/11/2006	10.11	10.11	sheen	--	--	--	--
							Total Volume Removed (gal):	0

Notes:
ft - feet
bgs - below ground surface
gal - gallons

Table 2-5
Summary of Enhanced Fluid Recovery
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well ID	Date	Initial Product Level (ft BGS)	Initial Water Level (ft BGS)	Product Thickness (ft)	Final Product Level (ft BGS)	Final Water Level (ft BGS)	Product Removed (~gal)	Total Volume Removed (~gal)
Former Pumphouse #1 Tank Pit Area (Release #2) – April 2006								
D-MW-05R	4/19/2006	--	10.18	0	--	NS	none	none
D-MW-06R	4/19/2006	--	9.63	0	--	NS	none	none
P1-MW-01	4/19/2006	--	11.04	0	--	NS	none	none
P1-MW-02	4/19/2006	--	10.56	0	--	NS	none	none
P1-MW-03	4/19/2006	--	9.35	0	--	NS	none	none
P1-MW-21	4/19/2006	--	10.98	0	--	NS	none	none
P1-MW-22	4/19/2006	--	9.61	0	--	NS	none	none
P1-CPT-2	4/19/2006	--	9.23	0	--	NS	none	none
P1-CPT-3	4/19/2006	--	Dry	0	--	NS	none	none
P1-CPT-7	4/19/2006	--	10.15	0	--	NS	none	none
P1-CPT-8	4/19/2006	--	8.05	0	--	NS	none	none
P1-CPT-11	4/19/2006	--	dry	0	--	NS	none	none
P1-CPT-17	4/19/2006	--	10.64	0	--	NS	none	none
P1-CPT-18	4/19/2006	--	dry	0	--	NS	none	none
							Total Volume Removed (gal)	0
Former Pumphouse #1 Tank Pit Area (Release #2) – July 2006								
D-MW-05R	7/17/2006	--	10.75	0	--	NS	--	--
D-MW-06R	7/17/2006	--	10.15	sheen	--	NS	--	--
P1-MW-01	7/17/2006	--	11.38	0	--	NS	--	--
P1-MW-02 [b]	07/17/06	11.07	11.09	0.02	11.42	11.44	--	1,000
P1-MW-03	7/17/2006	--	9.94	sheen	--	NS	--	--
P1-MW-21	7/17/2006	--	11.47	0	--	NS	--	--
P1-MW-22	7/17/2006	--	10.3	0	--	NS	--	--
P1-CPT-2	7/17/2006	--	9.81	0	--	NS	--	--
P1-CPT-3	7/17/2006	--	7.43	0	--	NS	--	--
P1-CPT-7	7/17/2006	--	10.66	0	--	NS	--	--
P1-CPT-8	7/17/2006	--	dry	0	--	NS	--	--
P1-CPT-11	7/17/2006	--	dry	0	--	NS	--	--
P1-CPT-17	7/17/2006	--	11.05	0	--	NS	--	--
P1-CPT-18	7/17/2006	--	dry	0	--	NS	--	--
							Total Volume Removed (gal)	1,000

Notes:
ft - feet
bgs - below ground surface
gal - gallons
a - Vacuum activities changed to four wells for 8 hours, well selection based on product measurements
b - Pumped for 8 hours

Table 2-5
Summary of Enhanced Fluid Recovery
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well ID	Date	Initial Product Level (ft BGS)	Initial Water Level (ft BGS)	Product Thickness (ft)	Final Product Level (ft BGS)	Final Water Level (ft BGS)	Hydrocarbons Removed (equiv. gal)	Total Volume Removed (~gal)
Former Pumphouse #1 Tank Pit Area (Release #2) – April 2007								
D-MW-05R	4/19/2007		11.14	0				
D-MW-06R	4/19/2007		10.06	0				
P1-MW-01	4/19/2007		11.48	0				
P1-MW-02 [b]	04/19/07	11.04	11.98	0.94		12.55	56	2749
P1-MW-03	4/19/2007		10.31	0				
P1-MW-21	4/19/2007		11.63	0				
P1-MW-22	4/19/2007		10.6	0				
P1-CPT-2	4/19/2007		10.17	0				
P1-CPT-3	4/19/2007	dry	dry	dry				
P1-CPT-7	4/19/2007		10.77	0				
P1-CPT-8	4/19/2007	dry	dry	dry				
P1-CPT-11	4/19/2007	dry	dry	dry				
P1-CPT-17	4/19/2007		11.28	0				
P1-CPT-18	4/19/2007	dry	dry	dry				
							Total Volume Removed (gal)	2749
Former Pumphouse #1 Tank Pit Area (Release #2) – July 2007								
D-MW-05R	7/13/2007		10.31	0				
D-MW-06R	7/13/2007	sheen	9.83	sheen				
P1-MW-01	7/13/2007		10.73	0				
P1-MW-02	7/13/2007		10.27	0				
P1-MW-03	7/13/2007		9.38	0				
P1-MW-18	7/13/2007		11.23	0				
P1-MW-21	7/13/2007		10.64	0				
P1-MW-22	7/13/2007		9.55	0				
P1-CPT-2	7/13/2007		9.24	0				
P1-CPT-3	7/13/2007		6.3	0				
P1-CPT-7	7/13/2007		9.63	0				
P1-CPT-8	7/13/2007		Dry	0				
P1-CPT-11	7/13/2007		Dry	0				
P1-CPT-17	7/13/2007		10.3	0				
P1-CPT-18	7/13/2007		10.4	0				
							Total Volume Removed (gal)	0 [b]

Notes:
ft - feet
bgs - below ground surface
gal - gallons
a - Well selection for EFR activities are based on product measurements
b - Vacuum activities were not conducted in any wells associated with the tank pit area (Release #2)

Table 2-5
Summary of Enhanced Fluid Recovery
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Well ID	Date	Initial Product Level (ft BGS)	Initial Water Level (ft BGS)	Product Thickness (ft)	Final Product Level (ft BGS)	Final Water Level (ft BGS)	Hydrocarbons Removed (equiv. gal)	Total Volume Removed (~gal)
Former Pumphouse #1 Tank Pit Area (Release #2) – October 2007								
D-MW-05R	10/9/2007		9.24					
D-MW-06R	10/9/2007		8..94					
P1-MW-01	10/9/2007		10.48					
P1-MW-02 [b]	10/09/07	9.41	9.42	0.01		10.22	34	2685
P1-MW-03	10/9/2007		8					
P1-MW-18	10/9/2007		11.22					
P1-MW-21	10/9/2007		10.14					
P1-MW-22	10/9/2007		8.31					
P1-CPT-2	10/9/2007		7.99					
P1-CPT-3	10/9/2007		7.35					
P1-CPT-5	10/9/2007		9.15					
P1-CPT-7	10/9/2007		8.88					
P1-CPT-8	10/9/2007		7.42					
P1-CPT-11	10/9/2007		9.07					
P1-CPT-17	10/9/2007		9.82					
P1-CPT-18	10/9/2007		9.38					
							Total Volume Removed (gal)	2685
Former Pumphouse #1 Tank Pit Area (Release #2) – January 2008								
D-MW-05R	1/15/2008		9.74					
D-MW-06R	1/15/2008		9.47					
P1-MW-01	1/15/2008		10.8					
P1-MW-02	1/15/2008	10.4	10.41	0.01				
P1-MW-03 [b]	1/15/2008		9.42			9.45	4.9	2777
P1-MW-18	1/15/2008		11.27					
P1-MW-21	1/15/2008		10.35					
P1-MW-22 [c]	01/15/08	9.61	9.62	0.01		11.56	1.6	2539
P1-CPT-2	1/15/2008		9.22					
P1-CPT-3	1/15/2008		6.35					
P1-CPT-5	1/15/2008		10.25					
P1-CPT-7	1/15/2008		9.04					
P1-CPT-8	1/15/2008		7.53					
P1-CPT-11	1/15/2008		dry					
P1-CPT-17	1/15/2008		10.36					
P1-CPT-18	1/15/2008		10.53					
							Total Volume Removed (gal)	5316

Notes:
ft - feet
bgs - below ground surface
gal - gallons
a - Well selection for EFR activities are based on product measurements
b - Pumped for 8h on dates 10/12/07, 1/21/08 and 1/24/08

Table 2-6
Site-Specific Alternate Concentration Limits and Alternate Threshold Levels
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

Constituent	ACL (µg/L)	ATL
Benzene	285	9.3
Toluene	800,000	479
Ethylbenzene	114,800	187
Xylenes	—	893
Benzo(*a*)anthracene	1.2	—
Benzo(*a*)pyrene	1.2	1.4
Benzo(*b*)fluoranthene	3.6	5.8
Benzo(*k*)fluoranthene	1.2	—
Chrysene	1.2	2.1
Dibenzo(*a,h*)anthracene	1.2	—
Indeno(1,2,3-*cd*)pyrene	1.2	0.66
Naphthalene	260	—

Notes:
ACL - Alternate Concentration Limit
ATL - Alternate Threshold Level
(µg/L) - micrograms per Liter
(mg/kg) - milligrams per kilogram

Table 2-7
Historical Groundwater Elevations
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #1)
Former Building 8060
Hunter Army Airfield, Georgia

Boring/Well Number	Date Installed	Boring Depth (ft bgs)	Screened Interval (ft bgs)	Type of Completion	Northing	Easting	Ground Surface	Top of Casing
CAP-Part A Investigation - 1996								
P1-MW01	11/18/1996	18.0	6.8 - 16.8	2-in. PVC	733935.0	817911.5	36.5	36.28
P1-MW02	11/18/1996	18.0	7.0 - 17.0	2-in. PVC	734125.0	818043.2	37.5	37.34
P1-MW03	11/19/1996	17.0	6.0 - 16.0	2-in. PVC	734348.0	817939.8	37.5	37.24
CAP-Part B Investigation - 19967, 1999								
P1-MW17	5/5/1997	17.0	6.5 - 16.5	2-in. PVC	734194.6	817691.7	36.0	35.78
P1-MW18	5/5/1997	20.0	9.5 - 19.5	2-in. PVC	733920.9	817691.6	36.1	35.92
P1-MW19	5/5/1997	20.0	9.0 - 19.0	2-in. PVC	733840.7	817960.5	37.9	37.76
P1-MW20	5/13/1997	18.0	7.0 - 17.0	2-in. PVC	734011.2	818147.9	37.2	36.98
P1-MW21	5/6/1997	18.0	7.0 - 17.0	2-in. PVC	734079.8	817393.4	37.4	destroyed in 1998
P1-MW22	5/6/1997	17.5	6.0 - 16.0	2-in. PVC	734290.7	817947.1	37.4	37.28
P1-MW23	5/13/1997	18.0	7.0 - 17.0	2-in. PVC	734295.5	818167.6	37.9	37.75
P1-MW24	5/6/1997	35.0	29.5 - 34.5	2-in. PVC	733910.8	817722.4	36.2	36.12
P1-MW36	9/28/1999	19.0	7.7 - 17.7	2-in. PVC	733746.1	817940.7	37.9	37.58
P1-MW40	9/30/1999	60.0	3.8 - 33.8	4-in. PVC	734330.2	817998.7	37.6	37.30
Replacement Well Installation - October 2002								
D-MW05R	10/18/2002	15.5	4.6 – 14.6	2-in. PVC	734528.69	974136.91	38.44	38.18
D-MW06R	10/18/2002	15.5	4.8 – 14.8	2-in. PVC	734570.07	974258.40	38.05	37.79

*Source: 2007 Free Product Monitoring and Removal Only Report Former Pumphouse #1, Release #1 (SAIC, 2008)

Notes:
ft bgs - Feet Below Ground Surface
NAD83 - North American Datum of 1983
NAV83 - North American Vertical Datum of 1988
PVC - Polyvinyl chloride
a - Injection wells were not surveyed - locations are estimated

Table 2-7
Historical Groundwater Elevations
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #1)
Former Building 8060
Hunter Army Airfield, Georgia

Boring/Well Number	Date Installed	Boring Depth (ft bgs)	Screened Interval (ft bgs)	Type of Completion	Northing	Easting	Ground Surface	Top of Casing
Free Product investigation Well installation - 2003								
P1-CPT02	9/17/2003	34.0	6.4 - 16.4	2-in. PVC	734489.53	974153.50	37.20	37.07
P1-CPT03	9/17/2003	10.3	1.1 - 8.5	2-in. PVC	734489.38	974141.21	38.10	37.84
P1-CPT04	9/18/2003	8.0	2.8 - 7.7	2-in. PVC	734535.21	974133.93	38.50	38.31
P1-CPT05	9/18/2003	34.6	--	2-in. PVC	*b*	*b*	--	--
P1-CPT06	9/18/2003	10.1	2.0 - 9.4	2-in. PVC	734588.69	974124.98	38.00	37.92
P1-CPT07	9/19/2003	34.5	5.0 - 14.6	2-in. PVC	734227.20	974279.15	37.10	36.96
P1-CPT08	9/19/2003	34.4	1.7 - 8.9	2-in. PVC	734470.70	974147.42	37.90	37.00
P1-CPT09	9/19/2003	34.0	5.1 - 14.7	2-in. PVC	734229.24	974227.79	23.84	23.84
D-CPT01	9/19/2003	34.4	5.2 - 14.8	2-in. PVC	734932.79	973323.29	35.40	35.30
P1-CPT10	9/20/2003	34.5	--	2-in. PVC	*b*	*b*	--	--
P1-CPT11	9/20/2003	34.5	2.4 - 9.6	2-in. PVC	734190.23	974253.90	37.70	--
D-CPT12	9/23/2003	34.0	5.1 - 14.9	2-in. PVC	734647.24	973181.13	36.40	36.31
D-CPT13	9/23/2003	34.0	5.8 - 15.6	2-in. PVC	734588.55	972983.79	35.20	34.98
D-CPT14	9/23/2003	34.0	5.8 - 15.6	2-in. PVC	734515.12	972911.85	35.40	35.17
D-CPT16	9/23/2003	34.0	5.9 - 15.7	2-in. PVC	735208.03	973612.02	35.10	34.98
P1-CPT17	10/7/2003	34.0	5.1 - 14.9	2-in. PVC	734156.45	974255.72	22.80	22.80
P1-CPT18	10/7/2003	34.0	2.8 - 12.6	2-in. PVC	734179.17	974212.63	24.36	24.36

*Source: 2007 Free Product Monitoring and Removal Only Report Former Pumphouse #1, Release #1 (SAIC, 2008) and Third Annual Monitoring Only Report Former Pumphouse #1 (SAIC, 2005)

Notes:
ft bgs - Feet Below Ground Surface
NAD83 - North American Datum of 1983
NAV83 - North American Vertical Datum of 1988
PVC - Polyvinyl chloride
a - Injection wells were not surveyed - locations are estimated
b - These wells could not be found to be surveyed

Table 2-7
Historical Groundwater Elevations
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #1)
Former Building 8060
Hunter Army Airfield, Georgia

Boring/Well Number	Date Installed	Boring Depth (ft bgs)	Screened Interval (ft bgs)	Type of Completion	Northing	Easting	Ground Surface	Top of Casing
Free Product investigation Well installation - 2003 (cont.)								
P1-CPT19	10/9/2003	34.0	6.1 - 15.9	2-in. PVC	734515.68	974098.83	25.03	25.03
P1-CPT20	10/9/2003	34.0	4.2 - 15.0	2-in. PVC	734521.22	974165.35	25.45	25.45
P1-CPT21	10/9/2003	34.0	5.8 - 15.6	2-in. PVC	73449.15	974118.17	25.91	25.91
P1-CPT22	10/10/2003	34.0	5.9 - 15.7	2-in. PVC	734483.01	974103.05	26.00	26.00
P1-CPT23	10/10/2003	34.0	5.7 - 15.5	2-in. PVC	734305.11	974253.99	23.43	23.43
P1-CPT24	10/10/2003	34.0	5.2 - 15.0	2-in. PVC	734276.89	974209.56	22.68	22.68
P1-CPT25	10/10/2003	34.0	3.2 - 13.0	2-in. PVC	734369.16	974158.21	24.36	24.36
Injection Well installation - May 2006								
P1-J1	5/11/2006	17.5	7.2 - 17.2	2-in. PVC	*a*	*a*	*a*	*a*
P1-J2	5/12/2006	17.5	7.3 - 17.3	2-in. PVC	*a*	*a*	*a*	*a*
P1-J3	5/12/2006	17.5	7.2 - 17.2	2-in. PVC	*a*	*a*	*a*	*a*
P1-J4	5/12/2006	17.5	7.2 - 17.2	2-in. PVC	*a*	*a*	*a*	*a*
P1-J5	5/12/2006	17.5	7.3 - 17.3	2-in. PVC	*a*	*a*	*a*	*a*
P1-J6	5/12/2006	17.6	7.3 - 17.3	2-in. PVC	*a*	*a*	*a*	*a*

*Source: 2007 Free Product Monitoring and Removal Only Report Former Pumphouse #1, Release #1 (SAIC, 2008)

Notes:
ft bgs - Feet Below Ground Surface
NAD83 - North American Datum of 1983
NAV83 - North American Vertical Datum of 1988
PVC - Polyvinyl chloride
a - Injection wells were not surveyed - locations are estimated

Table 3-1

Properties of oxygen release compounds.

Properties	**Magnesium-peroxide**	**Calcium-peroxide**	**Sodium-percarbonate**
Formula	MgO_2	CaO_2	$2\ Na_2CO_3\ .\ 3\ H_2O_2$
Molecular weight (g/mol)	56	72	314
Purity (%)	35	>75	>88
Additions	Mg (60%)	$Ca(OH)_2$, $CaCO_3$	
pH (con = 10 g/L; T = 20°C)	10,3	11,9	10,4-10,6
Density (kg/m³)	500	670	900-1200
Solubility in water (g/L)	<0,1	<0,1	150
formed while put in solution	$Mg(OH)_2$, O_2	$Ca(OH)_2$, O_2	Na_2CO_3, H_2O_2 en O_2
Clogging	Yes: $Mg(OH)_2$	Yes: $Ca(OH)_2$	No
$\%O_2$ generated	28	22	15
$\%O_2$ in relation to its purity	10	17	13

TABLE 3-2
PROPOSED ANALYTICAL PARAMETERS AND METHODS
Revised Corrective Acton Plan-Part B
Former Pumphouse #1 (Release #2)
Former Building 8060
Hunter Army Airfield, Georgia

PARAMETER	ANALYTICAL METHOD
Constituents of Concern	
BTEX	USEPA SW 846 8260B
Baseline Analytical	
Total Iron	SW 846 6010
Dissolved Iron	SW 846 6010
Manganese	SW 846 6010
Alkalinity	USEPA 310
Nitrate	USEPA 300
Sulfate	USEPA 300
Total organic carbon (TOC)	SW 846 9060A
Chemical Oxidant Demand (COD)	USEPA 410.4 2
Total Dissolved Solids	USEPA 160.1
Total Suspended Solids	USEPA 160.2
Field Kits	
Ferrous Iron	Field Hach Kit
Sodium Persulfate	Field CHEMetrics Kit
Secondary Water Quality Parameters	
Metals (Chromium, Arsenic)	SW 846 6010
Field Parameters	Multi-parameter field instrument with flow-through cell
Dissolved Oxygen (DO) mg/L	Multi-parameter field instrument with flow-through cell
Oxidation/Reduction Potential (ORP)	Multi-parameter field instrument with flow-through cell
Conductivity (CND) uS/cm	Multi-parameter field instrument with flow-through cell
pH	Multi-parameter field instrument with flow-through cell
Temperature (^{o}F)	Multi-parameter field instrument with flow-through cell

Notes:

1 Methods for Determination of Inorganic Substances In Environmental Samples (EPA 600/R-93/100)

2 Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79/020) and Revision 2 (1993)

3 BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

TABLE 3-3a
MONITORING SCHEDULE FOR DOSE RESPONSE TESTING AND SODIUM PERSULFATE PILOT TEST
Revised Corrective action Plan - Part B
Former Pumphouse 1 Release 2
Former Building 8060
Hunter Army Airfield, Georgia

		Baseline Event					20% of Planned Injection Volume				40% of Planned Injection Volume				60% of Planned Injection Volume				80% of Planned Injection Volume				100% of Planned Injection Volume and C/Co Stable			
LOCATION	OBJECTIVE	FK	BA	FP	SWQ	COCs	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs
Water Supply Tank	Baseline for Water Supply	x				x																				
Chemical Mix Tank	Injection Chemical Concentration	x		x			x	x			x	x			x	x			x	x			x	x	x	x
Injection Well	Injection Well/Monitor Washout Rate	x	x	x	x	x																	x	C	x	x
Monitor Well	Dose Response Wells	x	x	x	x	x	x	C			x	C			x	C			x	C			x	C	x	x
Monitor Well	Downgradient Wells	x	x	x	x	x		C				C				C				C			x	C		

Notes:

FK	Field Kits
BA	Baseline Analytical
FP	Field Parameters
SWQ	Secondary Water Quality
COCs	Constituents of Concern
C	Continuous monitoring (data logging)
C/Co	Ratio of concentration in dose-response well to initial concentration (tank concentration).
ft bgs	Feet below ground surface.
x	Parameter should be collected during monitoring event.

See Table 3-2 for list of analytical parameters for each group (field kits, baseline analytical, field parameters, tracer, secondary water quality, and COCs).
Set data logging trolls in wells prior to injections.

TABLE 3-3b

MONITORING SCHEDULE FOR DOSE RESPONSE TESTING AND SODIUM PERSULFATE PILOT TEST

Revised Corrective action Plan - Part B

Former Pumphouse 1 Release 2

Former Building 8060

Hunter Army Airfield, Georgia

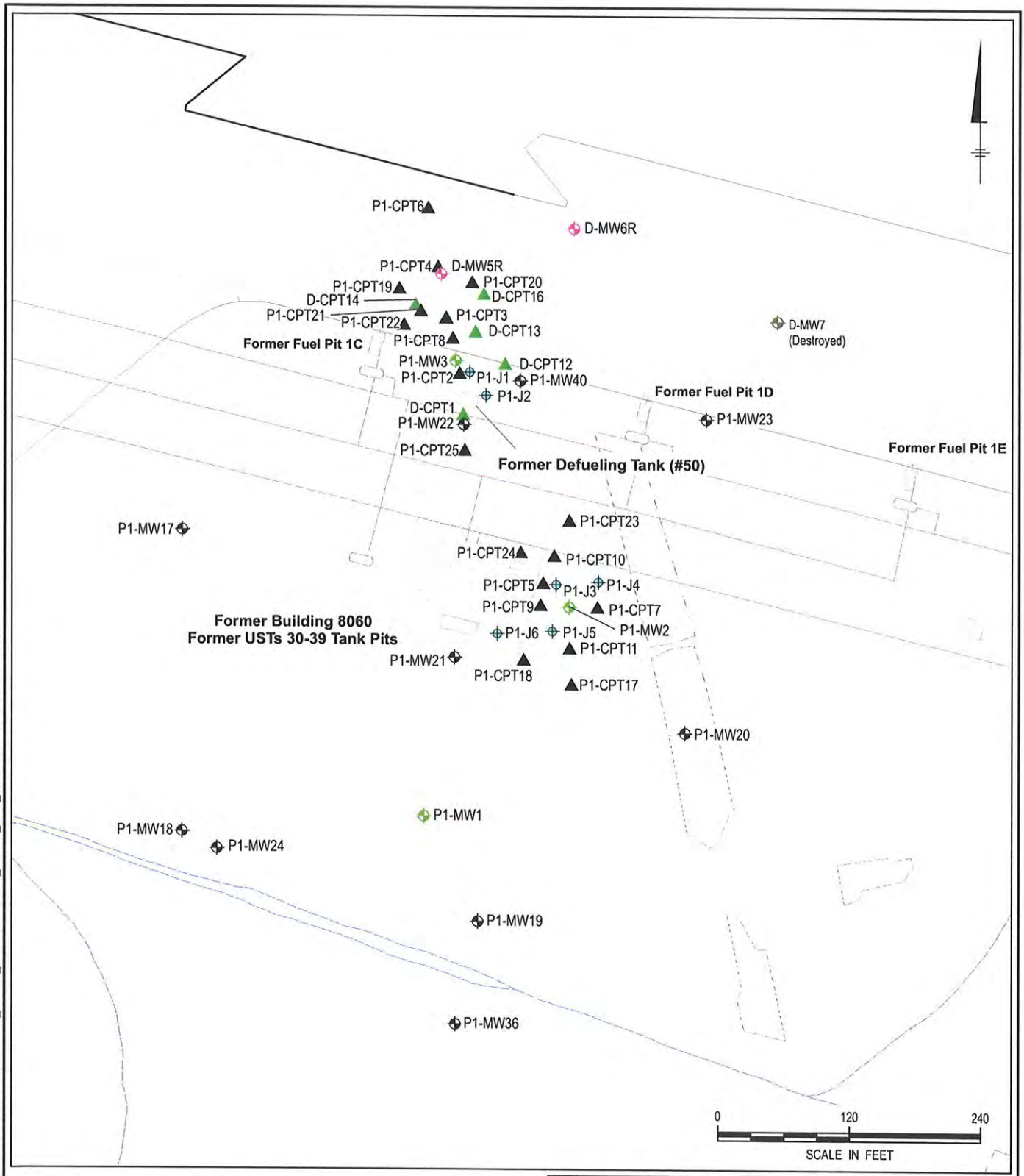
		WEEK 1 (twice per week)				WEEK 2 - 4 (once per week)				WEEK 5 - 17 (bi-weekly)			
LOCATION	OBJECTIVE	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs	FK	FP	SWQ	COCs
Water Supply Tank	Baseline for Water Supply												
Chemical Mix Tank	Injection Chemical Concentration												
Injection Well	Injection Well/Monitor Washout Rate	x	C			x	x	x	x	x	x	x	x
Monitor Well	Dose Response Wells	x	C			x	x	x	x	x	x	x	x
Monitor Well	Downgradient Wells	x	C			x	x	x	x	x	x	x	x

Notes:

FK	Field Kits
BA	Baseline Analytical
FP	Field Parameters
SWQ	Secondary Water Quality
COCs	Constituents of Concern
C	Continuous monitoring (data logging)
C/Co	Ratio of concentration in dose-response well to initial concentration (tank concentration).
ft bgs	Feet below ground surface.
x	Parameter should be collected during monitoring event.

See Table 3-2 for list of analytical parameters for each group (field kits, baseline analytical, field parameters, tracer, secondary water quality, and COCs).

Set data logging trolls in wells prior to injections.



LEGEND:

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Monitor Well (Destroyed)
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Former Fuel Transfer Line

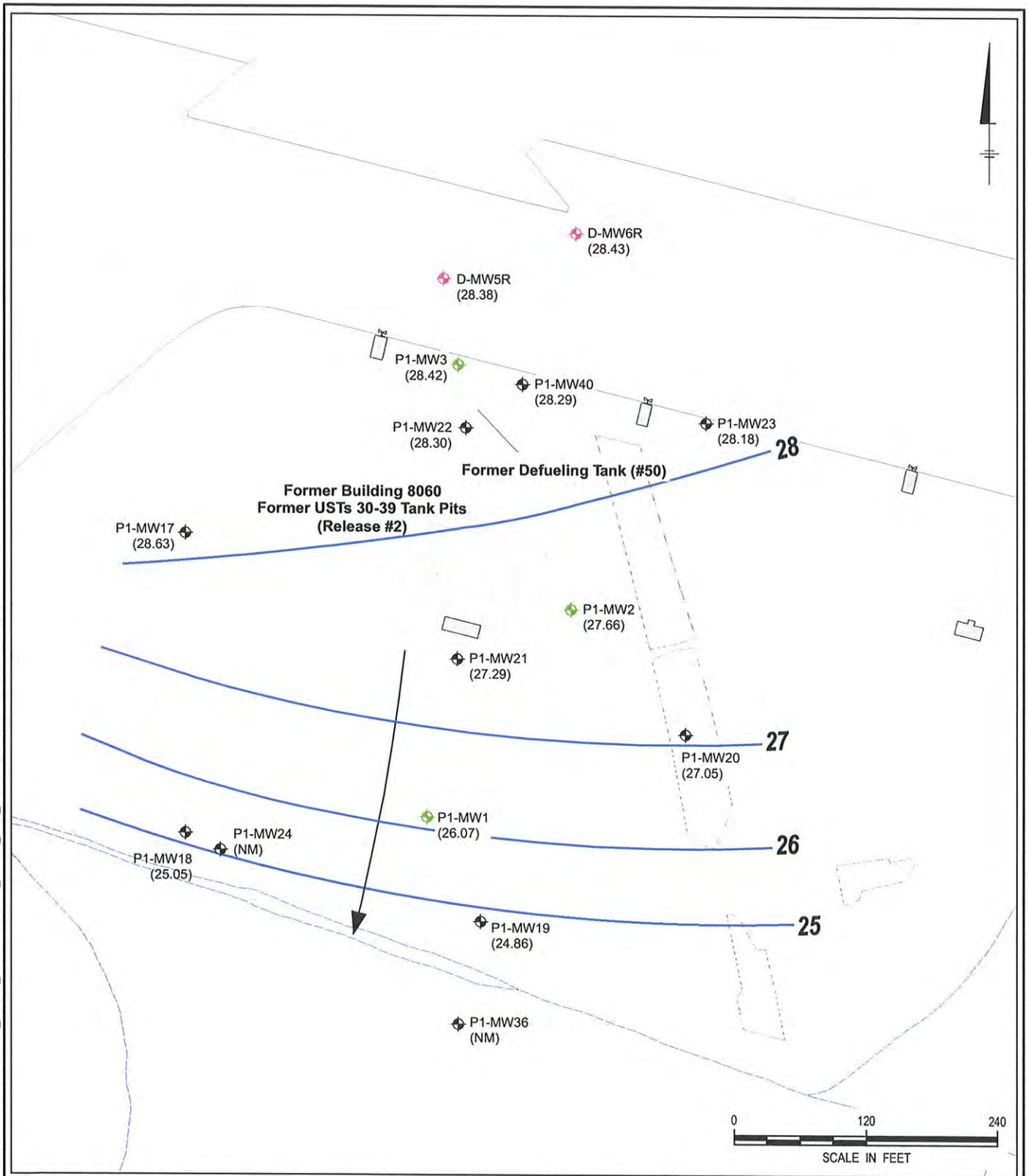
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Site Map of Former Pumphouse #1 (Release #2)

ARCADIS

FIGURE 2-1

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-1 HAA13_PH1R2_CAP_SITE.MXD SAVED: 1APR2009



REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Potentiometric Contour (ft, msl)
- Groundwater Flow Direction

(NM) Not Measured

(24.86) Water-Level Elevation (ft, msl) Measured January 27, 2008

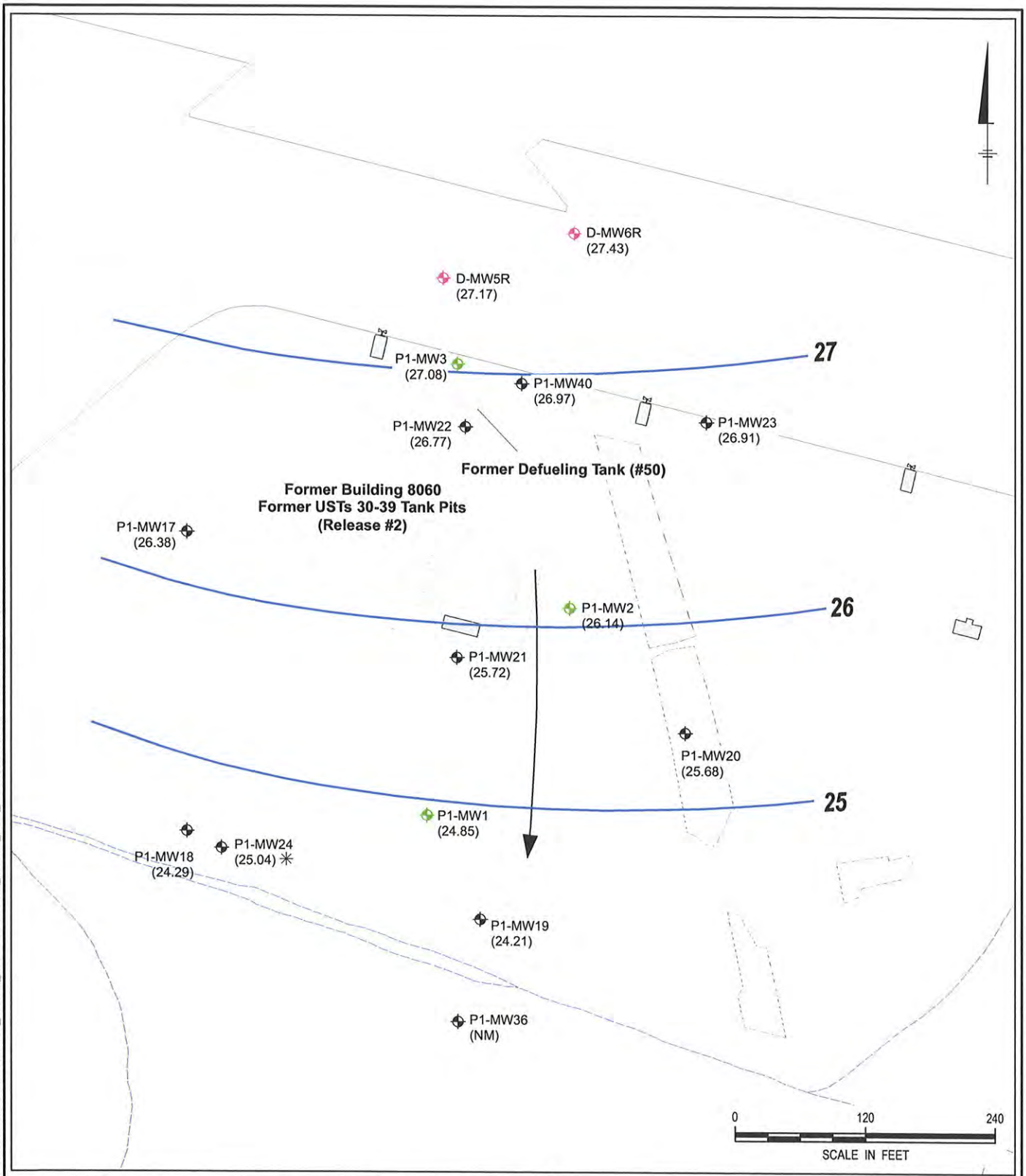
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Groundwater Potentiometric Surface Map (January 2008)

ARCADIS

FIGURE 2-2

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-2 HAA13_PH1R2_CAP_POT200801.MXD SAVED: 4MAY2009



REFERENCE: Thirteenth Semiannual Monitoring Only Report (SAIC 2009).

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Potentiometric Contour (ft, msl)
- Groundwater Flow Direction
- (NM) Not Measured
- (24.29) Water-Level Elevation (ft, msl) Measured July 16, 2008
- ✳ Not Used to Construct Contours

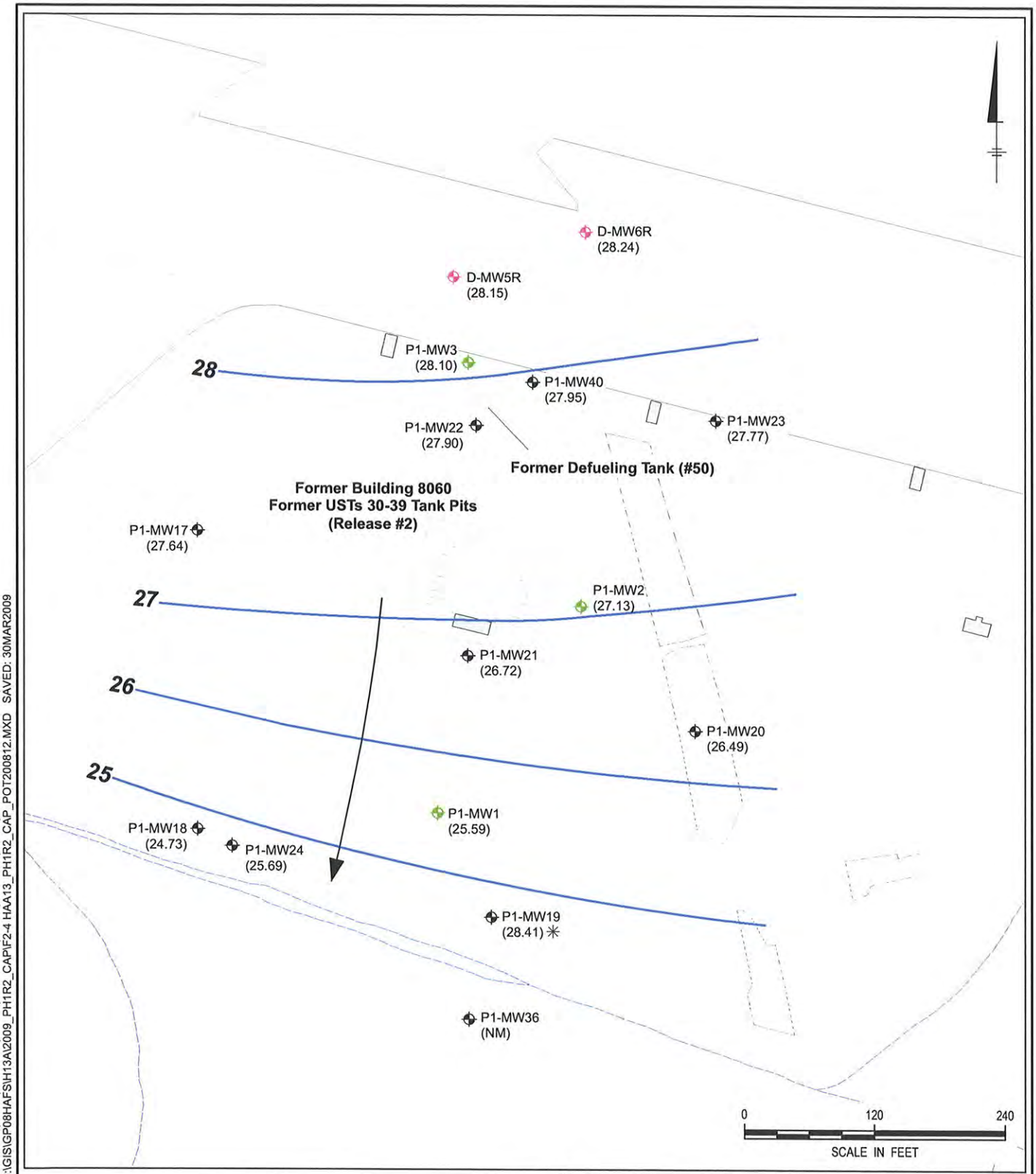
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Groundwater Potentiometric Surface Map (July 2008)

ARCADIS

FIGURE 2-3

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-3 HAA13_PH1R2_CAP_POT200807.MXD SAVED: 4MAY2009



LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Potentiometric Contour (ft, msl)
- Groundwater Flow Direction

(28.41) Water-Level Elevation, (ft, msl) Measured December 15, 2008

✳ Not Used to Construct Contours

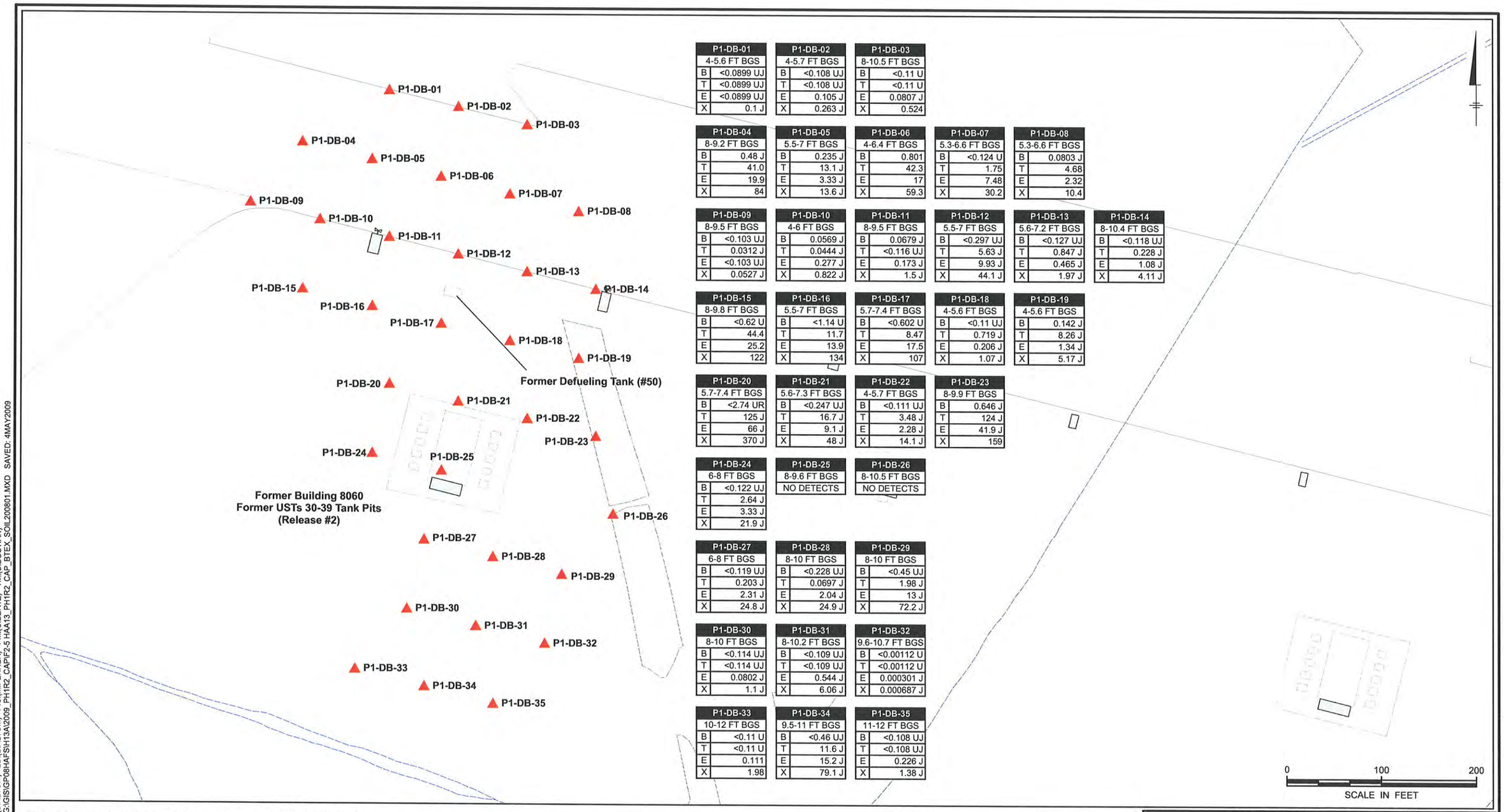
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Groundwater Potentiometric Surface Map (December 2008)

ARCADIS

FIGURE 2-4

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTJAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-4 HAA13_PH1R2_CAP_POT200812.MXD SAVED: 30MAR2009



P1-DB-01	
4-5.6 FT BGS	
B	<0.0899 UJ
T	<0.0899 UJ
E	<0.0899 UJ
X	0.1 J

P1-DB-02	
4-5.7 FT BGS	
B	<0.108 UJ
T	<0.108 UJ
E	0.105 J
X	0.263 J

P1-DB-03	
8-10.5 FT BGS	
B	<0.11 U
T	<0.11 U
E	0.0807 J
X	0.524

P1-DB-04	
8-9.2 FT BGS	
B	0.48 J
T	41.0
E	19.9
X	84

P1-DB-05	
5.5-7 FT BGS	
B	0.235 J
T	13.1 J
E	3.33 J
X	13.6 J

P1-DB-06	
4-6.4 FT BGS	
B	0.801
T	42.3
E	17
X	59.3

P1-DB-07	
5.3-6.6 FT BGS	
B	<0.124 U
T	1.75
E	7.48
X	30.2

P1-DB-08	
5.3-6.6 FT BGS	
B	0.0803 J
T	4.68
E	2.32
X	10.4

P1-DB-09	
8-9.5 FT BGS	
B	<0.103 UJ
T	0.0312 J
E	<0.103 UJ
X	0.0527 J

P1-DB-10	
4-6 FT BGS	
B	0.0569 J
T	0.0444 J
E	0.277 J
X	0.822 J

P1-DB-11	
8-9.5 FT BGS	
B	0.0679 J
T	<0.116 UJ
E	0.173 J
X	1.5 J

P1-DB-12	
5.5-7 FT BGS	
B	<0.297 UJ
T	5.63 J
E	9.93 J
X	44.1 J

P1-DB-13	
5.6-7.2 FT BGS	
B	<0.127 UJ
T	0.847 J
E	0.465 J
X	1.97 J

P1-DB-14	
8-10.4 FT BGS	
B	<0.118 UJ
T	0.228 J
E	1.08 J
X	4.11 J

P1-DB-15	
8-9.8 FT BGS	
B	<0.62 U
T	44.4
E	25.2
X	122

P1-DB-16	
5.5-7 FT BGS	
B	<1.14 U
T	11.7
E	13.9
X	134

P1-DB-17	
5.7-7.4 FT BGS	
B	<0.602 U
T	8.47
E	17.5
X	107

P1-DB-18	
4-5.6 FT BGS	
B	<0.11 UJ
T	0.719 J
E	0.206 J
X	1.07 J

P1-DB-19	
4-5.6 FT BGS	
B	0.142 J
T	8.26 J
E	1.34 J
X	5.17 J

P1-DB-20	
5.7-7.4 FT BGS	
B	<2.74 UR
T	125 J
E	66 J
X	370 J

P1-DB-21	
5.6-7.3 FT BGS	
B	<0.247 UJ
T	16.7 J
E	9.1 J
X	48 J

P1-DB-22	
4-5.7 FT BGS	
B	<0.111 UJ
T	3.48 J
E	2.28 J
X	14.1 J

P1-DB-23	
8-9.9 FT BGS	
B	0.646 J
T	124 J
E	41.9 J
X	159

P1-DB-24	
6-8 FT BGS	
B	<0.122 UJ
T	2.64 J
E	3.33 J
X	21.9 J

P1-DB-25
8-9.6 FT BGS
NO DETECTS

P1-DB-26
8-10.5 FT BGS
NO DETECTS

P1-DB-27	
6-8 FT BGS	
B	<0.119 UJ
T	0.203 J
E	2.31 J
X	24.8 J

P1-DB-28	
8-10 FT BGS	
B	<0.228 UJ
T	0.0697 J
E	2.04 J
X	24.9 J

P1-DB-29	
8-10 FT BGS	
B	<0.45 UJ
T	1.98 J
E	13 J
X	72.2 J

P1-DB-30	
8-10 FT BGS	
B	<0.114 UJ
T	<0.114 UJ
E	0.0802 J
X	1.1 J

P1-DB-31	
8-10.2 FT BGS	
B	<0.109 UJ
T	<0.109 UJ
E	0.544 J
X	6.06 J

P1-DB-32	
9.6-10.7 FT BGS	
B	<0.00112 U
T	<0.00112 U
E	0.000301 J
X	0.000687 J

P1-DB-33	
10-12 FT BGS	
B	<0.11 U
T	<0.11 U
E	0.111
X	1.98

P1-DB-34	
9.5-11 FT BGS	
B	<0.46 UJ
T	11.6 J
E	15.2 J
X	79.1 J

P1-DB-35	
11-12 FT BGS	
B	<0.108 UJ
T	<0.108 UJ
E	0.226 J
X	1.38 J

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

LEGEND

▲ DPT Soil Sample (2008)

NOTE:
1) All concentrations reported in milligrams per kilogram (mg/kg).
2) Soil Threshold Levels (STL).
3) No detected concentrations exceeded the Alternate Threshold Levels (ATL).

FT BGS - Feet Below Ground Surface

J - Estimated Value
U - Not Detected
R - Data Rejected

ACRONYMS		STL	ATL
B	Benzene	0.017	9.3
T	Toluene	115	479
E	Ethylbenzene	18	187
X	Xylenes (total)	700	893

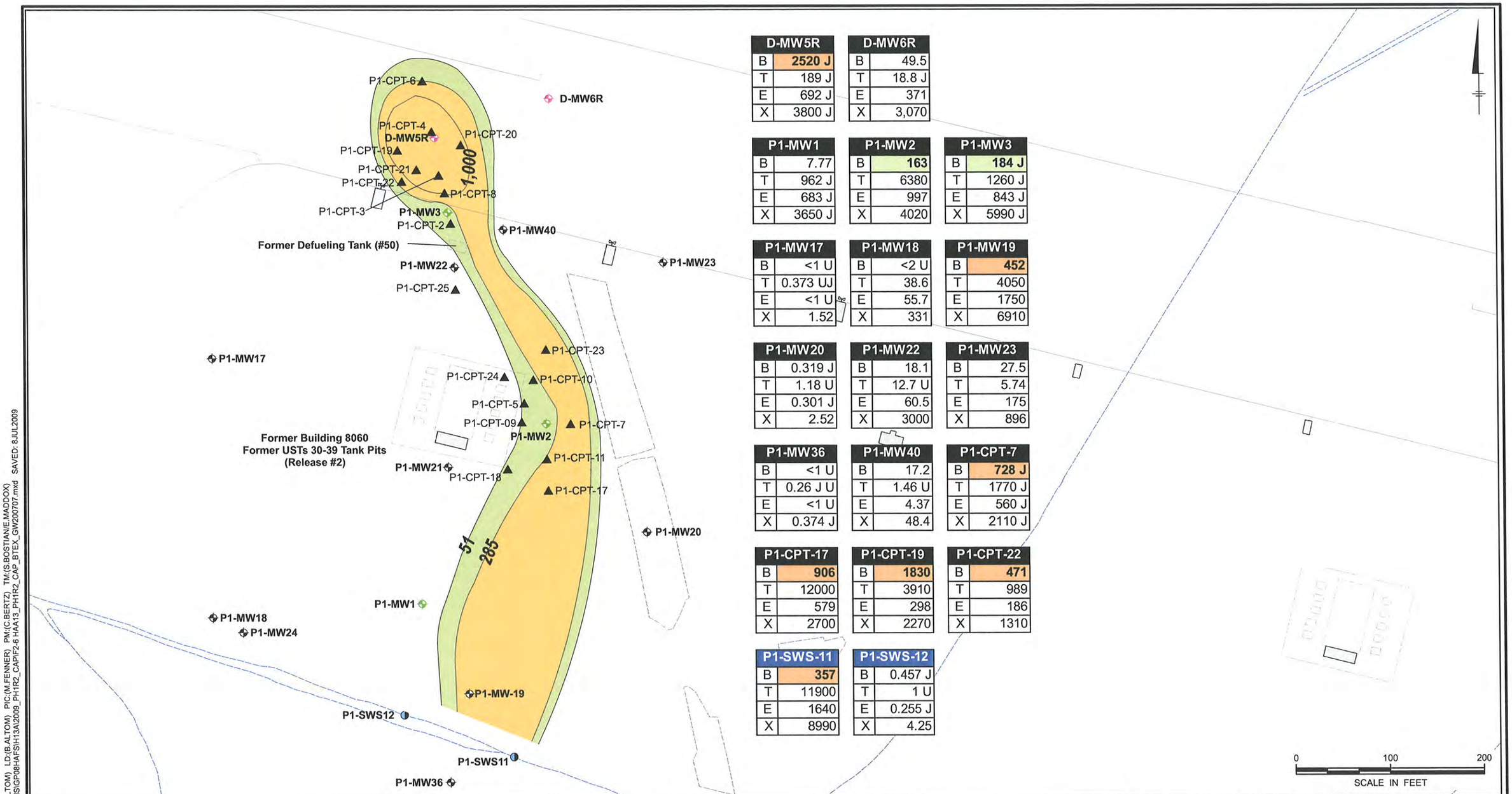
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

BTEX Concentrations in DPT Soil Samples (January 2008)

ARCADIS

FIGURE
2-5

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-5 HAA13_PH1R2_CAP_BTEX_SOIL200801.MXD SAVED: 4MAY2009



D-MW5R	
B	2520 J
T	189 J
E	692 J
X	3800 J

D-MW6R	
B	49.5
T	18.8 J
E	371
X	3,070

P1-MW1	
B	7.77
T	962 J
E	683 J
X	3650 J

P1-MW2	
B	163
T	6380
E	997
X	4020

P1-MW3	
B	184 J
T	1260 J
E	843 J
X	5990 J

P1-MW17	
B	<1 U
T	0.373 UJ
E	<1 U
X	1.52

P1-MW18	
B	<2 U
T	38.6
E	55.7
X	331

P1-MW19	
B	452
T	4050
E	1750
X	6910

P1-MW20	
B	0.319 J
T	1.18 U
E	0.301 J
X	2.52

P1-MW22	
B	18.1
T	12.7 U
E	60.5
X	3000

P1-MW23	
B	27.5
T	5.74
E	175
X	896

P1-MW36	
B	<1 U
T	0.26 J U
E	<1 U
X	0.374 J

P1-MW40	
B	17.2
T	1.46 U
E	4.37
X	48.4

P1-CPT-7	
B	728 J
T	1770 J
E	560 J
X	2110 J

P1-CPT-17	
B	906
T	12000
E	579
X	2700

P1-CPT-19	
B	1830
T	3910
E	298
X	2270

P1-CPT-22	
B	471
T	989
E	186
X	1310

P1-SWS-11	
B	357
T	11900
E	1640
X	8990

P1-SWS-12	
B	0.457 J
T	1 U
E	0.255 J
X	4.25

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- CPT Well
- Surface Water Sample
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

ACRONYMS		IWQS	ACL
B	Benzene	51	285
T	Toluene	5,980	800,000
E	Ethylbenzene	2,100	114,800
X	Xylenes (total)	NRC	---

NOTE:
1) All concentrations reported in micrograms per liter (µg/L).
2) If duplicate samples were collected, the higher value of the parent of duplicate sample is listed.

J - Estimated Value
U - Not Detected

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
NRC - No Regulatory Criteria

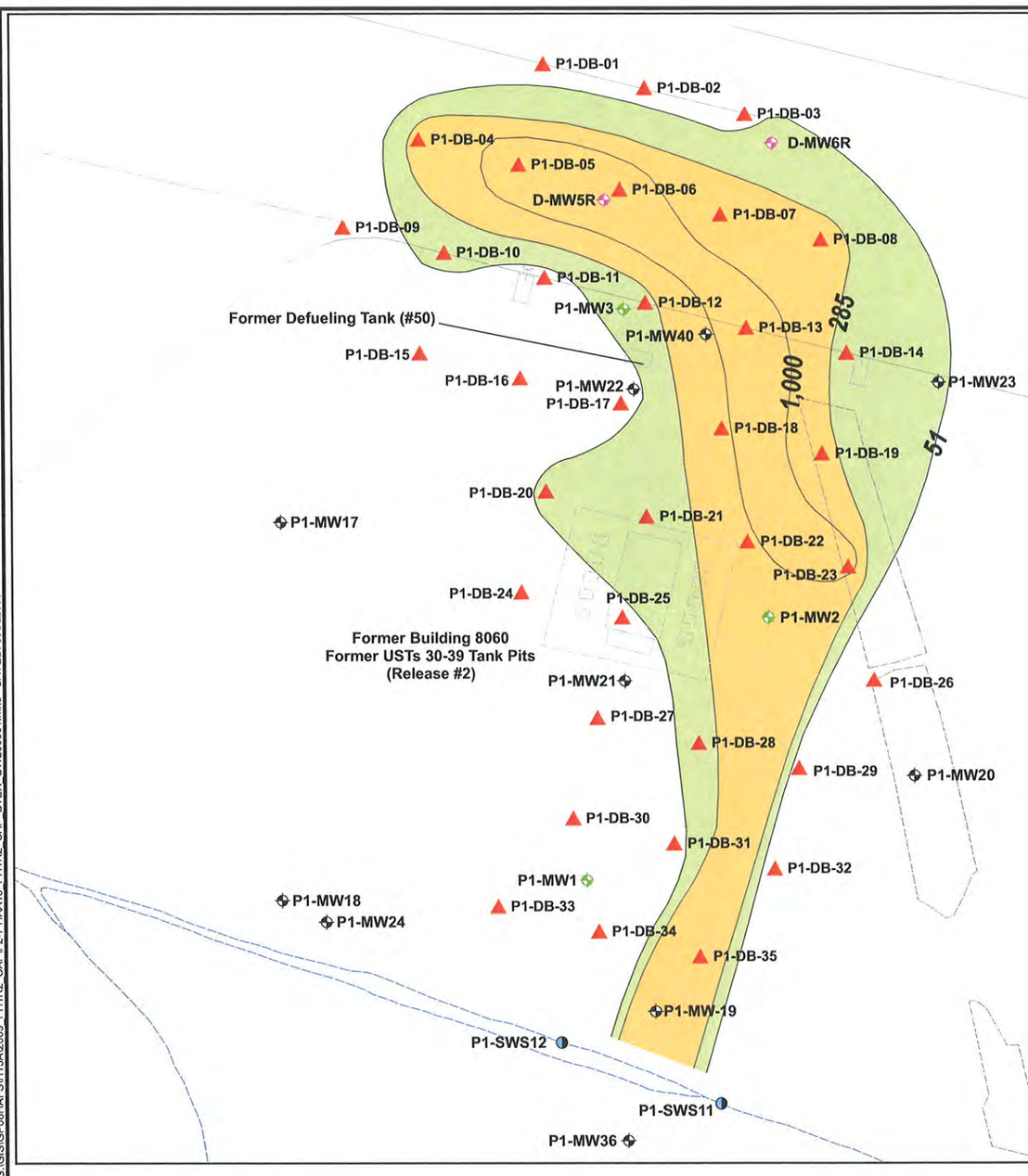
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

BTEX Concentrations in Groundwater Monitor Wells, CPT Wells and Surface Water Samples (July 2007)

ARCADIS

FIGURE
2-6

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A2009_PH1R2_CAP\F2-6 HAA13_PH1R2_CAP_BTEX_GW200707.mxd SAVED: 8JUL2009



D-MW5R	
B	3760
T	148
E	596
X	4460

P1-DB-01	
B	20.7
T	22.8
E	7.95
X	96.1

P1-DB-02	
B	16.7
T	14.2
E	27.4
X	94

P1-DB-03	
B	15.2
T	5.88
E	189
X	815

D-MW6R	
B	109
T	49.6
E	657
X	3920

P1-DB-04	
B	514
T	4420 J
E	937
X	3330

P1-DB-05	
B	1910
T	11200
E	752
X	2700

P1-DB-06	
B	2200
T	1860
E	1190
X	4170

P1-DB-07	
B	333
T	1070
E	363
X	1070

P1-DB-08	
B	588
T	556
E	1210
X	4570

P1-MW1	
B	2.14
T	1590
E	1580
X	9680

P1-DB-09	
B	< 1 U
T	3.71
E	1.2
X	4.48

P1-DB-10	
B	280
T	1060 J
E	721
X	2390

P1-DB-11	
B	5.01 J
T	0.656 J
E	9.03 J
X	10.2 J

P1-DB-12	
B	280
T	915
E	1550 J
X	4540

P1-DB-13	
B	1210
T	14300
E	1160
X	3820

P1-DB-14	
B	116
T	84.9
E	612
X	1830

P1-MW2	
B	457
T	13800
E	1450
X	6050

P1-DB-15	
B	7.06
T	2030
E	858
X	4460

P1-DB-16	
B	9.13
T	297
E	384
X	2040

P1-DB-17	
B	5.51
T	1020
E	1210
X	6980

P1-DB-18	
B	810
T	25400
E	1480
X	5650

P1-DB-19	
B	463
T	6440
E	1230
X	4130

P1-MW19	
B	461
T	1620
E	1380
X	5640

P1-DB-20	
B	63
T	12200
E	1360
X	5470

P1-DB-21	
B	188
T	8930
E	1020
X	4410

P1-DB-22	
B	915
T	19800
E	1380
X	6030

P1-DB-23	
B	1160
T	22100
E	1180
X	3990

P1-MW21	
B	0.567 J
T	9.45 U
E	361
X	811

P1-DB-24	
B	40.1
T	11700
E	1420
X	5670

P1-DB-25	
B	2.08
T	4.15
E	9.01
X	8.63

P1-DB-26	
B	1.71
T	11.5
E	54.1 J
X	191 J

P1-MW22	
B	32.6
T	6.81 U
E	28.1
X	2190

P1-DB-27	
B	0.486 J
T	179
E	266
X	1630

P1-DB-28	
B	120
T	5020
E	1520
X	7990

P1-DB-29	
B	28.6
T	2510
E	1070
X	4910

P1-MW23	
B	72.1
T	36.9
E	495
X	1940

P1-DB-30	
B	2.21
T	2500
E	1630
X	8640

P1-DB-31	
B	25.5
T	3130
E	1570
X	8630

P1-DB-32	
B	8.12
T	1370
E	1240
X	5290

P1-DB-33	
B	2.7
T	2520
E	884
X	5000

P1-DB-34	
B	< 1 U
T	1670
E	1630
X	8210

P1-DB-35	
B	598
T	11700
E	1470
X	6000

0 100 200
SCALE IN FEET

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- DPT Groundwater Grab Sample (2008)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

ACRONYMS		IWQS	ACL
B	Benzene	51	285
T	Toluene	5,980	800,000
E	Ethylbenzene	2,100	114,800
X	Xylenes (total)	NRC	---

NOTE: All concentrations reported in micrograms per liter (µg/L).

J - Estimated Value
U - Not Detected

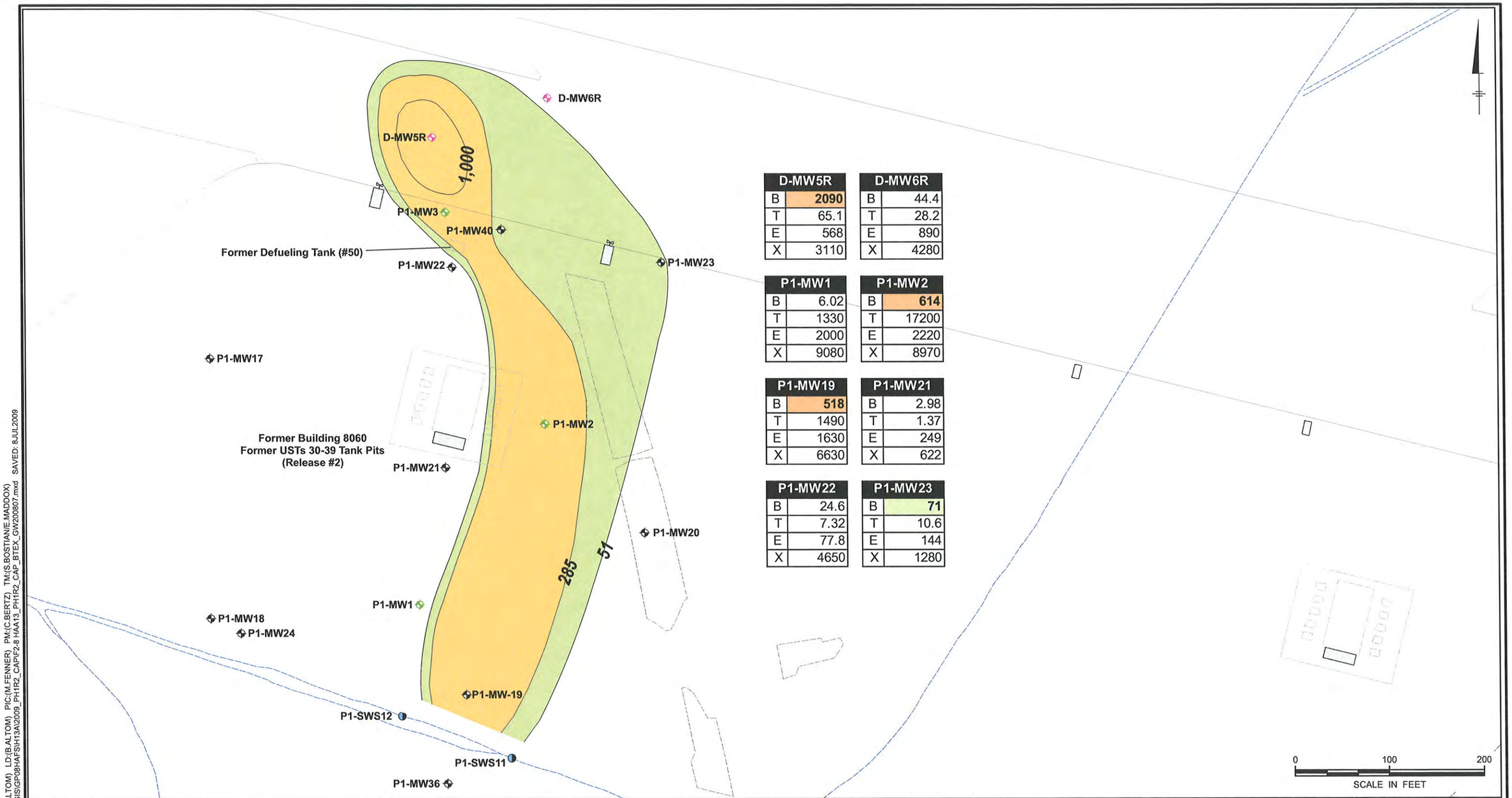
IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
NRC - No Regulatory Criteria

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

BTEX Concentrations in Groundwater Monitor Wells and DPT Groundwater Grab Samples (January 2008)

ARCADIS

FIGURE
2-7



D-MW5R	
B	**2090**
T	65.1
E	568
X	3110

D-MW6R	
B	44.4
T	28.2
E	890
X	4280

P1-MW1	
B	6.02
T	1330
E	2000
X	9080

P1-MW2	
B	**614**
T	17200
E	2220
X	8970

P1-MW19	
B	**518**
T	1490
E	1630
X	6630

P1-MW21	
B	2.98
T	1.37
E	249
X	622

P1-MW22	
B	24.6
T	7.32
E	77.8
X	4650

P1-MW23	
B	**71**
T	10.6
E	144
X	1280

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

ACRONYMS		IWQS	ACL
B	Benzene	51	285
T	Toluene	5,980	800,000
E	Ethylbenzene	2,100	114,800
X	Xylenes (total)	NRC	---

NOTE: All concentrations reported in micrograms per liter (µg/L).

J - Estimated Value
U - Not Detected

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
NRC - No Regulatory Criteria

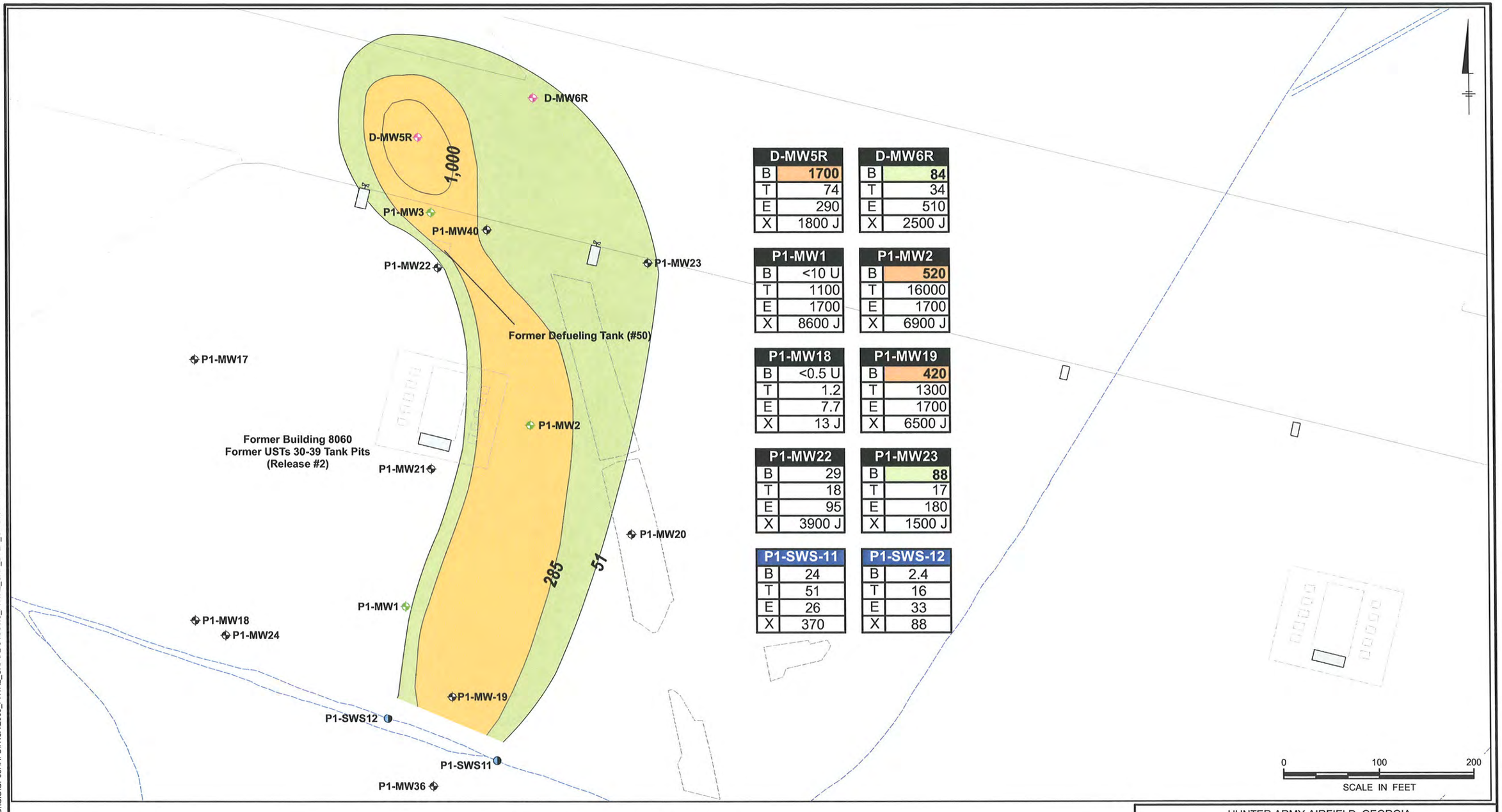
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

BTEX Concentrations in Groundwater Monitor Wells (July 2008)

ARCADIS

FIGURE
2-8

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-8 HAA13_PH1R2_CAP_BTEX_GW200807.mxd SAVED: 8JUL2009



D-MW5R	
B	1700
T	74
E	290
X	1800 J

D-MW6R	
B	84
T	34
E	510
X	2500 J

P1-MW1	
B	<10 U
T	1100
E	1700
X	8600 J

P1-MW2	
B	520
T	16000
E	1700
X	6900 J

P1-MW18	
B	<0.5 U
T	1.2
E	7.7
X	13 J

P1-MW19	
B	420
T	1300
E	1700
X	6500 J

P1-MW22	
B	29
T	18
E	95
X	3900 J

P1-MW23	
B	88
T	17
E	180
X	1500 J

P1-SWS-11	
B	24
T	51
E	26
X	370

P1-SWS-12	
B	2.4
T	16
E	33
X	88

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

ACRONYMS		IWQS	ACL
B	Benzene	51	285
T	Toluene	5,980	800,000
E	Ethylbenzene	2,100	114,800
X	Xylenes (total)	NRC	---

NOTE: All concentrations reported in micrograms per liter (µg/L).

J - Estimated Value
U - Not Detected

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
NRC - No Regulatory Criteria

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

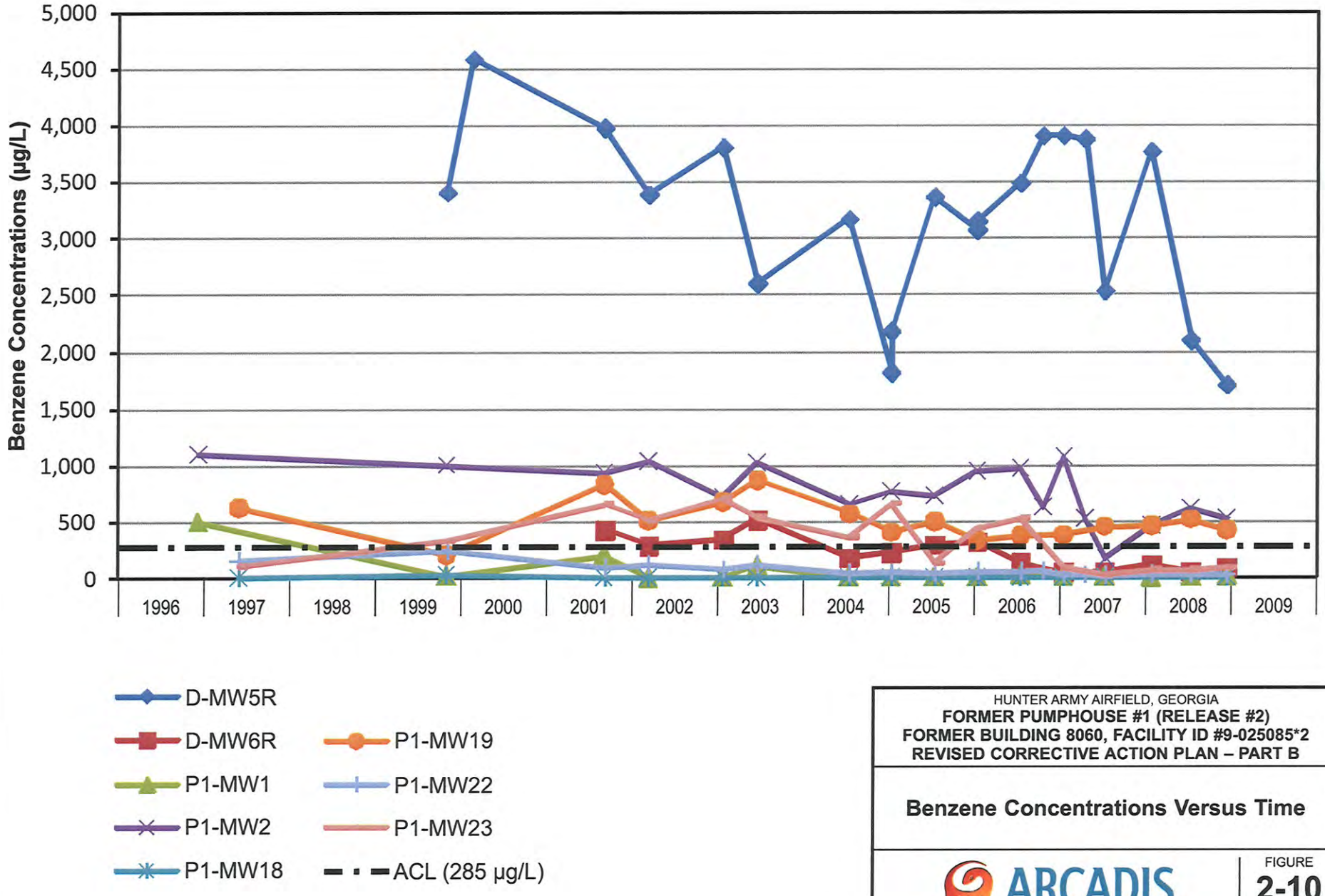
BTEX Concentrations in Groundwater Monitor Wells and Surface Water Samples (December 2008)

ARCADIS

FIGURE 2-9

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-9 HAA13_PH1R2_CAP_BTEX_GW200812.mxd SAVED: 8JUL2009

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-10 HAA13_PH1R2_CAP_BENZ.cdr SAVED: 15MAR2009



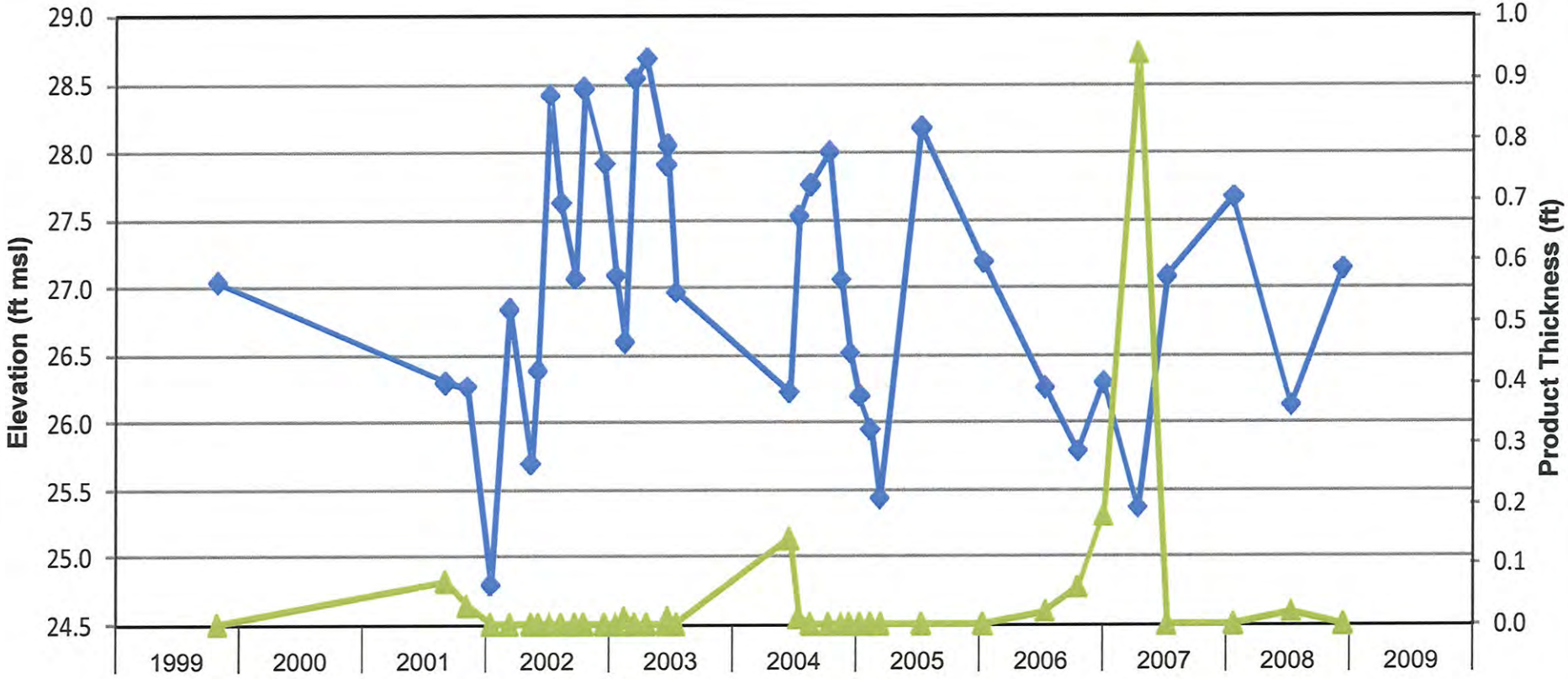
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Benzene Concentrations Versus Time

ARCADIS

FIGURE
2-10

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F2-11n12 HAA13_PH1R2_CAP_FP.cdr SAVED: 30MAR2009

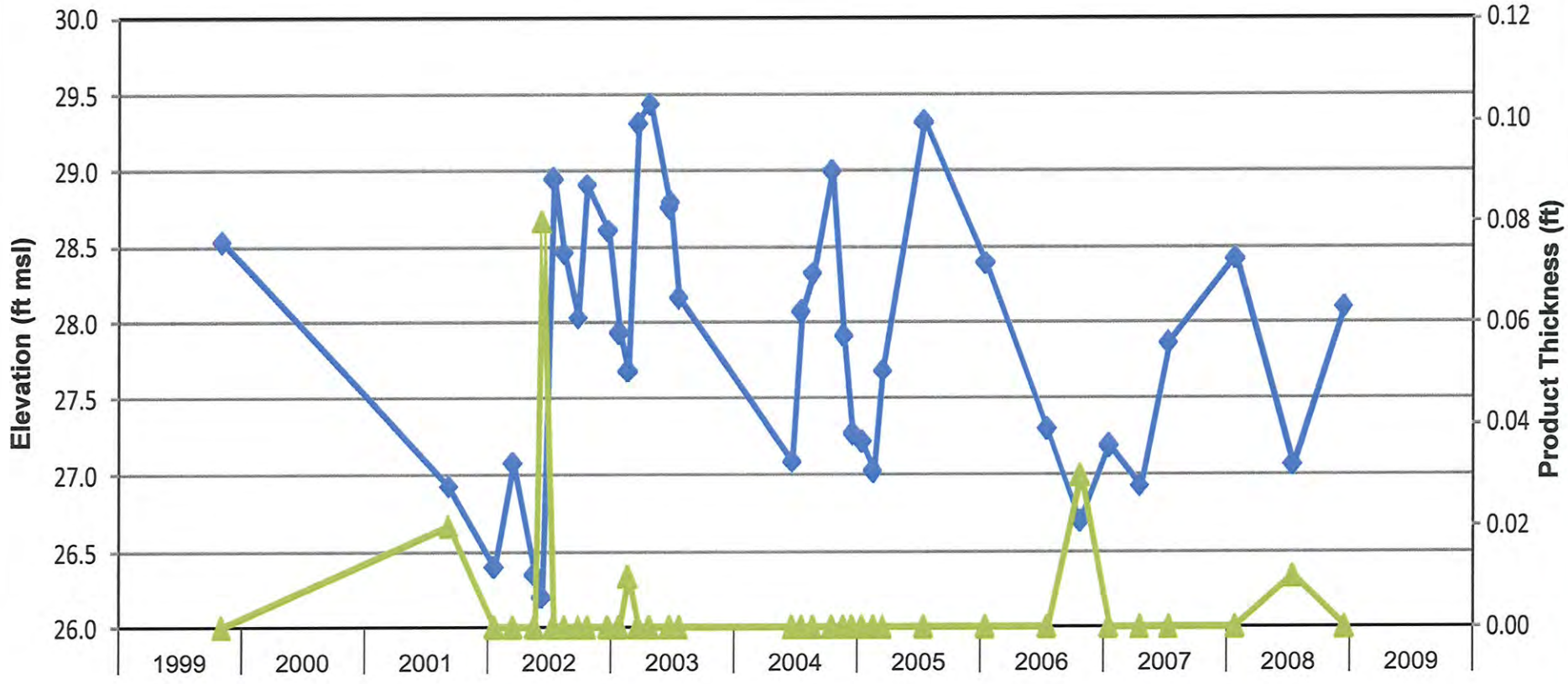


HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Monitor-Well P1-MW2
Free-Product Thickness Versus
Groundwater Elevation

ARCADIS

FIGURE
2-11



HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Monitor-Well P1-MW3 Free-Product Thickness Versus Groundwater Elevation

ARCADIS

FIGURE
2-12

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F3-1 HAA13_PH1R2_CAP_REM.mxd SAVED: 9JUL2009

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit

NOTE: All concentrations reported in micrograms per liter (µg/L).

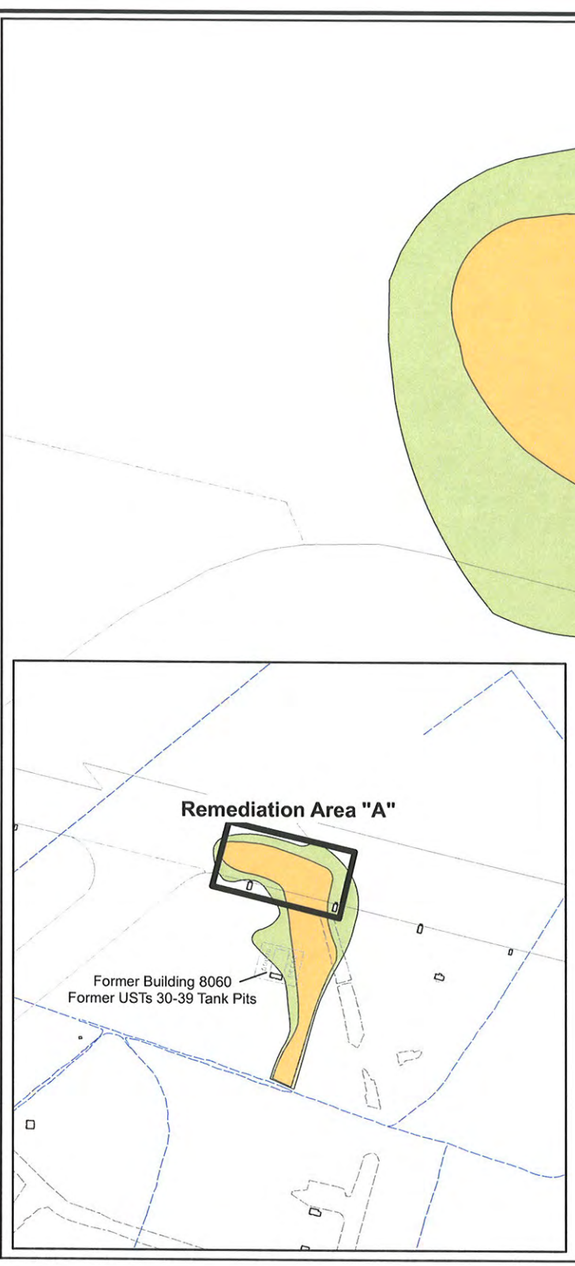
REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

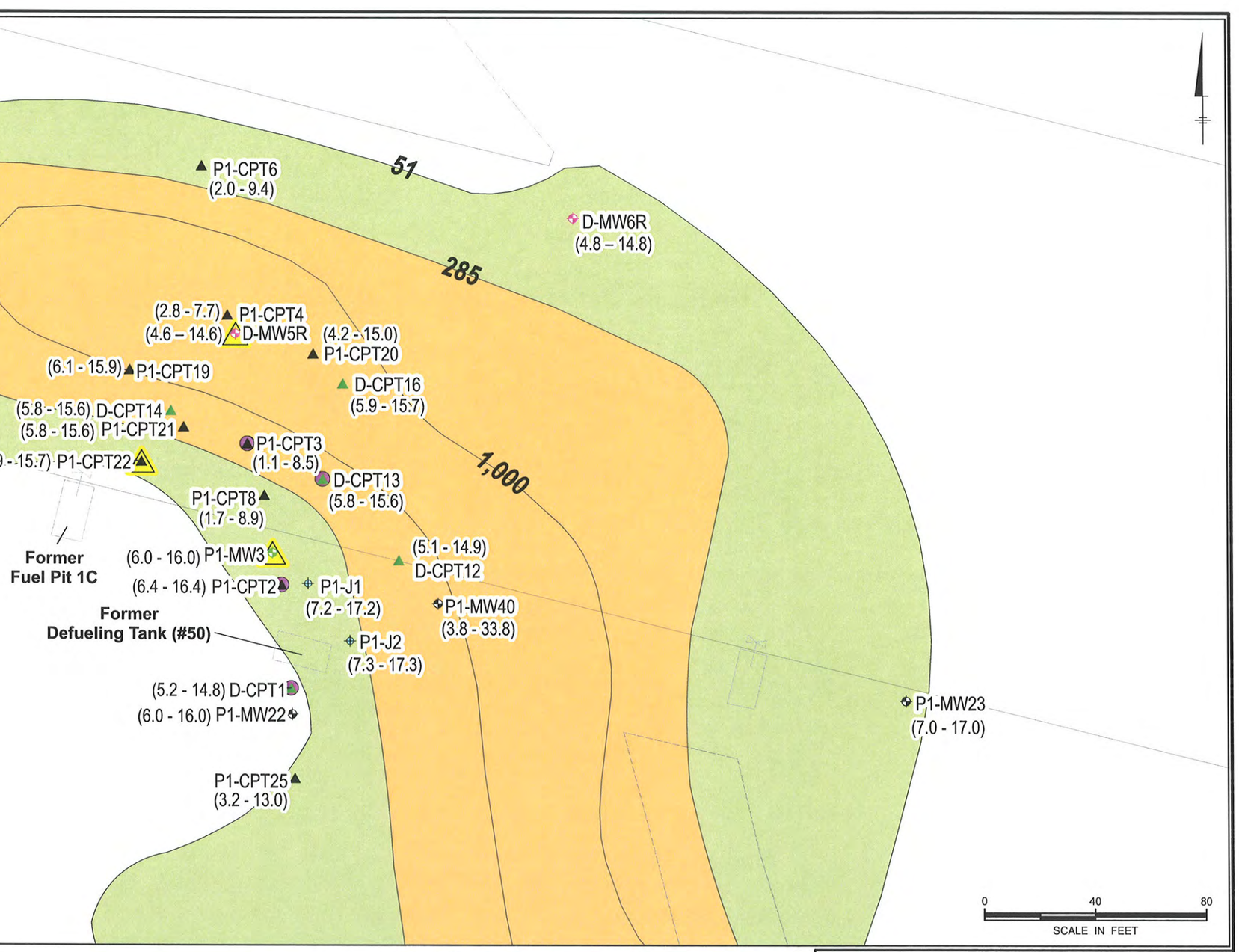
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remediation Areas With Existing Wells Shown

ARCADIS

FIGURE 3-1





LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- (3.2-13.0) Screened_interval (ft bgs)
- NAPL Detected During 2003 Investigation Using Fuel Floresence Detectors
- Measurable Product Thickness at Least Once Since 1999

NOTE: All concentrations reported in micrograms per liter (µg/L).

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
ft bfs - feet below ground surface

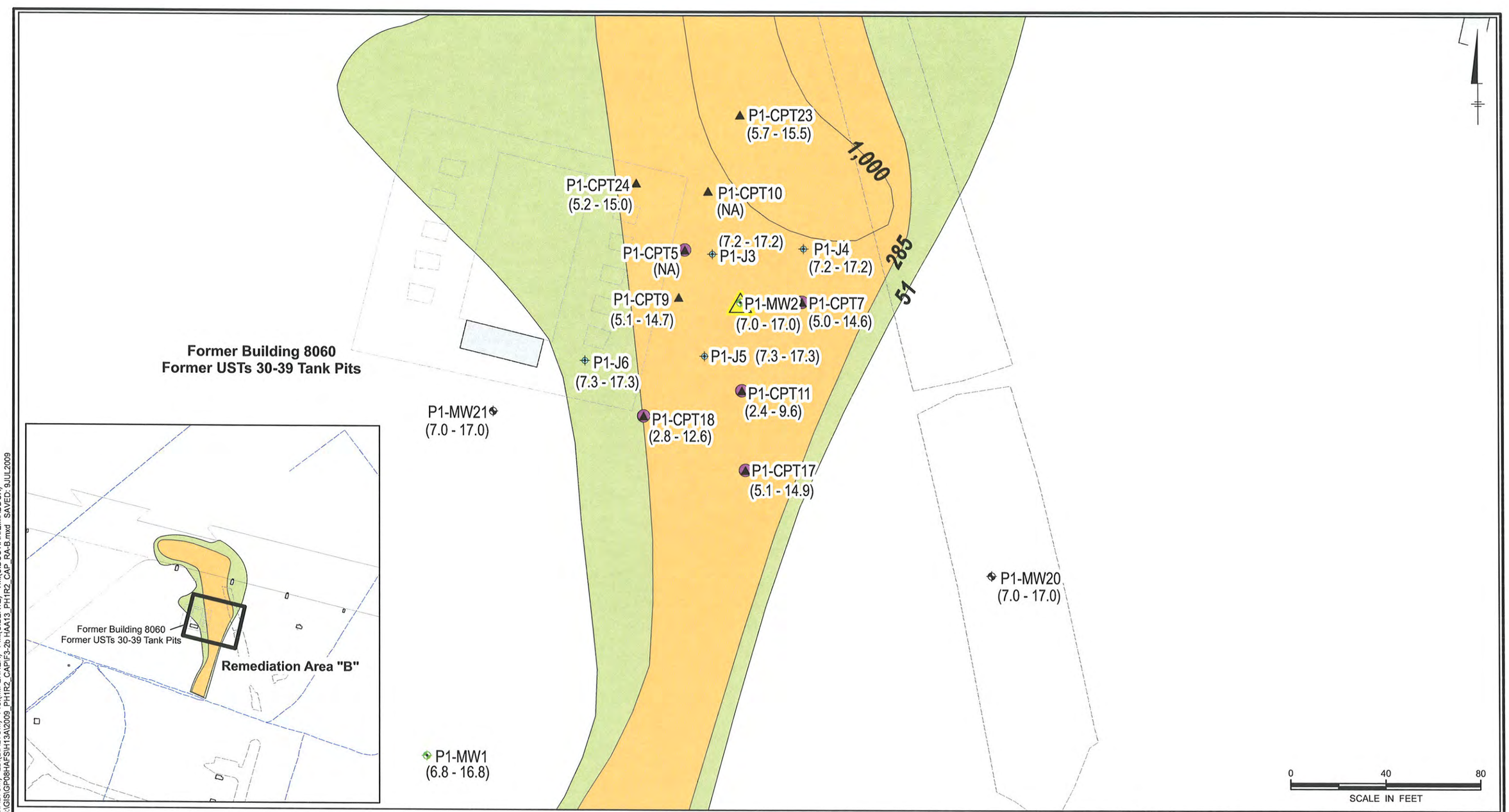
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remediation Area "A"
Former Fuel Pit 1C and Defueling Tank

ARCADIS

FIGURE
3-2a

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS; F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009 PH1R2 CAP\FS-2a HAA13 PH1R2 CAP RA-A.mxd SAVED: 9/JUL2009



CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009_PH1R2_CAP\F3-2b HAA13_PH1R2_CAP_RA-B.mxd SAVED: 9JUL2009

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- (6.8-16.8) Screened_interval (ft bgs)
- NAPL Detected During 2003 Investigation Using Fuel Floresence Detectors
- Measurable Product Thickness at Least Once Since 1999

NOTE: All concentrations reported in micrograms per liter (µg/L).

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

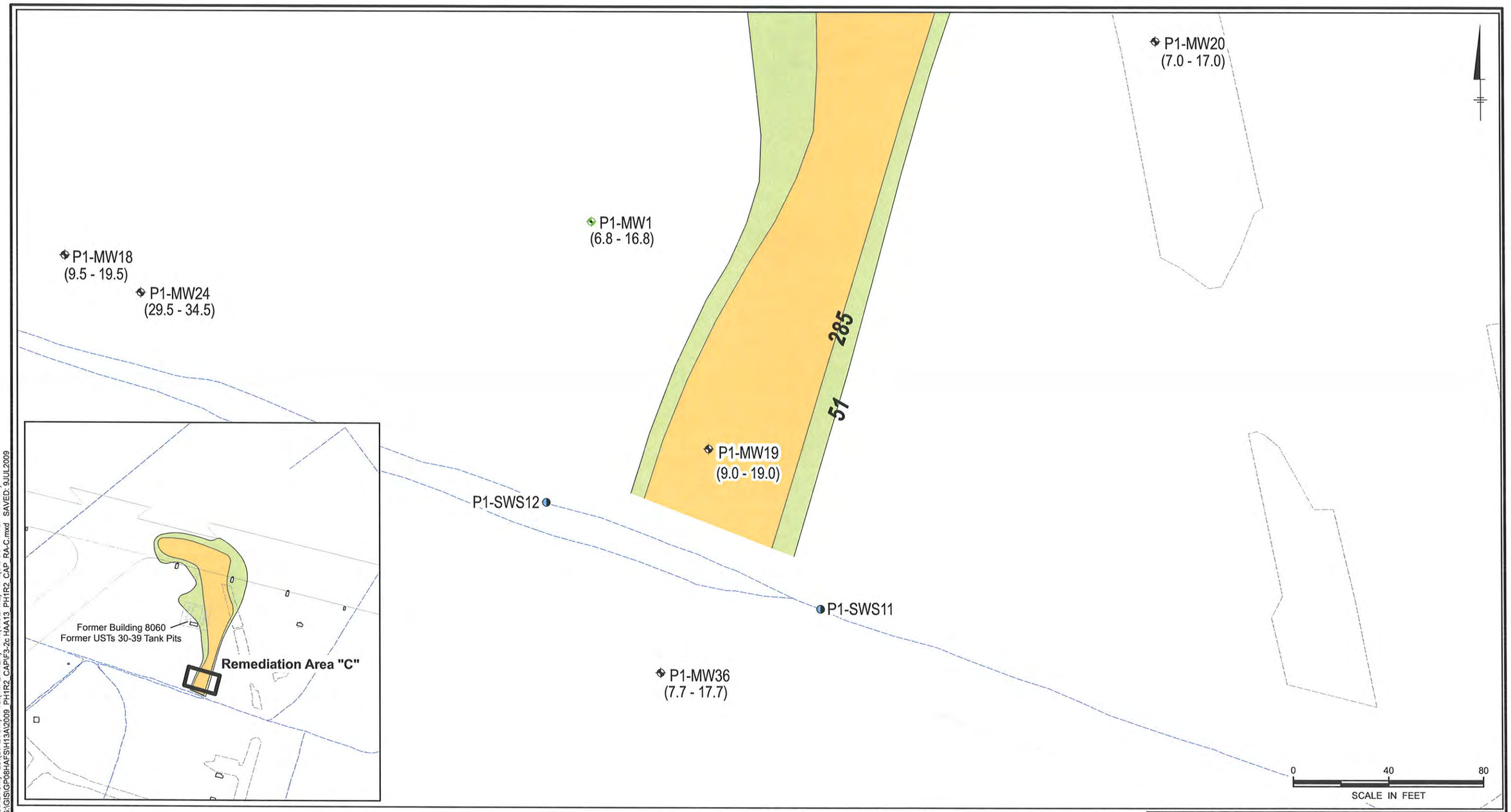
IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
ft bfs - feet below ground surface
NA - Screen Interval Not Known

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remediation Area "B"
Former Building 8060 Tank Pits

ARCADIS

FIGURE
3-2b



CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009 PH1R2 CAP\F3-2c HAA13 PH1R2 CAP RA-C.mxd SAVED: 9JUL2009

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- (7.7-17.7) Screened_interval (ft bgs)

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit
ft bfs - feet below ground surface

NOTE: All concentrations reported in micrograms per liter (µg/L).

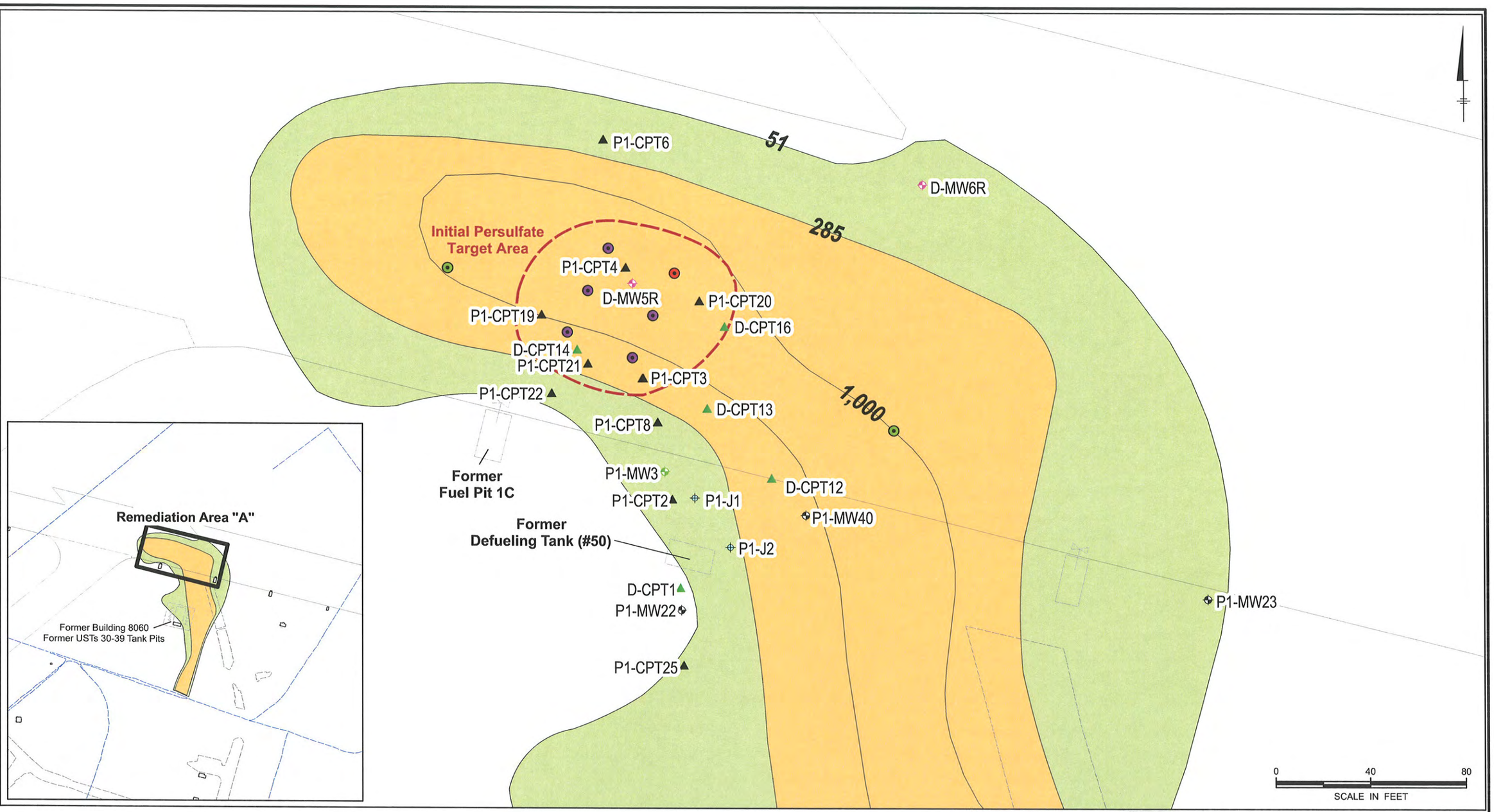
REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remediation Area "C"
Potential Surface Water Impacts

ARCADIS

FIGURE
3-2c



LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- Proposed Monitor Well
- Proposed Initial Injection Well
- Proposed Injection Well

NOTE: All concentrations reported in micrograms per liter (µg/L).

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

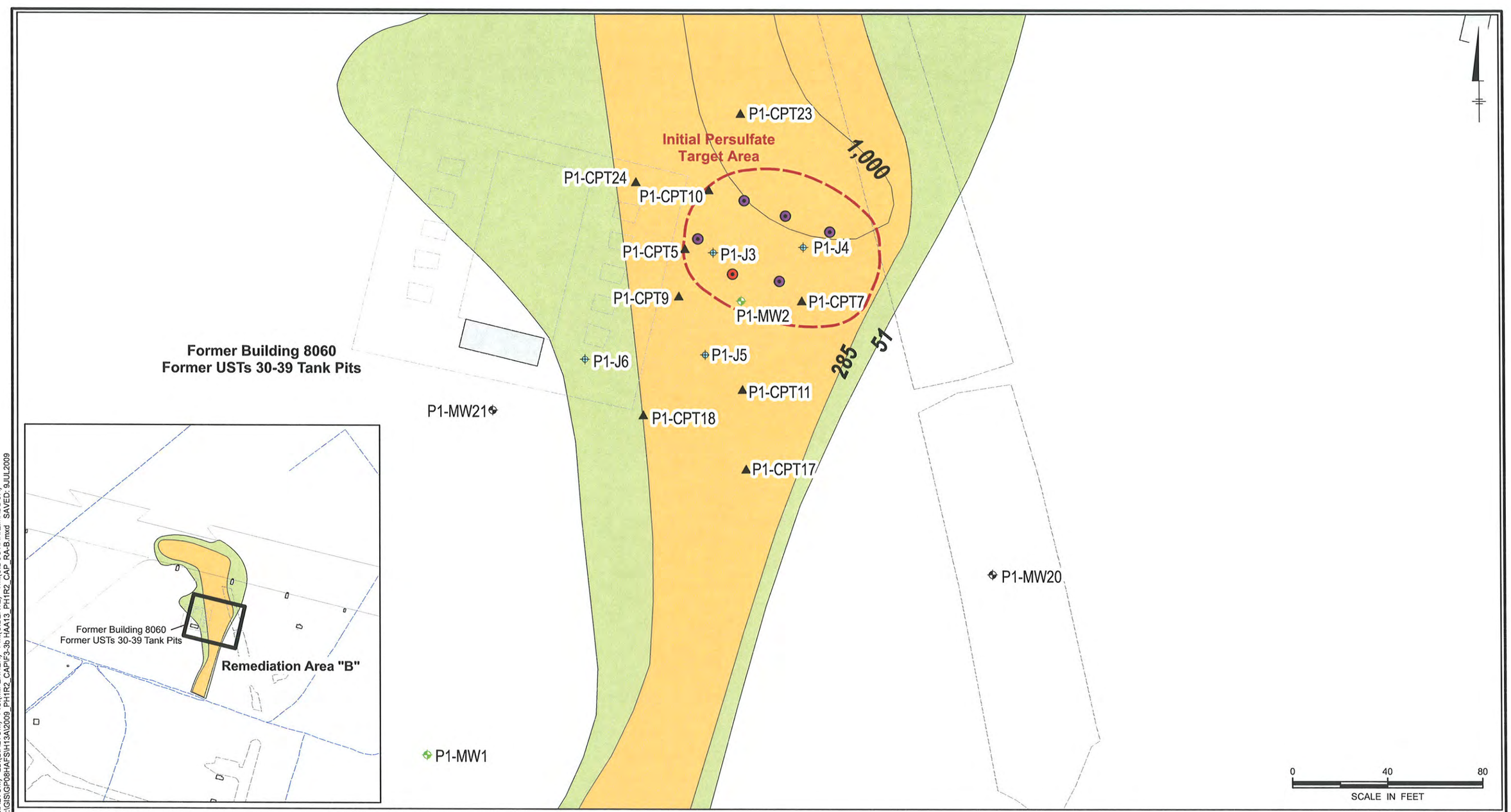
HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remedial Concept for Area "A"
Former Fuel Pit 1C and Defueling Tank

ARCADIS

FIGURE
3-3a

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A2009_PH1R2_CAP\F3-3a HAA13_PH1R2_CAP_RA-A.mxd SAVED: 9JUL2009



CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFSIH13A\2009_PH1R2_CAP\F3-3b HAA13_PH1R2_CAP_RA-B.mxd SAVED: 9JUL2009

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- Proposed Initial Injection Well
- Proposed Injection Well

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit

NOTE: All concentrations reported in micrograms per liter (µg/L).

REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remedial Concept for Area "B"
Former Building 8060 Tank Pits

ARCADIS

FIGURE
3-3b

CITY:(KNOXVILLE) DIV/GROUP:(ENV) DB:(B.ALTOM) LD:(B.ALTOM) PIC:(M.FENNER) PM:(C.BERTZ) TM:(S.BOSTIAN/E.MADDOX)
PROJECT: GP08HAFS.F13A.EH1R2 PATH: G:\GIS\GP08HAFS\H13A\2009 PH1R2 CAP\F3-3c HAA13 PH1R2 CAP RA-C.mxd SAVED: 9JUL2009

LEGEND

- Monitor Well (Pumphouse #1 CAP-A)
- Monitor Well (Pumphouse #1 CAP-B)
- Monitor Well (DAACG)
- Surface Water Sample
- Injection Well
- CPT Well (Pumphouse #1)
- CPT Well (DAACG)
- Benzene Concentration Exceeds IWQS (51 µg/L)
- Benzene Concentration Exceeds ACL (285 µg/L)
- Calcium Peroxide DPT Injection Point

IWQS - In-Stream Water Quality Standard
ACL - Alternate Concentration Limit

NOTE: All concentrations reported in micrograms per liter (µg/L).

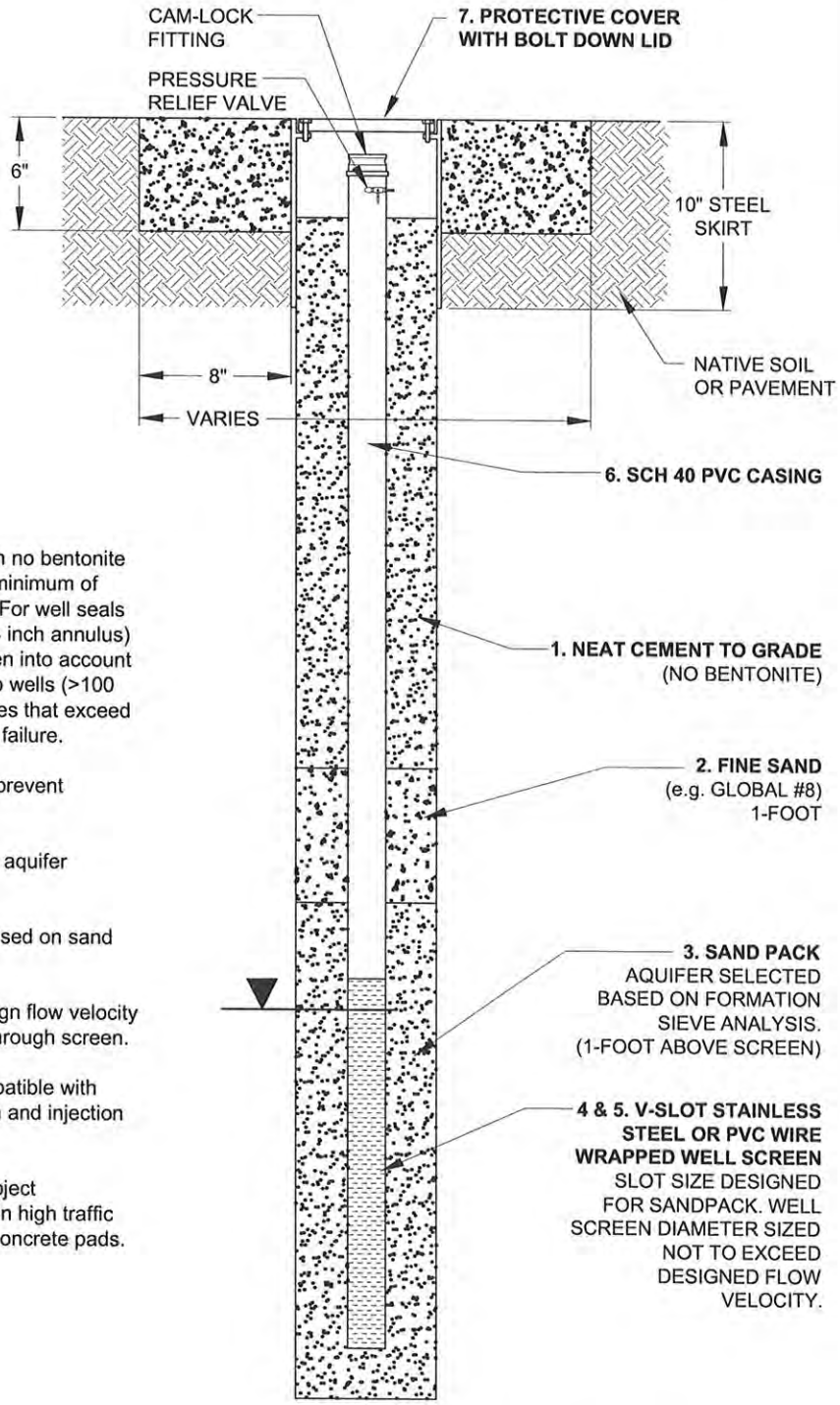
REFERENCE: Sixth Annual Monitoring Only Report (SAIC 2008).

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN – PART B

Remedial Concept for Area "C"
Potential Surface Water Impacts

ARCADIS

FIGURE
3-3c



NOTES

1. Well seal consists of neat cement grout with no bentonite seal. Cement must be allowed to set up for a minimum of 72-hours prior to development (and injection). For well seals greater than 50 feet in length (or with large > 4 inch annulus) consideration for heat generation must be taken into account with well materials. Also for exceptionally deep wells (>100 feet) long grout columns may result in pressures that exceed the overburden strength and lead to formation failure.

2. Fine sand placed above well sand pack to prevent migration of neat cement to well screen.

3. Sand pack size selected based on specific aquifer formation grainsize analysis.

4. Well screen slot size should be selected based on sand pack.

5. Well diameter to be sized to achieve a design flow velocity of less than or equal to 0.05 feet per second through screen.

6. Well materials must be selected to be compatible with injection fluids and selected to withstand depth and injection pressures.

7. Protective cover to be designed to meet project specifications. Traffic rated covers to be used in high traffic areas. Traffic rated covers require reinforced concrete pads.

NOT TO SCALE

HUNTER ARMY AIRFIELD, GEORGIA
FORMER PUMPHOUSE #1 (RELEASE #2)
FORMER BUILDING 8060, FACILITY ID #9-025085*2
REVISED CORRECTIVE ACTION PLAN . PART B

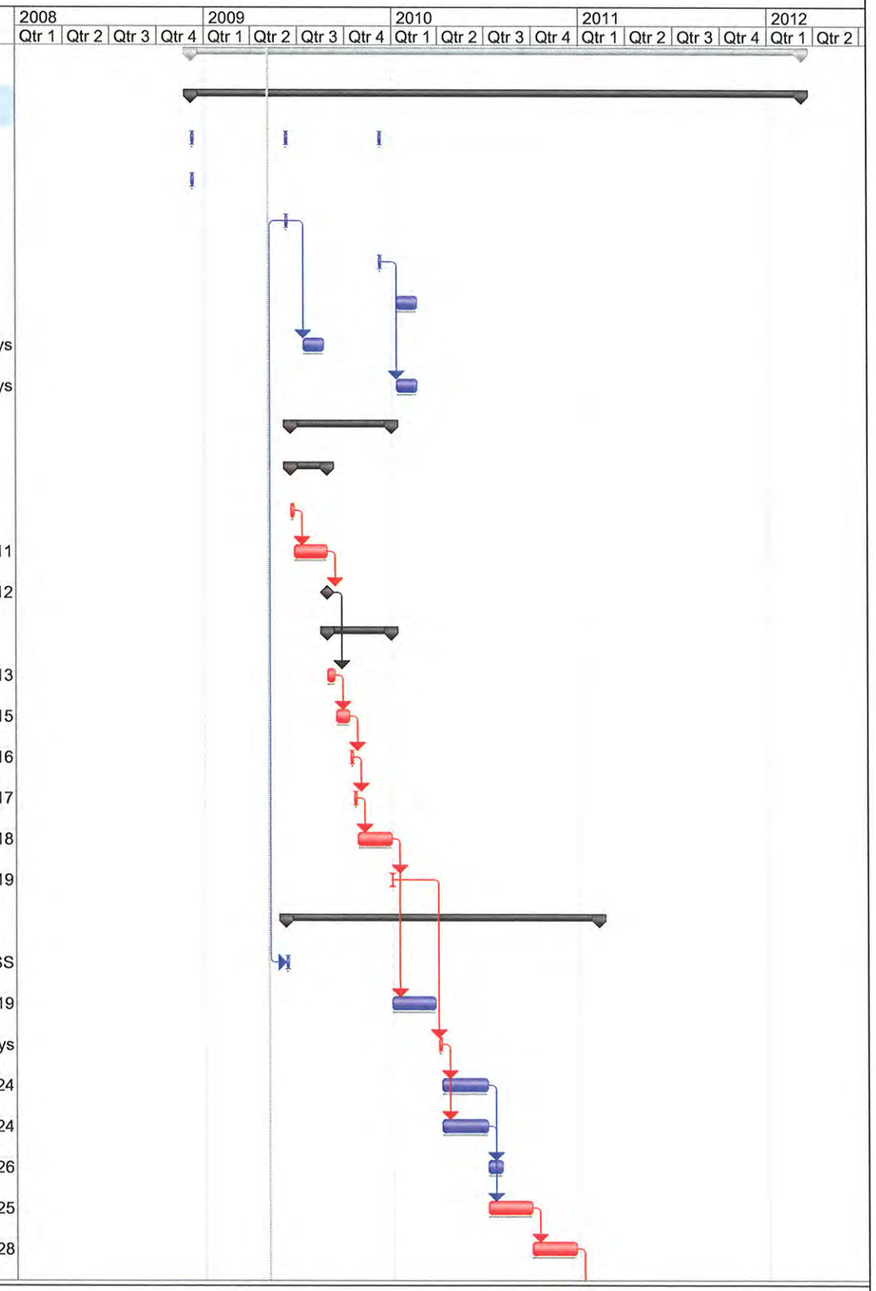
Typical Injection Well Detail (Unconfined Aquifer, Shallow Impacts)

ARCADIS

FIGURE
3-4

Figure 3-5: Project Schedule
HAA-13 Pumphouse 1 Release 2

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
0	**0**	**Ft Stewart / HAAF Schedule - Proposed**	**827 days**	**Mon 12/8/08**	**Fri 3/9/12**	
1	**1**	**HAA 13: PUMP HOUSE #1 / RELEASE #2**	**827 days**	**Mon 12/8/08**	**Fri 3/9/12**	
2	**1.1**	**Semi-Annual Monitoring and Gauging**	**258 days**	**Mon 12/8/08**	**Fri 12/11/09**	
3	1.1.1	Semi-Annual Monitoring and Gauging 1	5 days	Mon 12/8/08	Fri 12/12/08	
4	1.1.2	Semi-Annual Monitoring and Gauging 2	5 days	Mon 6/8/09	Fri 6/12/09	
5	1.1.3	Semi-Annual Monitoring and Gauging 3	5 days	Mon 12/7/09	Fri 12/11/09	
6	**1.2**	**Annual Reporting**	**155 days**	**Mon 7/13/09**	**Fri 2/19/10**	
7	1.2.1	Semiannual Reporting 2	30 days	Mon 7/13/09	Fri 8/21/09	4FS+30 edays
8	1.2.2	Annual Reporting 3	30 days	Mon 1/11/10	Fri 2/19/10	5FS+30 edays
9	**1.3**	**HAA 13 Revised CAP Part B**	**136 days**	**Thu 6/18/09**	**Thu 12/31/09**	
10	**1.3.1**	**HAA 13 Revised CAP Part B Rev 0 (includes Annual Report 1)**	**50 days**	**Thu 6/18/09**	**Thu 8/27/09**	
11	1.3.1.1	Army Submittal of Revised CAP Part B Rev 0	5 days	Thu 6/18/09	Wed 6/24/09	
12	1.3.1.2	GAEPD Review of Revised CAP Part B Rev 0	45 days	Thu 6/25/09	Thu 8/27/09	11
13	1.3.1.3	GAEPD comments on Revised CAP Part B Rev 0	0 days	Thu 8/27/09	Thu 8/27/09	12
14	**1.3.2**	**HAA 13 Revised CAP Part B Rev 1**	**85 days**	**Fri 8/28/09**	**Wed 12/30/09**	
15	1.3.2.1	Prepare RTCs and HAA 13 Revised CAP Part B Rev 1	10 days	Fri 8/28/09	Fri 9/11/09	13
16	1.3.2.2	Army Review of RTCs and Revised CAP Part B Rev 1	20 days	Mon 9/14/09	Fri 10/9/09	15
17	1.3.2.3	ARCADIS Revisions	5 days	Mon 10/12/09	Fri 10/16/09	16
18	1.3.2.4	Army Submittal of RTCs and Revised CAP Part B Rev 1	5 days	Mon 10/19/09	Fri 10/23/09	17
19	1.3.2.5	GAEPD Review of Revised CAP Part B Rev 1	45 days	Mon 10/26/09	Wed 12/30/09	18
20	1.3.3	Regulatory Approval Final HAA 13 Revised CAP Part B Rev 1	1 day	Thu 12/31/09	Thu 12/31/09	19
21	**1.4**	**HAA 13 Implementation**	**423 days**	**Mon 6/8/09**	**Mon 2/7/11**	
22	1.4.1	Baseline Biogeochemical Sampling	5 days	Mon 6/8/09	Fri 6/12/09	4SS
23	1.4.2	Treatability Testing	60 days	Thu 12/31/09	Thu 3/25/10	19
24	1.4.3	Construction Mobilization	4 days	Thu 4/1/10	Tue 4/6/10	20FS+90 edays
25	1.4.4	Well and Mixing System Construction Implementation	90 edays	Tue 4/6/10	Mon 7/5/10	24
26	1.4.5	Barrier Injection	90 edays	Tue 4/6/10	Mon 7/5/10	24
27	1.4.6	Construction and Injection Completion Report	20 days	Tue 7/6/10	Mon 8/2/10	26
28	1.4.7	ISCO Injection & Design Evaluation	60 days	Tue 7/6/10	Tue 9/28/10	25
29	1.4.8	UIC Permit Application	60 days	Wed 9/29/10	Thu 12/23/10	28



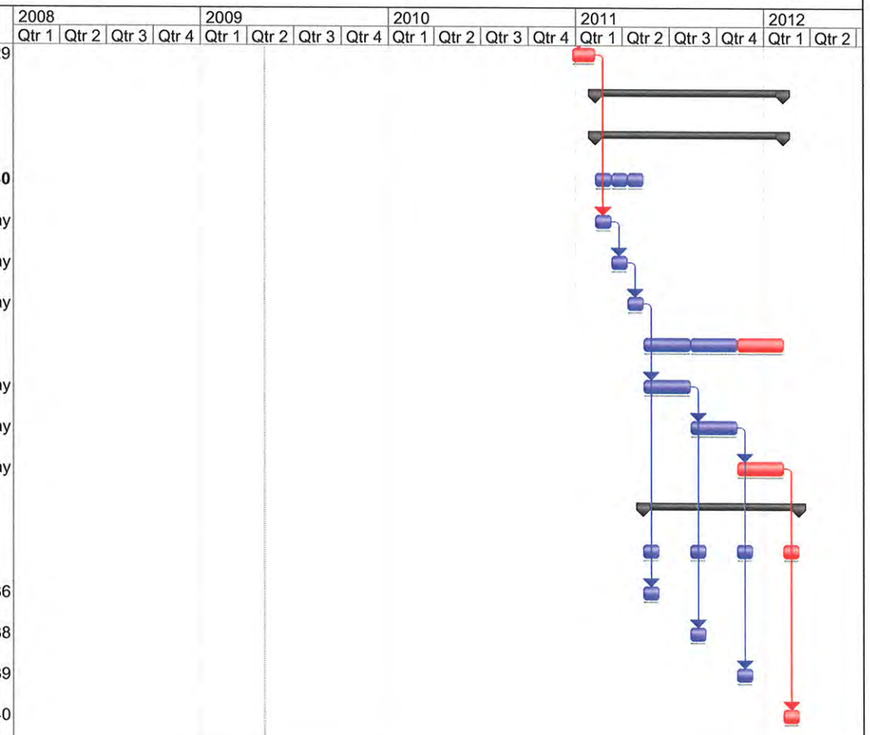
ARCADIS

Date: Mon 5/4/09

Task Duration Milestone Summary

Figure 3-5: Project Schedule
HAA-13 Pumphouse 1 Release 2

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
30	1.4.9	Full Scale Injection	30 days	Mon 12/27/10	Mon 2/7/11	29
31	**1.5**	**HAA 13 Site Monitoring**	**254 days**	**Tue 2/8/11**	**Wed 2/8/12**	
32	**1.5.1**	**HAA 13 Site Monitoring Years 1 and 2**	**254 days**	**Tue 2/8/11**	**Wed 2/8/12**	
33	**1.5.1.1**	**Post Injection Monitoring Q1**	**66 days**	**Tue 2/8/11**	**Wed 5/11/11**	**30**
34	1.5.1.1.1	Month 1 Monitoring	30 edays	Tue 2/8/11	Thu 3/10/11	30FS+1 day
35	1.5.1.1.2	Month 2 Monitoring	30 edays	Fri 3/11/11	Sun 4/10/11	34FS+1 day
36	1.5.1.1.3	Month 3 Monitoring	30 edays	Mon 4/11/11	Wed 5/11/11	35FS+1 day
37	**1.5.1.2**	**Quarterly Post Injection Monitoring**	**187 days**	**Thu 5/12/11**	**Wed 2/8/12**	
38	1.5.1.2.1	Monitoring Q2	90 edays	Thu 5/12/11	Wed 8/10/11	36FS+1 day
39	1.5.1.2.2	Monitoring Q3	90 edays	Thu 8/11/11	Wed 11/9/11	38FS+1 day
40	1.5.1.2.3	Monitoring Q4	90 edays	Thu 11/10/11	Wed 2/8/12	39FS+1 day
41	**1.6**	**HAA 13 Monitoring and Reporting**	**210 days**	**Wed 5/11/11**	**Fri 3/9/12**	
42	**1.6.1**	**HAA 13 Semiannual Performance Monitoring**	**210 days**	**Wed 5/11/11**	**Fri 3/9/12**	
43	1.6.1.1	HAA 13 Quarterly Performance Monitoring Report 1	30 edays	Wed 5/11/11	Fri 6/10/11	36
44	1.6.1.2	HAA 13 Quarterly Performance Monitoring Report 2	30 edays	Wed 8/10/11	Fri 9/9/11	38
45	1.6.1.3	HAA 13 Quarterly Performance Monitoring Report 3	30 edays	Wed 11/9/11	Fri 12/9/11	39
46	1.6.1.4	HAA 13 Quarterly Performance Monitoring Report 4	30 edays	Wed 2/8/12	Fri 3/9/12	40



ARCADIS

Date: Mon 5/4/09

Task Duration Milestone Summary

ARCADIS

APPENDIX A

Laboratory Data

January 2008 Supplemental Investigation

Note: Original data and Chain of Custody were submitted in 6th Annual Monitoring Only Report.

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 12:03	Matrix:	SOIL
Lab Sample ID:	201010001	Date Received:	01/16/2008 09:35	%Moisture:	10.7
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0119	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	1
Run Date:	01/28/2008 18:45	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 09:46	Aliquot:	5.1 g	Final Volume:	5 mL
Data File:	4v119.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.10 U	ug/kg	0.362	1.10
108-88-3	Toluene	U	1.10	ug/kg	0.318	1.10
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.219	1.10
1330-20-7	Xylenes (total)	J	0.566 J	ug/kg	0.219	1.10

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 12:03	Matrix:	SOIL
Lab Sample ID:	201010001	Date Received:	01/16/2008 09:35	%Moisture:	10.7
		Client:	SA1C072	Project:	SA1C007202
Client ID:	AK0119	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/18/2008 23:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s2a1822.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.2 U	ug/kg	12.4	37.2
129-00-0	Pyrene	U	37.2	ug/kg	11.7	37.2
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.44	37.2
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	13.0	37.2
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2
85-01-8	Phenanthrene	U	37.2	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.44	37.2
206-44-0	Fluoranthene	U	37.2	ug/kg	11.2	37.2
56-55-3	Benzo(a)anthracene	U	37.2	ug/kg	11.2	37.2
218-01-9	Chrysene	U	37.2	ug/kg	11.2	37.2
205-99-2	Benzo(b)fluoranthene	U	37.2	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	U	37.2	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	U	37.2	ug/kg	11.2	37.2

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201010 METHOD TYPE: SW846

SAMPLE ID: 201010001 CLIENT ID: AK0119

CONTRACT: SAIC007202

MATRIX:S DATE RECEIVED 16-JAN-08 LEVEL: Low %SOLIDS: 89

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	1090	ug/kg	B	J	P	444	1	OPTIMA3	012408-1

"Data Validation Copy"

Volatile

Certificate of Analysis
Sample Summary

SpG Number:	201010	Date Collected:	01/15/2008 13:02	Matrix:	SOIL
Lab Sample ID:	201010002	Date Received:	01/16/2008 09:35	% Moisture:	6.5
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0219	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	1
Run Date:	01/28/2008 19:13	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 09:49	Aliquot:	4.5 g	Final Volume:	5 mL
Data File:	4v120.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.19 U	ug/kg	0.392	1.19
108-88-3	Toluene	U	1.19 U	ug/kg	0.345	1.19
100-41-4	Ethylbenzene	J	0.938 J	ug/kg	0.238	1.19
1330-20-7	Xylenes (total)	J	0.865 J	ug/kg	0.238	1.19

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 13:02	Matrix:	SOIL
Lab Sample ID:	201010002	Date Received:	01/16/2008 09:35	% Moisture:	6.5
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0219	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 00:57	Analyst:	AGS1	Inj. Vol:	5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.24 g	Final Volume:	1 mL
Data File:	s2a1825.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.4 U	ug/kg	11.8	35.4
129-00-0	Pyrene	U	35.4	ug/kg	11.1	35.4
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.08	35.4
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	12.4	35.4
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
205-99-2	Benzo(b)fluoranthene	J	12.9 J	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4 U	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	J	13.0 J	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4 U	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201010 METHOD TYPE: SW846

SAMPLE ID: 201010002 CLIENT ID: AK0219

CONTRACT: SAIC007202

MATRIX: S DATE RECEIVED 16-JAN-08 LEVEL: Low %SOLIDS: 93.5

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	987	ug/kg	B	J	P	41[illegible]	1	OPTIMA3	012408-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 14:17	Matrix:	SOIL
Lab Sample ID:	201010003	Date Received:	01/16/2008 09:35	% Moisture:	9.8
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0319	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.1	Dilution:	1
Run Date:	01/28/2008 19:41	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 09:52	Aliquot:	4.6 g	Final Volume:	5 mL
Data File:	4v121.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.21 U	ug/kg	0.398	1.21
108-88-3	Toluene	J	0.528 J	ug/kg	0.350	1.21
100-41-4	Ethylbenzene	J	0.323 J	ug/kg	0.241	1.21
1330-20-7	Xylenes (total)		1.45 =	ug/kg	0.241	1.21

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 14:17	Matrix:	SOIL
Lab Sample ID:	201010003	Date Received:	01/16/2008 09:35	%Moisture:	9.8
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0319	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 01:18	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.29 g	Final Volume:	1 mL
Data File:	s2a1826.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.6 U	ug/kg	12.2	36.6
129-00-0	Pyrene	U	36.6	ug/kg	11.5	36.6
91-20-3	Naphthalene	U	36.6	ug/kg	11.0	36.6
91-57-6	2-Methylnaphthalene	U	36.6	ug/kg	7.32	36.6
91-58-7	2-Chloronaphthalene	U	36.6	ug/kg	12.8	36.6
208-96-8	Acenaphthylene	U	36.6	ug/kg	11.0	36.6
86-73-7	Fluorene	U	36.6	ug/kg	11.0	36.6
85-01-8	Phenanthrene	U	36.6	ug/kg	11.0	36.6
120-12-7	Anthracene	U	36.6	ug/kg	7.32	36.6
206-44-0	Fluoranthene	U	36.6	ug/kg	11.0	36.6
56-55-3	Benzo(a)anthracene	U	36.6	ug/kg	11.0	36.6
218-01-9	Chrysene	U	36.6	ug/kg	11.0	36.6
205-99-2	Benzo(b)fluoranthene	U	36.6	ug/kg	11.0	36.6
207-08-9	Benzo(k)fluoranthene	U	36.6	ug/kg	11.0	36.6
50-32-8	Benzo(a)pyrene	U	36.6	ug/kg	11.0	36.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.6	ug/kg	11.0	36.6
53-70-3	Dibenzo(a,h)anthracene	U	36.6	ug/kg	11.0	36.6
191-24-2	Benzo(ghi)perylene	U	36.6	ug/kg	11.0	36.6

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201010 METHOD TYPE: SW846

SAMPLE ID: 201010003 CLIENT ID: AK0319

CONTRACT: SAJC007202

MATRIX: S DATE RECEIVED 16-JAN-08 LEVEL: Low % SOLIDS: 90.2

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	5740	ug/kg			P	439	1	OPTIMA3	012408-1

DATA VALIDATION COPY

Volatile

Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 15:27	Matrix:	SOIL
Lab Sample ID:	201010004	Date Received:	01/16/2008 09:35	% Moisture:	7.6
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0419	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	1
Run Date:	01/28/2008 20:09	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 09:55	Aliquot:	5.1 g	Final Volume:	5 mL
Data File:	4v122.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.06 U	ug/kg	0.350	1.06
108-88-3	Toluene	U	1.06 U	ug/kg	0.308	1.06
100-41-4	Ethylbenzene		2.17 =	ug/kg	0.212	1.06
1330-20-7	Xylenes (total)	J	0.302 J	ug/kg	0.212	1.06

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201010	Date Collected:	01/15/2008 15:27	Matrix:	SOIL
Lab Sample ID:	201010004	Date Received:	01/16/2008 09:35	% Moisture:	7.6
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0419	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 01:39	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s2a1827.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.0 U	ug/kg	12.0	36.0
129-00-0	Pyrene	U	36.0	ug/kg	11.3	36.0
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.20	36.0
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0
85-01-8	Phenanthrene	U	36.0	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0	ug/kg	7.20	36.0
206-44-0	Fluoranthene	U	36.0	ug/kg	10.8	36.0
56-55-3	Benzo(a)anthracene	U	36.0	ug/kg	10.8	36.0
218-01-9	Chrysene	U	36.0	ug/kg	10.8	36.0
205-99-2	Benzo(b)fluoranthene	U	36.0	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene	U	36.0	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.0	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	U	36.0	ug/kg	10.8	36.0

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201010 METHOD TYPE: SW846

SAMPLE ID: 201010004 CLIENT ID: AK0419

CONTRACT: SAIC007202

MATRIX:S DATE RECEIVED 16-JAN-08 LEVEL: Low %SOLIDS: 92.4

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	3620	ug/kg			P	426	1	OPTIMA5	012408-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 10:23	Matrix:	SOIL
Lab Sample ID:	201086003	Date Received:	01/17/2008 09:30	%Moisture:	9.6
		Client:	SA1C072	Project:	SA1C007202
Client ID:	AK0519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	100
Run Date:	01/28/2008 18:17	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 12:15	Aliquot:	5.4 g	Final Volume:	10 mL
Data File:	4v118.d	Column:	RTX-VOLATILES	Level:	MED

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	205 U	ug/kg	67.6	205
108-88-3	Toluene		973 J	ug/kg GOI	59.4	205
100-41-4	Ethylbenzene		9690	ug/kg	41.0	205
1330-20-7	Xylenes (total)		24000	ug/kg	41.0	205

"Data Validation Copy"

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 10:23	Matrix:	SOIL
Lab Sample ID:	201086003	Date Received:	01/17/2008 09:30	% Moisture:	9.6
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 02:43	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.32 g	Final Volume:	1 mL
Data File:	s2a1830.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.5 U	ug/kg	12.2	36.5
129-00-0	Pyrene	U	36.5	ug/kg	11.5	36.5
91-20-3	Naphthalene	U	36.5	ug/kg	10.9	36.5
91-57-6	2-Methylnaphthalene	J	13.4 J	ug/kg	7.30	36.5
91-58-7	2-Chloronaphthalene	U	36.5 U	ug/kg	12.8	36.5
208-96-8	Acenaphthylene	U	36.5	ug/kg	10.9	36.5
86-73-7	Fluorene	U	36.5	ug/kg	10.9	36.5
85-01-8	Phenanthrene	U	36.5	ug/kg	10.9	36.5
120-12-7	Anthracene	U	36.5	ug/kg	7.30	36.5
206-44-0	Fluoranthene	U	36.5	ug/kg	10.9	36.5
56-55-3	Benzo(a)anthracene	U	36.5	ug/kg	10.9	36.5
218-01-9	Chrysene	U	36.5	ug/kg	10.9	36.5
205-99-2	Benzo(b)fluoranthene	U	36.5	ug/kg	10.9	36.5
207-08-9	Benzo(k)fluoranthene	U	36.5	ug/kg	10.9	36.5
50-32-8	Benzo(a)pyrene	U	36.5	ug/kg	10.9	36.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.5	ug/kg	10.9	36.5
53-70-3	Dibenzo(a,h)anthracene	U	36.5	ug/kg	10.9	36.5
191-24-2	Benzo(ghi)perylene	U	36.5	ug/kg	10.9	36.5

"Data Validation Copy"

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201086 METHOD TYPE: SW846

SAMPLE ID: 201086003 CLIENT ID: AK0519

CONTRACT: SAIC007202

MATRIX: S DATE RECEIVED 17-JAN-08 LEVEL: Low %SOLIDS: 90.4

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	28500	ug/kg			P	434	1	OPTIMA5	012408-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 09:26	Matrix:	SOIL
Lab Sample ID:	201086002	Date Received:	01/17/2008 09:30	% Moisture:	18.4
		Client:	SA1C072	Project:	SA1C007202
Client ID:	AK0619	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	50
Run Date:	01/28/2008 17:49	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 12:12	Aliquot:	5 g	Final Volume:	10 mL
Data File:	4v317.d	Column:	RTX-VOLATILES	Level:	MED

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	123	UJ	ug/kg GQZ	40.4	123
108-88-3	Toluene		589	J	ug/kg	35.5	123
100-41-4	Ethylbenzene		412		ug/kg	24.5	123
1330-20-7	Xylenes (total)		1860		ug/kg	24.5	123

"Data Validation Copy"

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 09:26	Matrix:	SOIL
Lab Sample ID:	201086002	Date Received:	01/17/2008 09:30	% Moisture:	18.9
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0619	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 02:22	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2a1829.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	40.6 U	ug/kg	13.6	40.6
129-00-0	Pyrene	U	40.6	ug/kg	12.8	40.6
91-20-3	Naphthalene	U	40.6	ug/kg	12.2	40.6
91-57-6	2-Methylnaphthalene	J	21.1 J	ug/kg	8.13	40.6
91-58-7	2-Chloronaphthalene	U	40.6 U	ug/kg	14.2	40.6
208-96-8	Acenaphthylene	U	40.6	ug/kg	12.2	40.6
86-73-7	Fluorene	U	40.6	ug/kg	12.2	40.6
85-01-8	Phenanthrene	U	40.6	ug/kg	12.2	40.6
120-12-7	Anthracene	U	40.6	ug/kg	8.13	40.6
206-44-0	Fluoranthene	U	40.6	ug/kg	12.2	40.6
56-55-3	Benzo(a)anthracene	U	40.6	ug/kg	12.2	40.6
218-01-9	Chrysene	U	40.6	ug/kg	12.2	40.6
205-99-2	Benzo(b)fluoranthene	U	40.6	ug/kg	12.2	40.6
207-08-9	Benzo(k)fluoranthene	U	40.6	ug/kg	12.2	40.6
50-32-8	Benzo(a)pyrene	U	40.6	ug/kg	12.2	40.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	40.6	ug/kg	12.2	40.6
53-70-3	Dibenzo(a,h)anthracene	U	40.6	ug/kg	12.2	40.6
191-24-2	Benzo(ghi)perylene	U	40.6	ug/kg	12.2	40.6

"Data Validation Copy"

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201086 METHOD TYPE: SW846

SAMPLE ID: 201086002 CLIENT ID: AK0619

CONTRACT: SAIC007202

MATRIX: S DATE RECEIVED 17-JAN-08 LEVEL: Low %SOLIDS: 82

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	25400	ug/kg			P	479	1	OPTIMA3	012408-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 08:20	Matrix:	SOIL
Lab Sample ID:	201086001	Date Received:	01/17/2008 09:30	% Moisture:	12.2
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0719	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	1
Run Date:	01/28/2008 20:38	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 12:06	Aliquot:	5.4 g	Final Volume:	5 mL
Data File:	4v123.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.05 U	ug/kg	0.348	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.306	1.05
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.211	1.05
1330-20-7	Xylenes (total)	J	0.348 J	ug/kg	0.211	1.05

"Data Validation Copy"

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 08:20	Matrix:	SOIL
Lab Sample ID:	201086001	Date Received:	01/17/2008 09:30	%Moisture:	12.2
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK0719	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 02:01	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.43 g	Final Volume:	1 mL
Data File:	s2a1828.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.4 U	ug/kg	12.5	37.4
129-00-0	Pyrene	U	37.4	ug/kg	11.8	37.4
91-20-3	Naphthalene	U	37.4	ug/kg	11.2	37.4
91-57-6	2-Methylnaphthalene	U	37.4	ug/kg	7.49	37.4
91-58-7	2-Chloronaphthalene	U	37.4	ug/kg	13.1	37.4
208-96-8	Acenaphthylene	U	37.4	ug/kg	11.2	37.4
86-73-7	Fluorene	U	37.4	ug/kg	11.2	37.4
85-01-8	Phenanthrene	U	37.4	ug/kg	11.2	37.4
120-12-7	Anthracene	U	37.4	ug/kg	7.49	37.4
206-44-0	Fluoranthene	U	37.4	ug/kg	11.2	37.4
56-55-3	Benzo(a)anthracene	U	37.4	ug/kg	11.2	37.4
218-01-9	Chrysene	U	37.4	ug/kg	11.2	37.4
205-99-2	Benzo(b)fluoranthene	U	37.4	ug/kg	11.2	37.4
207-08-9	Benzo(k)fluoranthene	U	37.4	ug/kg	11.2	37.4
50-32-8	Benzo(a)pyrene	U	37.4	ug/kg	11.2	37.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.4	ug/kg	11.2	37.4
53-70-3	Dibenzo(a,h)anthracene	U	37.4	ug/kg	11.2	37.4
191-24-2	Benzo(ghi)perylene	U	37.4	ug/kg	11.2	37.4

"Data Validation Copy"

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201086

SAMPLE ID: 201086001

CONTRACT: SAIC007202

MATRIX: S

DATE RECEIVED 17-JAN-08

CAS No	Analyte	Result	Units	C	Qual	M	[illegible]	[illegible]	Instrument ID	Analytical Run
7439-92-1	Lead	1370	ug/kg			P	455		[illegible]	[illegible]

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 09:12	Matrix:	SOIL
Lab Sample ID:	201540001	Date Received:	01/24/2008 15:05	%Moisture:	9.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0819	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	50
Run Date:	02/06/2008 15:53	Analyst:	RXYJ	Purge Vol:	5 mL
Prep Date:	01/25/2008 07:42	Aliquot:	5.5 g	Final Volume:	10 mL
Data File:	9w314.d	Column:	RTX-Volatiles	Level:	MED

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	101 U	ug/kg	33.3	101
108-88-3	Toluene	J	65.9 J	ug/kg	29.3	101
100-41-4	Ethylbenzene		1360 =	ug/kg	20.2	101
1330-20-7	Xylenes (total)		1810 =	ug/kg	20.2	101

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 09:12	Matrix:	SOIL
Lab Sample ID:	201540001	Date Received:	01/24/2008 15:05	%Moisture:	9.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0819	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6J	Dilution:	1
Run Date:	01/29/2008 12:01	Analyst:	JLDJ	Inj. Vol:	5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s6a2908.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.9 U	ug/kg	12.3	36.9
129-00-0	Pyrene	J	12.9 J	ug/kg	11.6	36.9
91-20-3	Naphthalene	U	36.9 U	ug/kg	11.1	36.9
91-57-6	2-Methylnaphthalene	E	63.4 = Fol, ug/kg Fo8		7.39	36.9
91-58-7	2-Chloronaphthalene	U	36.9 U	ug/kg	12.9	36.9
208-96-8	Acenaphthylene	U	36.9 U	ug/kg	11.1	36.9
86-73-7	Fluorene	J	11.6 J	ug/kg	11.1	36.9
85-01-8	Phenanthrene	J	29.4 J	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9 U	ug/kg	7.39	36.9
206-44-0	Fluoranthene	J	28.0 J	ug/kg	11.1	36.9
56-55-3	Benzo(a)anthracene	U	36.9 U	ug/kg	11.1	36.9
218-01-9	Chrysene	U	36.9	ug/kg	11.1	36.9
205-99-2	Benzo(b)fluoranthene	U	36.9	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene	U	36.9	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.9	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene	U	36.9	ug/kg	11.1	36.9

DATA VALIDATION
COPY

METALS

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201537-1 METHOD TYPE: SW846

SAMPLE ID: 201540001 CLIENT ID: AK0819

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 24-JAN-06 LEVEL: Low %SOLIDS: 90.0

CAS No	Analyte	Result	Units	C	Qua	M	IDL	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.4	mg/kg			P	0.011	1	ICP01	060204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 10:37	Matrix:	SOIL
Lab Sample ID:	201540002	Date Received:	01/24/2008 15:05	% Moisture:	16.5
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0919	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/04/2008 17:18	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 07:45	Aliquot:	5.6 g	Final Volume:	5 mL
Data File:	9w117.d	Column:	RTX-Volatiles	Level:	LOW

USE

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.353	1.07
108-88-3	Toluene		2.82 J Gol	ug/kg	0.310	1.07
100-41-4	Ethylbenzene	D	E 1950 645 =	ug/kg	0.214	1.07
1330-20-7	Xylenes (total)	D	E 2370 798 =	ug/kg	0.214	1.07

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 10:37	Matrix:	SOIL
Lab Sample ID:	201540002	Date Received:	01/24/2008 15:05	% Moisture:	16.5
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0919	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 12:23	Analyst:	JLD1	Inj. Vol:	.5 ul
Prep Date:	01/28/2008 19:37	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6a2909.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	39.9 U	ug/kg	15.9	39.9
129-00-0	Pyrene	U	39.9	ug/kg	12.0	39.9
91-20-3	Naphthalene	U	39.9	ug/kg	12.0	39.9
91-57-6	2-Methylnaphthalene	E	134 = Fol, ug/kg F08		7.99	39.9
91-58-7	2-Chloronaphthalene	U	39.9 U	ug/kg	14.3	39.9
208-96-8	Acenaphthylene	U	39.9 U	ug/kg	12.0	39.9
86-73-7	Fluorene		55.5 =	ug/kg	12.0	39.9
85-01-8	Phenanthrene		47.0 =	ug/kg	12.0	39.9
120-12-7	Anthracene	J	10.0 J	ug/kg	7.99	39.9
206-44-0	Fluoranthene	J	15.2 J	ug/kg	12.0	39.9
56-55-3	Benzo(a)anthracene	U	39.9 U	ug/kg	12.0	39.9
218-01-9	Chrysene	U	39.9	ug/kg	12.0	39.9
205-99-2	Benzo(b)fluoranthene	U	39.9	ug/kg	12.0	39.9
207-08-9	Benzo(k)fluoranthene	U	39.9	ug/kg	12.0	39.9
50-32-8	Benzo(a)pyrene	U	39.9	ug/kg	12.0	39.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.9	ug/kg	12.0	39.9
53-70-3	Dibenzo(a,h)anthracene	U	39.9	ug/kg	12.0	39.9
191-24-2	Benzo(ghi)perylene	U	39.9	ug/kg	12.0	39.9

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201537-1 METHOD TYPE: SW846

SAMPLE ID: 201540002 CLIENT ID: AK0919

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 24-JAN-08 LEVEL: Low %SOLIDS: 84

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	11	mg/kg			MS	0.012	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537	Date Collected:	01/23/2008 10:10	Matrix:	GROUND WATER
Lab Sample ID:	201537003	Date Received:	01/24/2008 15:05		
	RINSATE	Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0915	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723384	Inst:	VOA2.I	Dilution:	1
Run Date:	02/04/2008 15:25	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	02/04/2008 15:25	Column:	DB-624	Level:	LOW
Data File:	2w117.d				

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.00 U	ug/L	0.300	1.00
108-88-3	Toluene		2.83 =	ug/L	0.250	1.00
100-41-4	Ethylbenzene		2.83 =	ug/L	0.250	1.00
1330-20-7	Xylenes (total)		10.9 =	ug/L	0.250	1.00

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537	Date Collected:	01/23/2008 10:10	Matrix:	GROUND WATER
Lab Sample ID:	201537003	Date Received:	01/24/2008 15:05		
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK0915 RINSATE	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721970	Inst:	MSD5.I	Dilution:	1
Run Date:	01/29/2008 16:06	Analyst:	BJBJ	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 17:06	Aliquot:	1000 mL	Final Volume:	1 mL
Data File:	s5a2922.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	1.00 U	ug/L	0.310	1.00
129-00-0	Pyrene	U	1.00	ug/L	0.300	1.00
91-20-3	Naphthalene	U	1.00	ug/L	0.300	1.00
91-57-6	2-Methylnaphthalene	U	1.00	ug/L	0.300	1.00
91-58-7	2-Chloronaphthalene	U	1.00	ug/L	0.350	1.00
208-96-8	Acenaphthylene	U	1.00	ug/L	0.200	1.00
86-73-7	Fluorene	U	1.00	ug/L	0.200	1.00
85-01-8	Phenanthrene	U	1.00	ug/L	0.200	1.00
120-12-7	Anthracene	U	1.00	ug/L	0.200	1.00
206-44-0	Fluoranthene	U	1.00	ug/L	0.200	1.00
56-55-3	Benzo(a)anthracene	U	1.00	ug/L	0.200	1.00
218-01-9	Chrysene	U	1.00	ug/L	0.200	1.00
205-99-2	Benzo(b)fluoranthene	U	1.00	ug/L	0.200	1.00
207-08-9	Benzo(k)fluoranthene	U	1.00	ug/L	0.200	1.00
50-32-8	Benzo(a)pyrene	U	1.00	ug/L	0.200	1.00
193-39-5	Indeno(1,2,3-cd)pyrene	U	1.00	ug/L	0.200	1.00
53-70-3	Dibenzo(a,h)anthracene	U	1.00	ug/L	0.200	1.00
191-24-2	Benzo(ghi)perylene	U	1.00	ug/L	0.200	1.00

DATA VALIDATION COPY

METALS
-3-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201537 METHOD TYPE: SW846

SAMPLE ID: 201537005 - RINSATE CLIENT ID: AK0915

CONTRACT: SAIC08507

MATRIX:G DATE RECEIVED 24-JAN-08 LEVEL: Low %SOLIDS:

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	0.40 J	ug/L	E		MS	0.05	1	ICPMS6	080131-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 08:23	Matrix:	SOIL
Lab Sample ID:	201683001	Date Received:	01/25/2008 14:07	%Moisture:	6.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1019	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/07/2008 18:15	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:25	Aliquot:	4.8 g	Final Volume:	5 mL
Data File:	4w405.d	Column:	RTX-VOLATILES	Level:	LOW

USR

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Uh	1.12 UJ	ug/kg A05	0.369	1.12
108-88-3	Toluene	h	2.62 J	ug/kg	0.324	1.12
100-41-4	Ethylbenzene	Dh h	915 ~~859~~ J	ug/kg	0.223	1.12
1330-20-7	Xylenes (total)	Dh h	1030 ~~980~~ J	ug/kg	0.223	1.12

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 08:21	Matrix:	SOIL
Lab Sample ID:	201683001	Date Received:	01/25/2008 14:07	%Moisture:	6.8
		Client:	SA1C085	Project:	SA1C08507
Client ID:	AK1019	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 13:29	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s6a2912.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.7 U	ug/kg	11.9	35.7
129-00-0	Pyrene	U	35.7	ug/kg	11.2	35.7
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
91-57-6	2-Methylnaphthalene	B	133 = F01,	ug/kg F08	7.14	35.7
91-58-7	2-Chloronaphthalene	U	35.7 U	ug/kg	12.5	35.7
208-96-8	Acenaphthylene	U	35.7 U	ug/kg	10.7	35.7
86-73-7	Fluorene		37.4 =	ug/kg	10.7	35.7
85-01-8	Phenanthrene	J	11.8 J	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7 U	ug/kg	7.14	35.7
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683001 CLIENT ID: AK1019

CONTRACT: SAIC08507

MATRIX:S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 93.2

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	24.8	mg/kg			MS	0.011	2	ICPMS5	080204-1

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DATA VALIDATION
COPY

Volatile

Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 09:15	Matrix:	SOIL
Lab Sample ID:	201683002	Date Received:	01/25/2008 14:07	% Moisture:	14
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1119	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	250
Run Date:	02/07/2008 08:09	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:32	Aliquot:	4.9 g	Final Volume:	10 mL
Data File:	4w337.d	Column:	RTX-VOLATILES	Level:	MED

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Jh	259 J	ug/kg A05, A02	96	594
108-88-3	Toluene	h	52000	ug/kg	172	594
100-41-4	Ethylbenzene	h	16200	ug/kg	119	594
1330-20-7	Xylenes (total)	h	74000	ug/kg	116	594

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 09:15	Matrix:	SOIL
Lab Sample ID:	201683002	Date Received:	01/25/2008 14:07	% Moisture:	14
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1119	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 13:52	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s6a2913.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	38.7 U	ug/kg	12.9	38.7
129-00-0	Pyrene		62.0 =	ug/kg	12.1	38.7
91-20-3	Naphthalene	J	37.6 J	ug/kg	11.6	38.7
91-57-6	2-Methylnaphthalene	B	27? = F01,	ug/kg F08	7.73	38.7
91-58-7	2-Chloronaphthalene	U	38.7 U	ug/kg	13.5	38.7
208-96-8	Acenaphthylene	U	38.7 U	ug/kg	11.6	38.7
86-73-7	Fluorene		43.2 =	ug/kg	11.6	38.7
85-01-8	Phenanthrene		101 =	ug/kg	11.6	38.7
120-12-7	Anthracene	J	20.3 J	ug/kg	7.73	38.7
206-44-0	Fluoranthene		106 =	ug/kg	11.6	38.7
56-55-3	Benzo(a)anthracene	U	38.7 U	ug/kg	11.6	38.7
218-01-9	Chrysene	U	38.7 U	ug/kg	11.6	38.7
205-99-2	Benzo(b)fluoranthene	J	15.2 J	ug/kg	11.6	38.7
207-08-9	Benzo(k)fluoranthene	U	38.7 U	ug/kg	11.6	38.7
50-32-8	Benzo(a)pyrene	U	38.7	ug/kg	11.6	38.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.7	ug/kg	11.6	38.7
53-70-3	Dibenzo(a,h)anthracene	U	38.7	ug/kg	11.6	38.7
191-24-2	Benzo(ghi)perylene	U	38.7	ug/kg	11.6	38.7

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 **METHOD TYPE:** SW846

SAMPLE ID: 201683002 **CLIENT ID:** AK1119

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 25-JAN-08 **LEVEL:** Low **%SOLIDS:** 86

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	26.7	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile

Certificate of Analysis

Sample Summary

SDG Number:	201682-3	Date Collected:	01/24/2006 10:12	Matrix:	SOIL
Lab Sample ID:	201683003	Date Received:	01/25/2006 14:07	% Moisture:	9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1219	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4	Dilution:	1
Run Date:	02/06/2006 17:23	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2006 13:34	Aliquot:	4.7 g	Final Volume:	5 mL
Data File:	4w310.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.17 UJ	ug/kg A05	0.386	1.17
108-88-3	Toluene	U	1.17 UJ	ug/kg	0.339	1.17
100-41-4	Ethylbenzene	J	0.315 J	ug/kg	0.234	1.17
1330-20-7	Xylenes (total)	J	1.36 J	ug/kg	0.234	1.17

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 10:12	Matrix:	SOIL
Lab Sample ID:	201683003	Date Received:	01/25/2008 14:07	% Moisture:	9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1219	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 14:14	Analyst:	JLD1	Inj. Vol:	.5 ul.
Prep Date:	01/28/2008 19:37	Aliquot:	30.02 g	Final Volume:	1 ml.
Data File:	s6a2914.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U U	36.6 U	ug/kg	12.2	36.6
129-00-0	Pyrene	J	26.0 J	ug/kg	11.5	36.6
91-20-3	Naphthalene	U	36.6 U	ug/kg	11.0	36.6
91-57-6	2-Methylnaphthalene	BJ	36.6 U FQ1, ug/kg FQ6		3.32	36.6
91-58-7	2-Chloronaphthalene	U	36.6 U	ug/kg	12.2	36.6
208-96-8	Acenaphthylene	U	36.6	ug/kg	11.0	36.6
86-73-7	Fluorene	U	36.6	ug/kg	11.0	36.6
85-01-8	Phenanthrene		38.1 =	ug/kg	11.0	36.6
120-12-7	Anthracene	U	36.6 U	ug/kg	7.32	36.6
206-44-0	Fluoranthene		48.2 =	ug/kg	11.0	36.6
56-55-3	Benzo(a)anthracene	U	36.6 U	ug/kg	11.0	36.6
218-01-9	Chrysene	U	36.6	ug/kg	11.0	36.6
205-99-2	Benzo(b)fluoranthene	U	36.6	ug/kg	11.0	36.6
207-08-9	Benzo(k)fluoranthene	U	36.6	ug/kg	11.0	36.6
50-32-8	Benzo(a)pyrene	U	36.6	ug/kg	11.0	36.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.6	ug/kg	11.0	36.6
53-70-3	Dibenzo(a,h)anthracene	U	36.6	ug/kg	11.0	36.6
191-24-2	Benzo(ghi)perylene	U	36.6	ug/kg	11.0	36.6

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683003 CLIENT ID: AK1219

CONTRACT: SAIC08507

MATRIX:S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 91

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	5.1	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	203682-1	Date Collected:	01/24/2008 11:08	Matrix:	SOIL
Lab Sample ID:	203683004	Date Received:	01/25/2008 14:07	% Moisture:	6.1
		Client:	SA1C085	Project:	SA1C08507
Client ID:	AK1319	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/06/2008 17:51	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:37	Aliquot:	4.7 g	Final Volume:	5 mL
Data File:	4w311.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Uh	1.13 U5	ug/kg 105	0.374	1.13
108-88-3	Toluene	Jh	0.540 J	ug/kg	0.329	1.13
100-41-4	Ethylbenzene	Jh	0.342 J	ug/kg	0.227	1.13
1330-20-7	Xylenes (total)	h	1.76 J	ug/kg	0.227	1.13

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 11:08	Matrix:	SOIL
Lab Sample ID:	201683004	Date Received:	01/25/2008 14:07	% Moisture:	6.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1319	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.1	Dilution:	1
Run Date:	01/29/2008 14:36	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s6a2915.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.4 U	ug/kg	11.8	35.4
129-00-0	Pyrene	U	35.4	ug/kg	11.1	35.4
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
91-57-6	2-Methylnaphthalene	BJ 35.4	8.82 U F01,	ug/kg F06	7.08	35.4
91-58-7	2-Chloronaphthalene	U	35.4 U	ug/kg	12.4	35.4
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683004 CLIENT ID: AK1319

CONTRACT: SAIC08507

MATRIX:S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 93.9

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2.2	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 11:47	Matrix:	SOIL
Lab Sample ID:	201540003	Date Received:	01/24/2008 15:05	%Moisture:	10
		Client:	SA1C085	Project:	SA1C08507
Client ID:	AK1419	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/06/2008 14:25	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 07:51	Aliquot:	5.2 g	Final Volume:	5 mL
Data File:	9w311.d	Column:	RTX-Volatiles	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.353	1.07
108-88-3	Toluene	U	1.07 U	ug/kg	0.310	1.07
100-41-4	Ethylbenzene		26.8 =	ug/kg	0.214	1.07
1330-20-7	Xylenes (total)		59.3 =	ug/kg	0.214	1.07

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 11:47	Matrix:	SOIL
Lab Sample ID:	201540003	Date Received:	01/24/2008 15:05	% Moisture:	10
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1419	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 12:45	Analyst:	JLD1	Inj. Vol:	2 ul.
Prep Date:	01/28/2008 19:37	Aliquot:	30 g	Final Volume:	1 ml.
Data File:	s6a2910.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.0 U	ug/kg	12.4	37.0
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0
91-57-6	2-Methylnaphthalene	BJ	37 J U F01,	ug/kg F06	7.41	37.0
91-58-7	2-Chloronaphthalene	U	37.0 U	ug/kg	13.0	37.0
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0
120-12-7	Anthracene	U	37.0	ug/kg	7.41	37.0
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201537-1 METHOD TYPE: SW846

SAMPLE ID: 201540005 CLIENT ID: AK1419

CONTRACT: SAIC08507

MATRIX:S DATE RECEIVED 24-JAN-08 LEVEL: Low %SOLIDS: 90

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	14.8	mg/kg			MS	0.011	2	ICPMS5	080204-1

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DATA VALIDATION COPY

Volatile

Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 12:43	Matrix:	SOIL
Lab Sample ID:	201540004	Date Received:	01/24/2008 15:05	%Moisture:	12.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/04/2008 18:13	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 07:55	Aliquot:	5.1 g	Final Volume:	5 mL
Data File:	9w119.d	Column:	RTX-Volatiles	Level:	LOW

USR

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.12 U	ug/kg	0.371	1.12
108-88-3	Toluene	E	827 J M03	ug/kg	0.326	1.12
100-41-4	Ethylbenzene	E	615 J M03	ug/kg	0.225	1.12
1330-20-7	Xylenes (total)	DJ E 76	1820 J	ug/kg	0.225	1.12

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/23/2008 12:43	Matrix:	SOIL
Lab Sample ID:	201683009	Date Received:	01/25/2008 14:07	% Moisture:	12.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 17:08	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s6a2922.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	38.2 U	ug/kg	12.7	38.2
129-00-0	Pyrene	U	38.2	ug/kg	12.0	38.2
91-20-3	Naphthalene	U	38.2	ug/kg	11.5	38.2
91-57-6	2-Methylnaphthalene	BJ	38.2 ~~38.2~~ U F01,	ug/kg F06	7.63	38.2
91-58-7	2-Chloronaphthalene	U	38.2 U	ug/kg	13.4	38.2
208-96-8	Acenaphthylene	U	38.2	ug/kg	11.5	38.2
86-73-7	Fluorene	U	38.2	ug/kg	11.5	38.2
85-01-8	Phenanthrene	U	38.2	ug/kg	11.5	38.2
120-12-7	Anthracene	U	38.2	ug/kg	7.63	38.2
206-44-0	Fluoranthene	J	18.8 J	ug/kg	11.5	38.2
56-55-3	Benzo(a)anthracene	U	38.2 U	ug/kg	11.5	38.2
218-01-9	Chrysene	U	38.2	ug/kg	11.5	38.2
205-99-2	Benzo(b)fluoranthene	U	38.2	ug/kg	11.5	38.2
207-08-9	Benzo(k)fluoranthene	U	38.2	ug/kg	11.5	38.2
50-32-8	Benzo(a)pyrene	U	38.2	ug/kg	11.5	38.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.2	ug/kg	11.5	38.2
53-70-3	Dibenzo(a,h)anthracene	U	38.2	ug/kg	11.5	38.2
191-24-2	Benzo(ghi)perylene	U	38.2	ug/kg	11.5	38.2

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683009 CLIENT ID: AK1519

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 87

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	27	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 13:01	Matrix:	SOIL
Lab Sample ID:	201683005	Date Received:	01/25/2008 14:07	% Moisture:	24.7
		Client:	SA1C085	Project:	SA1C08507
Client ID:	AK1619	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/06/2008 18:18	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:41	Aliquot:	5.3 g	Final Volume:	5 mL
Data File:	4w312.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Uh	1.25 U5	ug/kg A05	0.413	1.25
108-88-3	Toluene	h	4.38 J	ug/kg	0.363	1.25
100-41-4	Ethylbenzene	h	48.9 J	ug/kg	0.251	1.25
1330-20-7	Xylenes (total)	h	245 J	ug/kg	0.251	1.25

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 13:01	Matrix:	SOIL
Lab Sample ID:	201683005	Date Received:	01/25/2008 14:07	%Moisture:	24.7
		Client:	SAIC085	Project:	SAIC08S07
Client ID:	AK1619	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 14:58	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s6a2916.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	44.2 U	ug/kg	14.8	44.2
129-00-0	Pyrene	U	44.2	ug/kg	13.9	44.2
91-20-3	Naphthalene	U	44.2	ug/kg	13.3	44.2
91-57-6	2-Methylnaphthalene	B	49.1 U F01,	ug/kg F07	8.83	44.2
91-58-7	2-Chloronaphthalene	U	44.2 U	ug/kg	15.5	44.2
208-96-8	Acenaphthylene	U	44.2 U	ug/kg	13.3	44.2
86-73-7	Fluorene	J	22.5 J	ug/kg	13.3	44.2
85-01-8	Phenanthrene	U	44.2 U	ug/kg	13.3	44.2
120-12-7	Anthracene	U	44.2	ug/kg	8.83	44.2
206-44-0	Fluoranthene	U	44.2	ug/kg	13.3	44.2
56-55-3	Benzo(a)anthracene	U	44.2	ug/kg	13.3	44.2
218-01-9	Chrysene	U	44.2	ug/kg	13.3	44.2
205-99-2	Benzo(b)fluoranthene	U	44.2	ug/kg	13.3	44.2
207-08-9	Benzo(k)fluoranthene	U	44.2	ug/kg	13.3	44.2
50-32-8	Benzo(a)pyrene	U	44.2	ug/kg	13.3	44.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	44.2	ug/kg	13.3	44.2
53-70-3	Dibenzo(a,h)anthracene	U	44.2	ug/kg	13.3	44.2
191-24-2	Benzo(ghi)perylene	U	44.2	ug/kg	13.3	44.2

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683005 CLIENT ID: AK1619

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 75

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	42.3	mg/kg			MS	0.013	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 14:07	Matrix:	SOIL
Lab Sample ID:	201683006	Date Received:	01/25/2008 14:07	%Moisture:	4.4
		Client:	SA1C085	Project:	SA1C08507
Client ID:	AK1719	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/06/2008 18:46	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:45	Aliquot:	5 g	Final Volume:	5 mL
Data File:	4w313.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Uh	1.05 U5	ug/kg AOS	0.345	1.05
108-88-3	Toluene	h	23.6 J	ug/kg	0.303	1.05
100-41-4	Ethylbenzene	h	30.7 J	ug/kg	0.209	1.05
1330-20-7	Xylenes (total)	h	170 J	ug/kg	0.209	1.05

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 14:07	Matrix:	SOIL
Lab Sample ID:	201683006	Date Received:	01/25/2008 14:07	% Moisture:	4.4
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1719	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6J	Dilution:	1
Run Date:	01/29/2008 15:19	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s6a2917.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	34.8 U	ug/kg	11.6	34.8
129-00-0	Pyrene	U	34.8	ug/kg	10.4	34.8
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8
91-57-6	2-Methylnaphthalene	B	34.8 U FOL	ug/kg FOL	6.96	34.8
91-58-7	2-Chloronaphthalene	U	34.8 U	ug/kg	13.9	34.8
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
206-44-0	Fluoranthene	U	34.8	ug/kg	10.4	34.8
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683006 CLIENT ID: AK1719

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 95.6

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	33.6	mg/kg			MS	0.01	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 15:08	Matrix:	SOIL
Lab Sample ID:	201683007	Date Received:	01/25/2008 14:07	% Moisture:	17.6
		Client:	SAIC08S	Project:	SAIC08507
Client ID:	AK1819	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/06/2008 19:14	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/28/2008 13:48	Aliquot:	4.8 g	Final Volume:	5 mL
Data File:	4w314.d	Column:	RTX-VOLATILES	Level:	LOW

USG

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	Uh	1.26	UJ	ug/kg AOS	0.417	1.26
108-88-3	Toluene	h	32.6	J	ug/kg	0.567	1.26
100-41-4	Ethylbenzene	Dh Eh	142 ~~300~~	J	ug/kg	0.253	1.26
1330-20-7	Xylenes (total)	Dh h	433 ~~1220~~	J	ug/kg	0.253	1.26

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/24/2008 15:08	Matrix:	SOIL
Lab Sample ID:	201683007	Date Received:	01/25/2008 14:07	% Moisture:	17.6
		Client:	SAIC08F	Project:	SAIC08507
Client ID:	AK1819	Method:	SW846 8270C	SOP Ref:	GL-04-E-009
Batch ID:	721999	Inst:	MSD6.1	Dilution:	1
Run Date:	01/29/2008 15:41	Analyst:	JLD1	Inj. Vol:	.5 ul
Prep Date:	01/28/2008 19:37	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s6a2918.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	J	17.5 J	ug/kg	12.1	40.3
129-00-0	Pyrene		69.3 =	ug/kg	12.1	40.3
91-20-3	Naphthalene	U	40.3 U	ug/kg	12.1	40.3
91-57-6	2-Methylnaphthalene	B	165 = F01, ug/kg F08		8.07	40.3
91-58-7	2-Chloronaphthalene	U	40.3 U	ug/kg	14.1	40.3
208-96-8	Acenaphthylene	U	40.3 U	ug/kg	12.1	40.3
86-73-7	Fluorene	J	31.9 J	ug/kg	12.1	40.3
85-01-8	Phenanthrene		136 =	ug/kg	12.1	40.3
120-12-7	Anthracene	J	23.7 J	ug/kg	8.07	40.3
206-44-0	Fluoranthene		125 =	ug/kg	12.1	40.3
56-55-3	Benzo(a)anthracene	U	40.3 U	ug/kg	12.1	40.3
218-01-9	Chrysene	U	40.3 U	ug/kg	12.1	40.3
205-99-2	Benzo(b)fluoranthene	J	21.7 J	ug/kg	12.1	40.3
207-08-9	Benzo(k)fluoranthene	U	40.3 U	ug/kg	12.1	40.3
50-32-8	Benzo(a)pyrene	U	40.3	ug/kg	12.1	40.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	40.3	ug/kg	12.1	40.3
53-70-3	Dibenzo(a,h)anthracene	U	40.3	ug/kg	12.1	40.3
191-24-2	Benzo(ghi)perylene	U	40.3	ug/kg	12.1	40.3

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683007 CLIENT ID: AK1819

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 82

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	46.2	mg/kg			MS	0.012	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201705
Lab Sample ID: 201705001

Client ID: AK1919
Batch ID: 724297
Run Date: 02/07/2008 11:24
Prep Date: 01/26/2008 23:24
Data File: 4w344.d

Date Collected: 01/25/2008 08:11
Date Received: 01/26/2008 14:15
Client: SAIC085
Method: SW846 8260B
Inst: VOA4.I
Analyst: ACJ
Aliquot: 4.6 g
Column: RTX-VOLATILES

Matrix: SOIL
%Moisture: 13.1
Project: SAIC08507
SOP Ref: GL-OA-E-038
Dilution: 1
Purge Vol: 5 mL
Final Volume: 5 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.25 U	ug/kg	0.413	1.25
108-88-3	Toluene	J	0.547 J Gal	ug/kg	0.363	1.25
100-41-4	Ethylbenzene	J	0.348	ug/kg	0.250	1.25
1330-20-7	Xylenes (total)		1.76	ug/kg	0.250	1.25

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 08:11	Matrix:	SOIL
Lab Sample ID:	201705001	Date Received:	01/26/2008 14:15	%Moisture:	13.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK1919	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 19:22	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.62 g	Final Volume:	1 mL
Data File:	s5a3109.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.6	ug/kg	12.5	37.6
129-00-0	Pyrene	U	37.6	ug/kg	11.8	37.6
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	13.1	37.6
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.51	37.6
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705001 **CLIENT ID:** AK1919

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 87

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2.5	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 14:41	Matrix:	SOIL
Lab Sample ID:	201540006	Date Received:	01/24/2008 15:05	%Moisture:	8.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2019	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/06/2008 13:29	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 08:46	Aliquot:	5.1 g	Final Volume:	5 mL
Data File:	9w309.d	Column:	RTX-Volatiles	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.353	1.07
108-88-3	Toluene	U	1.07 U	ug/kg	0.310	1.07
100-41-4	Ethylbenzene	U	1.07 U	ug/kg	0.214	1.07
1330-20-7	Xylenes (total)	J	0.443 J	ug/kg	0.214	1.07

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201682-1	Date Collected:	01/23/2008 14:41	Matrix:	SOIL
Lab Sample ID:	201683008	Date Received:	01/25/2008 14:07	% Moisture:	8.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2019	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 16:03	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s6a2919.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	J	29.6 J	ug/kg	12.1	36.2
129-00-0	Pyrene	U	36.2 U	ug/kg	11.4	36.2
91-20-3	Naphthalene	U	36.2 U	ug/kg	10.9	36.2
91-57-6	2-Methylnaphthalene	B	245 = F01, ug/kg F08		7.25	36.2
91-58-7	2-Chloronaphthalene	U	36.2 U	ug/kg	12.7	36.2
208-96-8	Acenaphthylene	U	36.2 U	ug/kg	10.9	36.2
86-73-7	Fluorene	J	13.7 J	ug/kg	10.9	36.2
85-01-8	Phenanthrene	U	36.2 U	ug/kg	10.9	36.2
120-12-7	Anthracene	U	36.2	ug/kg	7.25	36.2
206-44-0	Fluoranthene	U	36.2	ug/kg	10.9	36.2
56-55-3	Benzo(a)anthracene	U	36.2	ug/kg	10.9	36.2
218-01-9	Chrysene	U	36.2	ug/kg	10.9	36.2
205-99-2	Benzo(b)fluoranthene	U	36.2	ug/kg	10.9	36.2
207-08-9	Benzo(k)fluoranthene	U	36.2	ug/kg	10.9	36.2
50-32-8	Benzo(a)pyrene	U	36.2	ug/kg	10.9	36.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.2	ug/kg	10.9	36.2
53-70-3	Dibenzo(a,h)anthracene	U	36.2	ug/kg	10.9	36.2
191-24-2	Benzo(ghi)perylene	U	36.2	ug/kg	10.9	36.2

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683008 CLIENT ID: AK2019

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 91.7

CAS No	Analyte		Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	=	5.9	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 13:59	Matrix:	SOIL
Lab Sample ID:	201540005	Date Received:	01/24/2008 15:05	%Moisture:	7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2119	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/04/2008 20:06	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 08:40	Aliquot:	4.7 g	Final Volume:	5 mL
Data File:	9w123.d	Column:	RTX-Volatiles	Level:	LOW

USQ

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.14 U	ug/kg	0.377	1.14
108-88-3	Toluene	D E 513	1340 =	ug/kg	0.332	1.14
100-41-4	Ethylbenzene	D E 1910	1060 =	ug/kg	0.229	1.14
1330-20-7	Xylenes (total)	D E 12200	2690 =	ug/kg	0.229	1.14

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 13:59	Matrix:	SOIL
Lab Sample ID:	201540005	Date Received:	01/24/2008 15:05	%Moisture:	7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2119	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	721999	Inst:	MSD6.I	Dilution:	1
Run Date:	01/29/2008 13:07	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/28/2008 19:37	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s6a2911.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.7 U	ug/kg	11.9	35.7
129-00-0	Pyrene	J	15.0 J	ug/kg	11.2	35.7
91-20-3	Naphthalene	U	35.7 U	ug/kg	10.7	35.7
91-57-6	2-Methylnaphthalene	B	44.0 U F01,	ug/kg F07	7.15	35.7
91-58-7	2-Chloronaphthalene	U	35.7 U	ug/kg	12.5	35.7
208-96-8	Acenaphthylene	U	35.7 U	ug/kg	10.7	35.7
86-73-7	Fluorene	J	10.8 J	ug/kg	10.7	35.7
85-01-8	Phenanthrene	J	27.4 J	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7 U	ug/kg	7.15	35.7
206-44-0	Fluoranthene	J	24.7 J	ug/kg	10.7	35.7
56-55-3	Benzo(a)anthracene	J	11.5 J	ug/kg	10.7	35.7
218-01-9	Chrysene	U	35.7 U	ug/kg	10.7	35.7
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201537-1 METHOD TYPE: SW846

SAMPLE ID: 201540005 CLIENT ID: AK2119

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 24-JAN-08 LEVEL: Low %SOLIDS: 93

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	11	mg/kg			MS	0.01	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 09:13	Matrix:	SOIL
Lab Sample ID:	201705002	Date Received:	01/26/2008 14:15	%Moisture:	12
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2219	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/07/2008 11:52	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/26/2008 23:12	Aliquot:	4.8 g	Final Volume:	5 mL
Data File:	4w345.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.18 u	ug/kg	0.391	1.18
108-88-3	Toluene	U	1.18 ↓	ug/kg	0.343	1.18
100-41-4	Ethylbenzene	U	1.18 ↓	ug/kg	0.237	1.18
1330-20-7	Xylenes (total)		1.74 =	ug/kg	0.237	1.18

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 09:13	Matrix:	SOIL
Lab Sample ID:	201705002	Date Received:	01/26/2008 14:15	%Moisture:	12
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2219	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 20:24	Analyst:	RJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.32 g	Final Volume:	1 mL
Data File:	s5a3112.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.5 U	ug/kg	12.5	37.5
129-00-0	Pyrene	U	37.5 U	ug/kg	11.8	37.5
91-20-3	Naphthalene		142 =	ug/kg	11.2	37.5
91-57-6	2-Methylnaphthalene		164 =	ug/kg	7.49	37.5
91-58-7	2-Chloronaphthalene	U	37.5 U	ug/kg	13.1	37.5
208-96-8	Acenaphthylene	U	37.5 U	ug/kg	11.2	37.5
86-73-7	Fluorene		90.3 =	ug/kg	11.2	37.5
85-01-8	Phenanthrene	J	19.2 J	ug/kg	11.2	37.5
120-12-7	Anthracene	U	37.5 U	ug/kg	7.49	37.5
206-44-0	Fluoranthene	U	37.5	ug/kg	11.2	37.5
56-55-3	Benzo(a)anthracene	U	37.5	ug/kg	11.2	37.5
218-01-9	Chrysene	U	37.5	ug/kg	11.2	37.5
205-99-2	Benzo(b)fluoranthene	U	37.5	ug/kg	11.2	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.2	37.5
50-32-8	Benzo(a)pyrene	U	37.5	ug/kg	11.2	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5	ug/kg	11.2	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.2	37.5
191-24-2	Benzo(ghi)perylene	U	37.5	ug/kg	11.2	37.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705002 **CLIENT ID:** AK2219

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 88

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	35.2	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201705
Lab Sample ID: 201705003

DUPLICATE

Client ID: AK2213
Batch ID: 724297
Run Date: 02/07/2008 12:19
Prep Date: 01/26/2008 23:18
Data File: 4w346.d

Date Collected: 01/25/2008 09:13
Date Received: 01/26/2008 14:15
Client: SAIC085
Method: SW846 8260B
Inst: VOA4.I
Analyst: ACJ
Aliquot: 5 g
Column: RTX-VOLATILES

Matrix: SOIL
%Moisture: 12.1
Project: SAIC08507
SOP Ref: GL-OA-E-038
Dilution: 1
Purge Vol: 5 mL
Final Volume: 5 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.14 U	ug/kg	0.375	1.14
108-88-3	Toluene	U	1.14 ↓	ug/kg	0.330	1.14
100-41-4	Ethylbenzene	U	1.14 ↓	ug/kg	0.227	1.14
1330-20-7	Xylenes (total)		2.03 =	ug/kg	0.227	1.14

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201705
Lab Sample ID: 201705003

Client ID: AK2213 DUPLICATE
Batch ID: 722516
Run Date: 01/31/2008 20:44
Prep Date: 01/31/2008 12:56
Data File: s5a3113.d

Date Collected: 01/25/2008 09:13
Date Received: 01/26/2008 14:15
Client: SAIC085
Method: SW846 8270C
Inst: MSD5.I
Analyst: BJB1
Aliquot: 30.54 g
Column: J&W DB-5MS

Matrix: SOIL
%Moisture: 12.1
Project: SAIC08507
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.2 U	ug/kg	12.4	37.2
129-00-0	Pyrene	U	37.2 U	ug/kg	11.7	37.2
91-20-3	Naphthalene		48.5 =	ug/kg	11.2	37.2
91-57-6	2-Methylnaphthalene		69.8 =	ug/kg	7.45	37.2
91-58-7	2-Chloronaphthalene	U	37.2 U	ug/kg	13.0	37.2
208-96-8	Acenaphthylene	U	37.2 U	ug/kg	11.2	37.2
86-73-7	Fluorene		40.2 =	ug/kg	11.2	37.2
85-01-8	Phenanthrene	U	37.2 U	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.45	37.2
206-44-0	Fluoranthene	U	37.2	ug/kg	11.2	37.2
56-55-3	Benzo(a)anthracene	U	37.2	ug/kg	11.2	37.2
218-01-9	Chrysene	U	37.2	ug/kg	11.2	37.2
205-99-2	Benzo(b)fluoranthene	U	37.2	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	U	37.2	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	U	37.2	ug/kg	11.2	37.2

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705003 **CLIENT ID:** AK2213 DUPLICATE

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 88

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	31.6	mg/kg			MS	0.011	2	ICPMS5	080204-1

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DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 10:40	Matrix:	SOIL
Lab Sample ID:	201705004	Date Received:	01/26/2008 14:15	%Moisture:	7.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2319	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/08/2008 12:42	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/26/2008 23:46	Aliquot:	4.3 g	Final Volume:	5 mL
Data File:	4w509.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.26 U	ug/kg	0.416	1.25
108-88-3	Toluene	U	1.26 U	ug/kg	0.365	1.26
100-41-4	Ethylbenzene		64.1 =	ug/kg	0.252	1.26
1330-20-7	Xylenes (total)		141 =	ug/kg	0.252	1.26

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 10:40	Matrix:	SOIL
Lab Sample ID:	201705004	Date Received:	01/26/2008 14:15	%Moisture:	7.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2319	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 21:05	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5a3114.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.0 U	ug/kg	12.0	36.0
129-00-0	Pyrene	U	36.0 U	ug/kg	11.3	36.0
91-20-3	Naphthalene		45.7 =	ug/kg	10.8	36.0
91-57-6	2-Methylnaphthalene		76.2 =	ug/kg	7.21	36.0
91-58-7	2-Chloronaphthalene	U	36.0 U	ug/kg	12.6	36.0
208-96-8	Acenaphthylene	U	36.0 U	ug/kg	10.8	36.0
86-73-7	Fluorene	J	33.4 J	ug/kg	10.8	36.0
85-01-8	Phenanthrene	J	18.8 J	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0 U	ug/kg	7.21	36.0
206-44-0	Fluoranthene	J	15.2 J	ug/kg	10.8	36.0
56-55-3	Benzo(a)anthracene	U	36.0 U	ug/kg	10.8	36.0
218-01-9	Chrysene	U	36.0	ug/kg	10.8	36.0
205-99-2	Benzo(b)fluoranthene	U	36.0	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene	U	36.0	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.0	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	U	36.0	ug/kg	10.8	36.0

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705004 **CLIENT ID:** AK2319

CONTRACT: SAIC08507

MATRIX:S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 92.3

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	18.8	mg/kg			MS	0.01	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 11:38	Matrix:	SOIL
Lab Sample ID:	201705005	Date Received:	01/26/2008 14:15	%Moisture:	7.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2419	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/07/2008 13:42	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/26/2008 23:30	Aliquot:	5 g	Final Volume:	5 mL
Data File:	4w349.d	Column:	RTX-VOLATILES	Level:	LOW

USR

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.08 U	ug/kg	0.358	1.08
108-88-3	Toluene	J	1.05 J	ug/kg	0.314	1.08
100-41-4	Ethylbenzene		96.6 =	ug/kg	0.217	1.08
1330-20-7	Xylenes (total)	D E 401 346 =		ug/kg	0.217	1.08

DATA VALIDATION COPY

Semi–Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 11:38	Matrix:	SOIL
Lab Sample ID:	201705005	Date Received:	01/26/2008 14:15	%Moisture:	7.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2419	Method:	SW846 8270C	SOP Ref:	GL–OA–E–009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 21:26	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.26 g	Final Volume:	1 mL
Data File:	s5a3115.d	Column:	J&W DB–5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83–32–9	Acenaphthene	U	35.8 U	ug/kg	12.0	35.8
129–00–0	Pyrene	J	28.2 J	ug/kg	11.2	35.8
91–20–3	Naphthalene	J	24.5 J	ug/kg	10.7	35.8
91–57–6	2–Methylnaphthalene		42.7 =	ug/kg	7.17	35.8
91–58–7	2–Chloronaphthalene	U	35.8 U	ug/kg	12.5	35.8
208–96–8	Acenaphthylene	U	35.8 |	ug/kg	10.7	35.8
86–73–7	Fluorene	U	35.8 ↓	ug/kg	10.7	35.8
85–01–8	Phenanthrene		47.6 =	ug/kg	10.7	35.8
120–12–7	Anthracene	J	7.18 J	ug/kg	7.17	35.8
206–44–0	Fluoranthene		39.1 =	ug/kg	10.7	35.8
56–55–3	Benzo(a)anthracene	J	17.4 J	ug/kg	10.7	35.8
218–01–9	Chrysene	U	35.8 U	ug/kg	10.7	35.8
205–99–2	Benzo(b)fluoranthene	U	35.8 |	ug/kg	10.7	35.8
207–08–9	Benzo(k)fluoranthene	U	35.8 |	ug/kg	10.7	35.8
50–32–8	Benzo(a)pyrene	U	35.8 |	ug/kg	10.7	35.8
193–39–5	Indeno(1,2,3–cd)pyrene	U	35.8 |	ug/kg	10.7	35.8
53–70–3	Dibenzo(a,h)anthracene	U	35.8 |	ug/kg	10.7	35.8
191–24–2	Benzo(ghi)perylene	U	35.8 ↓	ug/kg	10.7	35.8

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705005 **CLIENT ID:** AK2419

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 92.2

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	25.8	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 13:06	Matrix:	SOIL
Lab Sample ID:	201705006	Date Received:	01/26/2008 14:15	%Moisture:	12.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/07/2008 12:47	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/26/2008 23:36	Aliquot:	5.5 g	Final Volume:	5 mL
Data File:	4w347.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.04 UJ	ug/kg	0.342	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.301	1.04
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.207	1.04
1330-20-7	Xylenes (total)	J	0.662 J	ug/kg	0.207	1.04

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 13:06	Matrix:	SOIL
Lab Sample ID:	201705006	Date Received:	01/26/2008 14:15	%Moisture:	12.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 21:46	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.94 g	Final Volume:	1 mL
Data File:	s5a3116.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	36.9 U	ug/kg	12.3	36.9
129-00-0	Pyrene	U	36.9	ug/kg	11.6	36.9
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.37	36.9
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.9	36.9
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9
85-01-8	Phenanthrene	U	36.9	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9	ug/kg	7.37	36.9
206-44-0	Fluoranthene	U	36.9	ug/kg	11.1	36.9
56-55-3	Benzo(a)anthracene	U	36.9	ug/kg	11.1	36.9
218-01-9	Chrysene	U	36.9	ug/kg	11.1	36.9
205-99-2	Benzo(b)fluoranthene	U	36.9	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene	U	36.9	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.9	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene	U	36.9	ug/kg	11.1	36.9

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705006 **CLIENT ID:** AK2519

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 88

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	6.5	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 14:25	Matrix:	SOIL
Lab Sample ID:	201705007	Date Received:	01/26/2008 14:15	%Moisture:	7.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2619	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724297	Inst:	VOA4.I	Dilution:	1
Run Date:	02/07/2008 13:14	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/26/2008 23:42	Aliquot:	5 g	Final Volume:	5 mL
Data File:	4w348.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	J	0.609 J	ug/kg	0.358	1.08
108-88-3	Toluene	J	0.857	ug/kg	0.315	1.08
100-41-4	Ethylbenzene	J	0.781 ↓	ug/kg	0.217	1.08
1330-20-7	Xylenes (total)		3.41 =	ug/kg	0.217	1.08

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201705	Date Collected:	01/25/2008 14:25	Matrix:	SOIL
Lab Sample ID:	201705007	Date Received:	01/26/2008 14:15	%Moisture:	7.8
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2619	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 22:07	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.53 g	Final Volume:	1 mL
Data File:	s5a3117.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.5 u	ug/kg	11.9	35.5
129-00-0	Pyrene	U	35.5	ug/kg	11.2	35.5
91-20-3	Naphthalene	U	35.5	ug/kg	10.7	35.5
91-57-6	2-Methylnaphthalene	U	35.5	ug/kg	7.11	35.5
91-58-7	2-Chloronaphthalene	U	35.5	ug/kg	12.4	35.5
208-96-8	Acenaphthylene	U	35.5	ug/kg	10.7	35.5
86-73-7	Fluorene	U	35.5	ug/kg	10.7	35.5
85-01-8	Phenanthrene	U	35.5	ug/kg	10.7	35.5
120-12-7	Anthracene	U	35.5	ug/kg	7.11	35.5
206-44-0	Fluoranthene	U	35.5	ug/kg	10.7	35.5
56-55-3	Benzo(a)anthracene	U	35.5	ug/kg	10.7	35.5
218-01-9	Chrysene	U	35.5	ug/kg	10.7	35.5
205-99-2	Benzo(b)fluoranthene	U	35.5	ug/kg	10.7	35.5
207-08-9	Benzo(k)fluoranthene	U	35.5	ug/kg	10.7	35.5
50-32-8	Benzo(a)pyrene	U	35.5	ug/kg	10.7	35.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.5	ug/kg	10.7	35.5
53-70-3	Dibenzo(a,b)anthracene	U	35.5	ug/kg	10.7	35.5
191-24-2	Benzo(ghi)perylene	U	35.5	ug/kg	10.7	35.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201705 **METHOD TYPE:** SW846

SAMPLE ID: 201705007 **CLIENT ID:** AK2619

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 26-JAN-08 **LEVEL:** Low **%SOLIDS:** 92.2

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2.5	mg/kg			MS	0.011	2	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 08:28	Matrix:	SOIL
Lab Sample ID:	201709001	Date Received:	01/27/2008 14:30	%Moisture:	7.5
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2719	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.1	Dilution:	1
Run Date:	02/08/2008 00:25	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:20	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6w414.d	Column:	DB-624	Level:	LOW

USQ

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene		1.30	=	ug/kg	0.357	1.08
108-88-3	Toluene		44.5	=	ug/kg	0.313	1.08
100-41-4	Ethylbenzene		72.2	=	ug/kg	0.216	1.08
1330-20-7	Xylenes (total)	D	348 ~~301~~	=	ug/kg	0.216	1.08

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 08:28	Matrix:	SOIL
Lab Sample ID:	201709001	Date Received:	01/27/2008 14:30	%Moisture:	7.5
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2719	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 22:28	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.52 g	Final Volume:	1 mL
Data File:	s5a3118.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.4 U	ug/kg	11.8	35.4
129-00-0	Pyrene	U	35.4	ug/kg	11.1	35.4
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
91-57-6	2-Methylnaphthalene	J	7.96 J	ug/kg	7.08	35.4
91-58-7	2-Chloronaphthalene	U	35.4 U	ug/kg	12.4	35.4
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709001 **CLIENT ID:** AK2719

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 92.5

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	13.3	mg/kg		N	MS	0.01	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 09:40	Matrix:	SOIL
Lab Sample ID:	201709002	Date Received:	01/27/2008 14:30	%Moisture:	5.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2819	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.1	Dilution:	1
Run Date:	02/09/2008 01:10	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:28	Aliquot:	4.6 g	Final Volume:	5 mL
Data File:	6w516.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.15 U	ug/kg	0.378	1.15
108-88-3	Toluene		6.95 =	ug/kg	0.332	1.15
100-41-4	Ethylbenzene		9.61 =	ug/kg	0.229	1.15
1330-20-7	Xylenes (total)		68.6 =	ug/kg	0.229	1.15

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 09:40	Matrix:	SOIL
Lab Sample ID:	201709002	Date Received:	01/27/2008 14:30	%Moisture:	5.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2819	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 22:49	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.31 g	Final Volume:	1 mL
Data File:	s5a3119.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	34.8 U	ug/kg	11.6	34.8
129-00-0	Pyrene	U	34.8 U	ug/kg	10.9	34.8
91-20-3	Naphthalene		36.6 =	ug/kg	10.4	34.8
91-57-6	2-Methylnaphthalene		52.3 =	ug/kg	6.96	34.8
91-58-7	2-Chloronaphthalene	U	34.8 U	ug/kg	12.2	34.8
208-96-8	Acenaphthylene	U	34.8 U	ug/kg	10.4	34.8
86-73-7	Fluorene	J	30.3 J	ug/kg	10.4	34.8
85-01-8	Phenanthrene	U	34.8 U	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
206-44-0	Fluoranthene	U	34.8	ug/kg	10.4	34.8
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709002 **CLIENT ID:** AK2819

CONTRACT: SAIC08507

MATRIX:S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 94.9

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	7.7	mg/kg		N	MS	0.01	2	ICPMS6	080201-1

S I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 10:30	Matrix:	SOIL
Lab Sample ID:	201709003	Date Received:	01/27/2008 14:30	%Moisture:	7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2919	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/08/2008 01:23	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:32	Aliquot:	4.5 g	Final Volume:	5 mL
Data File:	6w416.d	Column:	DB-624	Level:	LOW

USE

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.19 U	ug/kg	0.394	1.19
108-88-3	Toluene	DJ E	41.3 1000 J	ug/kg	0.346	1.19
100-41-4	Ethylbenzene	DJ E	25.6 1000 J	ug/kg	0.239	1.19
1330-20-7	Xylenes (total)	D	5 194 3200 =	ug/kg	0.239	1.19

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 10:30	Matrix:	SOIL
Lab Sample ID:	201709003	Date Received:	01/27/2008 14:30	%Moisture:	7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK2919	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 23:09	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.29 g	Final Volume:	1 mL
Data File:	s5a3120.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.5 U	ug/kg	11.9	35.5
129-00-0	Pyrene	J	14.7 J	ug/kg	11.1	35.5
91-20-3	Naphthalene		67.5 =	ug/kg	10.6	35.5
91-57-6	2-Methylnaphthalene		83.5 =	ug/kg	7.10	35.5
91-58-7	2-Chloronaphthalene	U	35.5 U	ug/kg	12.4	35.5
208-96-8	Acenaphthylene	U	35.5 U	ug/kg	10.6	35.5
86-73-7	Fluorene	J	31.8 J	ug/kg	10.6	35.5
85-01-8	Phenanthrene	J	27.5 J	ug/kg	10.6	35.5
120-12-7	Anthracene	U	35.5 U	ug/kg	10.6	35.5
206-44-0	Fluoranthene	J	24.5 J	ug/kg	10.6	35.5
56-55-3	Benzo(a)anthracene	J	13.4 J	ug/kg	10.6	35.5
218-01-9	Chrysene	U	35.5 U	ug/kg	10.6	35.5
205-99-2	Benzo(b)fluoranthene	U	35.5	ug/kg	10.6	35.5
207-08-9	Benzo(k)fluoranthene	U	35.5	ug/kg	10.6	35.5
50-32-8	Benzo(a)pyrene	U	35.5	ug/kg	10.6	35.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.5	ug/kg	10.6	35.5
53-70-3	Dibenzo(a,h)anthracene	U	35.5	ug/kg	10.6	35.5
191-24-2	Benzo(ghi)perylene	U	35.5	ug/kg	10.6	35.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709003 **CLIENT ID:** AK2919

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 93

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	12.2	mg/kg		N	MS	0.011	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 11:40	Matrix:	SOIL
Lab Sample ID:	201709004	Date Received:	01/27/2008 14:30	%Moisture:	12.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3019	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/09/2008 02:37	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:14	Aliquot:	4.6 g	Final Volume:	5 mL
Data File:	6w519.d	Column:	DB-624	Level:	LOW

USP

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.24 U	ug/kg	0.411	1.24
108-88-3	Toluene		7.59 J Gol	ug/kg	0.361	1.24
100-41-4	Ethylbenzene	D E 1690	1600 =	ug/kg	0.249	1.24
1330-20-7	Xylenes (total)	D E 5570	5070 ~~Gol~~	ug/kg =	0.249	1.24

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 11:40	Matrix:	SOIL
Lab Sample ID:	201709004	Date Received:	01/27/2008 14:30	%Moisture:	12.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3019	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 23:30	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5a3121.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	J	28.9 J	ug/kg	12.7	38.1
129-00-0	Pyrene		95.1 =	ug/kg	12.0	38.1
91-20-3	Naphthalene		100 ↓	ug/kg	11.4	38.1
91-57-6	2-Methylnaphthalene		120 ↓	ug/kg	7.63	38.1
91-58-7	2-Chloronaphthalene	U	38.1 U	ug/kg	13.3	38.1
208-96-8	Acenaphthylene	U	38.1 U	ug/kg	11.4	38.1
86-73-7	Fluorene	J	34.2 J	ug/kg	11.4	38.1
85-01-8	Phenanthrene		175 =	ug/kg	11.4	38.1
120-12-7	Anthracene	J	37.4 J	ug/kg	7.63	38.1
206-44-0	Fluoranthene		172 =	ug/kg	11.4	38.1
56-55-3	Benzo(a)anthracene		53.9 =	ug/kg	11.4	38.1
218-01-9	Chrysene	J	28.2 J	ug/kg	11.4	38.1
205-99-2	Benzo(b)fluoranthene		38.8 =	ug/kg	11.4	38.1
207-08-9	Benzo(k)fluoranthene	U	38.1 U	ug/kg	11.4	38.1
50-32-8	Benzo(a)pyrene	U	38.1 ↓	ug/kg	11.4	38.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.1 ↓	ug/kg	11.4	38.1
53-70-3	Dibenzo(a,h)anthracene	U	38.1 ↓	ug/kg	11.4	38.1
191-24-2	Benzo(ghi)perylene	U	38.1 ↓	ug/kg	11.4	38.1

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709004 **CLIENT ID:** AK3019

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 87

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	17.1	mg/kg		N	MS	0.011	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:10	Matrix:	SOIL
Lab Sample ID:	201709005	Date Received:	01/27/2008 14:30	%Moisture:	14.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3119	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/08/2008 23:43	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 20:52	Aliquot:	4.7 g	Final Volume:	5 mL
Data File:	6w513.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.24 U	ug/kg	0.409	1.24
108-88-3	Toluene	U	1.24 U	ug/kg	0.359	1.24
100-41-4	Ethylbenzene	U	1.24 U	ug/kg	0.248	1.24
1330-20-7	Xylenes (total)	J	0.931 J G01	ug/kg	0.248	1.24

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:10	Matrix:	SOIL
Lab Sample ID:	201709005	Date Received:	01/27/2008 14:30	%Moisture:	14.1
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3119	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	01/31/2008 23:51	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.38 g	Final Volume:	1 mL
Data File:	s5a3122.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	38.3 U	ug/kg	12.8	38.3
129-00-0	Pyrene	U	38.3	ug/kg	12.0	38.3
91-20-3	Naphthalene	U	38.3	ug/kg	11.5	38.3
91-57-6	2-Methylnaphthalene	U	38.3	ug/kg	7.67	38.3
91-58-7	2-Chloronaphthalene	U	38.3	ug/kg	13.4	38.3
208-96-8	Acenaphthylene	U	38.3	ug/kg	11.5	38.3
86-73-7	Fluorene	U	38.3	ug/kg	11.5	38.3
85-01-8	Phenanthrene	U	38.3	ug/kg	11.5	38.3
120-12-7	Anthracene	U	38.3	ug/kg	7.67	38.3
206-44-0	Fluoranthene	U	38.3	ug/kg	11.5	38.3
56-55-3	Benzo(a)anthracene	U	38.3	ug/kg	11.5	38.3
218-01-9	Chrysene	U	38.3	ug/kg	11.5	38.3
205-99-2	Benzo(b)fluoranthene	U	38.3	ug/kg	11.5	38.3
207-08-9	Benzo(k)fluoranthene	U	38.3	ug/kg	11.5	38.3
50-32-8	Benzo(a)pyrene	U	38.3	ug/kg	11.5	38.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.3	ug/kg	11.5	38.3
53-70-3	Dibenzo(a,h)anthracene	U	38.3	ug/kg	11.5	38.3
191-24-2	Benzo(ghi)perylene	U	38.3	ug/kg	11.5	38.3

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709005 **CLIENT ID:** AK3119

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 86

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2.2	mg/kg		N	MS	0.011	2	ICPMS6	080201-1

J I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 08:24	Matrix:	SOIL
Lab Sample ID:	201744001	Date Received:	01/28/2008 14:50	%Moisture:	11.2
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3219	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.1	Dilution:	1
Run Date:	02/08/2008 05:14	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/29/2008 06:45	Aliquot:	6 g	Final Volume:	5 mL
Data File:	6w424.d	Column:	DB-624	Level:	LOW

USR

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	0.939 U	ug/kg	0.310	0.939
108-88-3	Toluene	D	E 1110 497 =	ug/kg	0.272	0.939
100-41-4	Ethylbenzene	D	E 2390 644 =	ug/kg	0.188	0.939
1330-20-7	Xylenes (total)	D	E 8810 1600 =	ug/kg	0.188	0.939

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 08:24	Matrix:	SOIL
Lab Sample ID:	201744001	Date Received:	01/28/2008 14:50	%Moisture:	11.2
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3219	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.I	Dilution:	1
Run Date:	01/30/2008 12:46	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s6a3011.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.5 U	ug/kg	12.5	37.5
129-00-0	Pyrene	J	28.8 J	ug/kg	11.8	37.5
91-20-3	Naphthalene	U	37.5 U	ug/kg	11.3	37.5
91-57-6	2-Methylnaphthalene	J	9.24 J	ug/kg	7.50	37.5
91-58-7	2-Chloronaphthalene	U	37.5 U	ug/kg	13.1	37.5
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
85-01-8	Phenanthrene	J	34.1 J	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5 U	ug/kg	7.50	37.5
206-44-0	Fluoranthene		48.3 =	ug/kg	11.3	37.5
56-55-3	Benzo(a)anthracene	U	37.5 U	ug/kg	11.3	37.5
218-01-9	Chrysene	J	16.2 J	ug/kg	11.3	37.5
205-99-2	Benzo(b)fluoranthene	U	37.5 U	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene	U	37.5	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	U	37.5	ug/kg	11.3	37.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 **METHOD TYPE:** SW846

SAMPLE ID: 201744001 **CLIENT ID:** AK3219

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 28-JAN-08 **LEVEL:** Low **%SOLIDS:** 89

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	14.3	mg/kg			MS	0.011	2	ICPMS6	080201-1
		J	I01							

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 09:17	Matrix:	SOIL
Lab Sample ID:	201744002	Date Received:	01/28/2008 14:50	%Moisture:	6.6
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3319	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/08/2008 03:19	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/29/2008 06:55	Aliquot:	4.9 g	Final Volume:	5 mL
Data File:	6w420.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.09	U	ug/kg	0.360	1.09
108-88-3	Toluene		38.6	=	ug/kg	0.317	1.09
100-41-4	Ethylbenzene		43.8	=	ug/kg	0.218	1.09
1330-20-7	Xylenes (total)		141	=	ug/kg	0.218	1.09

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 09:17	Matrix:	SOIL
Lab Sample ID:	201744002	Date Received:	01/28/2008 14:50	%Moisture:	6.6
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3319	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.I	Dilution:	1
Run Date:	01/30/2008 13:51	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s6a3014.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.7 U	ug/kg	11.9	35.7
129-00-0	Pyrene	J	18.1 J	ug/kg	11.2	35.7
91-20-3	Naphthalene	U	35.7 U	ug/kg	10.7	35.7
91-57-6	2-Methylnaphthalene	J	26.1 J	ug/kg	7.13	35.7
91-58-7	2-Chloronaphthalene	U	35.7 U	ug/kg	12.5	35.7
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
85-01-8	Phenanthrene	J	27.3 J	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7 U	ug/kg	7.13	35.7
206-44-0	Fluoranthene	J	28.6 J	ug/kg	10.7	35.7
56-55-3	Benzo(a)anthracene	U	35.7 U	ug/kg	10.7	35.7
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 **METHOD TYPE:** SW846

SAMPLE ID: 201744002 **CLIENT ID:** AK3319

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 28-JAN-08 **LEVEL:** Low **%SOLIDS:** 93.4

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	26.6	mg/kg			MS	0.021	4	ICPMS6	080204-2

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 10:32	Matrix:	SOIL
Lab Sample ID:	201744003	Date Received:	01/28/2008 14:50	%Moisture:	12
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3419	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	50
Run Date:	02/07/2008 04:20	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/29/2008 07:00	Aliquot:	5.1 g	Final Volume:	10 mL
Data File:	6w324.d	Column:	DB-624	Level:	MED

U52

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	111	U	ug/kg	36.8	111
108-88-3	Toluene	D	22120018800	=	ug/kg	32.3	111
100-41-4	Ethylbenzene		4240	=	ug/kg	22.3	111
1330-20-7	Xylenes (total)		19600	=	ug/kg	22.3	111

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 10:32	Matrix:	SOIL
Lab Sample ID:	201744003	Date Received:	01/28/2008 14:50	%Moisture:	12
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3419	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.I	Dilution:	1
Run Date:	01/30/2008 14:13	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s6a3015.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.8 U	ug/kg	12.6	37.8
129-00-0	Pyrene	U	37.8	ug/kg	11.9	37.8
91-20-3	Naphthalene	U	37.8	ug/kg	11.4	37.8
91-57-6	2-Methylnaphthalene		59.6 =	ug/kg	7.57	37.8
91-58-7	2-Chloronaphthalene	U	37.8 U	ug/kg	13.2	37.8
208-96-8	Acenaphthylene	U	37.8 U	ug/kg	11.4	37.8
86-73-7	Fluorene	J	29.3 J	ug/kg	11.4	37.8
85-01-8	Phenanthrene	J	24.0 J	ug/kg	11.4	37.8
120-12-7	Anthracene	U	37.8 U	ug/kg	7.57	37.8
206-44-0	Fluoranthene	J	18.8 J	ug/kg	11.4	37.8
56-55-3	Benzo(a)anthracene	U	37.8 U	ug/kg	11.4	37.8
218-01-9	Chrysene	U	37.8	ug/kg	11.4	37.8
205-99-2	Benzo(b)fluoranthene	U	37.8	ug/kg	11.4	37.8
207-08-9	Benzo(k)fluoranthene	U	37.8	ug/kg	11.4	37.8
50-32-8	Benzo(a)pyrene	U	37.8	ug/kg	11.4	37.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.8	ug/kg	11.4	37.8
53-70-3	Dibenzo(a,h)anthracene	U	37.8	ug/kg	11.4	37.8
191-24-2	Benzo(ghi)perylene	U	37.8	ug/kg	11.4	37.8

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 **METHOD TYPE:** SW846

SAMPLE ID: 201744003 **CLIENT ID:** AK3419

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 28-JAN-08 **LEVEL:** Low **%SOLIDS:** 88

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	32.7	mg/kg			MS	0.023	4	ICPMS6	080204-2

J I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 12:56	Matrix:	SOIL
Lab Sample ID:	201744004	Date Received:	01/28/2008 14:50	%Moisture:	11.4
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.1	Dilution:	50
Run Date:	02/08/2008 22:45	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/29/2008 07:03	Aliquot:	4.7 g	Final Volume:	10 mL
Data File:	6w511.d	Column:	DB-624	Level:	MED

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	120 U	ug/kg	39.6	120
108-88-3	Toluene		1380 =	ug/kg	34.8	120
100-41-4	Ethylbenzene		2460 =	ug/kg	24.0	120
1330-20-7	Xylenes (total)		5350 =	ug/kg	24.0	120

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 12:56	Matrix:	SOIL
Lab Sample ID:	201744004	Date Received:	01/28/2008 14:50	%Moisture:	11.4
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.I	Dilution:	1
Run Date:	01/30/2008 14:34	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6a3016.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.6 U	ug/kg	12.6	37.6
129-00-0	Pyrene	J	21.7 J	ug/kg	11.8	37.6
91-20-3	Naphthalene	U	37.6 U	ug/kg	11.3	37.6
91-57-6	2-Methylnaphthalene		158 =	ug/kg	7.52	37.6
91-58-7	2-Chloronaphthalene	U	37.6 U	ug/kg	13.2	37.6
208-96-8	Acenaphthylene	U	37.6 U	ug/kg	11.3	37.6
86-73-7	Fluorene		115 =	ug/kg	11.3	37.6
85-01-8	Phenanthrene		50.8 =	ug/kg	11.3	37.6
120-12-7	Anthracene	J	15.3 J	ug/kg	7.52	37.6
206-44-0	Fluoranthene	J	35.4 J	ug/kg	11.3	37.6
56-55-3	Benzo(a)anthracene	U	37.6 U	ug/kg	11.3	37.6
218-01-9	Chrysene	J	12.2 J	ug/kg	11.3	37.6
205-99-2	Benzo(b)fluoranthene	U	37.6 U	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6

DATA VALIDATION
COPY

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 METHOD TYPE: SW846

SAMPLE ID: 201744004 CLIENT ID: AK3519

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 28-JAN-08 LEVEL: Low %SOLIDS: 89

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	104	mg/kg			MS	0.054	10	ICPMS6	080204-2

J I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 14:58	Matrix:	SOIL
Lab Sample ID:	201709008	Date Received:	01/27/2008 14:30	%Moisture:	19.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3619	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/08/2008 04:16	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 20:56	Aliquot:	5.8 g	Final Volume:	5 mL
Data File:	6w422.d	Column:	DB-624	Level:	LOW

USP

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.353	1.07
108-88-3	Toluene		9.56 J GOI	ug/kg	0.310	1.07
100-41-4	Ethylbenzene	D E 608 526 =		ug/kg	0.214	1.07
1330-20-7	Xylenes (total)	D E 2600 1970 =		ug/kg	0.214	1.07

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 14:58	Matrix:	SOIL
Lab Sample ID:	201709008	Date Received:	01/27/2008 14:30	%Moisture:	19.3
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3619	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	02/01/2008 00:53	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.73 g	Final Volume:	1 mL
Data File:	s5a3125.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene		46.0 =	ug/kg	13.5	40.3
129-00-0	Pyrene		123	ug/kg	12.7	40.3
91-20-3	Naphthalene		71.7	ug/kg	12.1	40.3
91-57-6	2-Methylnaphthalene		101 ↓	ug/kg	8.07	40.3
91-58-7	2-Chloronaphthalene	U	40.3 U	ug/kg	14.1	40.3
208-96-8	Acenaphthylene	U	40.3 U	ug/kg	12.1	40.3
86-73-7	Fluorene		52.5 =	ug/kg	12.1	40.3
85-01-8	Phenanthrene		332	ug/kg	12.1	40.3
120-12-7	Anthracene		70.9	ug/kg	8.07	40.3
206-44-0	Fluoranthene		204	ug/kg	12.1	40.3
56-55-3	Benzo(a)anthracene		58.4 ↓	ug/kg	12.1	40.3
218-01-9	Chrysene	J	30.9 J	ug/kg	12.1	40.3
205-99-2	Benzo(b)fluoranthene	J	31.1	ug/kg	12.1	40.3
207-08-9	Benzo(k)fluoranthene	J	12.5 ↓	ug/kg	12.1	40.3
50-32-8	Benzo(a)pyrene	U	40.3 U	ug/kg	12.1	40.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	40.3	ug/kg	12.1	40.3
53-70-3	Dibenzo(a,h)anthracene	U	40.3	ug/kg	12.1	40.3
191-24-2	Benzo(ghi)perylene	U	40.3 ↓	ug/kg	12.1	40.3

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709008 **CLIENT ID:** AK3619

CONTRACT: SAIC08507

MATRIX:S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 81

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	12.4	mg/kg		N	MS	0.012	2	ICPMS6	080201-1

J IOI

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:57	Matrix:	SOIL
Lab Sample ID:	201709006	Date Received:	01/27/2008 14:30	%Moisture:	16.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3719	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/09/2008 00:12	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:10	Aliquot:	5.8 g	Final Volume:	5 mL
Data File:	6w514.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.04 U	ug/kg	0.342	1.04
108-88-3	Toluene	U	1.04 U	ug/kg	0.301	1.04
100-41-4	Ethylbenzene	U	1.04 U	ug/kg	0.207	1.04
1330-20-7	Xylenes (total)	J	0.511 J	ug/kg	0.207	1.04

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:57	Matrix:	SOIL
Lab Sample ID:	201709006	Date Received:	01/27/2008 14:30	%Moisture:	16.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3719	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	02/01/2008 00:12	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.37 g	Final Volume:	1 mL
Data File:	s5a3123.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	39.6 U	ug/kg	13.2	39.6
129-00-0	Pyrene	U	39.6	ug/kg	12.4	39.6
91-20-3	Naphthalene	U	39.6	ug/kg	11.9	39.6
91-57-6	2-Methylnaphthalene	U	39.6	ug/kg	7.92	39.6
91-58-7	2-Chloronaphthalene	U	39.6	ug/kg	13.9	39.6
208-96-8	Acenaphthylene	U	39.6	ug/kg	11.9	39.6
86-73-7	Fluorene	U	39.6	ug/kg	11.9	39.6
85-01-8	Phenanthrene	U	39.6	ug/kg	11.9	39.6
120-12-7	Anthracene	U	39.6	ug/kg	7.92	39.6
206-44-0	Fluoranthene	U	39.6	ug/kg	11.9	39.6
56-55-3	Benzo(a)anthracene	U	39.6	ug/kg	11.9	39.6
218-01-9	Chrysene	U	39.6	ug/kg	11.9	39.6
205-99-2	Benzo(b)fluoranthene	U	39.6	ug/kg	11.9	39.6
207-08-9	Benzo(k)fluoranthene	U	39.6	ug/kg	11.9	39.6
50-32-8	Benzo(a)pyrene	U	39.6	ug/kg	11.9	39.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.6	ug/kg	11.9	39.6
53-70-3	Dibenzo(a,h)anthracene	U	39.6	ug/kg	11.9	39.6
191-24-2	Benzo(ghi)perylene	U	39.6	ug/kg	11.9	39.6

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709006 **CLIENT ID:** AK3719

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 83

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	9.6	mg/kg		N	MS	0.012	2	ICPMS6	080201-1

J I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:57	Matrix:	SOIL
Lab Sample ID:	201709007	Date Received:	01/27/2008 14:30	%Moisture:	16.4
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3713 DUPLICATE	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.I	Dilution:	1
Run Date:	02/09/2008 00:41	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/27/2008 21:04	Aliquot:	5.8 g	Final Volume:	5 mL
Data File:	6w515.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.03 U	ug/kg	0.340	1.03
108-88-3	Toluene	U	1.03 U	ug/kg	0.299	1.03
100-41-4	Ethylbenzene	U	1.03 U	ug/kg	0.206	1.03
1330-20-7	Xylenes (total)	J	0.326 J	ug/kg	0.206	1.03

DATA VALIDATION
COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201709	Date Collected:	01/26/2008 13:57	Matrix:	SOIL
Lab Sample ID:	201709007	Date Received:	01/27/2008 14:30	%Moisture:	16.4
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK3713 DUPLICATE	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722516	Inst:	MSD5.I	Dilution:	1
Run Date:	02/01/2008 00:32	Analyst:	BJB1	Inj. Vol:	.5 uL
Prep Date:	01/31/2008 12:56	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5a3124.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	39.9 U	ug/kg	13.3	39.9
129-00-0	Pyrene	U	39.9	ug/kg	12.5	39.9
91-20-3	Naphthalene	U	39.9	ug/kg	12.0	39.9
91-57-6	2-Methylnaphthalene	U	39.9	ug/kg	7.97	39.9
91-58-7	2-Chloronaphthalene	U	39.9	ug/kg	14.0	39.9
208-96-8	Acenaphthylene	U	39.9	ug/kg	12.0	39.9
86-73-7	Fluorene	U	39.9	ug/kg	12.0	39.9
85-01-8	Phenanthrene	U	39.9	ug/kg	12.0	39.9
120-12-7	Anthracene	U	39.9	ug/kg	7.97	39.9
206-44-0	Fluoranthene	U	39.9	ug/kg	12.0	39.9
56-55-3	Benzo(a)anthracene	U	39.9	ug/kg	12.0	39.9
218-01-9	Chrysene	U	39.9	ug/kg	12.0	39.9
205-99-2	Benzo(b)fluoranthene	U	39.9	ug/kg	12.0	39.9
207-08-9	Benzo(k)fluoranthene	U	39.9	ug/kg	12.0	39.9
50-32-8	Benzo(a)pyrene	U	39.9	ug/kg	12.0	39.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.9	ug/kg	12.0	39.9
53-70-3	Dibenzo(a,h)anthracene	U	39.9	ug/kg	12.0	39.9
191-24-2	Benzo(ghi)perylene	U	39.9	ug/kg	12.0	39.9

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201709 **METHOD TYPE:** SW846

SAMPLE ID: 201709007 **CLIENT ID:** AK3713 DUPLICATE

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 27-JAN-08 **LEVEL:** Low **%SOLIDS:** 84

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	9.4	mg/kg		N	MS	0.012	2	ICPMS6	080201-1

J I01

DATA VALIDATION COPY

Volatile

Certificate of Analysis

Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 12:37	Matrix:	SOIL
Lab Sample ID:	201086004	Date Received:	01/17/2008 09:30	% Moisture:	14.1
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK3819	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	1
Run Date:	01/29/2008 17:45	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 12:17	Aliquot:	5 g	Final Volume:	5 mL
Data File:	4v214.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.16 U	ug/kg	0.384	1.16
108-88-3	Toluene		2.08 =	ug/kg	0.337	1.16
100-41-4	Ethylbenzene		13.3 =	ug/kg	0.233	1.16
1330-20-7	Xylenes (total)		37.1 =	ug/kg	0.233	1.16

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	**Date Collected:**	01/16/2008 12:37	**Matrix:**	SOIL
Lab Sample ID:	201086004	**Date Received:**	01/17/2008 09:30	**% Moisture:**	14.1
		Client:	SA1C072	**Project:**	SA1C007202
Client ID:	AK3819	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	719185	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	01/19/2008 03:04	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	01/18/2008 15:58	**Aliquot:**	30.93 g	**Final Volume:**	1 mL
Data File:	s2a1831.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.6 U	ug/kg	12.6	37.6
129-00-0	Pyrene	U	37.6	ug/kg	11.8	37.6
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	13.9	37.6
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6

"Data Validation Copy"

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201086 METHOD TYPE: SW846

SAMPLE ID: 201086004 CLIENT ID: AK3819

CONTRACT: SAIC007202

MATRIX:S DATE RECEIVED 17-JAN-08 LEVEL: Low %SOLIDS: 86

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2190	ug/kg			P	464	1	OPTIMA3	012408-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 13:27	Matrix:	SOIL
Lab Sample ID:	201086005	Date Received:	01/17/2008 09:30	% Moisture:	15.9
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK3919	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	721963	Inst:	VOA4.I	Dilution:	250
Run Date:	01/28/2008 21:34	Analyst:	ACJ	Purge Vol:	5 mL
Prep Date:	01/15/2008 12:21	Aliquot:	6 g	Final Volume:	10 mL
Data File:	4v125.d	Column:	RTX-VOLATILES	Level:	LOW

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	496	U	ug/kg	164	496
108-88-3	Toluene		22500	=	ug/kg	144	496
100-41-4	Ethylbenzene		11900	=	ug/kg	99.1	496
1330-20-7	Xylenes (total)		55600	=	ug/kg	99.1	496

"Data Validation Copy"

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201086	Date Collected:	01/16/2008 13:27	Matrix:	SOIL
Lab Sample ID:	201086005	Date Received:	01/17/2008 09:30	%Moisture:	15.9
		Client:	SAIC072	Project:	SAIC007202
Client ID:	AK3919	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	719185	Inst:	MSD2.I	Dilution:	1
Run Date:	01/19/2008 03:26	Analyst:	AGSJ	Inj. Vol:	.5 uL
Prep Date:	01/18/2008 15:58	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s2a1832.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	39.6 U	ug/kg	13.2	39.6
129-00-0	Pyrene	J	18.5 J	ug/kg	12.6	39.6
91-20-3	Naphthalene	U	39.6 U	ug/kg	11.9	39.6
91-57-6	2-Methylnaphthalene	J	19.2 J	ug/kg	7.92	39.6
91-58-7	2-Chloronaphthalene	U	39.6 U	ug/kg	13.9	39.6
208-96-8	Acenaphthylene	U	39.6	ug/kg	11.9	39.6
86-73-7	Fluorene	U	39.6	ug/kg	11.9	39.6
85-01-8	Phenanthrene	J	22.5 J	ug/kg	11.9	39.6
120-12-7	Anthracene	U	39.6 U	ug/kg	7.92	39.6
206-44-0	Fluoranthene	U	39.6	ug/kg	11.9	39.6
56-55-3	Benzo(a)anthracene	U	39.6	ug/kg	11.9	39.6
218-01-9	Chrysene	U	39.6	ug/kg	11.9	39.6
205-99-2	Benzo(b)fluoranthene	U	39.6	ug/kg	11.9	39.6
207-08-9	Benzo(k)fluoranthene	U	39.6	ug/kg	11.9	39.6
50-32-8	Benzo(a)pyrene	U	39.6	ug/kg	11.9	39.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.6	ug/kg	11.9	39.6
53-70-3	Dibenzo(a,h)anthracene	U	39.6	ug/kg	11.9	39.6
191-24-2	Benzo(ghi)perylene	U	39.6	ug/kg	11.9	39.6

"Data Validation Copy"

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201086 METHOD TYPE: SW846

SAMPLE ID: 201086005 CLIENT ID: AK3919

CONTRACT: SAIC007202

MATRIX: S DATE RECEIVED 17-JAN-08 LEVEL: Low %SOLIDS: 84

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	10700	ug/kg			P	462	1	OPTIMA3	012408-1

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201537-1	Date Collected:	01/23/2008 16:03	Matrix:	SOIL
Lab Sample ID:	201540007	Date Received:	01/24/2008 15:05	%Moisture:	17.6
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4019	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	723846	Inst:	VOA9.I	Dilution:	1
Run Date:	02/04/2008 19:10	Analyst:	RXY1	Purge Vol:	5 mL
Prep Date:	01/25/2008 08:50	Aliquot:	5.6 g	Final Volume:	5 mL
Data File:	9w121.d	Column:	RTX-Volatiles	Level:	LOW

USR

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene		6.55 =	ug/kg	0.358	1.08
108-88-3	Toluene		23.6 =	ug/kg	0.314	1.08
100-41-4	Ethylbenzene	D E 567	193 =	ug/kg	0.217	1.08
1330-20-7	Xylenes (total)	D E 3220	733 =	ug/kg	0.217	1.08

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201682-1
Lab Sample ID: 201683030

Client ID: AK4019
Batch ID: 721999
Run Date: 01/29/2008 17:30
Prep Date: 01/28/2008 19:37
Data File: s6a2923.d

Date Collected: 01/23/2008 16:03
Date Received: 01/25/2008 14:07
Client: SAIC085
Method: SW846 8270C
Inst: MSD6.I
Analyst: JLD1
Aliquot: 30.04 g
Column: J&W DB-5MS

Matrix: SOIL
%Moisture: 17.6
Project: SAIC08507
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	J	24.3 J	ug/kg	13.5	40.4
129-00-0	Pyrene		81.5 =	ug/kg	12.7	40.4
91-20-3	Naphthalene	U	40.4 U	ug/kg	12.1	40.4
91-57-6	2-Methylnaphthalene	B	198 = F01,	ug/kg F08	8.08	40.4
91-58-7	2-Chloronaphthalene	U	40.4 U	ug/kg	14.1	40.4
208-96-8	Acenaphthylene	U	40.4 U	ug/kg	12.1	40.4
86-73-7	Fluorene	J	30.8 J	ug/kg	12.1	40.4
85-01-8	Phenanthrene		121 =	ug/kg	12.1	40.4
120-12-7	Anthracene	J	20.9 J	ug/kg	8.08	40.4
206-44-0	Fluoranthene		109 =	ug/kg	12.1	40.4
56-55-3	Benzo(a)anthracene	U	40.4 U	ug/kg	12.1	40.4
218-01-9	Chrysene	U	40.4	ug/kg	12.1	40.4
205-99-2	Benzo(b)fluoranthene	U	40.4	ug/kg	12.1	40.4
207-08-9	Benzo(k)fluoranthene	U	40.4	ug/kg	12.1	40.4
50-32-8	Benzo(a)pyrene	U	40.4	ug/kg	12.1	40.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	40.4	ug/kg	12.1	40.4
53-70-3	Dibenzo(a,h)anthracene	U	40.4	ug/kg	12.1	40.4
191-24-2	Benzo(ghi)perylene	U	40.4	ug/kg	12.1	40.4

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201682-1 METHOD TYPE: SW846

SAMPLE ID: 201683010 CLIENT ID: AK4019

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 25-JAN-08 LEVEL: Low %SOLIDS: 82

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	37.3	mg/kg			MS	0.01[illegible]	[illegible]	ICPMS5	080204-1

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 13:46	Matrix:	SOIL
Lab Sample ID:	201744005	Date Received:	01/28/2008 14:50	%Moisture:	11
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4119DL	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA7.I	Dilution:	50
Run Date:	02/10/2008 22:07	Analyst:	GRB2	Purge Vol:	5 mL
Prep Date:	01/29/2008 07:09	Aliquot:	5.6 g	Final Volume:	10 mL
Data File:	7w716.d	Column:	DB-624	Level:	MED

USR

CAS No.	Parmname	Qualifier	Result		Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	100	U	ug/kg	33.1	100
108-88-3	Toluene		119	=	ug/kg	29.1	100
100-41-4	Ethylbenzene	D	E 11000 ~~9900~~	=	ug/kg	20.1	100
1330-20-7	Xylenes (total)	D	E 67800 ~~48800~~	=	ug/kg	20.1	100

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 13:46	Matrix:	SOIL
Lab Sample ID:	201744005	Date Received:	01/28/2008 14:50	%Moisture:	11
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4119	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.1	Dilution:	1
Run Date:	01/30/2008 14:56	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6a3017.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene		40.7 =	ug/kg	12.5	37.5
129-00-0	Pyrene		143 |	ug/kg	11.8	37.5
91-20-3	Naphthalene		117 |	ug/kg	11.2	37.5
91-57-6	2-Methylnaphthalene		241 ↓	ug/kg	7.49	37.5
91-58-7	2-Chloronaphthalene	U	37.5 U	ug/kg	13.1	37.5
208-96-8	Acenaphthylene	U	37.5 U	ug/kg	11.2	37.5
86-73-7	Fluorene		49.1 =	ug/kg	11.2	37.5
85-01-8	Phenanthrene		237 |	ug/kg	11.2	37.5
120-12-7	Anthracene		54.8 |	ug/kg	7.49	37.5
206-44-0	Fluoranthene		210 |	ug/kg	11.2	37.5
56-55-3	Benzo(a)anthracene		52.9 |	ug/kg	11.2	37.5
218-01-9	Chrysene		39.2 ↓	ug/kg	11.2	37.5
205-99-2	Benzo(b)fluoranthene	J	28.4 J	ug/kg	11.2	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5 U	ug/kg	11.2	37.5
50-32-8	Benzo(a)pyrene	J	16.9 J	ug/kg	11.2	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5 U	ug/kg	11.2	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5 |	ug/kg	11.2	37.5
191-24-2	Benzo(ghi)perylene	U	37.5 ↓	ug/kg	11.2	37.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 **METHOD TYPE:** SW846

SAMPLE ID: 201744005 **CLIENT ID:** AK4119

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 28-JAN-08 **LEVEL:** Low **%SOLIDS:** 89

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	127	mg/kg			MS	0.11	20	ICPMS6	080204-2

5 101

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 14:37	Matrix:	SOIL
Lab Sample ID:	201744006	Date Received:	01/28/2008 14:50	%Moisture:	13.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4219	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724727	Inst:	VOA6.1	Dilution:	1
Run Date:	02/08/2008 03:48	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/29/2008 07:10	Aliquot:	5.4 g	Final Volume:	5 mL
Data File:	6w421.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.354	1.07
108-88-3	Toluene	J	0.474 J	ug/kg	0.311	1.07
100-41-4	Ethylbenzene		15.9 =	ug/kg	0.215	1.07
1330-20-7	Xylenes (total)		127 =	ug/kg	0.215	1.07

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201744	Date Collected:	01/27/2008 14:37	Matrix:	SOIL
Lab Sample ID:	201744006	Date Received:	01/28/2008 14:50	%Moisture:	13.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4219	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722159	Inst:	MSD6.I	Dilution:	1
Run Date:	01/30/2008 15:17	Analyst:	JLD1	Inj. Vol:	.5 uL
Prep Date:	01/29/2008 19:10	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s6a3018.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	38.5 U	ug/kg	12.9	38.5
129-00-0	Pyrene	U	38.5	ug/kg	12.1	38.5
91-20-3	Naphthalene	U	38.5	ug/kg	11.5	38.5
91-57-6	2-Methylnaphthalene	U	38.5	ug/kg	7.70	38.5
91-58-7	2-Chloronaphthalene	U	38.5	ug/kg	13.5	38.5
208-96-8	Acenaphthylene	U	38.5	ug/kg	11.5	38.5
86-73-7	Fluorene	U	38.5	ug/kg	11.5	38.5
85-01-8	Phenanthrene	U	38.5	ug/kg	11.5	38.5
120-12-7	Anthracene	U	38.5	ug/kg	7.70	38.5
206-44-0	Fluoranthene	U	38.5	ug/kg	11.5	38.5
56-55-3	Benzo(a)anthracene	U	38.5	ug/kg	11.5	38.5
218-01-9	Chrysene	U	38.5	ug/kg	11.5	38.5
205-99-2	Benzo(b)fluoranthene	U	38.5	ug/kg	11.5	38.5
207-08-9	Benzo(k)fluoranthene	U	38.5	ug/kg	11.5	38.5
50-32-8	Benzo(a)pyrene	U	38.5	ug/kg	11.5	38.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.5	ug/kg	11.5	38.5
53-70-3	Dibenzo(a,h)anthracene	U	38.5	ug/kg	11.5	38.5
191-24-2	Benzo(ghi)perylene	U	38.5	ug/kg	11.5	38.5

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201744 **METHOD TYPE:** SW846

SAMPLE ID: 201744006 **CLIENT ID:** AK4219

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 28-JAN-08 **LEVEL:** Low **%SOLIDS:** 86

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	7.3	mg/kg			MS	0.012	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201810	Date Collected:	01/28/2008 08:05	Matrix:	SOIL
Lab Sample ID:	201810001	Date Received:	01/29/2008 15:05	% Moisture:	9.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4319	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724730	Inst:	VOA6.I	Dilution:	1
Run Date:	02/07/2008 22:59	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/30/2008 07:14	Aliquot:	5.1 g	Final Volume:	5 mL
Data File:	6w411.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.09 U	ug/kg	0.359	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.315	1.09
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.218	1.09
1330-20-7	Xylenes (total)	J	0.613 J	ug/kg	0.218	1.09

DATA VALIDATION COPY

Semi–Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201810	Date Collected:	01/28/2008 08:05	Matrix:	SOIL
Lab Sample ID:	201810001	Date Received:	01/29/2008 15:05	%Moisture:	9.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4319	Method:	SW846 8270C	SOP Ref:	GL–OA–E–009
Batch ID:	722395	Inst:	MSD4.I	Dilution:	1
Run Date:	01/30/2008 15:11	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	01/30/2008 12:27	Aliquot:	30.24 g	Final Volume:	1 mL
Data File:	s4a3015.d	Column:	J&W DB–5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83–32–9	Acenaphthene	U	36.7 U	ug/kg	12.3	36.7
129–00–0	Pyrene	U	36.7	ug/kg	11.5	36.7
91–20–3	Naphthalene	U	36.7	ug/kg	11.0	36.7
91–57–6	2–Methylnaphthalene	U	36.7	ug/kg	7.34	36.7
91–58–7	2–Chloronaphthalene	U	36.7	ug/kg	12.8	36.7
208–96–8	Acenaphthylene	U	36.7	ug/kg	11.0	36.7
86–73–7	Fluorene	U	36.7	ug/kg	11.0	36.7
85–01–8	Phenanthrene	U	36.7	ug/kg	11.0	36.7
120–12–7	Anthracene	U	36.7	ug/kg	7.34	36.7
206–44–0	Fluoranthene	U	36.7	ug/kg	11.0	36.7
56–55–3	Benzo(a)anthracene	U	36.7	ug/kg	11.0	36.7
218–01–9	Chrysene	U	36.7	ug/kg	11.0	36.7
205–99–2	Benzo(b)fluoranthene	U	36.7	ug/kg	11.0	36.7
207–08–9	Benzo(k)fluoranthene	U	36.7	ug/kg	11.0	36.7
50–32–8	Benzo(a)pyrene	U	36.7	ug/kg	11.0	36.7
193–39–5	Indeno(1,2,3–cd)pyrene	U	36.7	ug/kg	11.0	36.7
53–70–3	Dibenzo(a,h)anthracene	U	36.7	ug/kg	11.0	36.7
191–24–2	Benzo(ghi)perylene	U	36.7	ug/kg	11.0	36.7

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201810 METHOD TYPE: SW846

SAMPLE ID: 201810001 CLIENT ID: AK4319

CONTRACT: SAIC08507

MATRIX:S DATE RECEIVED 29-JAN-08 LEVEL: Low %SOLIDS: 90.1

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	2.4	mg/kg			MS	0.011	2	ICPMS6	080201-1

J I01

DATA VALIDATION COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201810	Date Collected:	01/28/2008 09:12	Matrix:	SOIL
Lab Sample ID:	201810002	Date Received:	01/29/2008 15:05	% Moisture:	6.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4419	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724730	Inst:	VOA6.I	Dilution:	1
Run Date:	02/08/2008 23:14	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/30/2008 07:16	Aliquot:	4.9 g	Final Volume:	5 mL
Data File:	6w512.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.10 U	ug/kg	0.362	1.10
108-88-3	Toluene	U	1.10	ug/kg	0.318	1.10
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.219	1.10
1330-20-7	Xylenes (total)	J	0.724 J (J0)	ug/kg	0.219	1.10

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201810	Date Collected:	01/28/2008 09:12	Matrix:	SOIL
Lab Sample ID:	201810002	Date Received:	01/29/2008 15:05	%Moisture:	6.9
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4419	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	722395	Inst:	MSD4.1	Dilution:	1
Run Date:	01/30/2008 16:07	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	01/30/2008 12:27	Aliquot:	30.47 g	Final Volume:	1 mL
Data File:	s4a3018.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	35.3 U	ug/kg	11.8	35.3
129-00-0	Pyrene	U	35.3	ug/kg	11.1	35.3
91-20-3	Naphthalene	U	35.3	ug/kg	10.6	35.3
91-57-6	2-Methylnaphthalene	U	35.3	ug/kg	7.05	35.3
91-58-7	2-Chloronaphthalene	U	35.3	ug/kg	12.3	35.3
208-96-8	Acenaphthylene	U	35.3	ug/kg	10.6	35.3
86-73-7	Fluorene	U	35.3	ug/kg	10.6	35.3
85-01-8	Phenanthrene	U	35.3	ug/kg	10.6	35.3
120-12-7	Anthracene	U	35.3	ug/kg	7.05	35.3
206-44-0	Fluoranthene	U	35.3	ug/kg	10.6	35.3
56-55-3	Benzo(a)anthracene	U	35.3	ug/kg	10.6	35.3
218-01-9	Chrysene	U	35.3	ug/kg	10.6	35.3
205-99-2	Benzo(b)fluoranthene	U	35.3	ug/kg	10.6	35.3
207-08-9	Benzo(k)fluoranthene	U	35.3	ug/kg	10.6	35.3
50-32-8	Benzo(a)pyrene	U	35.3	ug/kg	10.6	35.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.3	ug/kg	10.6	35.3
53-70-3	Dibenzo(a,h)anthracene	U	35.3	ug/kg	10.6	35.3
191-24-2	Benzo(ghi)perylene	U	35.3	ug/kg	10.6	35.3

DATA VALIDATION
COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201810 **METHOD TYPE:** SW846

SAMPLE ID: 201810002 **CLIENT ID:** AK4419

CONTRACT: SAIC08507

MATRIX: S **DATE RECEIVED** 29-JAN-08 **LEVEL:** Low **%SOLIDS:** 93.1

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	1.2	mg/kg			MS	0.01	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	201810	Date Collected:	01/28/2008 10:40	Matrix:	SOIL
Lab Sample ID:	201810003	Date Received:	01/29/2008 15:05	%Moisture:	13.7
		Client:	SAIC085	Project:	SAIC08507
Client ID:	AK4519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	724730	Inst:	VOA6.I	Dilution:	1
Run Date:	02/07/2008 23:56	Analyst:	DXR1	Purge Vol:	5 mL
Prep Date:	01/30/2008 07:21	Aliquot:	5.4 g	Final Volume:	5 mL
Data File:	6w413.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.07 U	ug/kg	0.354	1.07
108-88-3	Toluene	J	0.454 J	ug/kg	0.311	1.07
100-41-4	Ethylbenzene	U	1.07 U	ug/kg	0.215	1.07
1330-20-7	Xylenes (total)	J	0.854 J	ug/kg	0.215	1.07

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201810
Lab Sample ID: 201810003

Client ID: AK4519
Batch ID: 722395
Run Date: 01/30/2008 16:26
Prep Date: 01/30/2008 12:27
Data File: s4a3019.d

Date Collected: 01/28/2008 10:40
Date Received: 01/29/2008 15:05
Client: SAIC085
Method: SW846 8270C
Inst: MSD4.I
Analyst: JMB3
Aliquot: 30.9 g
Column: J&W DB-5MS

Matrix: SOIL
%Moisture: 13.7
Project: SAIC08507
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	37.5 U	ug/kg	12.5	37.5
129-00-0	Pyrene		1830 =	ug/kg	11.8	37.5
91-20-3	Naphthalene	U	37.5 U	ug/kg	11.2	37.5
91-57-6	2-Methylnaphthalene	J	11.0 J	ug/kg	7.50	37.5
91-58-7	2-Chloronaphthalene	U	37.5 U	ug/kg	13.1	37.5
208-96-8	Acenaphthylene		201 =	ug/kg	11.2	37.5
86-73-7	Fluorene	U	37.5 U	ug/kg	11.2	37.5
85-01-8	Phenanthrene	U	37.5	ug/kg	11.2	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.50	37.5
206-44-0	Fluoranthene		946 =	ug/kg	11.2	37.5
56-55-3	Benzo(a)anthracene		914	ug/kg	11.2	37.5
218-01-9	Chrysene		1030	ug/kg	11.2	37.5
205-99-2	Benzo(b)fluoranthene		965	ug/kg	11.2	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5 U	ug/kg	11.2	37.5
50-32-8	Benzo(a)pyrene		656 =	ug/kg	11.2	37.5
193-39-5	Indeno(1,2,3-cd)pyrene		351	ug/kg	11.2	37.5
53-70-3	Dibenzo(a,h)anthracene		175	ug/kg	11.2	37.5
191-24-2	Benzo(ghi)perylene		431	ug/kg	11.2	37.5

DATA VALIDATION COPY

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 201810 METHOD TYPE: SW846

SAMPLE ID: 201810003 CLIENT ID: AK4519

CONTRACT: SAIC08507

MATRIX: S DATE RECEIVED 29-JAN-08 LEVEL: Low %SOLIDS: 86

CAS No	Analyte	Result	Units	C	Qual	M	IDL	DF	Instrument ID	Analytical Run
7439-92-1	Lead	6.9	mg/kg			MS	0.012	2	ICPMS6	080201-1

J I01

DATA VALIDATION
COPY

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Science Applications International Corporation
151 Lafayette Ave, Oak Ridge, TN 37830 (865)481-4600

200801299II 201010 %

CHAIN OF CUSTODY RECORD

COC NO.: PH1Φ1Φ

PROJECT NAME: Hunter - Pumphouse 1

PROJECT NUMBER: 01-1055-04-2945-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	Moisture Content	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
AKΦ119	1/15/08	1203	Soil	X	X	X	X	2	4.6 ppm	
AKΦ219	1/15/08	1302	Soil	X	X	X	X	2	42.8 ppm	
AKΦ319	1/15/08	1417	Soil	X	X	X	X	2	89.9 ppm	
AKΦ419	1/15/08	1527	Soil	X	X	X	X	2	643 ppm	

TIC

TIC

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29407

PHONE NO: (843)556-8171

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Timothy Coffey	1/15/08	Fed Ex	1/15/08
COMPANY NAME: SAIC	1830	COMPANY NAME: Fed Ex	1830
RECEIVED BY: M Smith	Date/Time 1-16-08	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	9:35	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME:		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 8

Cooler ID: #12

Cooler Temperature: 4 °C

FEDEX NUMBER: 833296455336 7

PAH and Lead together in same 8oz jar.

B-147

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20080129973

CHAIN OF CUSTODY RECORD

COC NO.: PH1011

PROJECT NAME: Hunter - Pumphouse 1

PROJECT NUMBER: 01-1055-04-2945-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

REQUESTED PARAMETERS 201686%

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29407

PHONE NO: (843)556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
AK0719	1/16/08	0820	Soil	X	X	X	2	167 ppm	
AK0619	1/16/08	0926	Soil	X	X	X	2	4000 ppm	
AK0519	1/16/08	1023	Soil	X	X	X	2	3330 ppm	
AK3819	1/16/08	1237	Soil	X	X	X	2	122 ppm	
AK3919	1/16/08	1327	Soil	X	X	X	2	3040 ppm	
			ISC						

B-148

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 10	Cooler Temperature: 4°C
Timothy Coffey	1/16/08	FedEx	1/16/08	Cooler ID: #13	FEDEX NUMBER: 833296553378
COMPANY NAME: SAIC	1700	COMPANY NAME: FedEx	1700		
RECEIVED BY: P. Hunt	Date/Time 1/17/08 0930	RELINQUISHED BY:	Date/Time	PAH and Lead together in same 8 oz. jar.	
COMPANY NAME: W.L.C.B.	0935 PD	COMPANY NAME:	1/17/08		
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time		
COMPANY NAME:		COMPANY NAME:			

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Science Applications International Corporation
151 Lafayette Ave, Oak Ridge, TN 37830 (865)481-4600

201537, 201540

CHAIN OF CUSTODY RECORD

COC NO.: PH1012

PROJECT NAME: Hunter - Pumphouse 1

PROJECT NUMBER: 01-1055-04-~~2945-200~~ 3552-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407

PHONE NO: (843)556-8171

REQUESTED PARAMETERS

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS.
1	TH0619	1/23/08	0730	QA	X			2	N/A	Trip Blank
2	AK0819	1/23/08	0912	Soil	X	X	X	2	3150 ppm	
3	AK0818	1/23/08	0941	GW	X	X	X	5	N/A	
4	AK0919	1/23/08	1037	Soil	X	X	X	2	3640 ppm	
5	AK0915	1/23/08	1010	QA	X	X	X	5	N/A	Eq. Rinsate
6	AK0918	1/23/08	1055	GW	X	X	X	5	N/A	
7	AK1419	1/23/08	1147	Soil	X	X	X	2	840 ppm	
8	AK1418	1/23/08	1212	GW	X	X	X	5	N/A	
9	AK1519	1/23/08	1243	Soil	X	X	X	2	2740 ppm	
10	AK1518	1/23/08	1310	GW	X	X	X	5	N/A	250-ml bottle for dis/susD
11	AK2119	1/23/08	1359	Soil	X	X	X	2	2770 ppm	
12	AK2118	1/23/08	1418	GW	X	X	X	5	N/A	
13	AK2019	1/23/08	1441	Soil	X	X	X	2	63.1 ppm	

TOTAL NUMBER OF CONTAINERS: See Pg. 2

Cooler Temperature:

Cooler ID:

FEDEX NUMBER:

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Timothy Coffey	01/23/08 1900	Wayne H. Pierce	01/24/08
COMPANY NAME: SAIC		COMPANY NAME: SAIC	
RECEIVED BY: Wayne H. Pierce	01/23/08 1900	~~RELINQUISHED BY:~~ Rel Ben Watkins	1/24/08
COMPANY NAME: SAIC		~~COMPANY NAME:~~ GEL	
RELINQUISHED BY: Wayne H. Pierce	01/24/08 1200	RECEIVED BY: ~~Ben Watkins~~	01/24/08 1260
COMPANY NAME: SAIC		COMPANY NAME: Rel GEL	

RELINQUISHED Ben Watkins 1-24-08 1505

Page 2 of 2

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Science Applications International Corporation
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CHAIN OF CUSTODY RECORD

COC NO.: PH1012

PROJECT NAME: Hunter - Pumphouse 1

PROJECT NUMBER: 01-1055-04-~~2945-200~~ 3456-208

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29407

PHONE NO: (843)556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
AK2018	1/23/08	1515	GW	X	X	X	5	N/A	
AK4019	1/23/08	1603	Soil	X	X	X	2	2840 ppm	
AK4018	1/23/08	1628	GW	X	X	X	5	N/A	

B-150

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 56	Cooler Temperature:
COMPANY NAME: SAIC	01/23/08 1900	COMPANY NAME: GEL	01/24/08 1200	Cooler ID:	FEDEX NUMBER:
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time		
COMPANY NAME: SAIC	~~01/23/08~~ ~~1900~~	COMPANY NAME: 1900			
RELINQUISHED BY:	Date/Time	RECEIVED BY: Relinquished Ben Watkins	Date/Time ~~01/24/08~~ 1/24/08 ~~1200~~ 1505		
COMPANY NAME: SAIC	01/24/08 1200	COMPANY NAME: GEL			

Received by: D. [illegible] at [illegible]

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Science Applications International Corporation
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201682, 201683

CHAIN OF CUSTODY RECORD

COC NO.: PH1013

PROJECT NAME: Hunter - Pumphouse 1

PROJECT NUMBER: 01-1055-04-~~2945~~-200
3056

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
TH0620	1/24/08	0730	QA	X			2	N/A	Trip Blank
AK1019	1/24/08	0821	Soil	X	X	X	2	3040 ppm	
AK1018	1/24/08	0859	GW	X	X	X	5	N/A	
AK1119	1/24/08	0915	Soil	X	X	X	2	3340 ppm	
AK1118	1/24/08	0936	GW	X	X	X	5	N/A	
AK1219	1/24/08	1012	Soil	X	X	X	2	384 ppm	
AK1218	1/24/08	1030	GW	X	X	X	5	N/A	
AK1214	1/24/08	1030	GW	X	X	X	5	N/A	Duplicate
AK1319	1/24/08	1108	~~GW~~ Soil	X	X	X	2	11.8 ppm	
AK1318	1/24/08	1134	GW	X	X	X	5	N/A	
AK1619	1/24/08	1301	Soil	X	X	X	2	118 ppm	
AK1618	1/24/08	1328	GW	X	X	X	5	N/A	
AK1719	1/24/08	1407	Soil	X	X	X	2	741 ppm	

B-151

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29407

PHONE NO: (843)556-8171

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME: SAIC	01/24/08 1900	COMPANY NAME: GEL	01/25/08 1120
RECEIVED BY:	01/24/08 1900	RELINQUISHED BY:	01/25/08 1407
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RELINQUISHED BY:	01/25/08 1120	RECEIVED BY:	1/25/08 1407
COMPANY NAME: SAIC		COMPANY NAME: Gel	

TOTAL NUMBER OF CONTAINERS: See Pg. 2

Cooler ID:

Cooler Temperature:

FEDEX NUMBER:

For soil samples: PAH and Lead are together in same 8-oz. Jar

201705 201706

Page 1 of 2

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CHAIN OF CUSTODY RECORD

COC NO.: PH1014

PROJECT NAME: Hunter - Pumphouse 1 TEC

PROJECT NUMBER: 01-1055-04-~~2945~~-200 3056

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29407

PHONE NO: (843)556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS,
~~PH1021~~	~~1/25/08~~		GA	X			2	N/A	Trip Blank TEC 1/25/08
.1 AK1919	1/25/08	0811	Soil	X	X	X	2	3.7 ppm	
.2 AK1918	1/25/08	0838	GW	X	X	X	5	N/A	
.1 AKZZ19	1/25/08	0913	Soil	X	X	X	2	1830 ppm	
.1 AKZZ13	1/25/08	0913	Soil	X	X	X	2	1830 ppm	Duplicate
.2 AKZZ18	1/25/08	0935	GW	X	X	X	5	N/A	
AK2319	1/25/08	1040	Soil	X	X	X	2	2820 ppm	
.2 AK2318	1/25/08	1101	GW	X	X	X	5	N/A	
.1 AK2419	1/25/08	1138	Soil	X	X	X	2	2930 ppm	
.2 AK2418	1/25/08	1204	GW	X	X	X	5	N/A	
.1 AK2519	1/25/08	1306	Soil	X	X	X	2	13.3 ppm	
.2 AK2518	1/25/08	1339	GW	X	X	X	5	N/A	
.1 AK2619	1/25/08	1425	Soil	X	X	X	2	114 ppm	

B-152

REQUESTED PARAMETERS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: See Pg. 2	Cooler Temperature:
Timothy Coffey	01/25/08 1900	P. Merit	01/26/08 1120	Cooler ID:	FEDEX NUMBER:
COMPANY NAME: SAIC		COMPANY NAME: G.E.L.			
RECEIVED BY: Wayne H. Pan	Date/Time 01/25/08 1900	RELINQUISHED BY: P. Merit	Date/Time 1/26/08 1420	For soil samples: PAH and Lead are together in the same 8-oz jar.	
COMPANY NAME: SAIC		COMPANY NAME: G.E.L.			
RELINQUISHED BY: Wayne H. Pan	Date/Time 01/26/08 1120	RECEIVED BY: Nellie Smith	Date/Time 1-26-08 14:15		
COMPANY NAME: SAIC		COMPANY NAME: GEL			

Page 1 of 2

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151 Lafayette Ave, Oak Ridge, TN 37830 (865)481-4600

CHAIN OF CUSTODY RECORD

20170901

COC NO.: PH1015

PROJECT NAME: Hunter - Pumphouse 1
FTC

PROJECT NUMBER: 01-1055-04-~~2045~~-200
3056

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29407

PHONE NO: (843)556-8171

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
.1	AK2719	1/26/08	0828	Soil	X	X	X	2	2670 ppm	
.2	AK2718	1/26/08	0848	GW	X	X	X	5	N/A	
↓	AK2714	1/26/08	0848	GW	X	X	X	5	N/A	Duplicate
.1	AK2819	1/26/08	0940	Soil	X	X	X	2	3380 ppm	
.2	AK2818	1/26/08	0956	GW	X	X	X	5	N/A	
.1	AK2919	1/26/08	1030	Soil	X	X	X	2	3140 ppm	
.2	AK2918	1/26/08	1053	GW	X	X	X	5	N/A	
.1	AK3019	1/26/08	1140	Soil	X	X	X	2	3830 ppm	
.2	AK3018	1/26/08	1206	GW	X	X	X	5	N/A	Lead: 250-ml poly for MS/MSD
.1	AK3119	1/26/08	1310	Soil	X	X	X	2	0.0 ppm	
.2	AK3118	1/26/08	1330	GW	X	X	X	5	N/A	
.1	AK3719	1/26/08	1357	Soil	X	X	X	2	0.0 ppm	
↓	AK3713	1/26/08	1357	Soil	X	X	X	2	0.0 ppm	Duplicate

B-153

REQUESTED PARAMETERS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: See pg. 2	Cooler Temperature:
COMPANY NAME: SAIC	01/26/08 1900	COMPANY NAME: GEL	01/27/08 1200	Cooler ID:	FEDEX NUMBER:
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time	For soil samples: PAH and Lead are together in same 8-oz. jar.	
COMPANY NAME: SAIC	01/26/08 1900	COMPANY NAME: GEL	1/27/08 14:30		
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time		
COMPANY NAME: SAIC	01/27/08 1200	COMPANY NAME: GEL	1-27-08 1430		

Page 2 of 6

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CHAIN OF CUSTODY RECORD

COC NO.: PH1015

PROJECT NAME: Hunter - Pumphouse 1 TRC

PROJECT NUMBER: 01-1055-04-~~2045~~-200 3056

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29407

PHONE NO: (843)556-8171

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS.
.2	AK3718	1/26/08	1425	GW	X	X	X	5	N/A	
.1	AK3619	1/26/08	1458	Soil	X	X	X	2	3740 ppm	
.2	AK3618	1/26/08	1533	GW	X	X	X	5	N/A	

TRC

B-154

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 56	Cooler Temperature:
COMPANY NAME: SAIC	01/26/08 1400	COMPANY NAME: GEL	01/27/08 1200	Cooler ID:	FEDEX NUMBER:
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time	For Soil samples: PAH and Lead are together in same 8 oz. jar.	
COMPANY NAME: SAIC	01/26/08 1900	COMPANY NAME: GEL	1/27/08 14:30		
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time		
COMPANY NAME: SAIC	01/27/08 1200	COMPANY NAME: GEL	1-27-08 1430		

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Science Applications International Corporation
151 Lafayette Ave, Oak Ridge, TN 37830 (865)481-4600

201744, ~~201746~~ 201745

CHAIN OF CUSTODY RECORD

COC NO.: PH1016

PROJECT NAME: Hunter - Pumphouse 1
TJC

PROJECT NUMBER: 01-1055-04-~~2040~~-200
3456

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS.
AK3219	1/27/08	0824	Soil	X	X	X	2	3390 ppm	
AK3218	1/27/08	0845	GW	X	X	X	5	N/A	
AK3214	1/27/08	0815	GW	X	X	X	5	N/A	Duplicate.
AK3319	1/27/08	0917	Soil	X	X	X	2	2550 ppm	
AK3318	1/27/08	0956	GW	X	X	X	5	N/A	
AK3419	1/27/08	1032	Soil	X	X	X	2	3340 ppm	
AK3418	1/27/08	1456	GW	X	X	X	5	N/A	
AK3519	1/27/08	1256	Soil	X	X	X	2	2320 ppm	
AK3518	1/27/08	1320	GW	X	X	X	5	N/A	
AK4119	1/27/08	1346	Soil	X	X	X	2	2030 ppm	
AK4118	1/27/08	1411	GW	X	X	X	5	N/A	
AK4219	1/27/08	1437	Soil	X	X	X	2	2120 ppm	
AK4218	1/27/08	1502	GW	X	X	X	5	N/A	

B-155

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29407

PHONE NO: (843)556-8171

RELINQUISHED BY:	Date/Time	RECEIVED BY	Date/Time
Timothy Coffey	01/27/08 1400		
COMPANY NAME: SAIC		COMPANY NAME: GEL	01/28/08 1155
RECEIVED BY: Wayne H. Penn	01/27/08 1900	RELINQUISHED BY:	
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RELINQUISHED BY: Wayne H. Penn	01/28/08 1155	RECEIVED BY:	1/28/08 1450
COMPANY NAME: SAIC		COMPANY NAME: GEL	

TOTAL NUMBER OF CONTAINERS: 47

Cooler ID:

Cooler Temperature:

FEDEX NUMBER:

For soil samples: PAH and Lead are together in same 8 oz. Jar.

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Science Applications International Corporation
151 Lafayette Ave, Oak Ridge, TN 37830 (865)481-4600

CHAIN OF CUSTODY RECORD

2018101.
2018111.

COC NO.: PH1017

PROJECT NAME: Hunter - Pumphouse 1
TSC

PROJECT NUMBER: 01-1055-04-~~2945~~-200
3056

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Timothy Coffey (Printed Name): Timothy Coffey

REQUESTED PARAMETERS

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407

PHONE NO: (843)556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	Lead	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS,
AK4319	1/28/08	0805	Soil	X	X	X	2	0.0 ppm	
AK4318	1/28/08	0835	GW	X	X	X	5	N/A	
AK4419	1/28/08	0912	Soil	X	X	X	2	0.0 ppm	
AK4418	1/28/08	0942	GW	X	X	X	5	N/A	
AK4519	1/28/08	1040	Soil	X	X	X	2	0.0 ppm	
AK4518	1/28/08	1101	GW	X	X	X	5	N/A	

TSC

TSC

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Timothy Coffey	01/28/08 1900	Ben Walton	01/28/08 1145
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RECEIVED BY: Wayne H. Penn	Date/Time 01/28/08 1900	RELINQUISHED BY: Ben Walton	Date/Time 01/29/08 1505
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RELINQUISHED BY: Wayne H. Penn	Date/Time 01/29/08 1145	RECEIVED BY: P. Nent	Date/Time 1/29/08 15:05
COMPANY NAME: SAIC		COMPANY NAME: GEL	

TOTAL NUMBER OF CONTAINERS: 21

Cooler ID:

Cooler Temperature:

FEDEX NUMBER:

For soil samples: PAH and Lead are together in same 8oz jar.

B-156

Volatile

Certificate of Analysis

Sample Summary

SDG Number:	201111-1	Date Collected:	01/15/2008 12:25	Matrix:	WATER
Lab Sample ID:	201112005	Date Received:	01/17/2008 09:30		
		Client:	SAJC072	Project:	SAJC007202
Client ID:	AK0118	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	720957	Inst:	VOA2.I	Dilution:	1
Run Date:	01/26/2008 21:20	Analyst:	CDSI	Purge Vol:	5 mL
Prep Date:	01/26/2008 21:20	Column:	DB-624	Level:	MED
Data File:	2a632.d				

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-43-2	Benzene	U	1.00 U	ug/L	0.300	1.00
108-88-3	Toluene		1.63 =	ug/L	0.250	1.00
100-41-4	Ethylbenzene	J	0.754 J	ug/L	0.250	1.00
1330-20-7	Xylenes (total)		3.35 =	ug/L	0.250	1.00

DATA VALIDATION COPY

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number: 201111-1
Lab Sample ID: 201112005

Client ID: AK0118
Batch ID: 719340
Run Date: 01/21/2008 13:12
Prep Date: 01/18/2008 17:28
Data File: s7a2106.d

Date Collected: 01/15/2008 12:25
Date Received: 01/17/2008 09:30
Client: SAIC072
Method: SW846 8270C
Inst: MSD7J
Analyst: RMB
Aliquot: 930 mL
Column: J & W DB-5MS

Matrix: WATER

Project: SAIC007202
SOP Ref: GL-OA-E-009
Dilution: 1
Inj. Vol: .5 uL
Final Volume: 1 mL
Level: LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
83-32-9	Acenaphthene	U	1.08 U	ug/L	0.333	1.08
129-00-0	Pyrene	U	1.08	ug/L	0.323	1.08
91-20-3	Naphthalene	U	1.08	ug/L	0.323	1.08
91-57-6	2-Methylnaphthalene	U	1.08	ug/L	0.323	1.08
91-58-7	2-Chloronaphthalene	U	1.08	ug/L	0.376	1.08
208-96-8	Acenaphthylene	U	1.08	ug/L	0.215	1.08
86-73-7	Fluorene	U	1.08	ug/L	0.215	1.08
85-01-8	Phenanthrene	U	1.08	ug/L	0.215	1.08
120-12-7	Anthracene	U	1.08	ug/L	0.215	1.08
206-44-0	Fluoranthene	U	1.08	ug/L	0.215	1.08
56-55-3	Benzo(a)anthracene	U	1.08	ug/L	0.215	1.08
218-01-9	Chrysene	U	1.08	ug/L	0.215	1.08
205-99-2	Benzo(b)fluoranthene	U	1.08	ug/L	0.215	1.08
207-08-9	Benzo(k)fluoranthene	U	1.08	ug/L	0.215	1.08
50-32-8	Benzo(a)pyrene	U	1.08	ug/L	0.215	1.08
193-39-5	Indeno(1,2,3-cd)pyrene	U	1.08	ug/L	0.215	1.08
53-70-3	Dibenzo(a,h)anthracene	U	1.08	ug/L	0.215	1.08
191-24-2	Benzo(ghi)perylene	U	1.08	ug/L	0.215	1.08

DATA VALIDATION COPY