FINAL

CORRECTIVE ACTION PLAN–PART B
FORMER UNDERGROUND STORAGE TANK 117
BUILDING 7002
BULK FUEL FACILITY (HAA-09)
FACILITY IDENTIFICATION NUMBER: 9-025113*1
HUNTER ARMY AIRFIELD, GEORGIA

Prepared for
U.S. Army Corps of Engineers
Savannah District
Under Contract Number DACA21-95-D-0022
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List of Abbreviations and Acronyms

ACE	Anderson Columbia Environmental, Inc.
ACL	alternate concentration limit
ARAR	applicable or relevant and appropriate requirement
ASTM	American Society for Testing and Materials
ATL	alternate threshold level
AT123D	Analytical Transient 1-, 2-, 3-Dimensional
BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
COPC	contaminant of potential concern
DAF	dilution attenuation factor
DPW	Directorate of Public Works
DRO	diesel-range organics
EPA	U.S. Environmental Protection Agency
GA EPD	Georgia Environmental Protection Division
GRO	gasoline-range organics
GUST	Georgia Underground Storage Tank
ISC	Initial Site Characterization
IWQS	In-stream Water Quality Standard
MCL	maximum contaminant level
PAH	polynuclear aromatic hydrocarbon
RBCA	risk-based corrective action
SAIC	Science Applications International Corporation
SI	Site Investigation
STL	soil threshold level
TPH	total petroleum hydrocarbons
USACE	U.S. Army Corps of Engineers
UST	underground storage tank
USTMP	Underground Storage Tank Management Program
VOC	volatile organic compound

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I. CORRECTIVE ACTION PLAN CERTIFICATION–PART B

(Form and certification follow this page.)

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Georgia Department of Natural Resources
Environmental Protection Division
Land Protection Branch
Underground Storage Tank Management Program
4244 International Parkway, Suite 104
Atlanta, GA 30354
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CORRECTIVE ACTION PLAN
PART B

Facility Name: Former UST 117, Building 7002 Site

Street Address: Bulk Fuel Facility, Perimeter Road

City: Hunter Army Airfield **County:** Chatham

Facility ID #: 9-025113*1

Submitted by UST Owner/Operator:
Name: Thomas C. Fry/Environmental Branch
Company: U.S. Army/HQ 3d Inf. Div. (Mech)
Address: DPW ENRD ENV. Br (Fry)
1550 Frank Cochran, Building 1137
City: Fort Stewart State: GA
Zip Code: 31314-4927

Prepared by:
Name: C. Allison Bailey
Company: Science Applications International Corp.
Address: P.O. Box 2501
City: Oak Ridge State: TN
Zip Code: 37831

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 complete, and the plan satisfies all criteria and requirements of Rule 391-3-15-.09 of the Georgia Rules for Underground Storage Tank Management.

Name: Thomas C. Fry

Signature: Thomas C Fry Date: 08/10/01

B. Professional Engineer or Professional Geologist

Name: C. Allison Bailey

Signature: C. Allison Bailey

Date: 07/25/01

C. ALLISON BAILEY
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
Georgia Stamp or Seal
No. 1530

Check all boxes below 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

A. Horizontal and Vertical Extent of Contamination:

- ☒ Soil (Section II.A.1)
- ☒ Groundwater (Section II.A.2)
- ☒ Free Product (Section II.A.3)
- ☒ Surface Water (Section II.A.4)

B. Local and Site Hydrogeology

- ☒ Documentation of Local Groundwater Conditions (Section II.B.1)
- ☒ Stratigraphic Boring Logs (Section II.B.2)
- ☒ Stratigraphic Cross Sections (Section II.B.3)
- ☒ Referenced or Documented Calculations of Relevant Aquifer Parameters (Section II.B.4)
- ☒ Direction of Groundwater Flow (Section II.B.5)
  - ☒ Table of Monitoring Well Data (Table 6)
  - ☒ Potentiometric Map (Figures 18 and 19)
  - ☒ Flow Net Superimposed on a Base Map (Figure 20)

III. REMEDIAL ACTION PLAN:

A. Corrective Action Completed or In-Progress:

- ☒ Recovery/Removal of Free-Product (Non-aqueous Phase Hydrocarbons)
- ☐ Remediation/Treatment of Contaminated Backfill Material & Native Soils
- ☐ Other (specify)_____

B. Objective of Corrective Action:

- ☒ Remove Free Product That Exceeds One-Eighth Inch
- ☐ Remediate Groundwater Contamination That Exceeds:
  - ☐ Maximum Contaminant Levels (MCLs)

    OR
  - ☐ In-stream Water Quality Standards

B. Objective 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)

☒ Provide Risk Based Corrective Action (Reference CAP B App. VI) (Section III.B.4)

☐ 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 -.09 (3) But Is Less Than ACLs

OR

☐ No Further Action Required - Soil and/or Groundwater Contamination is Below Levels in Rule -.09 (3)

C. Design Operation of Corrective Action Systems

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

D. Implementation (Section III.D)

Includes, as a minimum, the following:

- Milestone schedule for site remediation
- Inspection and preventive maintenance schedule for all specialized remediation equipment
- Monitoring/sampling and reporting plan for measuring interim progress and project completion
- Plan to decommission equipment/wells and close site

IV. PUBLIC NOTICE

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

☒ Legal Notice in Newspaper, as approved by EPD (Section III.E)

☐ Other EPD-approved Method (specify)_____

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

- ☐ GUST Trust Fund Application (GUST-36), must be attached if applicable
- ☐ Cost Proposal
  - ☐ Non-Reimbursable Costs

    OR
  - ☐ Reimbursable Costs
    - ☐ Total Project Costs
      - ☐ Costs incurred to date, per GUST-92
      - ☐ Estimated costs to complete corrective action, per GUST-92
    - ☐ Invoices and Proofs-of-Payment for Costs Incurred to Date
- ☐ Proposed Schedule For Reimbursement
  - ☐ Lump Sum Payment Upon Completion Of Corrective Action

    OR
  - ☐ Interim Payments With Final Payment Upon Completion
- ☒ Not Applicable

II. SITE INVESTIGATION REPORT

This represents the Site Investigation (SI) Report for the Former Underground Storage Tank (UST) 117, Building 7002 site, Facility ID: 9-025113*1, located at the Bulk Fuel Facility (BFF) at Hunter Army Airfield (HAAF), Georgia (Figure 1). This Corrective Action Plan (CAP)–Part B Report follows the guidance published by the Georgia Environmental Protection Division (GA EPD) in February 1995; however, the organization of the appendices for this report mirrors that of the appendices listed in the CAP–Part A template issued by GA EPD in May 1998. Report figures and tables are located in Appendices I and II, respectively.

The Former UST 117, Building 7002 site is located near the northwestern boundary of the HAAF at the BFF as illustrated in Figure 2. The facility is approximately 600 feet by 1,200 feet and covers an area of approximately 16.5 acres. The facility contains three aboveground storage tanks (ASTs) with capacities of approximately 500,000 gallons each, aboveground and underground piping, and off-loader stations and pump stations for the distribution of fuel to and from the ASTs. In the past, the BFF has been used to store jet propulsion (JP-4) fuel, motor gasoline, #2 fuel oil, diesel, and aviation gasoline, and was used to supply fuel to pump houses. Currently, the BFF and associated ASTs and pipelines are used to store JP-8 and to supply fuel to the USTs located at Pump House #3, Pump House #4, and Pump House #5.

According to operational information maintained by the Fort Stewart Directorate of Public Works (DPW), a 550-gallon vertically oriented UST, used to store JP-4 fuel, was previously located in the north–central portion of the facility. This UST (UST 117), along with the ancillary piping, was purged and closed in-place by filling with grout on September 30, 1996, by Anderson Columbia Environmental, Inc. (ACE). In addition, a 2,000-gallon, non-regulated bulk storage overflow tank (UST 131) was removed by Earth Tech, Inc., on June 24, 1999. Refurbishment activities began at the BFF in 1999 and included the upgrading of ASTs 7007 and 7009, the installation of a new aboveground fuel pipeline, and the demolition of ASTs 7001 and 7003. Activities were completed in early 2001.

The site is located within an average or higher groundwater pollution susceptibility area and is more than 500 feet from a withdrawal point but less than 500 feet to a surface water body (Lamar Canal). Since public water supply wells exist within 2 miles of the site, as defined in Georgia Underground Storage Tank (GUST) Management Rule 391-5-15-.09, the appropriate soil threshold levels (STLs) are those presented in Table A, Column 1 of GUST Rule 391-5-15.

ACE performed the Initial Site Characterization (ISC) in September 1996 (ACE 1997). The ISC consisted of closing UST 117 in place on September 30, 1996. The UST piping was drained into the tank, and all remaining contents were subsequently removed using a vacuum truck and/or compressor-driven barrel vacuum device. The piping and the tank were then closed in-place by filling with grout. One soil sample (8102-TK117-S1) was collected from alongside the closed tank at a depth of 5 feet below ground surface (BGS) and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), and polynuclear aromatic hydrocarbons (PAHs). The soil sample was reported to contain benzene at a concentration of 0.013 mg/kg, which exceeds the Georgia Environmental Protection Division (GA EPD) applicable STL for benzene of 0.005 mg/kg (i.e., Table A, column 1). In addition, TPH was reported at a concentration of 163 mg/kg in the soil sample. The Closure Report, dated January 1997, was submitted to GA EPD.

Following the ISC, Science Applications International Corporation (SAIC) conducted a soil gas survey at the BFF in January 1999 to identify areas of significant contaminant concentration (SAIC 1999). The soil gas survey identified distinct continuous soil gas contaminant plumes for combined PAHs, benzene, TPH–diesel-range organics (DRO), and TPH–gasoline-range organics (GRO) with areas of significant contaminant concentrations ("hot spots") identified around Pumping Stations 7002 and 7008; ASTs 7001,

7003, 7005, and 7009; and the rail spur. The most significant areas of contamination were determined to be associated with AST 7003 and Pumping Station 7002, where the highest concentrations of benzene were noted. Sediment and surface water sampling activities were also conducted as part of the soil gas survey investigation. Sediment and surface water samples were collected from Lamar Canal in May 1999 to assess the potential impact of petroleum contaminants from the BFF (SAIC 1999). The evaluation of the surface water data indicated that petroleum-related compounds were not impacting the Lamar Canal surface water. However, the sediment data indicated that petroleum-related compounds were present at multiple isolated sampling locations downstream of the BFF.

Based on the results of the soil gas survey investigation activities, optimal sample locations were recommended for the implementation of a CAP–Part A SI. The CAP–Part A SI was conducted by SAIC in November and December 1999 and January 2000. The SI included the installation of 31 soil borings/monitoring wells, 6 vertical-profile borings, collecting soil and sediment samples for BTEX, PAH, TPH–DRO, TPH–GRO, and volatile organic compound (VOC) headspace analyses; collecting groundwater and surface water samples for BTEX and PAH analyses; collecting one undisturbed geotechnical sample; collecting water level and free product measurements; and conducting a survey of public and nonpublic drinking water supplies within a 2.0- and 0.5-mile radius of the site.

The CAP–Part A Report (SAIC 2000a), describing the results of the ISC and CAP–Part A investigation activities, was submitted to the GA EPD Underground Storage Tank Management Program (USTMP) in June 2000. The GA EPD USTMP conducted a technical review of the CAP–Part A Report. In a correspondence dated September 5, 2000 (Logan 2000), GA EPD approved the technical proposal contained in the CAP–Part A Report for further investigation of the groundwater contamination.

The CAP–Part B SI was conducted by SAIC in November and December 2000 and March 2001. This investigation was performed in accordance with the technical approach described in the SI Plan provided in the CAP–Part A Report (SAIC 2000a) and the requirements of *Addendum #11 to the Work Plan for Preliminary Groundwater and Corrective Action Plan–Part A/Part B Investigations at Former Underground Storage Tank Sites, Fort Stewart, Georgia* (SAIC 2000b). The CAP–Part B SI consisted of performing the following activities:

- installing seven shallow soil borings for soil sampling;
- installing three shallow borings for soil sampling and the installation of 1-inch-diameter monitoring wells to collect groundwater samples;
- collecting two sediment samples from Lamar Canal;
- collecting groundwater samples from all existing site groundwater monitoring wells;
- performing in situ permeability (slug) tests in two of the 2-inch-diameter wells (installed by Earth Tech); and
- collecting a comprehensive round of site water level and free product measurements.

In addition, as part of the facility upgrade activities, Earth Tech, Inc., installed six shallow borings for soil sampling and the installation of 2-inch-diameter monitoring wells around AST 7009. The soil samples were collected by Earth Tech Inc., during borehole installation in January 2000. However, the groundwater samples were collected by SAIC in December 2000 as part of the CAP–Part B SI. The Earth Tech, Inc., borings will herein afterwards be referenced with the CAP–Part B SI.

All soil and sediment samples were analyzed for BTEX, TPH–DRO and TPH–GRO. All groundwater samples were analyzed for BTEX and PAHs.

The CAP–Part B SI soil and sediment analytical laboratory results are included in Appendix V, and the groundwater analytical laboratory results are included in Appendix VIII of this document. This SI Report presents the findings of the CAP–Part B investigation.

The CAP–Part B for the Former UST 117, Building 7002 site was performed by SAIC for the Fort Stewart DPW, Environmental Branch, through the U.S. Army Corps of Engineers (USACE), Savannah District, under contract number DACA21-95-D-022, delivery order 0051.

II.A. HORIZONTAL AND VERTICAL EXTENT OF CONTAMINATION

The horizontal and vertical extent of petroleum contamination in soil and groundwater has been delineated by activities performed during the ISC, CAP–Part A SI, and CAP–Part B SI.

II.A.1. Delineation of Soil Contamination

Petroleum-related contaminants detected in soil at the UST 117 site during the ISC, CAP–Part A, and CAP–Part B SI included BTEX, anthracene, benzo(*a*)anthracene, benzo(*a*)pyrene, benzo(*b*)fluoranthene, benzo(*g,h,i*)perylene, benzo(*k*)fluoranthene, chrysene, dibenzo(*a,h*)anthracene, fluoranthene, fluorene, indeno(1,2,3-*cd*)pyrene, naphthalene, phenanthrene, pyrene, TPH–DRO, and TPH–GRO. BTEX and TPH compounds were present in the soil sample collected during the ISC. During the CAP–Part A SI, BTEX, TPH–DRO, TPH–GRO, benzo(*b*)fluoranthene, benzo(*k*)fluoranthene, fluoranthene, fluorene, and naphthalene were detected. The remaining constituents were detected in the soil samples collected during the CAP–Part B investigation.

II.A.1.a. Contaminant concentrations

II.A.1.a.1. Initial Site Characterization

During the ISC, one soil sample was collected from alongside the tank. The sample contained concentrations of benzene and TPH as indicated in Tables 1a and 1b. The benzene concentration exceeded the applicable GUST STL (i.e., Table A, Column 1).

II.A.1.a.2. CAP–Part A Site Investigation

During the CAP–Part A SI, 31 soil samples were collected for geochemical analysis from 31 shallow soil borings ranging in depths from 10.7 to 13.5 feet BGS, as presented in Figure 3. Field screening methods were used during drilling to select soil samples for geochemical analysis.

The analytical results for soil sampling are summarized in Tables 2a and 2b and presented in the plan view in Figures 3 and 4a. The results exceeding applicable GUST STLs are shown in the cross-sections in Figure 3. The results of the soil and sediment samples collected during the CAP–Part A investigations are summarized below:

- Benzene was detected in 12 of the 31 soil samples at concentrations ranging from 0.0005 J mg/kg in SB-12 to 1.130 mg/kg in SB-22, and there were 4 samples with detection limits above the reporting limits. A total of six of these concentrations and detection limits exceeded the benzene STL of 0.005 mg/kg.

- Toluene was detected in 15 of the 31 soil samples at concentrations ranging from 0.0005 J mg/kg in SB-28 to 0.404 mg/kg in SB-22, and there were 4 samples with detection limits above the reporting limits. A total of two these concentrations and detection limits exceeded the toluene STL of 0.400 mg/kg.

- Ethylbenzene was detected in 8 of the 31 soil samples at concentrations ranging from 0.0006 J mg/kg in SB-29 to 13.6 J mg/kg in SB-22, and there were 2 samples with detection limits above the reporting limits. A total of four concentrations and detection limits exceeded the ethylbenzene STL of 0.370 mg/kg.

- Xylenes were detected in 7 of the 31 soil samples at concentrations ranging from 0.0006 J mg/kg in SB-14 to 74.6 J mg/kg in SB-22, and there were 2 samples with detection limits above the reporting limits. Only one of these samples had a concentration above the xylene STL of 20 mg/kg.

- Four PAH compounds were detected in 6 of the 31 soil samples. None of the concentrations exceeded their respective STLs.

- TPH–DRO was detected in 8 of the 31 soil samples at concentrations ranging from 6.5 mg/kg in SB-14 to 3450.0 mg/kg in SB-22.

- TPH–GRO was detected in 17 of the 31 soil samples at concentrations ranging from 0.07 mg/kg to 4520.0 mg/kg in SB-22.

Concentrations of BTEX exceeded the applicable GUST STLs (i.e., Table A, Column 1). The highest concentration of soil contamination was reported for the soil sample collected from boring SB-22 at a depth of 0.0 to 2.0 feet BGS. Benzene was reported at 1.130 mg/kg, toluene at 0.404 mg/kg, ethylbenzene at 13.6 mg/kg, and total xylenes at 74.6 mg/kg. Each of the compounds were reported above their respective STLs. Benzene and toluene were also detected in boring SB-20 at concentrations above the STLs. For the soil samples collected from borings SB-07, SB-09, SB-10, and SB-17, the volatile reporting limits were elevated causing the values for the BTEX compounds to be qualified as non-detects although their detection limits were above their applicable STLs. Alternate threshold levels (ATLs) for BTEX were calculated (Appendix VI). The ATL for benzene is 0.387 mg/kg, 12.210 mg/kg for toluene, 61.850 mg/kg for ethylbenzene, and 74.60 mg/kg for xylene. The ATL for benzene was exceeded in soil collected from borings SB-07 and SB-22. The ATLs for ethylbenzene and toluene were not exceeded in any of the soil samples. For xylene, the maximum concentration (74.6 mg/kg in SB-22) is equal to the calculated ATL.

II.A.1.a.3. CAP–Part B Site Investigation

During the CAP–Part A SI, the vertical extent of soil contamination was determined; however, the horizontal extent of soil contamination was not. Therefore, the CAP–Part A SI recommended collecting additional soil samples to delineate the horizontal extent of contamination around locations SB-7 and SB-22 (Figure 3).

During the CAP–Part B SI, 10 soil samples were collected for geochemical analysis from 10 shallow soil borings ranging in depth from 6.0 to 13.0 feet BGS. In addition, 12 soil samples were collected for geochemical analysis from the six Earth Tech, Inc., soil borings installed to a depth of 14 feet BGS.

The analytical results for the soil sampling are summarized in Tables 2c and 2d and presented in the plan view in Figures 3 and 4b. The results exceeding applicable STLs are shown in the cross-sections in Figure 3. The results of the soil samples collected during the CAP–Part B SI are summarized below:

- Benzene was detected in 5 of the 22 soil samples at concentrations ranging from 0.0018 mg/kg in SB-37 to 0.0763 mg/kg in SB-38. Only one soil sample (SB-38) had a concentration (0.0763 mg/kg) that exceeded the benzene STL of 0.005 mg/kg.

- Toluene was detected in 7 of the 22 soil samples at concentrations ranging from 0.00043 J mg/kg in SB-34 to 0.0388 mg/kg in SB-36. None of the concentrations exceeded the toluene STL of 0.400 mg/kg.

- Ethylbenzene was detected in 7 of the 22 soil samples at concentrations ranging from 0.0064 mg/kg in SB-37 to 4.5 mg/kg in MW-E3. A total of two of these concentrations exceeded the ethylbenzene STL of 0.370 mg/kg.

- Xylenes were detected in 8 of the 22 soil samples at concentrations ranging from 0.001 J mg/kg in MW-E4 to 17.0 mg/kg in MW-E3. None of these samples had concentrations above the xylene STL of 20 mg/kg.

- Ten PAH compounds were detected in 13 of the 21 soil samples. None of the concentrations exceeded their respective STLs.

- TPH–DRO was detected in 7 of the 22 soil samples at concentrations ranging from 8.6 mg/kg in SB-37 to 1,660 mg/kg in SB-22. There is no STL for TPH–DRO.

- TPH–GRO was detected in 14 of the 22 soil samples at concentrations ranging from 0.0644 mg/kg in SB-35 to 3240.0 mg/kg in SB-38. There is no STL for TPH–DRO.

Concentrations of benzene in the soil sample collected from SB-38 and concentrations of ethylbenzene in the soil sample collected from MW-E3 and SB-38 exceeded their respective applicable GUST STLs (i.e., Table A, Column 1). However, none of the benzene or ethylbenzene concentrations exceeded their respective ATLs (Appendix VI).

II.A.1.b. Field screening results

Field screening through VOC headspace analysis was performed during drilling for soil collected during the CAP–Part A and CAP–Part B investigations.

For each 2-foot interval drilled, soil grab samples were collected in glass jars and covered with aluminum foil. These samples corresponded to potential analytical sample aliquots collected from the same interval. After allowing at least 15 minutes for volatilization and temperature equilibration, the headspace VOC concentration was measured with a photoionization detector to quantify the VOCs present. The field screening results for each boring are indicated on each boring log.

For boreholes from which two soil samples were sent to the analytical laboratory for analysis, sample selection was based on field headspace readings and was as described below.

- In cases in which no contamination was detected by field headspace gas analysis in any of the borehole intervals, two soil samples were sent for chemical analyses: one from the interval nearest to the midpoint between the ground surface and the water table and one from the interval above the water table.

- In cases in which contamination was detected by field headspace gas analysis in one or more of the borehole intervals, two soil samples were sent for chemical analyses: one from the interval with the highest detected organic vapor concentration and one from the interval with the lowest detected organic vapor concentration.

Field headspace readings were also used to select soil samples for boreholes from which only one sample was sent to the analytical laboratory. The sample was selected as described below:

- In cases in which no contamination was detected by field headspace gas analysis in any of the borehole intervals, the sample above the water table was selected.

- In cases in which contamination was detected by field headspace gas analysis in one or more of the borehole intervals, the interval with the highest detected organic vapor concentration was selected.

II.A.2. Delineation of Groundwater Contamination

Petroleum-related contaminants detected in groundwater at the Former UST 117 site during the CAP–Part A SI and CAP–Part B SI included benzene, ethylbenzene, toluene, total xylenes, ancenaphthene, fluorene, naphthalene, and phenanthrene. These constituents were present in 64 of the 105 groundwater samples collected during the CAP–Part A and CAP–Part B investigations. Benzene was the only constituent to exceed its In-stream Water Quality Standard (IWQS) during the CAP–Part A and CAP–Part B investigations. Naphthalene was identified in 17 groundwater samples during the CAP–Part A and CAP–Part B SIs. Naphthalene does not have a Georgia IWQS or federal maximum contaminant level (MCL); however, several concentrations were above the current risk-based screening level of 6.5 µg/L. The other PAH constituents detected were all below applicable regulatory threshold values.

II.A.2.a. Horizontal extent of groundwater contamination

II.A.2.a.1. Initial Site Characterization

Groundwater samples were not collected during tank closure activities as part of the ISC.

II.A.2.a.2. CAP–Part A Site Investigation

During the CAP–Part A SI, 66 groundwater samples were collected for geochemical analysis from 31 shallow monitoring wells (MW-01 through MW-31) and 6 vertical-profile borings (VP-02 through VP-07), as presented in Tables 3a and 3b. The monitoring well construction diagrams were presented in Appendix VII of the CAP–Part A Report (SAIC 2000).

Benzene was identified in 18 groundwater samples during the CAP–Part A SI at concentrations ranging from 0.21 µg/L to 553.0 µg/L, as illustrated in the plan view and cross-section on Figure 5. The benzene concentrations in three samples collected from MW-21, MW-22, and VP-04 were above the Georgia IWQS of 71.28 µg/L and the federal MCL of 5 µg/L. The benzene concentrations in 11 samples exceeded the risk-based concentration of 0.36 µg/L; however, none of the concentrations exceeded the benzene alternate concentration limit (ACL) of 634.4 µg/L (see Appendix VI). The analytical detection limit for benzene was less than 2 µg/L in all samples.

Toluene was identified in 38 groundwater samples during the CAP–Part A SI at concentrations ranging from 0.28 J µg/L to 2.8 µg/L, as illustrated in the plan view and cross-section on Figure 6. The concentrations did

not exceed the Georgia IWQS of 200,000 µg/L; the federal MCL of 1,000 µg/L; or the risk-based screening level of 750 µg/L. The analytical detection limit for toluene was less than 2 µg/L in all samples.

Ethylbenzene was identified in 18 groundwater samples during the CAP–Part A SI at concentrations ranging from 0.10 J µg/L to 86.7 µg/L, as illustrated in the plan view and cross-section in Figure 7. The concentrations did not exceed the Georgia IWQS of 28,718 µg/L; the federal MCL of 700 µg/L; or the risk-based screening level of 1,300 µg/L. The analytical detection limit for ethylbenzene was less than 2 µg/L in all samples.

Total xylenes were identified in 12 groundwater samples during the CAP–Part A SI at concentrations ranging from 0.36 J µg/L to 710 µg/L, as illustrated in the plan view and cross-section in Figure 8. There is no Georgia IWQS for xylenes. The concentrations did not exceed the federal MCL of 10,000 µg/L or the risk-based screening level of 12,000 µg/L. The analytical detection limit for total xylenes was less than 3.0 µg/L in all samples.

Naphthalene was identified in five groundwater samples during the CAP–Part A SI. Naphthalene concentrations ranged from 2.0 µg/L in MW-20 to 101 µg/L in MW-22, as illustrated on Figure 9. This compound does not have a Georgia IWQS or federal MCL; however, concentrations in three samples (MW-10, MW-21, and MW-22) are above the current risk-based screening level of 6.5 µg/L. The concentration in sample MW-21 is above the CAP–Part A calculated site ACL for naphthalene of 57.85 µg/L (SAIC 2000) but below the revised CAP–Part B site ACL of 820.95 µg/L (Appendix VI).

II.A.2.a.3. CAP–Part B Site Investigation

During the CAP–Part A SI, it was determined that benzene concentrations in three groundwater samples were above the IWQS of 71.28 µg/L; however, their concentrations were below the benzene ACL of 634.4 µg/L. In addition, naphthalene was determined to exceed the risk-based screening level of 6.5 µg/L in three groundwater samples with one sample exceeding the CAP–Part A calculated site ACL for naphthalene of 57.85 µg/L. The vertical extent of groundwater contamination was determined during the CAP–Part A SI. As a conservative measure, the CAP–Part A SI recommended that a CAP–Part B SI be conducted to confirm the site conditions, ensure groundwater monitoring locations exist downgradient of the area of highest groundwater contamination, and validate the fate and transport model.

During the CAP–Part B SI conducted in November and December 2000, three additional monitoring wells were installed: (1) adjacent to VP-04; (2) downgradient of MW-22; and (3) cross-gradient of MW-22. One groundwater sample was collected from each of these three new wells (MW-32, MW-33, and MW-34). Groundwater samples were also collected from 30 of the existing CAP–Part A wells and from the 6 monitoring wells installed by Earth Tech, Inc. Monitoring well MW-15 could not be sampled as it had been inadvertently destroyed during the BFF upgrade activities prior to December 2000. A total of 39 groundwater samples were collected for geochemical analysis, as presented in Tables 3c and 3d. Monitoring well locations are presented in Figure 2.

A comprehensive round of water level measurements was also collected on December 1, 2000. During this event, it was discovered that approximately 0.58 feet of free product was present in MW-22 (Table 4). The product was pumped from the well resulting in the recovery of approximately 0.066 gallons. Subsequent measurements collected on February 1 and March 12, 2001, indicate that all free product has been removed. Free product has not been detected in any of the other wells located at the Former UST 117, Building 7002 site.

A site survey conducted on May 1, 2001, determined that during the removal efforts of ASTs 7001 and 7003 at the BFF in April 2001, monitoring wells MW-21 and MW-24 were destroyed. In addition, the construction of a haul road for the AST removal efforts damaged the concrete pads around monitoring wells MW-17, MW-20, MW-22, MW-23, MW-25, and MW-26, and may have damaged the wells below the surface.

Benzene was identified in 10 groundwater samples during the CAP–Part B SI at concentrations ranging from 0.29 J µg/L to 251 µg/L, as illustrated in the plan view and cross-section on Figure 10. The benzene concentrations in three samples collected from MW-21, MW-22, and MW-32 were above the Georgia IWQS of 71.28 µg/L and the federal MCL of 5 µg/L. The benzene concentrations in eight samples exceeded the risk-based concentration of 0.36 µg/L; however, none of the concentrations exceeded the benzene ACL of 634.4 µg/L (see Appendix VI). The analytical detection limit for benzene was less than 2 µg/L in all samples.

Toluene was identified in 10 groundwater samples during the CAP–Part B SI at concentrations ranging from 0.27 J µg/L to 5.7 µg/L, as illustrated in the plan view and cross section on Figure 11. The concentrations did not exceed the Georgia IWQS of 200,000 µg/L; the federal MCL of 1,000 µg/L; or the risk-based screening level of 750 µg/L. The analytical detection limit for toluene was less than 2 µg/L in all samples.

Ethylbenzene was identified in 13 groundwater samples during the CAP–Part B SI at concentrations ranging from 0.18 J µg/L to 128 µg/L, as illustrated in the plan view and cross-section in Figure 12. The concentrations did not exceed the Georgia IWQS of 28,718 µg/L; the federal MCL of 700 µg/L; or the risk-based screening level of 1,300 µg/L. The analytical detection limit for ethylbenzene was less than 2 µg/L in all samples.

Total xylenes were identified in 13 groundwater samples during the CAP–Part B SI at concentrations ranging from 0.30 µg/L to 734 µg/L, as illustrated in the plan view and cross-section in Figure 13. There is no Georgia IWQS for xylenes. The concentrations did not exceed the federal MCL of 10,000 µg/L or the risk-based screening level of 12,000 µg/L. The analytical detection limit for total xylenes was less than 3.0 µg/L in all samples.

Acenaphthene and fluorene were detected in two groundwater samples (MW-E1 and MW-E5), and phenanthrene was detected in one groundwater sample (MW-E5); however, none of the concentrations exceeded applicable Georgia IWQS or the risk-based screening levels.

Naphthalene was identified in 12 groundwater samples during the CAP–Part B SI. Naphthalene concentrations ranged from 0.58 J µg/L to 528 µg/L, as illustrated on Figure 14. This compound does not have a Georgia IWQS or federal MCL; however, concentrations in seven samples are above the current risk-based screening level of 6.5 µg/L. None of the concentrations are above the CAP–Part B SI calculated site ACL for naphthalene of 820.95 µg/L (Appendix VI).

II.A.2.a.4. Conclusions of the horizontal extent of site groundwater contamination

Figures 5 through 14 demonstrate that the horizontal extent of groundwater contamination has been delineated. Petroleum contaminants identified in groundwater at the Former UST 117, Building 7002 site included BTEX constituents normally associated with gasoline and diesel releases as well as PAH constituents, which probably represent less soluble biodegradation products of such a release. During the CAP–Part A and CAP–Part B investigations, benzene was the only compound detected that exceeded the Georgia IWQS of 71.28 µg/L; however, none of the concentrations exceeded the benzene ACL of 634.4 µg/L. None of the PAH constituents detected during the CAP–Part A or CAP–Part B SI exceeded their respective Georgia IWQS. Naphthalene was detected at concentrations exceeding the risk-based screening level of 6.5 µg/L. However, none of the naphthalene concentrations exceeded the CAP–Part B calculated site naphthalene ACL of 820.95 µg/L.

II.A.2.b. Vertical extent of groundwater contamination

The vertical extent of groundwater contamination was not investigated during the ISC. During the CAP–Part A SI, the vertical extent of groundwater was delineated through groundwater sampling below the water table. Six vertical-profile borings (VP-02 through VP-07) were advanced below the water table, and groundwater samples were collected at 5-foot intervals. Drilling was stopped at a refusal depth of 43.0 feet BGS. This refusal depth may have indicated the Hawthorn Formation. The benzene concentrations in groundwater were found to decrease with depth. During the vertical groundwater investigation, the highest benzene concentration (81.8 μg/L) was observed in VP-4 from the 13.0- to 18.0-foot sample interval. The following sample interval, 18.0 to 23.0 feet BGS, had a benzene concentration of 1.4 μg/L. The deepest interval, 38.0 to 43.0 feet BGS, in VP-4 had a benzene concentration of 0.21 J μg/L, indicating that the vertical extent of groundwater contamination had been delineated and is confined to the Surficial Aquifer.

II.A.3. Delineation of Free Product Plume

Free product was identified at the Former UST 117, Building 7002 site during the CAB–Part B SI. On December 1, 2000, approximately 0.58 feet of free product was discovered in MW-22. The product was removed from the well by pumping, resulting in the recovery of approximately 0.066 gallons. Subsequent measurements collected on February 1 and March 12, 2001, indicate that all free product has been removed. Free product has not been detected in any of the other wells located at the Former UST 117, Building 7002 site.

II.A.4. Delineation of Sediment and Surface Water Contamination

II.A.4.a. CAP-Part A Investigation

A total of nine sediment samples and eight surface water samples were collected from Lamar Canal during the CAP–Part A SI. The analytical results for the sediment samples are summarized in Tables 2e and 2f. The analytical results for the surface water samples are summarized in Tables 3e and 3f. The sampling locations for these samples are shown on Figure 15. The results of the sampling activities are summarized below:

- Benzene was not detected in any of the sediment samples. In sediment sample SD-3, the detection limit for benzene was above the reporting limit and exceeded the STL of 0.005 mg/kg; however, the concentration was below the ATL.
- Toluene was detected in seven of the nine sediment samples at concentrations ranging from 0.00036 J mg/kg in SD-08 to 2.81 mg/kg in SD-3. Only sediment sample SD-3 had a toluene concentration that exceeded the STL of 0.400 mg/kg. However, this concentration was below the ATL.
- Ethylbenzene was not detected in any of the sediment samples. In sediment sample SD-3, the detection limit for ethylbenzene was above the reporting limit; however, the concentration did not exceed the STL.
- Xylene was not detected in any of the sediment samples. In sediment sample SD-3, the detection limit for xylene was above the reporting limit; however, the concentration did not exceed the STL.
- Seven PAH compounds were reported in two of the nine sediment samples. However, none of the concentrations exceeded their respective STLs.

- TPH–DRO was detected in two of the nine sediment samples at concentrations of 9.2 J mg/kg and 9.2 mg/kg.
- TPH–GRO was also detected in two of the nine sediment samples at concentrations of 0.232 mg/kg and 0.160 mg/kg.
- Benzene was the only compound detected in the eight surface water samples collected. Surface water sample SD-5 contained a benzene concentration of 0.17 µg/L. This concentration did not exceed the IWQS of 71.28 µg/L or the MCL of 5 µg/L.

The CAP–Part A SI recommended collecting additional sediment samples adjacent to location SD-3 because this location contained concentrations of benzene and toluene above their respective STLs and is located adjacent to the storm drain system draining the area with identified groundwater contamination.

II.A.4.b. CAP–Part B Investigation

During the CAP–Part B SI, two sediment samples (SD-10 and SD-11) were collected downgradient of the site from Lamar Canal adjacent to SD-3 and near the storm drain. The sampling locations are shown on Figure 15, and analytical data for these samples are shown on Tables 2e and 2f. No BTEX or PAH compounds were detected in either of the two samples collected. No surface water samples were collected during the CAP–Part B SI.

II.B. LOCAL AND SITE HYDROGEOLOGY

Discussion of the local and site hydrogeology is based on field observations and investigative activities performed during the CAP–Part A SI and CAP–Part B SI of the Former UST 117, Building 7002 site and is presented in detail in Appendix X.

II.B.1. Documentation of Local Groundwater Conditions

II.B.1.a. Groundwater usage

According to the Groundwater Pollution Susceptibility Map of Georgia (GA EPD 1992), the Former UST 117, Building 7002 site is located within an average or higher groundwater pollution susceptibility area. A total of five public groundwater supply wells are located within a 2-mile radius of the Former UST 117, Building 7002 site. Four of these wells (PWS #1, PWS #2, PWS #3, and PWS #4A) are located within the confines of the HAAF. The other well (PWS #25) is located approximately 0.8 miles northwest of the site in Savannah, Georgia. All of the groundwater supply wells are classified as public wells and supply water either to HAAF or the City of Savannah for drinking and non-drinking purposes. These wells range in depth from approximately 300 feet to 600 feet deep and draw groundwater from the Principal Artesian (also known as the Floridan) Aquifer. A complete discussion of the water supply wells at HAAF and near the Former UST 117, Building 7002 site is provided in Appendix III. The locations of the wells within the 2-mile radius and within a 500-foot radius are shown on Figures 16 and 17, respectively.

II.B.1.b. Aquifer description

The hydrogeology in the vicinity of HAAF is dominated by two aquifers referred to as the Principal Artesian and the Surficial Aquifers (Miller 1990). The Principal Artesian Aquifer is the lowermost hydrologic unit and

is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer is composed primarily of Tertiary-age limestone, including the Bug Island Formation, the Ocala Group, and the Suwannee Limestone. These formations are approximately 800 feet thick, and groundwater from this aquifer is used primarily for drinking water (Arora 1984).

The uppermost hydrologic unit is the Surficial Aquifer, which consists of widely varying amounts of sand and clay ranging from 55 feet to 150 feet in thickness. This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 feet to 10 feet BGS (Miller 1990). The base of the aquifer corresponds to the top of the underlying dense clay of the Hawthorn Group. The Hawthorn Group was not encountered during drilling at this site but is believed to be located at approximately 50 feet BGS; thus, the effective aquifer thickness would be approximately 45 feet. Groundwater encountered at the Former UST 117, Building 7002 site is part of the Surficial Aquifer system.

The confining layer for the Principal Artesian Aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 feet to 90 feet. The vertical hydraulic conductivity of this confining unit is on the order of 10^{-8} cm/sec. There are minor occurrences of aquifer material within the Hawthorn Group; however, they have limited utilization (Miller 1990). The Hawthorn Group has been divided into three formations: Coosawhatchie Formation, Markshead Formation, and Parachula Formation, which are listed from youngest to oldest.

The Coosawhatchie Formation is composed predominantly of clay but also has sandy clay, argillaceous sand, and phosphorite units. The formation is approximately 170 feet thick in the Savannah, Georgia, area. This unit disconformably overlies the Markshead Formation and is distinguished from the underlying unit by dark phosphatic clays or phosphorite in the lower part and fine-grained sand in the upper part.

The Markshead Formation is approximately 70 feet thick in the Savannah, Georgia, area and consists of light-colored phosphatic, slightly dolomitic, argillacerous sand to fine-grained sandy clay with scattered beds of dolostone and limestone.

The Parachula Formation consists of sand, clay, limestone, and dolomite and is approximately 10 feet thick in the Savannah, Georgia, area. The Parachula Formation generally overlies the Suwannee Limestone in Georgia.

Based on the fact 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 the Former UST 117, Building 7002 site (and associated plumes, if applicable) and water supply withdrawal points.

II.B.1.c. Surface water

The water resources survey conducted during the CAP–Part A SI is presented in Appendix III. Surface water bodies including Lamar Canal, Pond 29, and several unnamed drainage ditches are located within a 1-mile radius of the Former UST 117, Building 7002 site and are shown in Figure 17. Lamar Canal is located approximately 180 feet south–southeast (downgradient) of the BFF site. A series of storm drains and catch basins are located along the southern border of the BFF and are used to drain the bermed area around each of the ASTs (Figure 2). One of the storm drains is located approximately 120 feet from the area of greatest soil and groundwater contamination (SB/MW-22) in the vicinity of AST 7003. The invert elevation of the storm drain is unknown; however, based on the shallow depth to the water table (2.26 feet BGS), it is assumed that the storm drain is below the water table. Therefore, the storm drain is considered as a preferential pathway. Based on the location of Lamar Canal relative to the associated plumes, the Former UST 117, Building 7002 site is classified as being located less than 500 feet from a surface water body.

II.B.2. Stratigraphic Boring Logs

The local stratigraphy of HAAF and vicinity is presented in Section II.B.2.a, and the site stratigraphy from the CAP–Part A and CAP–Part B investigations is presented in Section II.B.2.b.

II.B.2.a. Local stratigraphy

HAAF is located within the Barrier Island Sequence District of the Coastal Plain Physiographic Province of the Southeast United States (Clark and Zisa 1976). The Barrier Island Sequence District in Chatham County is characterized by the existence of several marine terraces (step-like topographic surfaces that decrease in elevation toward the coast). These marine terraces, and their associated deposits, are the result of sea level fluctuations that occurred during the Pleistocene Epoch. The surficial (Quaternary) deposits in Chatham County, in decreasing elevation and area, are part of the Okefenokee, Wicomico, Penholoway, Pamlico, and Silver Bluff terrace complexes (Wilkes et al. 1974; GA DNR 1976; Huddlestun 1988).

HAAF, as well as most of Chatham County, is underlain by the Pleistocene Pamlico Terrace. The Pleistocene Satilla Formation (formerly known as the Pamlico Formation) consists of deposits of the Pamlico Terrace complex and other terrace complexes in the region. The Satilla Formation is a lithologically heterogeneous unit that consists of variably bedded to non-bedded sand and variably bedded silty to sandy clay. During the Pleistocene, these sand and clay deposits were formed in offshore and inner continental shelf, barrier island, and marsh/lagoonal-type environments (Huddlestun 1988). According to the Geologic Map of Georgia (GA DNR 1976), clay beds of marsh origin, which were deposited on the northwest side of the former Pamlico Barrier Island complex, exist in the western quarter of HAAF. Very fine- to coarse-grained sand deposits of barrier island origin are more common throughout the remaining areas of HAAF.

II.B.2.b. Site stratigraphy

As determined from soil borings drilled during the CAP–Part A SI and CAP–Part B SI, the lithologies present within 15 feet of the surface at the Former UST 117, Building 7002 site appear to correlate with the regional stratigraphic section. The lithology underlying the study area consists of interbedded layers of sand with varying amounts of silt and clay concluded to be part of the Satilla Formation. Soil groups at HAAF include the Chipley, Leon, Ellabelle, Kershaw, Pelham, Albany, Wahee, and Ogeechee (Wilkes et al. 1974). CAP–Part B SI soil boring logs are provided in Appendix IV.

II.B.3. Stratigraphic Cross Sections

Stratigraphic cross sections have been developed based on the CAP–Part A SI and CAP–Part B SI soil boring logs. Figure 3 presents four cross sections that illustrate the geology described in Section II.B.2.b.

II.B.4. Referenced or Documented Calculations

Referenced or documented calculations performed to support the CAP–Part B SI include those used in developing and interpreting the results of the groundwater slug testing and the site ATLs and ACLs (Appendix VI and Attachment A).

II.B.4.a. Geotechnical analysis

A soil sample for geotechnical analysis was collected as part of the CAP–Part A investigation. The results were provided in the CAP–Part A Report (SAIC 2000) and are summarized in Table 5 of this document. Additional geotechnical sampling was not performed as part of the CAP–Part B SI.

II.B.4.b. Slug testing

Slug tests were conducted on shallow wells MW-E4, MW-E5, and MW-E6 on January 4, 2000. The slug test data were evaluated using the Bouwer & Rice method in the AQTESOLVE Professional v2.5 (1999) groundwater modeling software. Calculated hydraulic conductivity values are 0.0010 cm/sec, 0.0064 cm/sec, and 0.0013 cm/sec, respectively. The average hydraulic conductivity of the surficial aquifer around the Former UST 117, Building 7002 site is 0.0029 cm/sec. Calculations for determining the hydraulic conductivity and transmissivity from the slug test data are presented in Attachment A.

II.B.5. Direction of Groundwater Flow

II.B.5.a. Well construction details

Following contact with fully saturated material in a soil boring, a water level measurement was taken to determine the remaining depth to be drilled. This measurement was necessary to ensure the placement of at least 5 feet of well screen below the water table, in accordance with the Work Plan.

The monitoring well casing installed by SAIC consisted of a 1-inch inside diameter, Schedule 40, flush-thread, polyvinyl chloride (PVC) riser pipe and screen in 10-foot sections (MW-01 through MW-34). Earth Tech, Inc., installed 2-inch inside diameter, Schedule 40, flush-thread PVC riser pipe and screen in 10-foot sections (MW-E1 through MW-E6). The well screen slot size was 0.010 inch. Table 6 summarizes construction details for CAP–Part A SI and CAP–Part B SI monitoring wells. Well construction diagrams for the CAP–Part B SI are presented in Appendix VII. Following installation of the well casing, filter-pack sand was poured and extended to a measured level at least 0.5 foot above the top of the well screen.

Well seals were composed of 3/8-inch bentonite pellets and allowed to hydrate before filling of the annular space above the seal. The total volume of potable water used to hydrate the pellets averaged 2 gallons per well. The well seal extended to a measured level of at least 0.5 foot above the top of the filter pack.

Above the well seal, the remaining annular space was completed with a 1-foot-long, flush-mount, sheet steel protective casing that was grouted in place with a 12-inch-diameter × 4-inch-thick, high-strength concrete pad or a 3-foot × 3-foot × 4-inch-thick pad, depending upon whether the borehole was located in concrete or grass. Well casings were capped with expandable locking caps. Protective casings were covered with bolted cast-iron manhole covers. Inscribed monitoring well identification plates were permanently affixed to the inside of each manhole cover.

II.B.5.b. Potentiometric mapping

Water level measurements were collected during the CAP–Part A SI at least 24 hours after installation in January 2000 and during CAP–Part B SI groundwater sampling activities in March 2001. Data obtained from these measurements are presented in Tables 7a and 7b. During the CAP–Part A SI in January, groundwater flowed to the southeast (Figure 18). During the CAP–Part B SI in March 2001, groundwater was also determined to flow to the southeast (Figure 19).

II.B.5.c. Equipotential flow net

An equipotential flow net based on the March 2001 water level measurements and the contoured potentiometric surface is presented in Figure 20.

III. REMEDIAL ACTION PLAN

III.A. CORRECTIVE ACTION COMPLETED OR IN PROGRESS

III.A.1. Recovery/Removal of Free Product

Free product was identified in monitoring well MW-22 on December 1, 2000. Corrective action activities at the site consisted of pumping the free product from well MW-22, resulting in the recovery of approximately 0.066 gallons of free product on December 1, 2000. Subsequent measurements collected on February 1 and March 12, 2001, indicate that all of the free product has been removed (Table 4). Free product has not been detected in any of the other wells located at the Former UST 117, Building 7002 site.

III.A.2. Remediation/Treatment of Contaminated Backfill Material and Native Soils

Anderson Columbia closed UST 117 in place on September 30, 1996. No soil was excavated or removed from the site.

III.B. OBJECTIVES OF CORRECTIVE ACTION

III.B.1. Removal of Free Product That Exceeds One-Eighth Inch

During the CAP–Part B investigation in December 2000, free product was detected in monitoring well MW-22. All free product was removed from MW-22 on December 1, 2000. On February 1 and March 12, 2001, additional measurement activities were conducted. Free product was not measured in MW-22 during either of these events. However, it is recommended that all of the site wells be monitored for the presence of free product during the recommended semi-annual basis for the next year. If free product is detected, removal activities will be commenced.

III.B.2. Remediate Groundwater Contamination

The CAP–Part A and CAP–Part B SIs documented groundwater contamination that exceeded the benzene IWQS at locations MW-21, MW-22, VP-4, and MW-34. During the CAP–Part A SI, the benzene concentration at the site in December 1999 was 553 µg/L in well MW-22, which is above the IWQS of 71.28 µg/L. This concentration was the maximum concentration observed during the CAP–Part A and CAP–Part B SIs. However, this concentration does not exceed the calculated benzene ACL of 634.4 µg/L (Appendix VI). During the CAP–Part B SI, the highest benzene concentration at the site was 251 µg/L, which was observed in well MW-21. Because MW-21 was destroyed during the removal efforts of ASTs 7001 and 7003, it is recommended that a replacement well (MW-21A) be installed in its former location.

The CAP–Part A and CAP–Part B SIs documented groundwater contamination that exceeded the naphthalene risk-based screening level of 6.5 µg/L at locations MW-9, MW-10, MW-20, MW-21, MW-22, MW-E1, and MW-E5. During the CAP–Part B SI, the maximum naphthalene concentration of 528 µg/L was observed in MW-22; however, this concentration does not exceed the CAP–Part B calculated ACL of 820.95 µg/L. None of the other PAH constituents were detected at concentrations above their respective IWQS or risk-based screening levels during the CAP–Part A or CAP–Part B SI.

As a result of the CAP–Part B SI, monitored natural attenuation of the site is recommended to confirm that benzene and naphthalene concentrations remain below their respective ACLs over the next 12 months (i.e., confirmatory sampling).

III.B.3. Remediate Soil Contamination

The results from the CAP–Part A investigation indicate that concentrations of benzene, toluene, ethylbenzene, and xylenes exceeded the applicable GUST STLs (i.e., Table A, Column 1). The highest concentration of soil contamination was reported for the soil sample collected from boring SB-22 at a depth of 0.0 to 2.0 feet BGS. Benzene was reported at 1.130 mg/kg, toluene at 0.404 mg/kg, ethylbenzene at 13.6 mg/kg and, xylenes at 74.6 mg/kg. Each of the compounds were reported above their respective STLs. Benzene and toluene were also detected in boring SB-20 and at sediment sampling location SD-3 at concentrations above the STLs. For the soil samples collected from borings SB-07, SB-09, SB-10, and SB-17, the volatile reporting limits were elevated causing the values for the BTEX compounds to be qualified as non-detects. ATLs for benzene, toluene, ethylbenzene, and xylene were calculated (Appendix VI). The ATL for benzene is 0.387 mg/kg, 12.210 mg/kg for toluene, 61.850 mg/kg for ethylbenzene, and 74.60 mg/kg for xylene. The ATL for benzene was exceeded in soil collected from borings SB-07, and SB-22. The ATLs for ethylbenzene and toluene were not exceeded in any of the soil samples. For xylene, the maximum concentration (74.6 mg/kg in SB-22) is equal to the calculated ATL.

To delineate the horizontal extent of soil contamination around location SB-07 and SB-22, additional soil samples were collected as part of the CAP–Part B SI. The results of the CAP–Part B investigation indicate that concentrations of benzene and ethylbenzene in the soil sample collected from SB-38, located adjacent to MW-22, exceeded their respective applicable GUST STLs (i.e., Table A, Column 1); however, the concentrations were below the ATLs. In addition, ethylbenzene was detected in MW-E3 above its STL; however, the concentration was below the ATL. The GUST STLs were not exceeded in any of the other soil or sediment samples collected during the CAP–Part B SI. The ATLs were not exceeded in any of the CAP–Part B sediment samples. Both the benzene and the xylene concentrations are below the risk-based screening levels (i.e., 200 mg/kg and 1,000,000 mg/kg, respectively) that are protective of soil exposure during industrial land use.

The subsequent sampling at SB-22 to delineate the horizontal extent of the benzene contamination in the soil indicated that benzene concentrations above its ATL were limited to the SB-22 location. At SB-22, the soil sample was collected from 0.0 to 2.0 feet BGS, which is above the water table. Groundwater samples collected at this location (MW-22) detected benzene concentrations of 553 μg/L and 174 μg/L, during the CAP–Part A and CAP–Part B SIs, respectively. However, both of these concentrations are below the ACL of 634.4 μg/L. Because the benzene concentration exceeding its ATL is limited to only SB/MW-22, the benzene contamination is above the water table, and the groundwater concentrations are below the benzene ACL, active remediation/removal of the soil is not recommended.

III.B.4. Provide Risk-based Corrective Action

A risk-based approach was used to determine the need for further action at the Former UST 117, Building 7002 site. Due to the nature of the contamination, the risk-based approach was limited to human health concerns. Ecological risk concerns are negligible because of the land use surrounding the site. The analytical results from surface water and sediment sampling in the drainage ditch indicate that the habitat potentially associated with Lamar Canal is not impacted by the former UST operations.

The methods for assessing human health concerns for the site were derived from GUST CAP–Part B guidance (GA EPD 1995) and recent GA EPD guidance (GA EPD 1996). These were supplemented by the additional

guidance documents on risk assessment methods referenced in this section. In general, the risk-based corrective action (RBCA) approach is performed in two steps:

1. Results are screened against readily available regulatory levels and risk-based screening levels to identify contaminants of potential concern (COPCs).

2. Site-specific ACLs are developed for COPCs using the results of the fate and transport modeling and identified receptor locations.

The following sections present the conceptual model of the exposure setting and potential receptors as well as the general methodology employed to perform the screening for COPCs and the development of ACLs.

III.B.4.a. Potential receptor survey

The exposure assessment identifies any potentially complete pathways between the contaminant source and potential receptors. This involves identifying potential current and future receptors, release mechanisms through which contamination might come into contact with the receptors, and routes of exposure through which receptors might be exposed.

The Former UST 117, Building 7002 site is located within an active military installation and within an access-controlled fence. Lamar Canal is located approximately 180 feet south–southeast (downgradient) of the BFF site. A series of storm drains and catch basins are located along the southern border of the BFF and are used to drain the bermed area around each of the ASTs. One of these storm drains is located 120 feet from AST 7003.

No connection between site contamination and current off-site receptors has been identified. Site contamination has migrated to the Surficial Aquifer. The Hawthorn Group, which is approximately 90 feet of clay, separates the Surficial Aquifer from the deep drinking water aquifer, the Floridan Aquifer. There appears to be no vertical migration from the Surficial Aquifer to the Floridan Aquifer. None of the HAAF's current water supply wells are located downgradient of the Former UST 117, Building 7002 site. The Hawthorn Group, a thick and highly effective confining unit, separates the water supply wells from the Surficial Aquifer.

Current on-site receptors have not been identified for the site. Potential future on-site receptors might include industrial workers and military residents.

Potential future on-site industrial receptors may come in direct contact with site soil contamination during construction or excavation activities. No near-term on-site receptors are likely to come into contact with groundwater unless the Surficial Aquifer discharges into the catch basin or Lamar Canal.

III.B.4.b. Screening for chemicals of potential concern

III.B.4.b.1. Screening Methodology

The purpose of a risk evaluation screening is to identify the COPCs and areas of concern at a site, and possibly to identify sites for which no further action is needed. The first step in the risk process uses screening levels that are readily obtainable and that, due to their conservative nature, can be used with a high degree of confidence to indicate sites for which no further action is required.

An American Society for Testing and Materials (ASTM 1995) Tier 1-type risk evaluation process will be applied to the data collected for the Former UST 117, Building 7002 site to identify any COPCs and media for which no further action is needed. The risk evaluation screen involves the steps listed below:

- identify potential migration and exposure pathways associated with the site, and identify potential exposure scenarios that should be used to select screening levels;
- identify risk-based screening levels and regulatory-based screening levels for each contaminant;
- compare site-related concentrations to screening levels to determine if any COPCs exist at the site; and
- compare detection limits to screening levels to identify potential false-negative screening results.

The screening levels for the Former UST 117, Building 7002 site data have been taken from the following sources based on GA EPD guidance (GA EPD 1996):

- Georgia IWQS (GA EPD 1998),
- GUST STLs (i.e., Table A, column 1),
- soil screening levels developed by the U.S. Environmental Protection Agency (EPA) (1996), and
- soil and groundwater risk-based concentrations developed by EPA Region 3 (EPA 1999).

These values reflect screening levels based on a combination of regulatory screening levels (i.e., IWQS and GUST STLs), and calculated risk-based values (i.e., EPA Region 3 risk-based concentrations).

Screening levels inherently incorporate assumptions about land use. In identifying COPCs, it is generally accepted that screening levels will reflect any potential future land uses and, thus, they usually reflect a conservative residential use scenario (EPA 1991; EPA 1996; ASTM 1995). Based on GA EPD guidance, risk-based screening levels reflect residential land use for groundwater and industrial land use for deep soils (i.e., > 2 feet BGS) (GA EPD 1996).

Default residential exposure scenarios for groundwater assume that use of the land could someday be residential and that the following exposures could occur:

- ingestion of groundwater, and
- inhalation of volatiles during showering.

The default industrial exposure assumptions for deep soils (i.e., > 2 feet BGS) assume that the following exposures could occur:

- incidental ingestion of soil, and
- inhalation of volatiles and dust.

EPA's *Soil Screening Guidance* (EPA 1996) provides two options for selecting soil values that address protection of groundwater. One value assumes no contaminant dilution or attenuation would occur between the soil and groundwater; a second value assumes a 20-fold dilution attenuation factor (DAF). A DAF of 20 was used to develop soil screening values protective of groundwater at the Former UST 117, Building 7002 site.

If applicable or relevant and appropriate requirement (ARAR)- or risk-based values are not available, it generally means that (1) the chemical is not considered to be toxic except perhaps at extremely high

concentrations (e.g., aluminum, sodium); (2) the dose-response data do not indicate a toxic effect; or (3) EPA is currently reviewing toxicity information, and no reference dose or cancer slope factor is currently available.

III.B.4.b.2. Risk-based screening results

The risk-screening process is a systematic screening of sample results to determine site-related COPCs. Constituent concentrations below risk- or ARAR-based screening levels were not considered to be COPCs and were not evaluated further. Table 8 presents the results of the risk-based screening for the CAP–Part A and the CAP–Part B SI soil data. Table 9 presents the results of the risk-based screening for the CAP–Part A SI and CAP–Part B SI groundwater data.

During the CAP–Part A SI, BTEX compounds were detected above GUST and risk-based screening levels based on leaching to groundwater in seven soil of the 53 soil samples collected. BTEX compounds were identified as COPCs for soil at the site.

The detection limits for benzene, toluene, ethylbenzene, and several PAHs exceeded GUST and risk-based screening levels in several samples during the CAP–Part A and CAP–Part B SIs. Many results were estimated due to detections below the detection limits. No soil data were rejected. No COPCs for soils were selected for the site based on the detection limits.

During the CAP–Part A SI, 66 groundwater samples were collected from 31 shallow monitoring wells and 6 vertical profiles. Benzene was identified in 18 groundwater samples at concentrations ranging from 0.21 µg/L to 553.0 µg/L. A total of 11 of these results exceeded the risk-based concentration of 0.36 µg/L. Concentrations in three of these samples (MW-21, MW-22, and VP-4) exceeded the benzene IWQS of 71.28 µg/L. Naphthalene was detected in five groundwater samples with concentrations ranging from 2.0 µg/L in MW-20 to 101.0 µg/L in MW-22. Concentrations in three samples (MW-10, MW-21, and MW-22) exceeded the risk-based screening levels for naphthalene of 6.5 µg/L. An IWQS does not exist for naphthalene. Toluene, ethylbenzene, and total xylenes were detected but at concentrations below their respective IWQS and risk-based screening levels.

Thirty-nine groundwater samples were collected during the CAP–Part B SI. Benzene was detected in 11 samples from 39 wells at concentrations above screening levels. The detections ranged from 0.29 µg/L at well MW-E4 to 251 µg/L at well MW-21. A total of nine of these results exceeded the risk-based screening level of benzene of 0.36 µg/L. Three of the 11 results also exceeded the IWQS for benzene of 71.28 µg/L. Naphthalene was detected in 12 of the 39 samples at concentrations above screening levels. The detections ranged from 0.58 µg/L in MW-31 to 528 µg/L in MW-22. A total of seven of these results exceeded the risk-based screening levels for naphthalene of 6.5 µg/L. An IWQS does not exist for naphthalene. Ethylbenzene, toluene, xylenes, acenapthene, fluorene, and phenanthrene were detected below screening values for the CAP–Part B SI. Benzene and naphthalene were selected as COPCs for groundwater at the Former UST 117, Building 7002 site.

Detection limits achieved for several PAHs during both the CAP–Part A and CAP–Part B SIs exceeded their respective IWQSs and/or risk-based screening levels for the groundwater data. For these constituents, screening levels represent values below analytically achievable levels. No additional COPCs were selected for groundwater based on the detection limit screening.

III.B.4.c. Site-specific levels

Detections exceeding the conservative generic screening levels are considered to be COPCs. ATLs and ACLs are developed, when appropriate, for the COPCs using site-specific information from the fate and transport modeling and applicable regulatory levels.

III.B.4.c.1. Alternate threshold levels

Benzene, ethylbenzene, toluene, and xylenes were identified as COPC for soil at the site. ATL calculations for these compounds are presented in Appendix VI and are based on the Analytical Transient 1-, 2-, 3-Dimensional (AT123D) modeling. The ATLs for soil at the site were determined to be as follows:

- 0.387 mg/kg for benzene,
- 12.210 mg/kg for toluene,
- 61.850 mg/kg for ethylbenzene,
- 74.6 mg/kg for toluene.

III.B.4.c.2. Alternative concentration limits

Benzene and naphthalene were identified as COPCs for groundwater at the site. Benzene and naphthalene were modeled to the potential downgradient location at where a receptor may come in contact with migrating site contamination. This was determined to be a storm drain located 120 feet downgradient from the center of the source area. Fate and transport modeling was used to develop a site-specific DAF between the source and the receptor location (see III.B.4.c.3 below). The modeling results estimated a DAF for benzene of 8.9 and a DAF of 126.3 for naphthalene for the storm drain. Compound-specific regulatory levels or risk-based screening criteria were used in conjunction with the site-specific DAFs identified for the potential migration of contamination from the site to determine the ACL for each compound. The ACL calculations are presented in Appendix VI. The ACLs associated with the drainage ditch were determined to be as follows:

- 634.4 μg/L for benzene (i.e., 8.9 × 71.28 μg/L), and
- 820.9 μg/L for naphthalene (i.e., 126.3 × 6.5 μg/L).

III.B.4.c.3. Fate and transport model

Site-specific DAFs between the source and the receptor locations were developed. The DAF is a numerical value that represents the attempt to mathematically quantify the natural physical, chemical, and biological processes (e.g., advection-dispersion, sorption-retardation, biodegradation, and volatilization) that result in the decrease of a chemical concentration in an environmental medium. In simple terms, the DAF is the ratio of chemical concentration at the source (or the point of origin) to the concentration at the exposure point. The DAFs reflect the natural attenuation concepts outlined in the ASTM's RBCA protocol (ASTM 1995).

Fate and transport models are used as tools for developing DAFs. The application of fate and transport models at any release site must ensure that the modeling results are protective of human health and the environment. Therefore, the selection process of a predictive model at a release site must consider its performance, characteristics, and applicability to the site being considered. The following characteristics were considered before selecting an appropriate model for the Installation:

- the model provides conservative predictions,
- the model is technically sound,
- the model is a public-domain model or is readily available,

- the model has received adequate peer review,
- the model has been applied to other similar sites, and
- the model is easy to use.

The AT123D meets all of the above criteria and was selected for performing fate and transport analysis for this site. AT123D is a well-known and commonly used analytical groundwater pollutant fate and transport model. This model computes the spatial-temporal concentration distribution of chemicals in the aquifer system and predicts the transient spread of a chemical plume through a groundwater aquifer. The fate and transport processes accounted for in AT123D are advection, dispersion, adsorption/retardation, and decay. This model can be used as a tool for estimating the dissolved concentration of a chemical in one, two, or three dimensions in the groundwater resulting from a mass release (either continuous or instant or depleting source) over a source area (i.e., point, line, area, or volume source).

SESOIL is used to simulate the vertical transport of contaminants from the source areas down through the vadose zone to the shallow groundwater (water table). SESOIL is an acronym for Seasonal Soil compartment model and is a one-dimensional, vertical transport code for the unsaturated soil zone, and is designed to simultaneously model water transport and pollutant fate. The program was originally developed by EPA and has been extensively modified to enhance its capabilities (Hetrick et al. 1989, Hetrick et al. 1986, and Hetrick and Travis 1988).

The SESOIL defines the "soil compartment" as a soil column extending from the ground surface through the unsaturated zone to the water table. Processes simulated in SESOIL include both the hydrologic cycle and pollutant cycle, each of which are separate sub-modules in the SESOIL code. The hydrologic cycle includes rainfall, surface runoff, infiltration, soil water content, evapotranspiration, and groundwater recharge. The pollutant cycle includes convective transport, volatilization, adsorption/desorption, and degradation/ decay. A contaminant in SESOIL can partition in up to four phases (liquid, adsorbed, air, and pure).

SESOIL is well recognized and accepted by the scientific community utilizing soil-chemical fate models. Some of the attributes of SESOIL that make it particularly attractive and suitable for the vadose zone soil leaching at this site are as follows:

- SESOIL has been extensively validated and shown to work under a number of scenarios. It has also been used for similar applications in other parts of the country and is capable of providing the information required from this study.

- SESOIL has the advantage of fewer input requirements and faster run times than more complex unsaturated zone models, while still maintaining considerable resolution of the pollutant front in both time and space.

- The model can be divided into as few as two layers and as many as four layers, with as many as 10 sub-layers in each of the layers. This compartmental nature of the model allows for user-specified tailoring to suit a particular site.

The maximum soil concentration of benzene at this site was above the water table (i.e., 1.13 mg/kg from 0.0 to 2.0 feet). Modeling of leaching to groundwater by percolating rainwater was performed with SESOIL in order to determine the predicted maximum concentration in the leachate at the water table interface and the soil ATLs. Since the predicted leachate concentration was lower than the maximum groundwater concentration at the source (i.e., 553 μg/L), the steady-state model was developed by calibrating the model against the maximum estimated concentration beneath the site. The potential receptor is a storm drain located approximately 120 feet southwest of the site.

Vertical migration of the contaminant plume through the confining unit to the Principal Artesian aquifer is improbable. The confining unit has a vertical hydraulic conductivity on the order of 10^{-8} cm/sec and ranges from 15 to 90 feet in thickness. Assuming a vertical gradient of 1.0 foot/foot and an effective porosity of 0.06 (Mills et al. 1985) for the confining unit, the groundwater travel time is estimated to be 87 years. Therefore, it would take more than 400 years for the benzene contamination to migrate through the confining layer. The surficial aquifer in which the contaminant plume is located is not used as a source of drinking water.

The fate and transport modeling results are presented in Appendix VI and were based on the assumption of a continuous source of contamination (i.e., steady state) of infinite duration. In summary, benzene and naphthalene were modeled from the center of the plume in the vicinity of MW-22 to one potential downgradient location at which a receptor might encounter migrating groundwater contamination. The location was a storm drain that is located approximately 120 feet downgradient (southwest) from the center of the source area. This storm drain is part of a series of drains used to drain the bermed areas around the ASTs at the BFF. These drains empty into Lamar Canal. This is the nearest possible location at which a receptor might encounter migrating groundwater contamination due to a possible hydraulic connection between the groundwater and the surface water in Lamar Canal.

The AT123D Model was used to determine the impact of dissolved hydrocarbons on potential receptors. The AT123D Model was calibrated to the maximum observed site concentration of benzene (i.e., MW-22, 553 µg/L) and naphthalene (i.e., MW-22, 528 µg/L) in the groundwater assuming steady-state (continuous) concentrations. In reality, the source of contamination will deplete due to biodegradation and natural attenuation. The modeling results indicate that benzene should reach the storm drain at a concentration of 62.10 µg/L, which is below the state IWQS of 71.28 µg/L. Naphthalene is predicted to reach the storm drain at a concentration of 4.19 µg/L, which is below the risk-based value of 6.5 µg/L.

The modeling results estimated a DAF of 8.9 and 126.3 for the lateral migration of benzene and naphthalene in groundwater to the storm drain, respectively. Simulations were also performed to predict the concentrations of benzene over a simulation period of 2 years in monitoring wells MW-22 and MW-32. The results are presented in Table 10.

III.B.4.d. Conclusions and recommendations

The conclusions below are based on a review of the CAP–Part A SI and CAP–Part B SI results using a risk-based approach and the fate and transport modeling:

- Free product was detected in MW-22 during the CAP–Part B SI and removed on December 1, 2000. Free product has not been detected at the site since this event.

- The vertical and horizontal extent of soil contamination below applicable GUST STLs was delineated during the CAP–Part A and CAP–Part B SIs.

- The vertical and horizontal extent of groundwater contamination below federal MCLs and Georgia IWQS was delineated during the CAP–Part A and CAP–Part B SIs.

- Risk-based screening results show that concentrations of BTEX compounds in soil exceed their respective initial screening levels. However, using the results of the fate and transport modeling, only the benzene concentration detected at SB-07 and MW-22 exceeded the site-specific ATL of 0.387 mg/kg. For the sample collected from SB-07, the detection limit was above the reporting limit. Subsequent sampling at this location indicated that benzene was not present in the soil above its STL. Subsequent sampling at

SB-22 to delineate the horizontal extent of the benzene contamination in the soil indicated that benzene concentrations above its ATL was limited to the SB-22 location. At SB-22, the soil sample was collected from 0.0 to 2.0 feet BGS, which is above the water table. Groundwater samples collected at this location (MW-22) detected benzene concentrations of 553 µg/L and 174 µg/L during the CAP–Part A and CAP–Part B SIs, respectively. However, both of these concentrations are below the ACL of 634.4 µg/L. Because the concentration above the benzene ATL is limited to only SB/MW-22, the benzene contamination is above the water table, and the groundwater concentrations are below the benzene ACL, active remediation/removal of the soil is not recommended.

- Risk-based screening results show that benzene and naphthalene in groundwater exceed their respective initial screening levels. However, using the results of the fate and transport modeling, benzene and naphthalene did not exceed their site-specific ACLs of 634.4 µg/L and 820.95 µg/L, respectively.

- Fate and transport modeling of benzene and naphthalene, assuming a continuous, steady-state source, indicates that benzene will not exceed the state IWQS and that naphthalene will not exceed the risk-based concentration at the nearest downgradient receptor, the storm drain.

- Based on the CAP–Part B data, the environmental site ranking score is 3,250 (Appendix X).

Considering that the site is located within the confines of HAAF and that the most recent benzene concentrations in groundwater exceeded the IWQS but not the ACL, natural attenuation is recommended as the corrective action for the site; therefore, a monitoring only plan is recommended. Detailed sampling and analysis recommendations are provided in Section III.D.

III.C. DESIGN AND OPERATION OF CORRECTIVE ACTION SYSTEMS

III.C.1. System Effectiveness/Basis for Selection

The selected corrective action approach, natural attenuation of groundwater, was chosen following evaluation of numerous established and innovative active and passive remediation alternatives. A three-step screening process was used to select the preferred remedy for the Former UST 117, Building 7002 site. This alternative selection process is illustrated in Figure 21.

III.C.1.a. Theory and feasibility

The remedies evaluated for aromatic hydrocarbons in soil and groundwater at this site include monitored natural attenuation, oxygen-injection-enhanced bioremediation, air sparging with soil vapor extraction, and six-phase heating. Based on the hydrocarbon concentrations in the soil and water, natural attenuation is the preferred alternative. Natural attenuation is based on the premise that fuel-type hydrocarbons are readily biodegraded in most environmental systems. Biodegradation of BTEX has been documented for sites similar to the UST 117 site (e.g., shallow water table, permeable silty sand). In fact, the conditions at the Former UST 117, Building 7002 site are similar to other sites that have proven ideal for biodegradation (Abou-Rizk, Leavitt, and Graves 1995). Site groundwater flow and the geology of the site are conducive to aerobic biodegradation, which is known to produce the most rapid biodegradation rates for hydrocarbons. Finally, the primary sources have been removed; therefore, subsurface conditions (e.g., dissolved oxygen, oxidation-reduction potential, and background nutrient availability) will steadily improve with time.

Other remedial options that were considered introduce more risk of exposure due to contaminant release into other matrices (e.g., soil gas, air, and treatment canisters) or as a result of excavation. In addition, the excessive

costs associated with an aggressive remediation system do not result in added protection to the industrial worker receptor.

The Georgia IWQS for benzene of 71.28 µg/L and the risk-based screening level of 6.5 µg/L for naphthalene were exceeded in the groundwater during the CAP–Part B SI. No other compounds exceeded their respective IWQSs or risk-based screening levels during any of the past sampling rounds. The ACLs proposed for benzene and naphthalene are 634.4 µg/L and 820.95 µg/L, respectively, and the CAP–Part B concentrations did not exceed this value; however, the site ranking score (i.e., > 2,500) indicates that a year of monitored natural attenuation is warranted to confirm site conditions.

III.D. IMPLEMENTATION

III.D.1. Milestone Schedule

A milestone schedule for the monitoring only plan has been prepared. A Gantt chart showing milestone activities and anticipated duration is provided in Figure 22. HAAF will notify GA EPD USTMP of any significant changes to the proposed schedule time and will provide an updated Gantt chart, as necessary.

III.D.2. Progress Reporting

An annual monitoring report will be submitted to GA EPD that will summarize all previous annual sampling events.

III.D.3. Certificate of Completion Report

Petition for permanent closure will be submitted with the final monitoring only report unless HAAF determines the wells should remain in place to provide a means of monitoring the active site. GA EPD will provide final approval for decommissioning of the monitoring wells, which will be requested in the final monitoring only report. Decommissioning of the monitoring wells will be completed in accordance with the USACE design manual for monitoring wells. Decommissioning will comply with all applicable state and federal standards.

The certification below 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 UST 117, Building 7002 site, Facility ID #9-025113*1, including any and all certified amendments 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)

III.D.4. Inspection Schedule and Preventative Maintenance Program

During each sampling event, wells will be visually inspected for changes or damage. Any notable observations will be recorded in the subsequent progress report. Any required repairs to ensure the monitoring wells remain in conformance with GA EPD and U.S. Environmental Protection Agency (EPA) performance standards will be made as needed.

III.D.5. Periodic Monitoring

Groundwater samples from monitoring wells MW-19, MW-20, MW-21A (replacement well), MW-22, MW-32, MW-33, and MW-34 will be collected semiannually for 1 year and analyzed for BTEX and PAH compounds. Monitoring will continue at the site for a year to ensure that the benzene and naphthalene concentrations remain below their respective ACLs of 634.4 µg/L and 820.95 µg/L, and that free product is not present.

During each sampling event, water levels and free product measurements in all monitoring wells will be collected. Specific conductivity, pH, and temperature analysis will be completed for each sample from the monitoring wells at which analytical samples were collected. The samples will be shipped to an approved laboratory for BTEX analysis using EPA Methods 8021B/8260B and PAH analysis using EPA Methods 8100/8270C/8310.

III.D.6. Effectiveness of Corrective Action

The monitoring only plan will be discontinued once the objectives of the corrective action have been achieved; that is, the concentrations of COPCs in groundwater remain below their respective ACLs for 1 year, and no free product has been detected.

III.D.7. Confirmatory Soil Sampling Plan

No excavation of soil is planned; therefore, confirmatory sampling will not be conducted.

III.D.8. Stockpiled Bulk Soil Sampling

No stockpiled soil will be generated from this corrective action; therefore, no soil sampling will be conducted.

III.D.9. Termination Conditions

Prior to termination of the monitoring only plan, concentrations of benzene and naphthalene in groundwater must be at or below their respective ACLs, and it must be shown that free product no longer exists at the site. Achievement of these conditions will take precedence over the site ranking score.

III.D.10. Post-completion Site Restoration Activities

After termination has been granted, equipment and debris related to the monitoring program will be removed from the site.

III.E. PUBLIC NOTIFICATION

The Former UST 117, Building 7002 site is located entirely within the confines of the HAAF, 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 April 8, 2001. A copy of the newspaper announcement used for public notification is presented in Appendix XI of this report.

IV. CLAIM FOR REIMBURSEMENT

HAAF is a federally owned facility and has funded the investigation for the Former UST 117, Building 7002 site, Facility ID: 9-025113*1, using Department of Defense Environmental Restoration Account Funds. Application for GUST Trust Fund reimbursement is not being pursued at this time.

V. REFERENCES

Abou-Rizk, J. A., Leavitt, M. E., and Graves, D. A. 1995. "In Situ Aquifer Bioremediation of Organics Including Cyanide and Carbon Disulfide" in R. Hinchee, ed., *In Situ and On-Site Bioreclamation,* Battelle Press, Columbus, Ohio.

ACE (Anderson Columbia Environmental, Inc.). 1997. *Closure Report for Used Oil Tank #117 at Building 7002, Facility ID# 9-025113*1, Hunter Army Airfield, Savannah, Georgia.* January.

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.

ASTM (American Society for Testing and Materials). 1995. *Standard Guide for Risk-based Corrective Action Applied at Petroleum Release Sites,* ASTM E 1739-95, approved September 10, 1995.

Clark, W. Z. Jr., and Zisa, A. C. 1976. *Physiographic Map of Georgia,* Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1988).

City of Savannah Bureau Water Operations. 1998. *Personal communication with Michael Coon.*

City of Savannah Bureau of Sewer and Water Planning. 1998. *Personal communication with Clay Rogers.*

Earth Tech, Inc. 1999. *Final Closure Report, Bulk Fuel Facility, UST #131, Non-regulated UST, 3rd Infantry Division, Hunter Army Airfield,* Advanced Infrastructure Management Technologies, Oak Ridge, Tennessee, Contract No. DE-AC05-84OR21400.

Earth Tech, Inc. 2000. *Final Monitoring Well Installation Report, Bulk Fuel Facility (HAA-09) Facility Identification Number 9-025113, 3rd Infantry Division, Hunter Army Airfield, Georgia,* Advanced Infrastructure Management Technologies, Oak Ridge, Tennessee, Contract No. DE-AC05-84OR21400.

EPA (U.S. Environmental Protection Agency). 1998. *Watershed Environmental Profile, Ogeechee Coastal Dataset,* July.

EPA. 1991. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors* (Interim Final), OSWER Directive 9285.6-03, Office of Emergency and Remedial Response, Washington, D.C.

EPA. 1996. *Soil Screening Guidance,* EPA/540/R-94/101, Office of Solid Waste and Emergency Response, available from U.S. Government Printing Office, Washington, D.C.

EPA. 1999. *Risk-based Concentration Table,* EPA Region 3, Office of RCRA Technical and Program Support Branch, April.

Furlow, J. W. 1969. *Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit,* Department of Mines and Mining, Division of Conservation, Georgia Geologic Survey, Bulletin 82.

FS DPW (Fort Stewart Directorate of Public Works). 1998. *Personal communication with Fort Stewart DPW Personnel.*

GA DNR (Georgia Department of Natural Resources). 1976. *Geologic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1997).

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

GA EPD. 1995. *Guidance Document for the Preparation of an Underground Storage Tank Corrective Action Plan, Part B*, February.

GA EPD. 1996. *Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units*, Georgia Environmental Division, Atlanta, Georgia, November.

GA EPD. 1998. *Rules of Georgia Department of Natural Resources, Environmental Protection Division, Chapter 391-3-6, Water Quality Control*, May.

Herrick, S. M. 1961. *Well Logs of the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey.

Hetrick, D. M., Travis, C. C., Shirley, P. S., and Etnier, E. L. 1986. *Model Predictions of Watershed Hydrologic Components: Comparison and Verification*, Water Resources Bulletin, pp. 803–810.

Hetrick, D. M., and Travis, C. C. 1988. *Model Predictions of Watershed Erosion Components*, Water Resources Bulletin, pp. 413–419.

Hetrick, D. M., Travis, C. C., Leonard, S. K., and Kinerson, R. S. 1989. *Qualitative Validation of Pollutant Transport Components of an Unsaturated Soil Zone Model (SESOIL)*, ORNL/TM-10672, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Huddlestun, P. F. 1988. *A Revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, The Miocene through Holocene*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey, Bulletin 104.

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

SAIC (Science Applications International Corporation). 1998. *Sampling and Analysis Plan for the Corrective Action Plan – Part A Investigations for Former Underground Storage Tanks at Hunter Army Airfield, Georgia,* U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order 0019.

SAIC 1999. *Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09) at Hunter Army Airfield, Georgia*, U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order No. 0033.

SAIC 2000a. *Corrective Action Plan – Part A Report for Former Underground Storage Tank 117, Building 7002, Facility ID# 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia,* U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Order No. 0051. June.

SAIC 2000b. *Addendum #11 to Work Plan for Preliminary Groundwater and Corrective Action Plan – Part A/B Investigations at Former Underground Storage Tank Sites, Fort Stewart, Georgia*, U.S. Army Corps of Engineers, Savannah District, Contract No. DACA21-95-D-0022, Delivery Orders 0009, 0043, 0051, and 0077. November.

USGS (United States Geological Survey). 1990. *Water Use for the Ogeechee Coastal Watershed.*

Wilkes, R. L., Johnson, J. H., Stoner, H. T., and Bacon, D. D. 1974. *Soil Survey of Bryan and Chatham Counties, Georgia*, U.S. Department of Agriculture Soil Conservation Service, 71 pp.

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APPENDIX I

REPORT FIGURES

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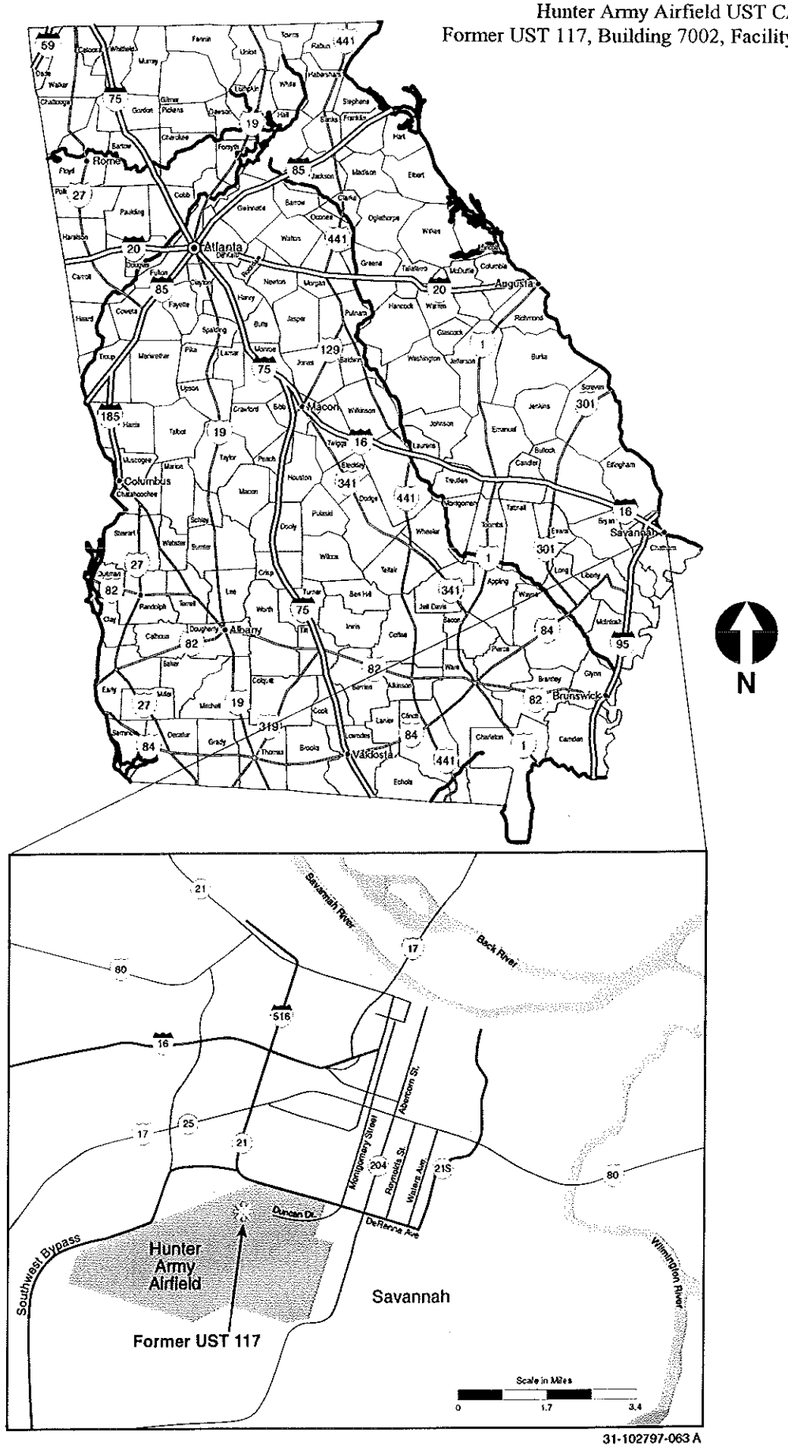


Figure 1. Regional Map of Georgia Showing Location of Former UST 117, Building 7002 Site

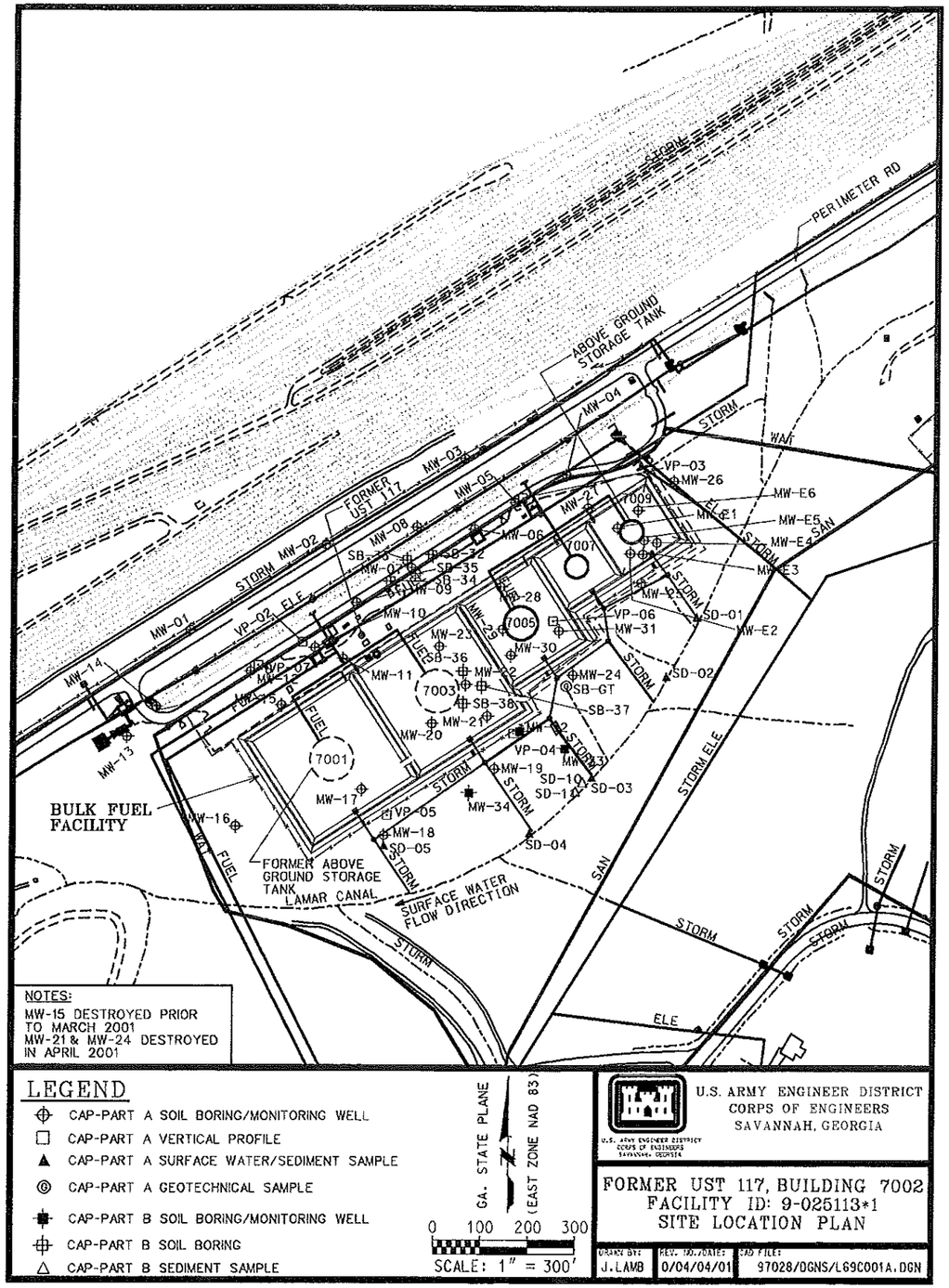


Figure 2. Site Map of the Former UST 117, Building 7002 Site

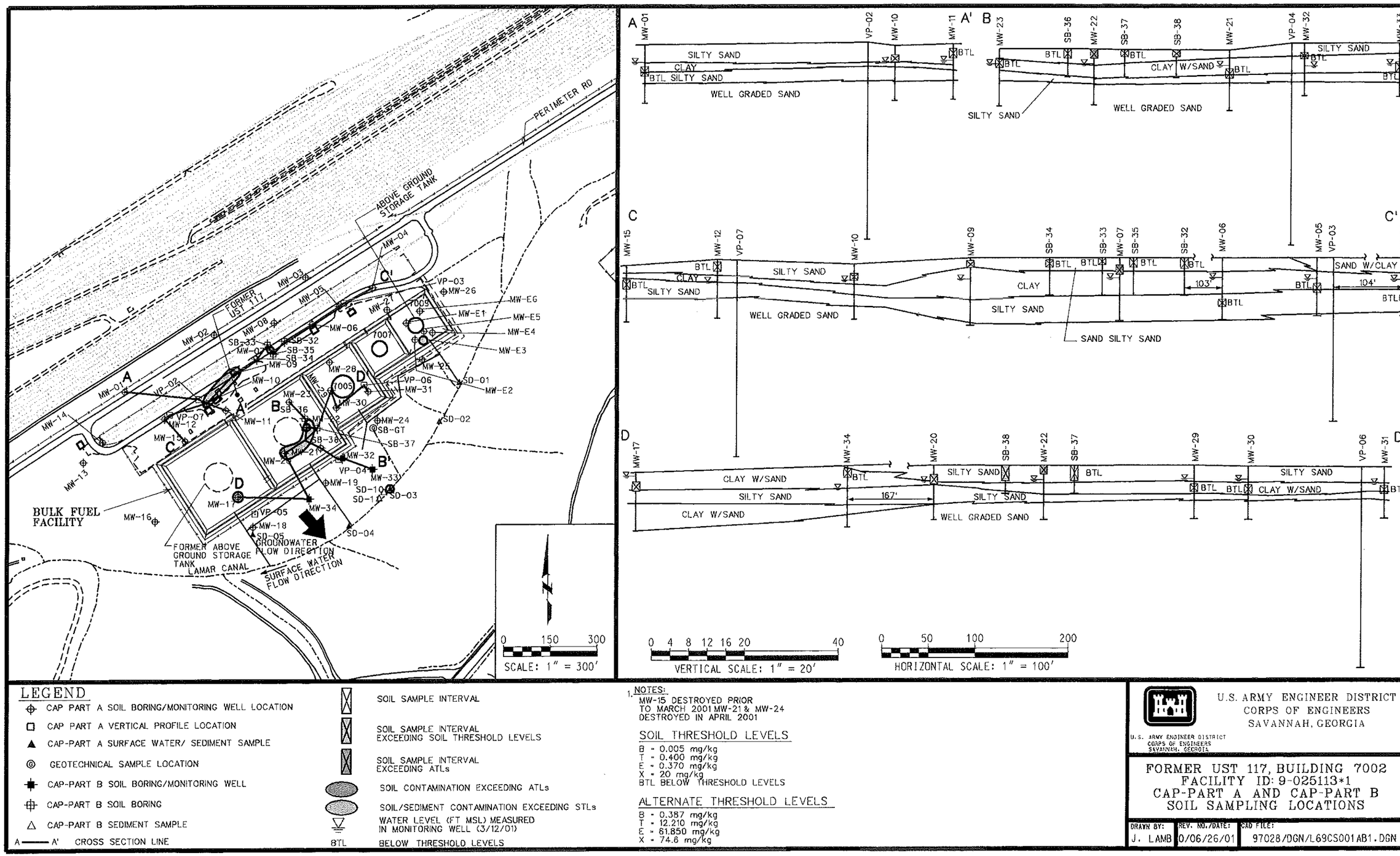
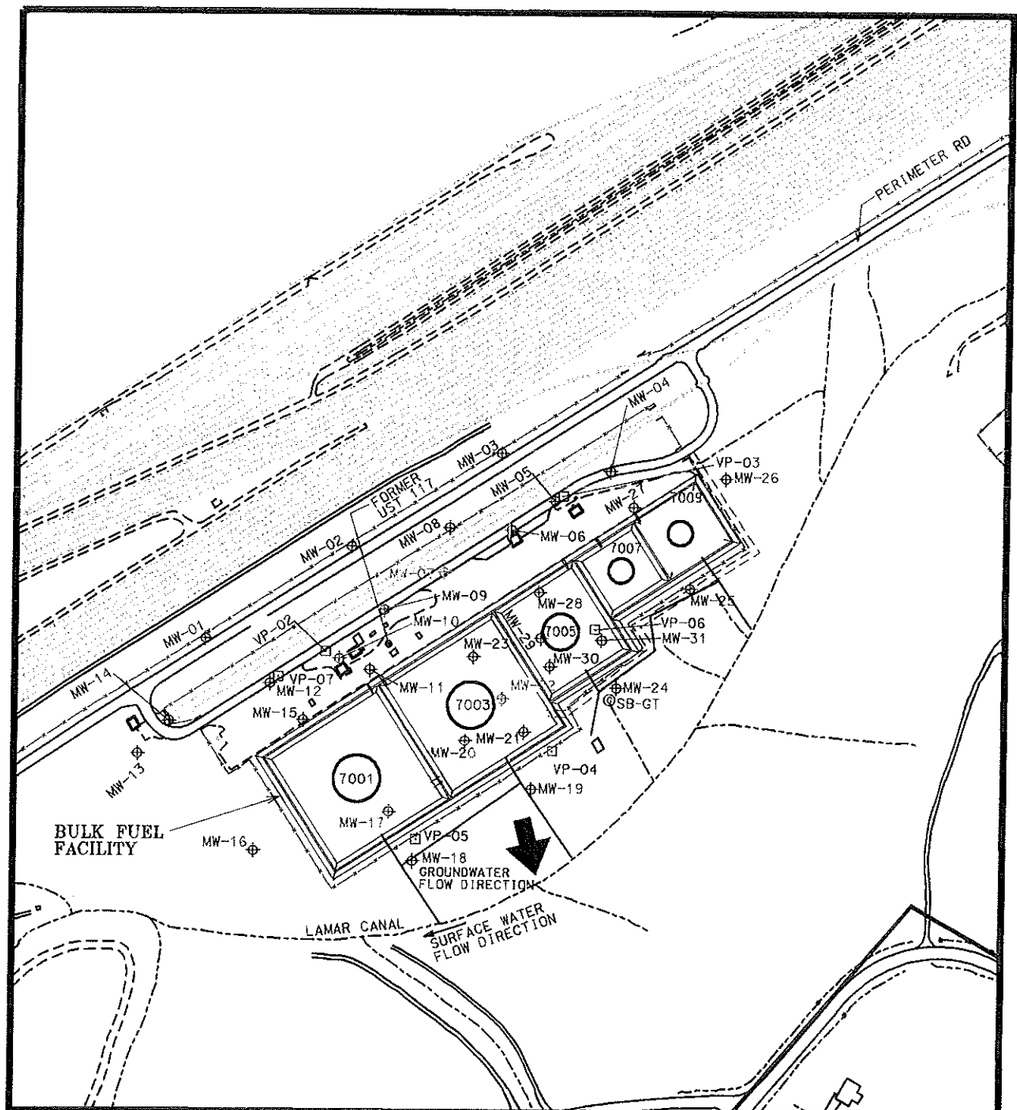


Figure 3. CAP–Part A and B Soil Sampling Locations at the Former UST 117, Building 7002 Site



MW-01	
BF0111 (4.7 to 6.7 ft bgs)	
B	0.0006 J
T	0.0029 =
E	0.0010 U
X	0.0029 U
DRO	2.0 U
GRO	0.124 U
P	BDL

MW-02	
BF0211 (6.0 to 8.0 ft bgs)	
B	0.0011 =
T	0.0010 U
E	0.0010 U
X	0.0030 U
DRO	1.4 U
GRO	0.122 U
P	BDL

MW-03	
BF0311 (6.0 to 8.0 ft bgs)	
B	0.0011 U
T	0.0025 =
E	0.0011 U
X	0.0033 U
DRO	1.2 U
GRO	0.319 U
P	BDL

MW-04	
BF0411 (8.0 to 9.1 ft bgs)	
B	0.0010 U
T	0.0010 J
E	0.0010 U
X	0.0030 U
DRO	2.7 UJ
GRO	0.122 U
P	BDL

MW-05	
BF0511 (5.5 to 7.5 ft bgs)	
B	0.0010 U
T	0.0010 U
E	0.0010 U
X	0.0031 U
DRO	2.2 UJ
GRO	0.128 U
P	BDL

MW-06	
BF0611 (8.8 to 10.4 ft bgs)	
B	0.0013 U
T	0.0013 U
E	0.0013 U
X	0.0038 U
DRO	1.2000 U
GRO	0.1220 U
P	BDL

MW-07	
BF0711 (1.5 to 3.0 ft bgs)	
B	<1.3500
T	<1.3500
E	<1.3500
X	<4.0400
DRO	74.0 =
GRO	2.330 =
N	0.0841 =

MW-08	
BF0811 (1.1 to 3.1 ft bgs)	
B	0.0010 U
T	0.0010 U
E	0.0010 U
X	0.0031 U
DRO	1.4 UJ
GRO	0.114 U
P	BDL

MW-09	
BF0911 (0.55 to 2.0 ft bgs)	
B	<0.1100
T	<0.1100
E	<0.1100
X	<0.3310
DRO	11.2 J
GRO	27.200 =
P	BDL

MW-10	
BF1011 (2.0 to 3.5 ft bgs)	
B	<0.1640
T	<0.1640
E	0.3330 =
X	0.4000 J
DRO	136.0 =
GRO	290.0 =
N	0.2680 =

MW-11	
BF1111 (1.0 to 3.0 ft bgs)	
B	0.0010 J
T	0.001 J
E	0.0014 U
X	0.0044 U
DRO	0.77 U
GRO	0.112 U
P	BDL

MW-12	
BF1211 (0.5 to 2.5 ft bgs)	
B	0.0005 J
T	0.0007 J
E	0.0008 J
X	0.0010 J
DRO	0.51 UJ
GRO	0.197 =
P	BDL

MW-13	
BF1311 (7.0 to 8.9 ft bgs)	
B	0.0006 J
T	0.0010 J
E	0.0011 U
X	0.0033 U
DRO	1.1 U
GRO	0.07 =
P	BDL

MW-14	
BF1411 (0.5 to 2.5 ft bgs)	
B	0.0045 =
T	0.0009 J
E	0.0008 J
X	0.0006 J
DRO	6.5 =
GRO	0.592 =
P	BDL

MW-15	
BF1511 (1.5 to 3.5 ft bgs)	
B	0.0013 U
T	0.0013 U
E	0.0013 U
X	0.0038 U
DRO	0.99 U
GRO	0.120 U
B(B)F	0.0404 =
B(K)F	0.135 =

MW-16	
BF1611 (4.3 to 6.3 ft bgs)	
B	0.0010 U
T	0.0010 U
E	0.0010 U
X	0.0031 U
DRO	0.92 U
GRO	0.123 U
P	BDL

MW-17	
BF1711 (2.0 to 4.0 ft bgs)	
B	<0.1050
T	<0.1050
E	0.7920 =
X	5.9000 =
DRO	87.4 =
GRO	223.0 =
N	0.3500 =

MW-18	
BF1811 (4.1 to 6.1 ft bgs)	
B	0.0011 U
T	0.0009 J
E	0.0011 U
X	0.0034 U
DRO	1.8 U
GRO	0.121 U
P	BDL

MW-19	
BF1911 (6.0 to 8.0 ft bgs)	
B	0.0006 J
T	0.0044 =
E	0.0010 U
X	0.0030 U
DRO	1.6 U
GRO	0.120 U
P	BDL

MW-20	
BF2013 (2.0 to 4.0 ft bgs)	
B	0.0382 J
T	0.1000 U
E	0.6450 =
X	4.480 =
DRO	425 =
GRO	2450.000 =
N	0.8810 =

MW-21	
BF2111 (4.0 to 6.0 ft bgs)	
B	0.0011 U
T	0.0011 U
E	0.0011 U
X	0.0034 U
DRO	2.9 U
GRO	0.129 U
P	BDL

MW-22	
BF2211 (0.0 to 2.0 ft bgs)	
B	1.1300 =
T	0.4040 =
E	13.6000 =
X	73.8000 =
DRO	3420 =
GRO	4520.000 =
FL	0.1540 =
N	14.2000 =

MW-23	
BF2311 (2.0 to 4.0 ft bgs)	
B	0.0010 U
T	0.0010 U
E	0.0010 U
X	0.0030 U
DRO	2.1 UJ
GRO	0.132 =
P	BDL

MW-24	
BF2411 (4.0 to 6.0 ft bgs)	
B	0.0008 J
T	0.054 =
E	0.0012 U
X	0.0036 U
DRO	7.7 J
GRO	0.180 =
P	BDL

MW-25	
BF2511 (5.6 to 7.6 ft bgs)	
B	0.0009 J
T	0.0025 =
E	0.0012 U
X	0.0035 U
DRO	1.4 U
GRO	0.305 =
P	BDL

MW-26	
BF2611 (1.2 to 3.2 ft bgs)	
B	0.0012 U
T	0.0012 U
E	0.0012 U
X	0.0035 U
DRO	0.59 U
GRO	0.131 U
P	BDL

MW-27	
BF2711 (5.0 to 7.0 ft bgs)	
B	0.0012 U
T	0.0011 J
E	0.0012 U
X	0.0037 U
DRO	2.0 U
GRO	0.211 =
P	BDL

MW-28	
BF2811 (2.0 to 2.8 ft bgs)	
B	0.0014 U
T	0.0005 J
E	0.0009 J
X	0.0043 U
DRO	2.5 U
GRO	1.690 =
P	BDL

MW-29	
BF2911 (4.0 to 5.7 ft bgs)	
B	0.0009 J
T	0.0015 =
E	0.0008 J
X	0.2790 =
DRO	2.6 U
GRO	0.871 =
P	BDL

MW-30	
BF3011 (4.0 to 5.9 ft bgs)	
B	0.0011 U
T	0.0011 U
E	0.0011 U
X	0.0033 U
DRO	1.9 U
GRO	0.0939 J
P	BDL

MW-31	
BF3111 (4.0 to 5.7 ft bgs)	
B	0.0015 U
T	0.0015 U
E	0.0015 U
X	0.0044 U
DRO	1.5 U
GRO	0.297 =
P	BDL

LABORATORY QUALIFIERS

U - COMPOUND WAS NOT DETECTED AT THE CONCENTRATION REPORTED

UJ - COMPOUND NOT DETECTED AT THE REPORTED CONCENTRATION AND THE CONCENTRATION WAS ESTIMATED

J - VALUE FOR COMPOUND IS ESTIMATED

= - COMPOUND DETECTED AT THE CONCENTRATION REPORTED

VALUES IN GREEN EXCEED SOIL THRESHOLD LEVELS

VALUES IN BLUE EXCEED ALTERNATE THRESHOLD LEVELS

LEGEND

- CAP-PART A SOIL BORING/MONITORING WELL LOCATION
- VERTICAL PROFILE LOCATION
- GEOTECHNICAL SAMPLE LOCATION
- (7001) ABOVEGROUND STORAGE TANK

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES, TOTAL
GRO	TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS
DRO	TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE ORGANICS
P	POLYNUCLEAR AROMATIC HYDROCARBONS
B(B)F	BENZO(B)FLUORANTHENE
B(K)F	BENZO(K)FLUORANTHENE
FL	FLUORANTHENE
N	NAPHTHALENE
BDL	BELOW DETECTION LIMIT
BGS	BELOW GROUND SURFACE
	CONCENTRATIONS IN mg/kg

SOIL THRESHOLD LEVELS

B = 0.005 mg/kg
T = 0.400 mg/kg
E = 0.370 mg/kg
X = 20.0 mg/kg
B(B)F = 0.820 mg/kg
B(K)B = 1.60 mg/kg

ALTERNATE THRESHOLD LEVELS

B = 0.387 mg/kg
T = 12.210 mg/kg
E = 61.850 mg/kg
X = 74.6 mg/kg

GA STATE PLANE (EAST ZONE NAD 83)

0 100 200 300
SCALE: 1" = 300'

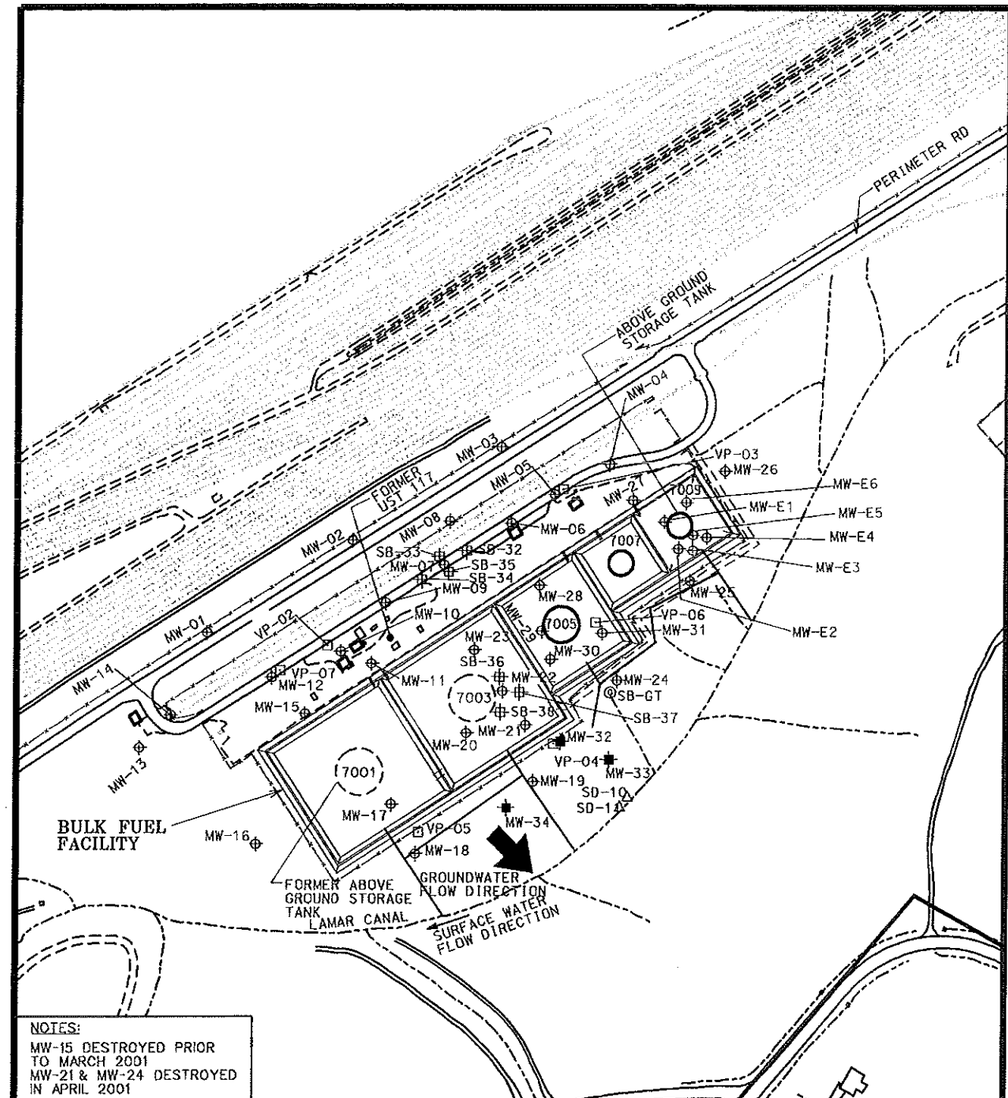
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

FORMER UST 117, BUILDING 7002
FACILITY ID: 9-025113*1
CAP-PART A SOIL SAMPLING
ANALYTICAL RESULTS

DRAWN BY:	REV. NO./DATE:	CAD FILE:
J. LAMB	0/06/25/01	97028/DGN/L69C001H.DGN

Figure 4a. CAP–Part A Soil Sampling Analytical Results at the Former UST 117, Building 7002 Site



NOTES:
MW-15 DESTROYED PRIOR TO MARCH 2001
MW-21 & MW-24 DESTROYED IN APRIL 2001

SB-32

BF3211 (0.0 to 2.3 ft bgs)		
B	0.0016	U
T	0.00043	J
E	0.0016	U
X	0.0047	U
DRO	0.81	U
GRO	0.118	U
P	BDL	

SB-33

BF3311 (0.0 to 2.1 ft bgs)		
B	0.0018	
T	0.00079	
E	0.0018	
X	0.0053	
DRO	2.5	
GRO	0.118	
P		

SB-34

BF3411 (0.5 to 2.2 ft bgs)		
B	0.0013	U
T	0.00044	J
E	0.0013	U
X	0.0039	U
DRO	1.4	U
GRO	0.113	U
P	BDL	

SB-35

BF3511 (0.0 to 2.0 ft bgs)		
B	0.0019	U
T	0.00062	J
E	0.0019	U
X	0.0056	U
DRO	41.6	=
GRO	0.0644	J
P	BDL	

SB-36

BF3611 (0.0 to 2.0 ft bgs)		
B	0.0039	=
T	0.0388	=
E	0.134	=
X	1.96	=
DRO	829	=
GRO	320	=
N	0.457	=

SB-37

BF3711 (0.0 to 3.5 ft bgs)		
B	0.0018	=
T	0.00099	J
E	0.0064	=
X	0.0362	=
DRO	8.6	=
GRO	0.843	=
N	0.0224	J

SB-38

BF3811 (0.0 to 3.4 ft bgs)		
B	0.0763	J
T	0.185	U
E	1.62	=
X	4.63	=
DRO	1660	=
GRO	3240	J
N	6.81	=

MW-32

BF321B (2.0 to 3.3 ft bgs)		
B	0.0021	U
T	0.0018	J
E	0.0021	U
X	0.0062	U
DRO	0.61	U
GRO	0.19	=
N	0.0371	=

MW-33

BF331B (4.0 to 6.2 ft bgs)		
B	0.0012	U
T	0.0012	U
E	0.0012	U
X	0.0037	U
DRO	2.2	U
GRO	0.124	U
P	BDL	

MW-34

BF341B (8.0 to 9.0 ft bgs)		
B	0.0015	U
T	0.0015	U
E	0.0015	U
X	0.0044	U
DRO	1.5	U
GRO	0.118	U
P	BDL	

MW-E1

MW-01-01 (0.0 to 2.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.009	=
X	0.003	U
DRO	530	J
GRO	440	J
A	0.086	J
B(A)A	0.74	J
FL	0.97	J
F	0.18	J
PH	0.49	J
PY	0.55	J

MW-01-02 (2.0 to 4.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.003	U
X	0.003	U
DRO	1300	J
GRO	6.1	U
A	0.086	J
B(A)A	0.74	J
FL	0.97	J
F	0.18	J
PH	0.49	J
PY	0.55	J

MW-E2

MW-02-01 (0.0 to 2.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.016	=
X	0.008	=
DRO	29	U
GRO	72	J
BP	0.017	=
IP	0.0082	=

MW-02-02 (2.0 to 4.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.003	U
X	0.003	U
DRO	31	U
GRO	70	J
P	BDL	

MW-E3

MW-03-01 (0.0 to 2.0 ft bgs)		
B	0.002	J
T	0.002	U
E	4.5	=
X	17	=
DRO	31	U
GRO	1100	J
B(A)P	0.2	J
IP	0.03	=
PH	0.0089	=

MW-03-02 (2.0 to 4.0 ft bgs)		
B	0.002	J
T	0.003	U
E	0.18	=
X	3.5	=
DRO	31	U
GRO	100	J
P	BDL	

MW-E4

MW-04-01 (0.0 to 2.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.003	U
X	0.001	J
DRO	31	U
GRO	20	=
B(B)F	0.025	=
B(K)F	0.096	J

MW-04-02 (2.0 to 4.0 ft bgs)		
B	0.004	U
T	0.004	U
E	0.004	U
X	0.004	U
DRO	32	U
GRO	30	=
B(B)F	0.024	=

MW-E5

MW-05-01 (0.0 to 2.0 ft bgs)		
B	0.004	U
T	0.004	U
E	0.004	U
X	0.002	J
DRO	390	=
GRO	8.8	=
BP	0.023	J
FL	0.04	=
PY	0.092	J

MW-05-02 (2.0 to 4.0 ft bgs)		
B	0.004	U
T	0.001	U
E	0.004	U
X	0.004	U
DRO	32	U
GRO	12	=
B(K)F	0.24	=

MW-E6

MW-06-01 (0.0 to 2.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.003	U
X	0.003	U
DRO	30	U
GRO	6	U
P	BDL	

MW-06-02 (2.0 to 4.0 ft bgs)		
B	0.003	U
T	0.003	U
E	0.003	U
X	0.003	U
DRO	32	U
GRO	6.3	U
P	BDL	

LABORATORY QUALIFIERS

U - COMPOUND WAS NOT DETECTED AT THE CONCENTRATION REPORTED

UJ - COMPOUND NOT DETECTED AT THE REPORTED CONCENTRATION AND THE CONCENTRATION WAS ESTIMATED

J - VALUE FOR COMPOUND IS ESTIMATED

= - COMPOUND DETECTED AT THE CONCENTRATION REPORTED

VALUES IN GREEN EXCEED SOIL THRESHOLD LEVELS

VALUES IN BLUE EXCEED ALTERNATE THRESHOLD LEVELS

LEGEND

- CAP PART A SOIL BORING/MONITORING WELL LOCATION
- CAP PART A VERTICAL PROFILE LOCATION
- CAP-PART B SOIL BORING/MONITORING WELL
- CAP-PART B SOIL BORING
- CAP-PART B SEDIMENT SAMPLE
- GEOTECHNICAL SAMPLE LOCATION

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES, TOTAL
GRO	TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS
DRO	TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE ORGANICS
P	POLYNUCLEAR AROMICE HYDROCARBONS
A	ANTHRACENE
B(A)A	BENZO(A)ANTHRACENE
B(A) P	BENZO(A)PYRENE
BP	BENZO(g,h,i)PERYLENE
B(B)F	BENZO(B)FLUORANTHENE
B(K)F	BENZO(K)FLUORANTHENE
FL	FLUORANTHENE
F	FLUORENE
IP	INDENO(1,2,3-cd) PYRENE
PH	PHENANTHRENE
PY	PYRENE
N	NAPHTHALENE
BDL	BELOW DETECTION LIMIT
BGS	BELOW GROUND SURFACE

CONCENTRATIONS IN mg/kg

SOIL THRESHOLD LEVELS

B - 0.005 mg/kg
T - 0.400 mg/kg
E - 0.370 mg/kg
X - 20.0 mg/kg
B(A)P-0.660 mg/kg
B(B)F - 0.820 mg/kg
B(K)F - 1.60 mg/kg

ALTERNATE THRESHOLD LEVELS

B - 0.387 mg/kg
T - 12.210 mg/kg
E - 61.850 mg/kg
X - 74.6 mg/kg

GA. STATE PLANE (EAST ZONE NAD 83)

0 100 200 300
SCALE: 1" = 300'

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FORMER UST 117, BUILDING 7002
FACILITY ID: 9-025113*1
CAP-PART B SOIL SAMPLING
ANALYTICAL RESULTS

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J. LAMB	0/06/25/01	97028/DGN/L69C001J.DGN

Figure 4b. CAP–Part B Soil Sampling Analytical Results at the Former UST 117, Building 7002 Site

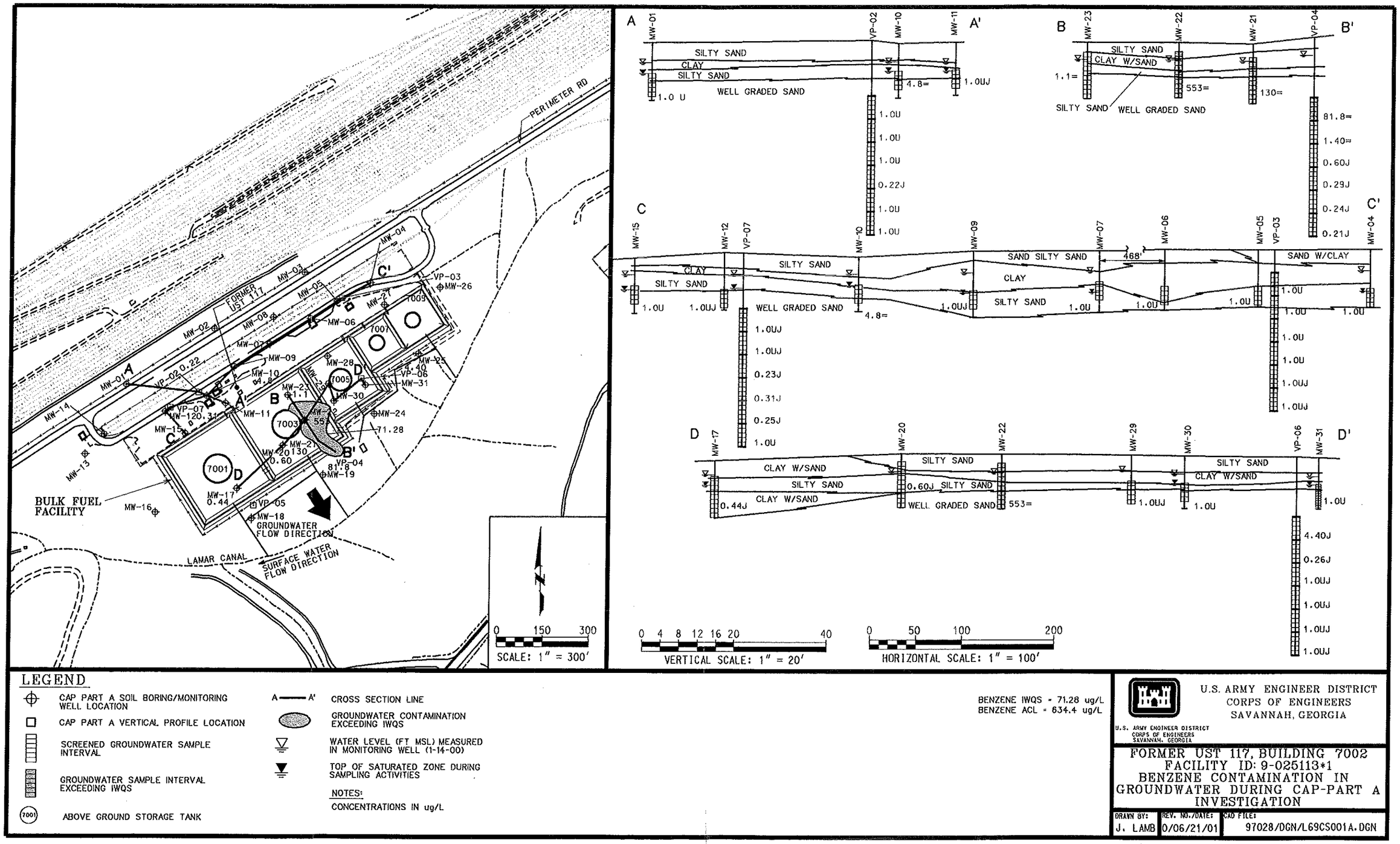


Figure 5. Benzene Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the Former UST 117, Building 7002 Site

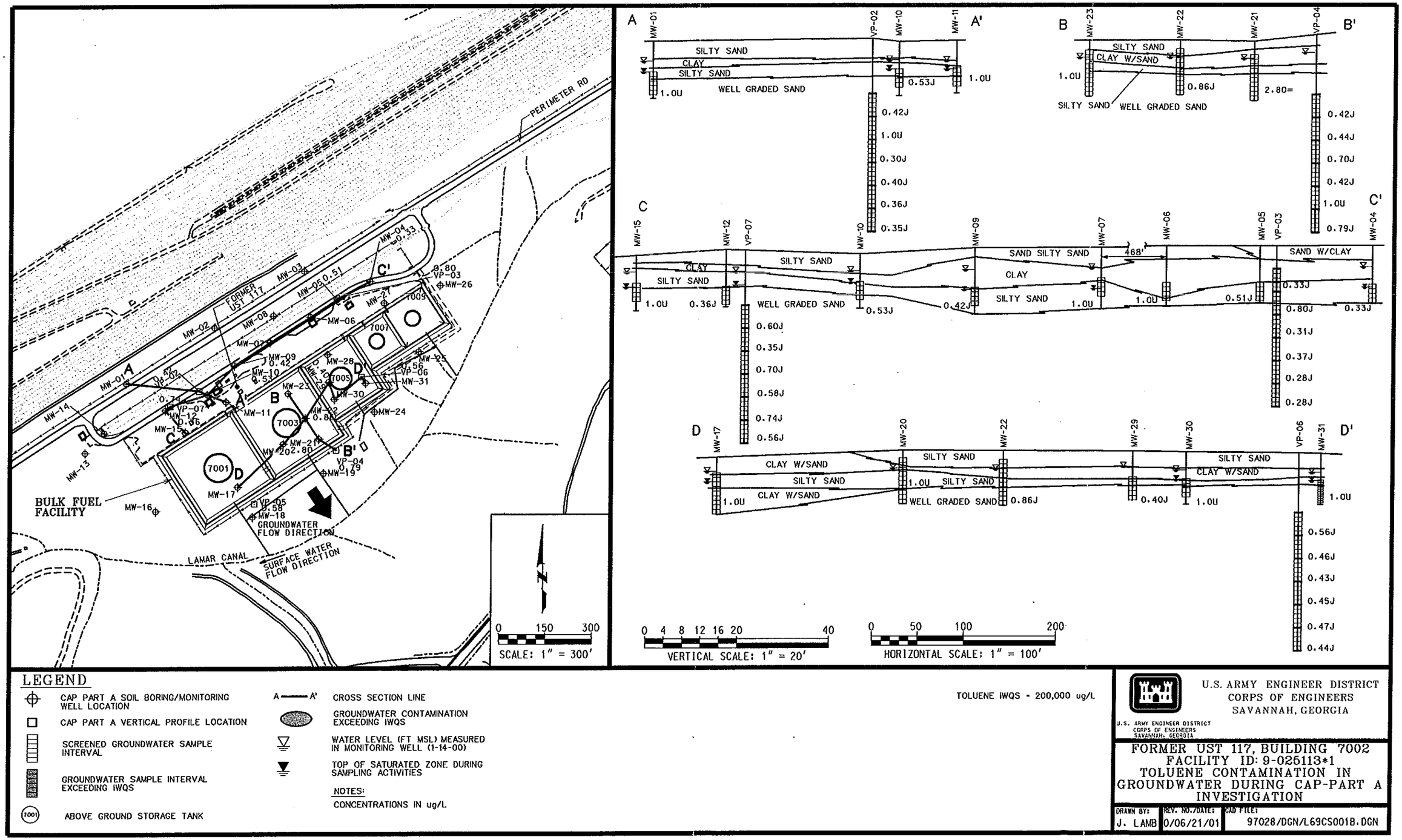


Figure 6. Toluene Contamination in Groundwater Determined During the CAP–Part A Site Investigation at the Former UST 117, Building 7002 Site

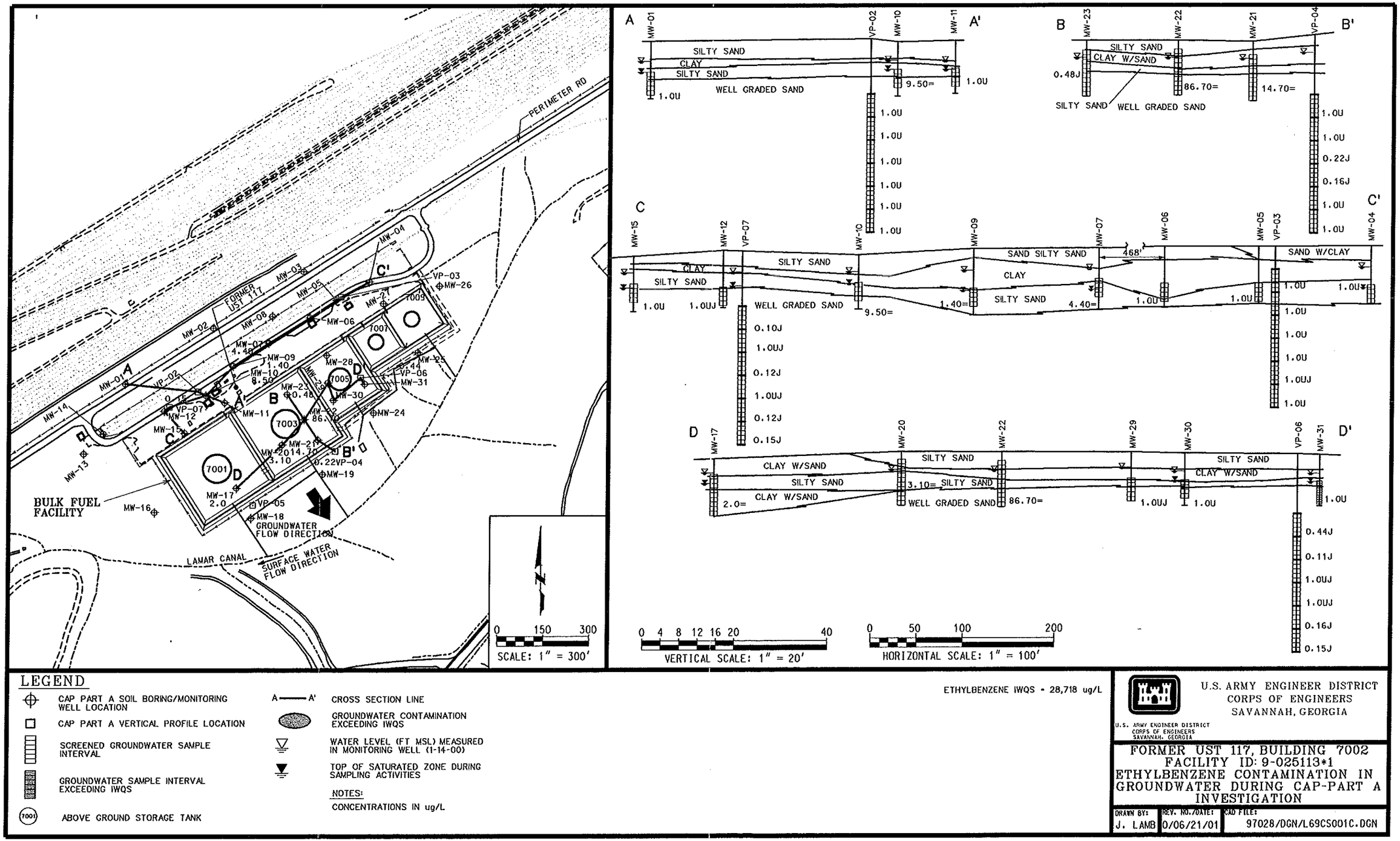


Figure 7. Ethylbenzene Contamination in Groundwater Determined During the CAP–Part A Site Investigation at the Former UST 117, Building 7002 Site

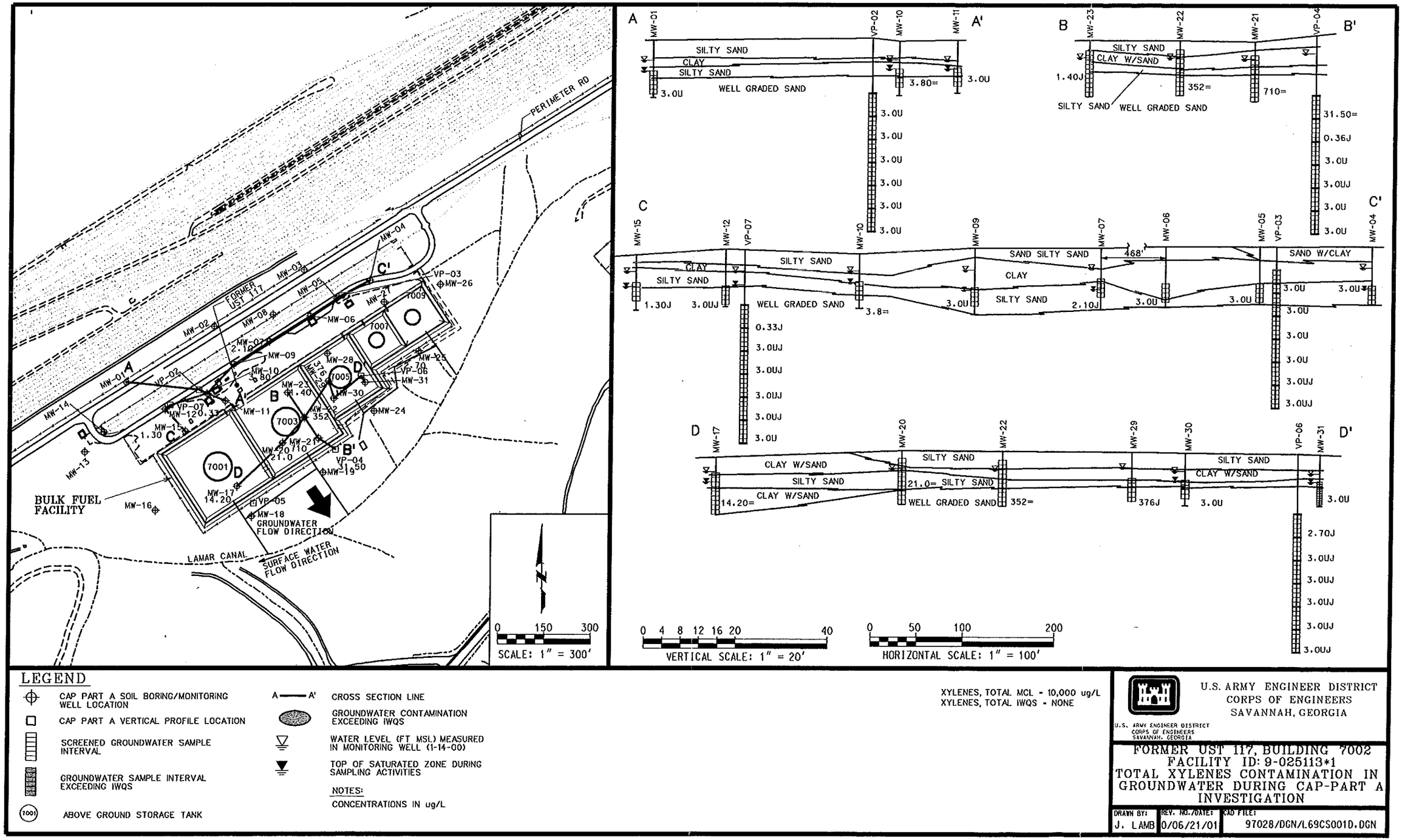


Figure 8. Total Xylenes Contamination in Groundwater Determined During the CAP–Part A Site Investigation at the Former UST 117, Building 7002 Site

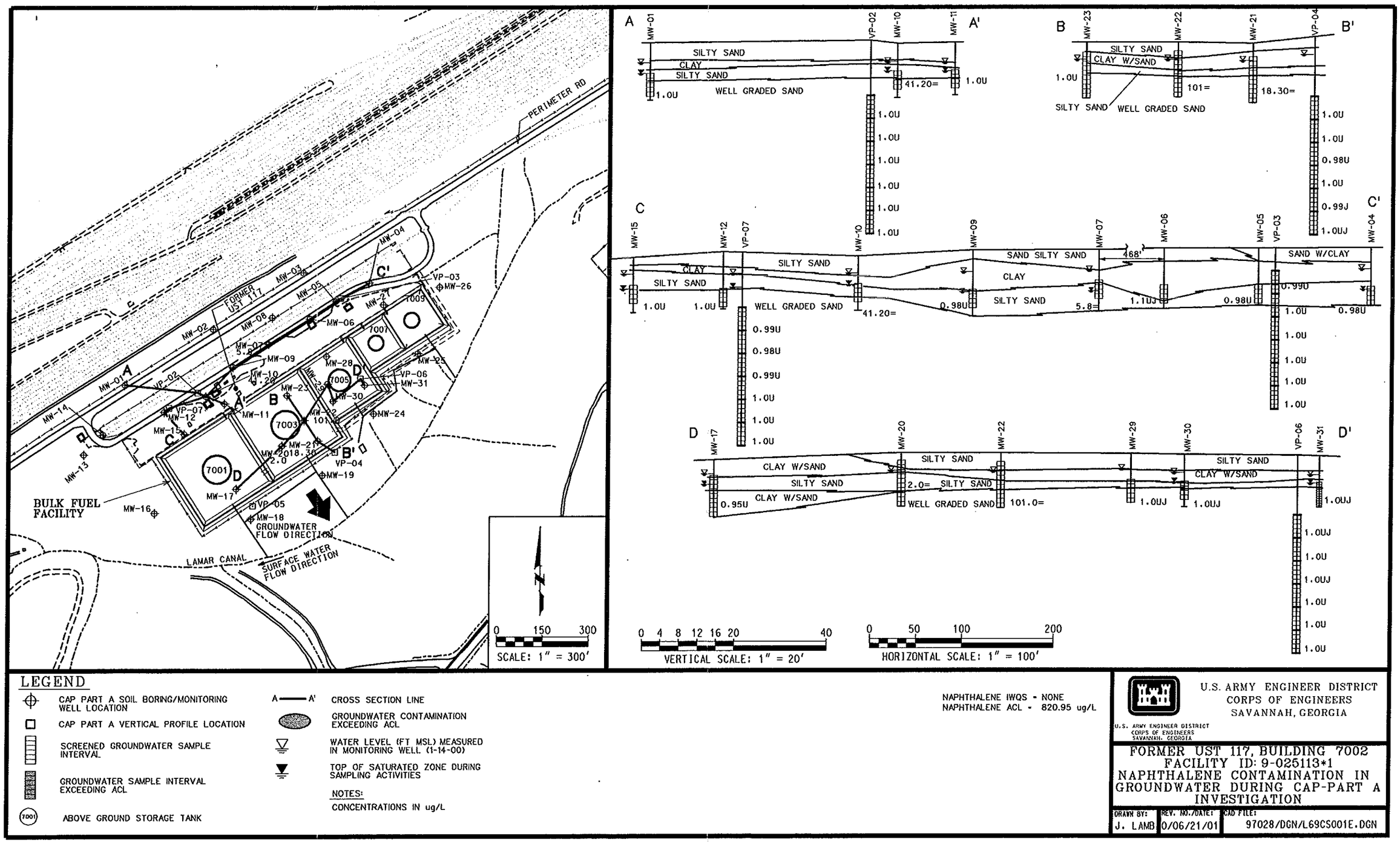


Figure 9. Naphthalene Contamination in Groundwater Determined During the CAP–Part A Site Investigation at the Former UST 117, Building 7002 Site

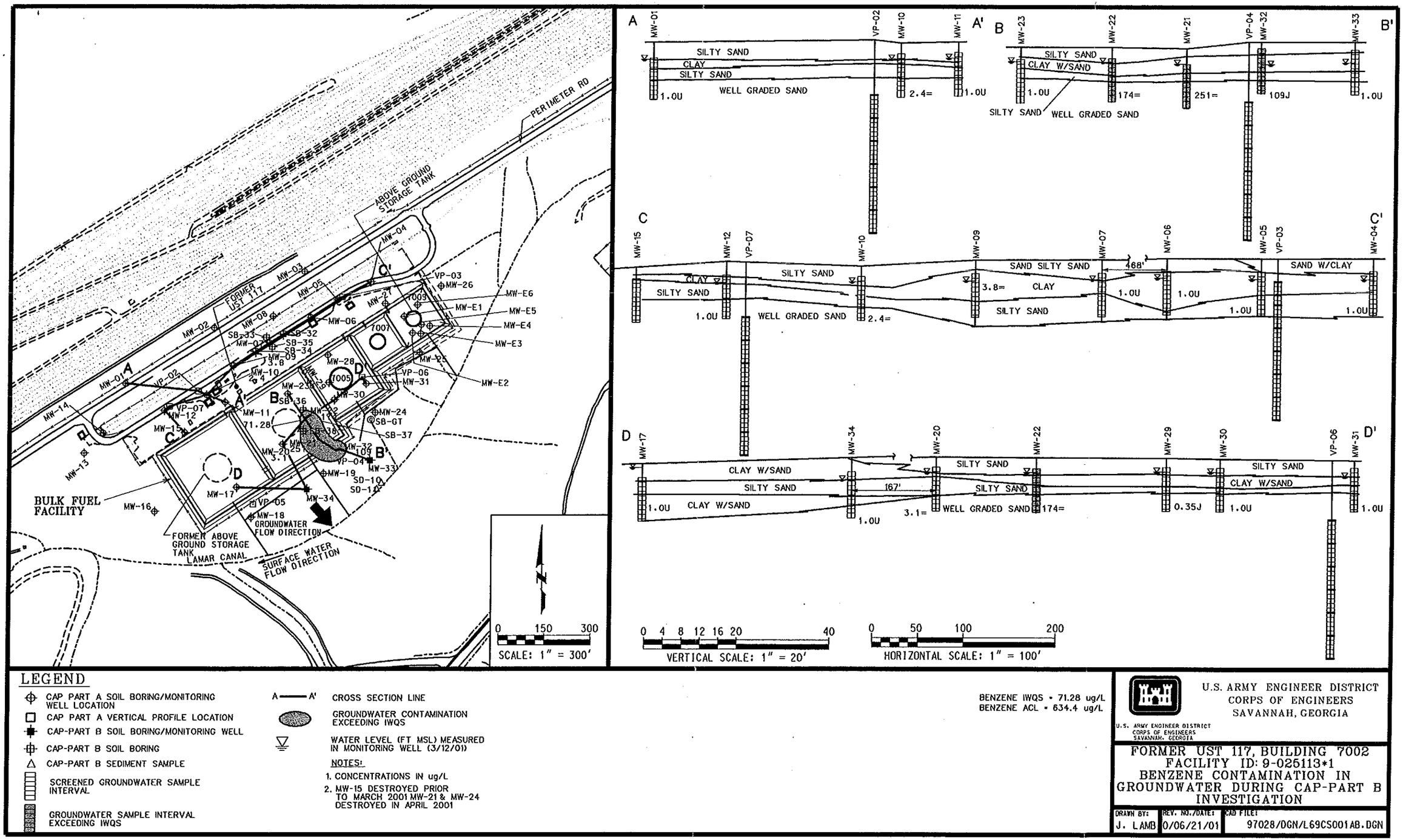


Figure 10. Benzene Contamination in Groundwater Determined During the CAP–Part B Site Investigation at the Former UST 117, Building 7002 Site

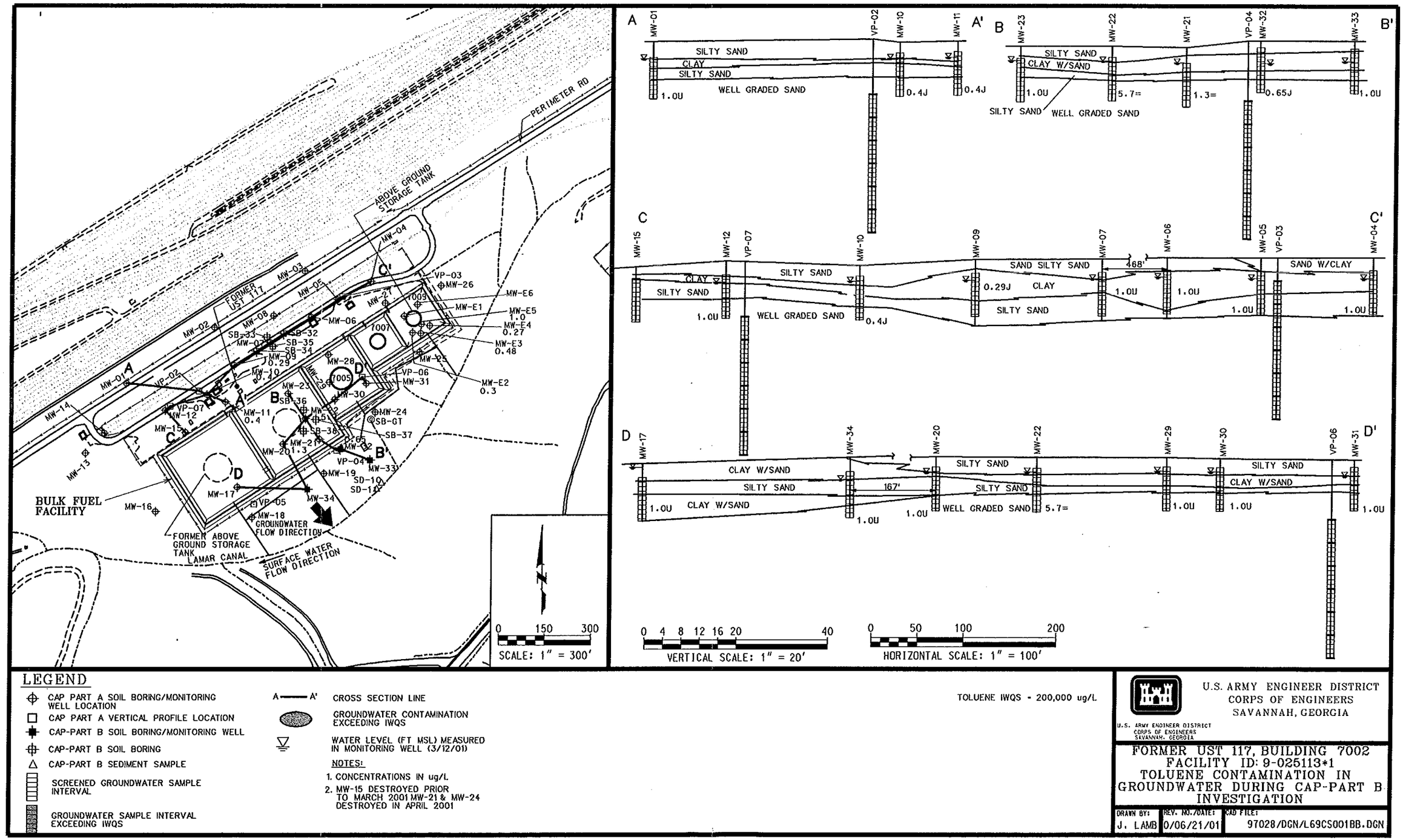


Figure 11. Toluene Contamination in Groundwater Determined During the CAP–Part B Site Investigation at the Former UST 117, Building 7002 Site

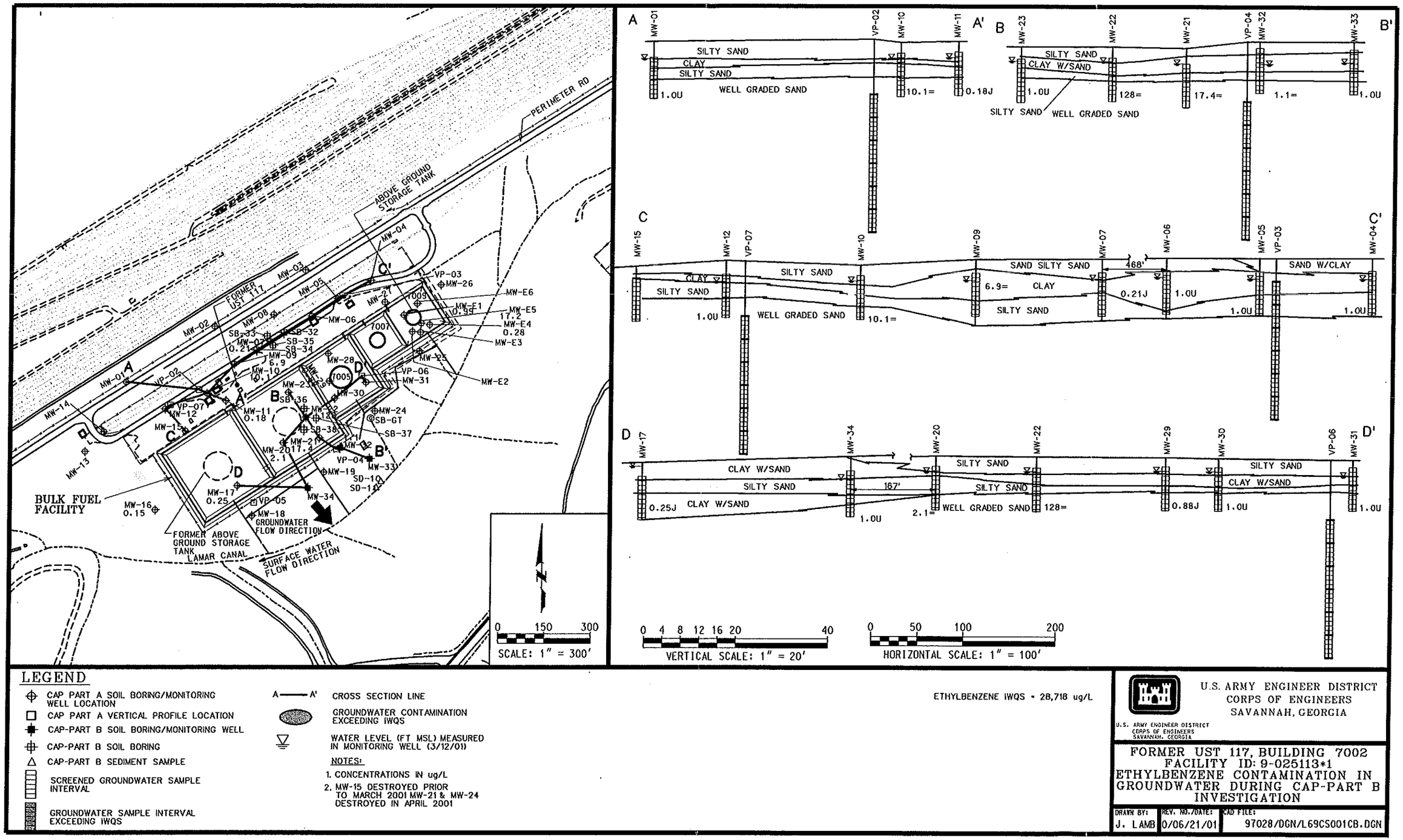
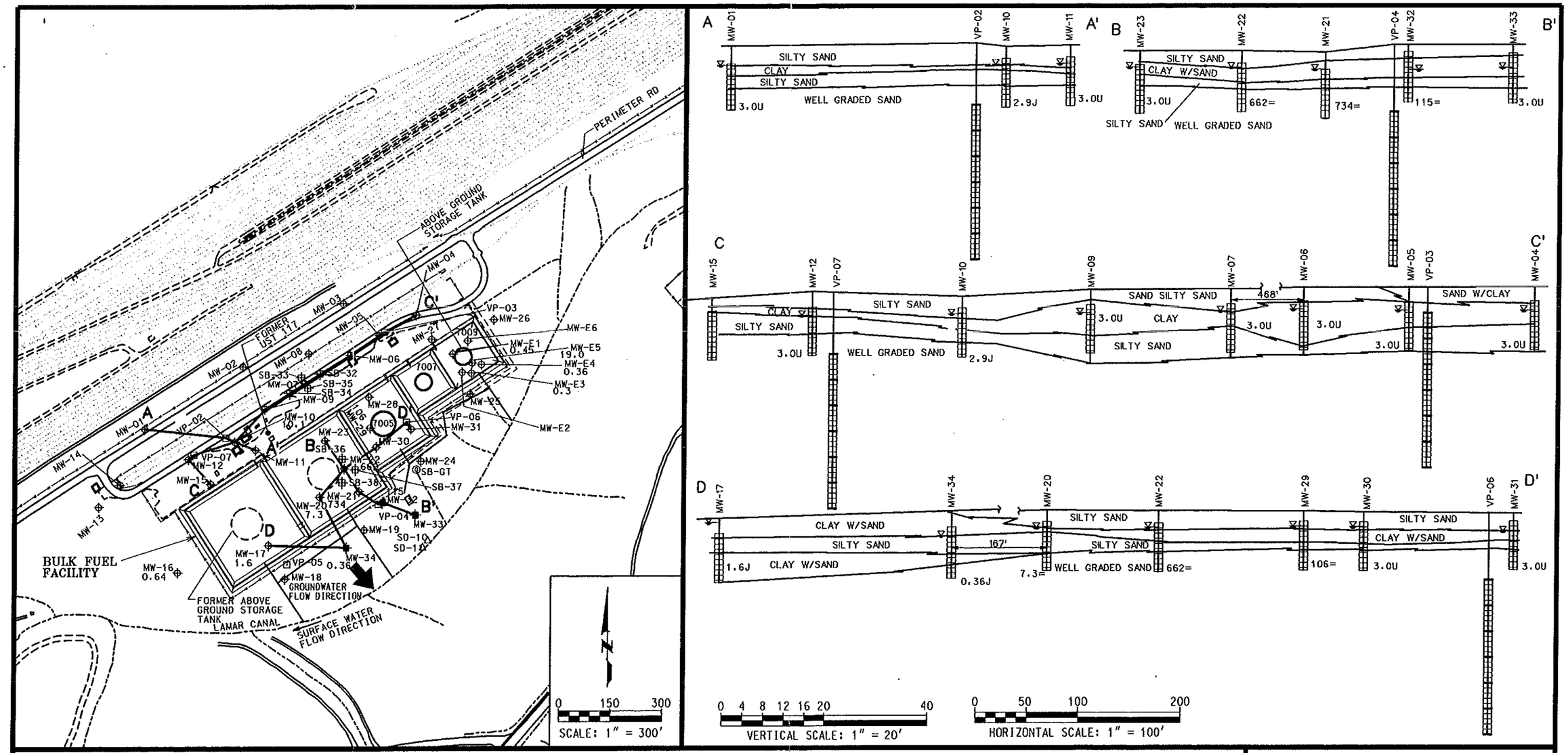


Figure 12. Ethylbenzene Contamination in Groundwater Determined During the CAP–Part B Site Investigation at the Former UST 117, Building 7002 Site



LEGEND

- CAP PART A SOIL BORING/MONITORING WELL LOCATION
- CAP PART A VERTICAL PROFILE LOCATION
- CAP-PART B SOIL BORING/MONITORING WELL
- CAP-PART B SOIL BORING
- CAP-PART B SEDIMENT SAMPLE
- SCREENED GROUNDWATER SAMPLE INTERVAL
- GROUNDWATER SAMPLE INTERVAL EXCEEDING IWQS
- A —— A' CROSS SECTION LINE
- GROUNDWATER CONTAMINATION EXCEEDING IWQS
- WATER LEVEL (FT MSL) MEASURED IN MONITORING WELL (3/12/01)

NOTES:
1. CONCENTRATIONS IN ug/L
2. MW-15 DESTROYED PRIOR TO MARCH 2001 MW-21 & MW-24 DESTROYED IN APRIL 2001

TOTAL XYLENES MCL = 10,000 ug/L
TOTAL XYLENES IWQS = NONE ug/L

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FORMER UST 117, BUILDING 7002
FACILITY ID: 9-025113*1
TOTAL XYLENES CONTAMINATION IN GROUNDWATER DURING CAP-PART B INVESTIGATION

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J. LAMB	0/06/21/01	97028/DGN/L69CS001DB.DGN

Figure 13. Total Xylenes Contamination in Groundwater Determined During the CAP–Part B Site Investigation at the Former UST 117, Building 7002 Site

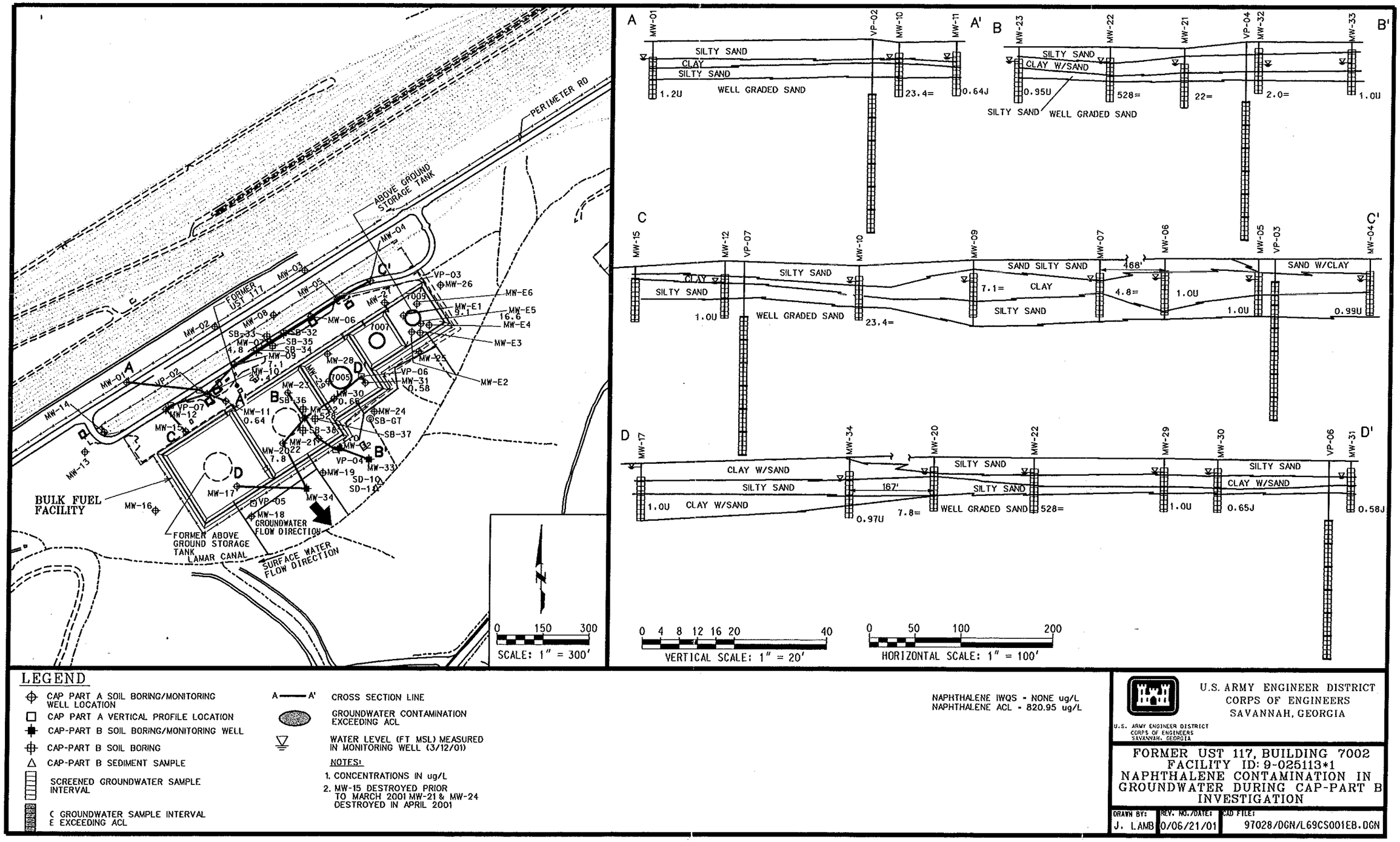
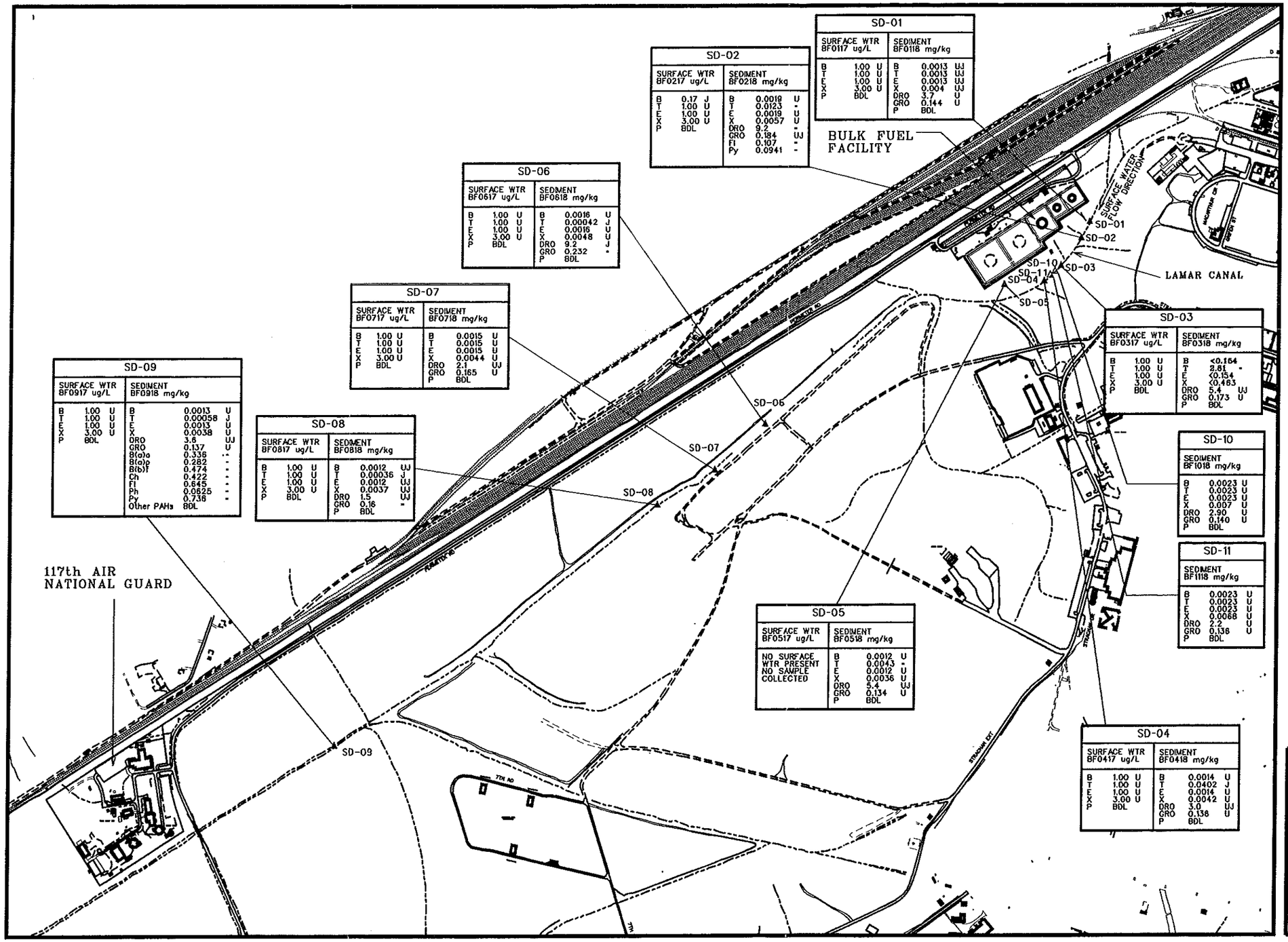


Figure 14. Naphthalene Contamination in Groundwater Determined During the CAP–Part B Site Investigation at the Former UST 117, Building 7002 Site



LEGEND

- ▲ CAP-PART A SURFACE WATER/SEDIMENT SAMPLE
- △ CAP-PART B SEDIMENT SAMPLE

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES, TOTAL
DRO	TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE ORGANICS
GRO	TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE ORGANICS
P	PAHs
B(A)A	BENZO(A)ANTHRACENE
B(A)P	BENZO(A)PYRENE
B(B)F	BENZO(B)FLUORANTHENE
CH	CHRYSENE
FL	FLUORANTHENE
PH	PHENANTHRENE
PY	PYRENE

IN-STREAM WATER QUALITY STANDARDS

B	71.28 ug/L
T	200,000 ug/L
E	28,718 ug/L
X	NA

SOIL THRESHOLD LEVELS

B	0.005 mg/kg
T	0.400 mg/kg
E	0.370 mg/kg
X	20.0 mg/kg
B(A)P	0.660 mg/kg
B(B)F	0.820 mg/kg
CH	0.660 mg.kg
BDL	BELOW DETECTION LIMITS

LABORATORY QUALIFIERS

U - COMPOUND WAS NOT DETECTED AT THE CONCENTRATION REPORTED

UJ - COMPOUND NOT DETECTED AT THE REPORTED CONCENTRATION AND THE CONCENTRATION WAS ESTIMATED

J - VALUE FOR COMPOUND IS ESTIMATED

= - COMPOUND DETECTED AT THE CONCENTRATION REPORTED

BOLD VALUES EXCEED APPLICABLE GUST/GEPD STANDARDS

GA. STATE PLANE (EAST ZONE NAD 83)

0 400 800 1600

SCALE: 1" = 800'

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FORMER UST 117, BUILDING 7002
FACILITY ID: 9-025113*1

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J.LAMB	0/04/04/01	97028/DGNS/L69C001E.DGN

Figure 15. CAP–Part A and B Sediment and Surface Water Sample Locations and Analytical Data for the Former UST 117, Building 7002 Site

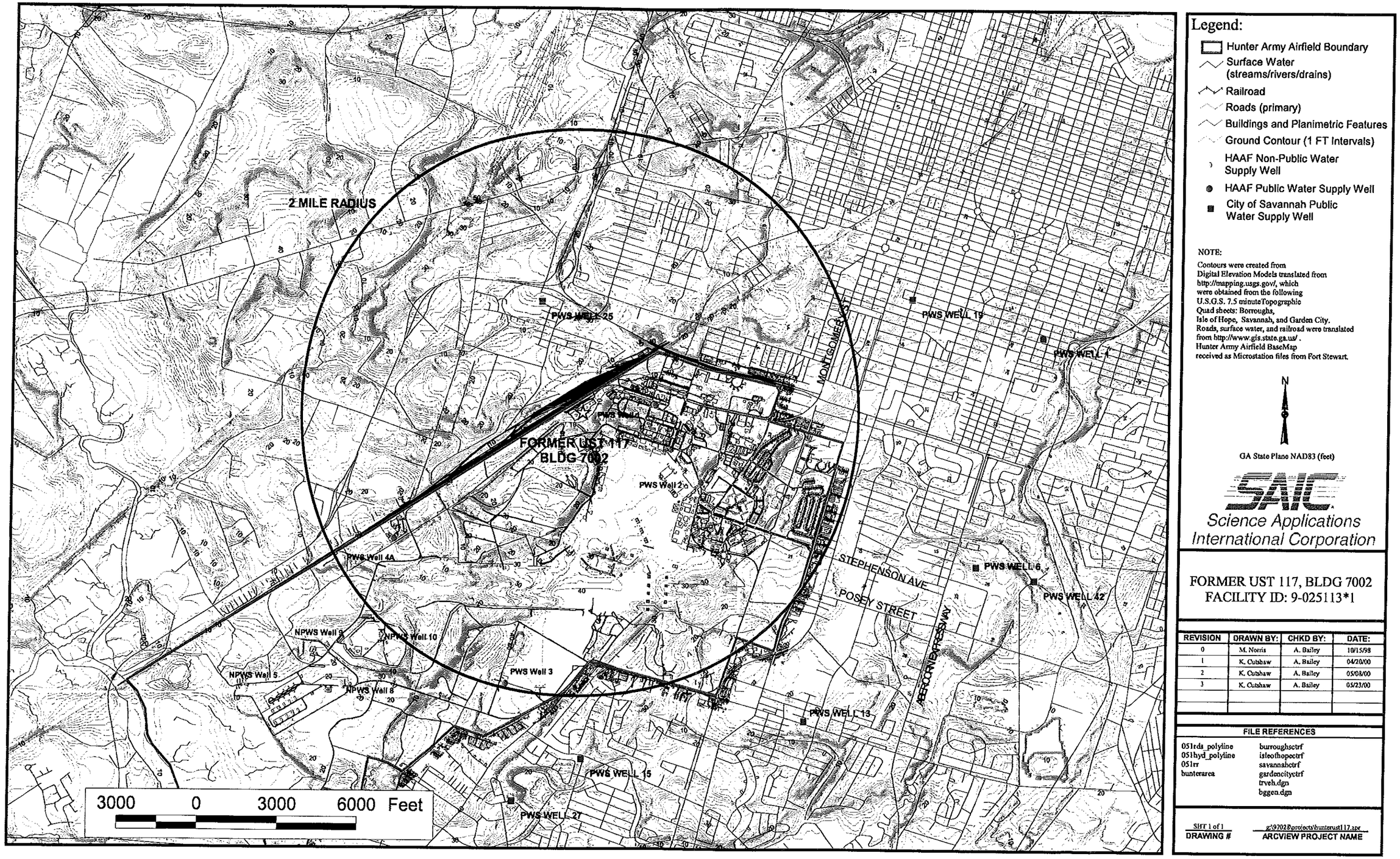

Figure 16. Topographic Quadrangle Map of Hunter Army Airfield and Surrounding Area

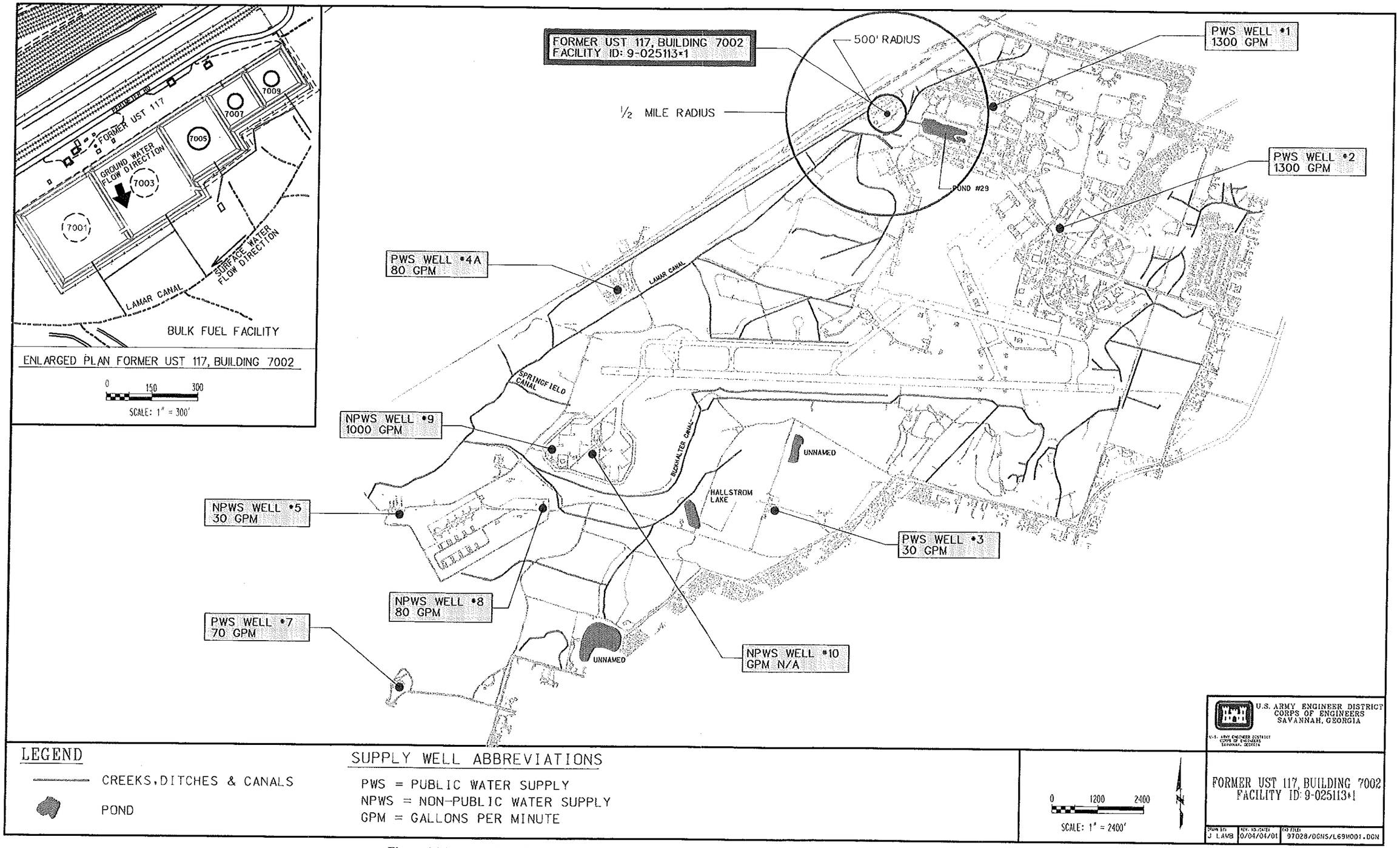

Figure 17. Detailed Map Showing Public and Private Drinking Water Sources and Surface Water Bodies with Respect to the Former UST 117, Building 7002 Site

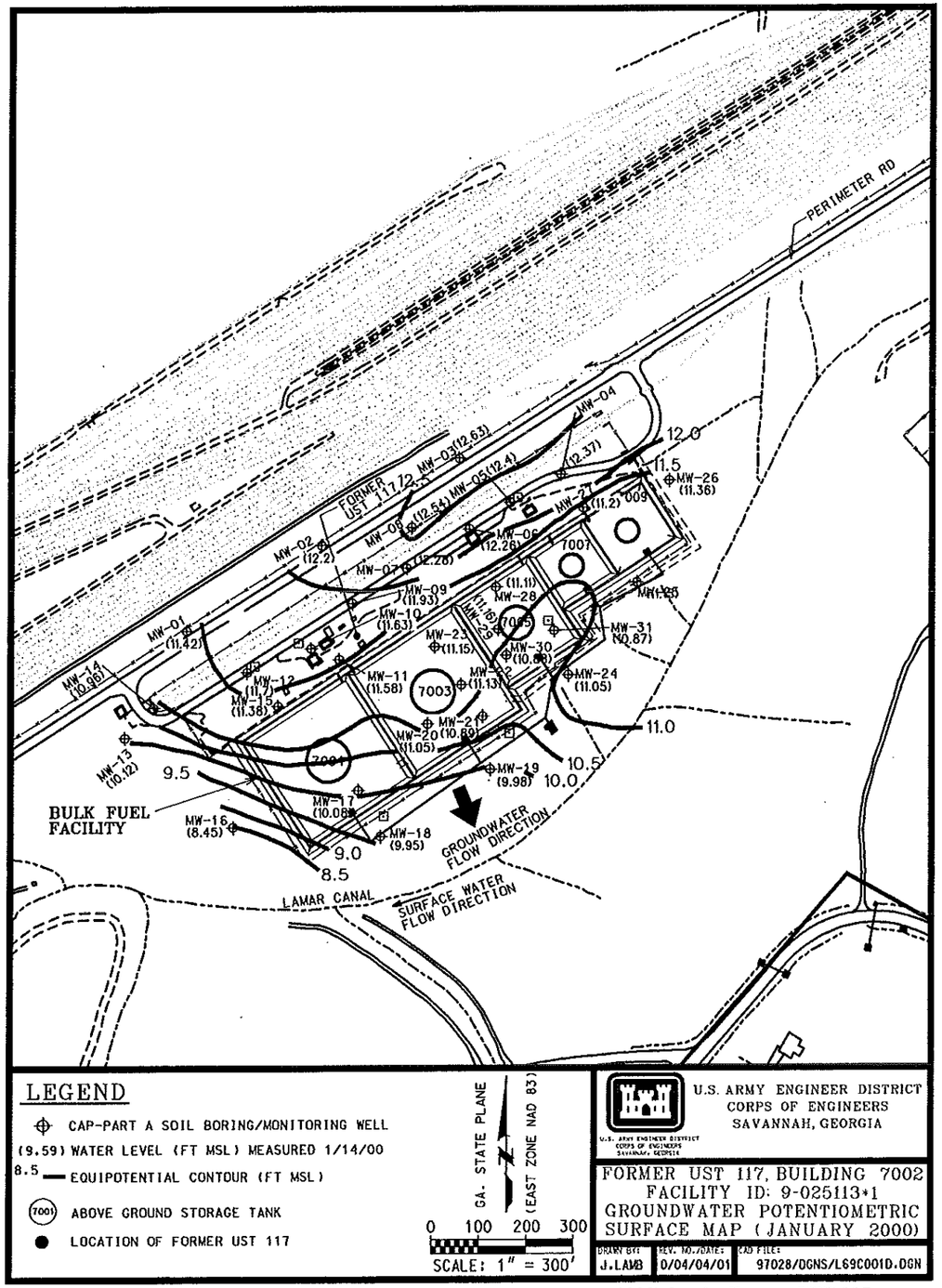

Figure 18. Groundwater Potentiometric Surface Map (January 2000) for the Former UST 117, Building 7002 Site

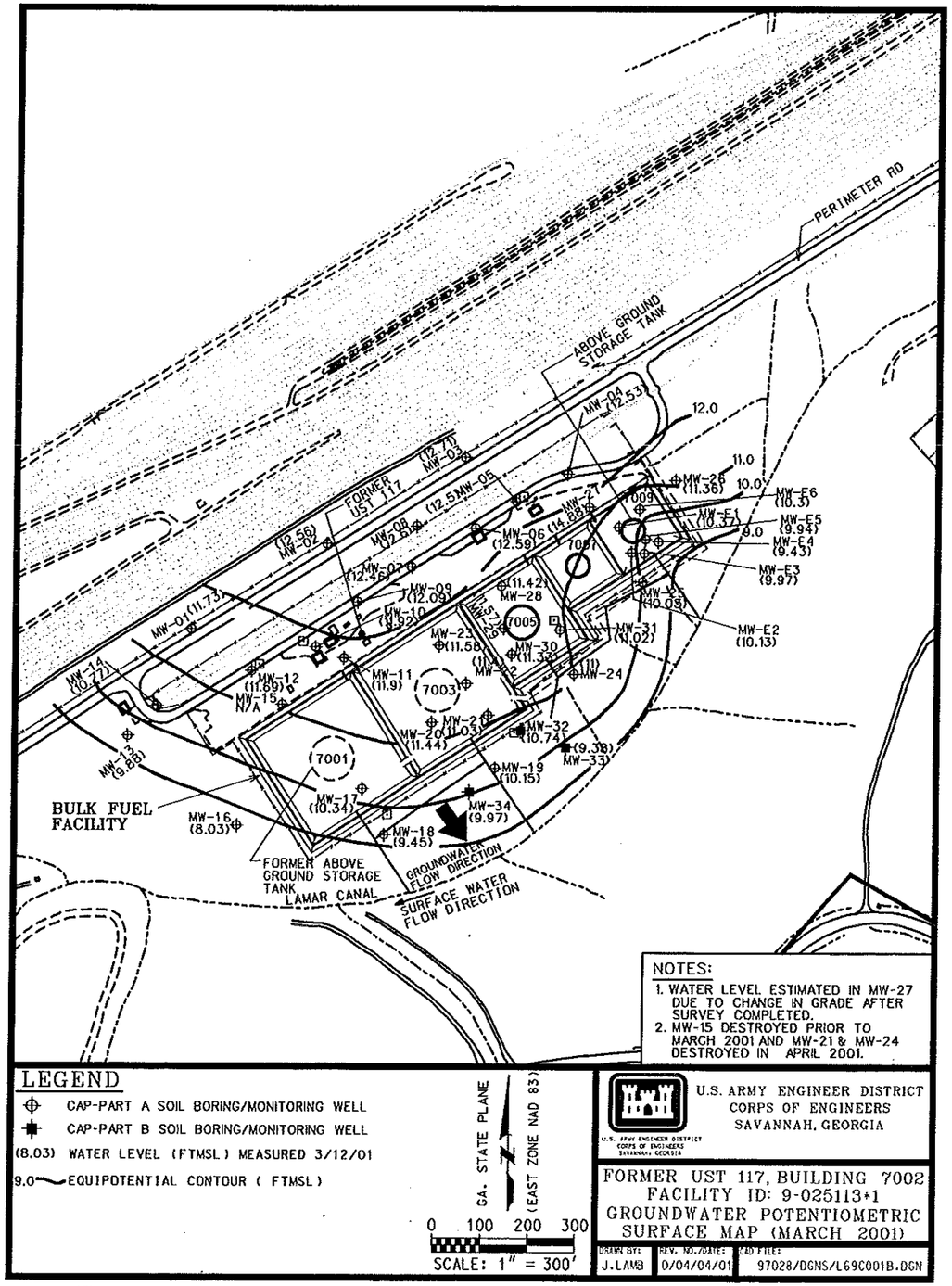

Figure 19. Groundwater Potentiometric Surface Map (March 2001) for the Former UST 117, Building 7002 Site

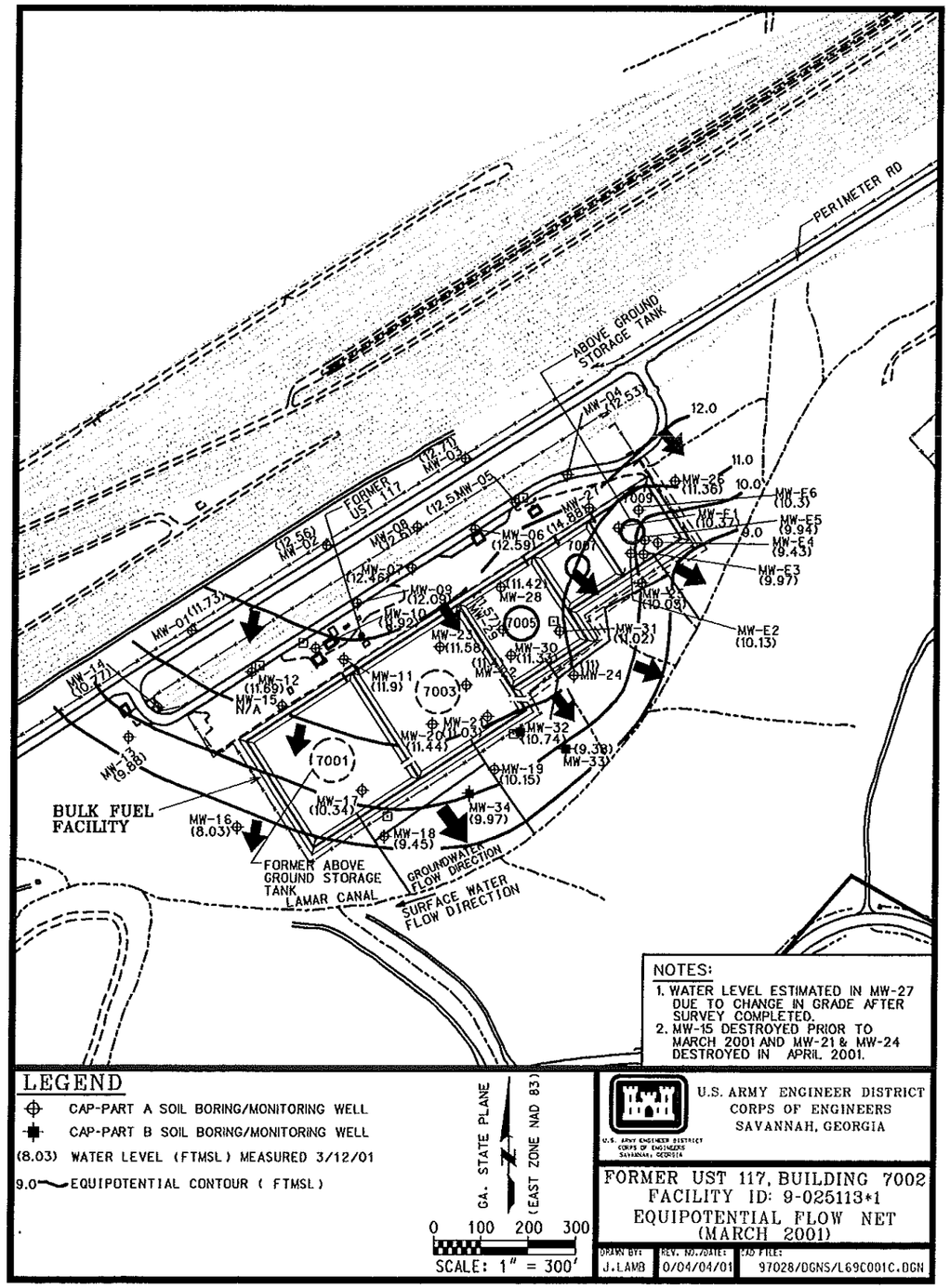

Figure 20. Equipotential Flow Net (March 2001) for the Former UST 117, Building 7002 Site

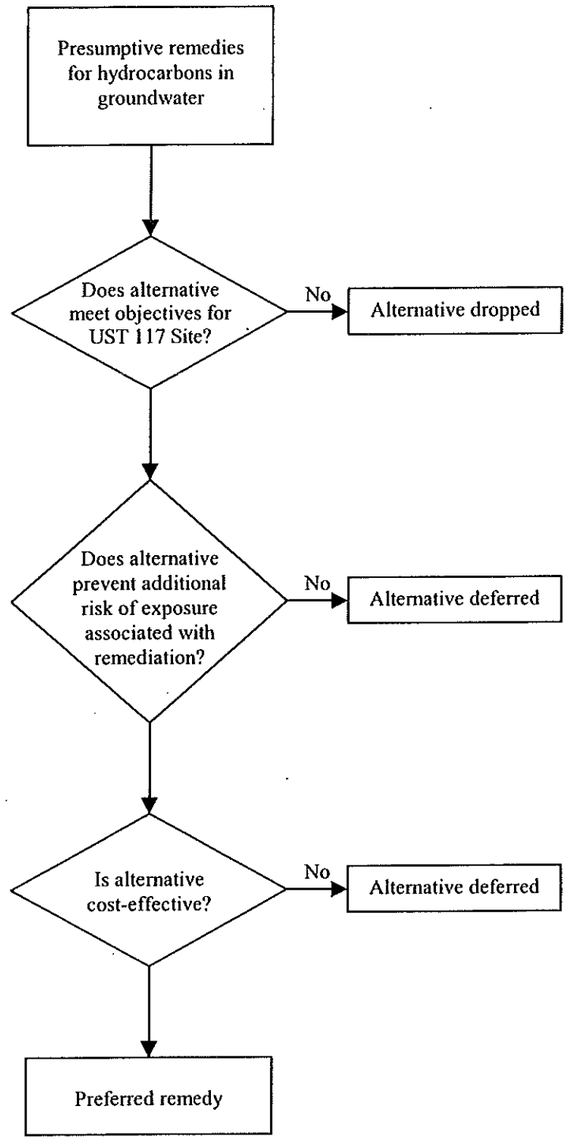

Figure 21. Remedial Alternatives Selection Process for the Former UST 117, Building 7002 Site

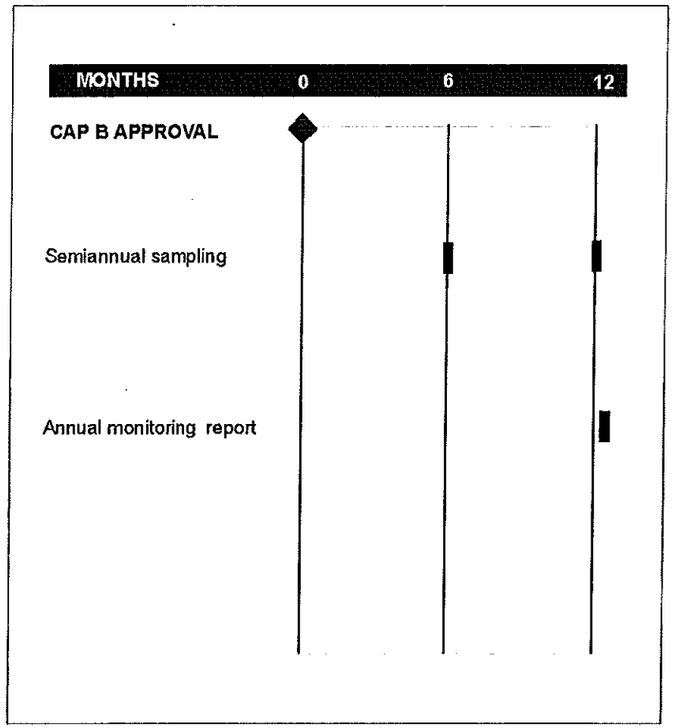

Figure 22. Milestone Schedule for the Remedial Action at the Former UST 117, Building 7002 Site

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APPENDIX II

REPORT TABLES

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 1a: UST SYSTEM CLOSURE[1] - SOIL ANALYTICAL RESULTS
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)
8102-TK117-S1	5.0	09/30/96	**0.013**	0.0026	0.0065	0.0052	0.0273	163
Applicable Standards[2]			0.005	0.400	0.370	20.0	NRC	NRC

TABLE 1b: UST SYSTEM CLOSURE[1] - SOIL ANALYTICAL RESULTS
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)				Total PAHs (mg/kg)
			BDL	BDL	BDL	BDL	
8102-TK117-S1	5.0	09/30/96					BDL
Applicable Standards[2]							

NOTE: [1]Underground storage tank system closure performed by Anderson Columbia Environmental, Inc. (1997).
[2]Georgia Department of Natural Resources Applicable Soil Threshold Levels (i.e., Table A, column 1).

BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH - Total petroleum hydrocarbon.

Bold values exceed the applicable standard.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 1c: UST SYSTEM CLOSURE[1] - GROUNDWATER ANALYTICAL RESULTS
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
N/A							
Applicable Standards[2]			5	1,000	700	10,000	NRC

TABLE 1d: UST SYSTEM CLOSURE[1] - GROUNDWATER ANALYTICAL RESULTS
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)			Total PAHs (µg/L)
N/A						
Applicable Standards[2]						

NOTE: [1]Underground storage tank system closure performed by Anderson Columbia Environmental, Inc. (1997).
[2]U.S. Environmental Protection Agency maximum contaminant levels.

BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
N/A - Not applicable. Groundwater sample not collected.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

TABLE 2a: CAP-PART A SOIL ANALYTICAL RESULTS[1]

(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[4] (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
SB-01	BF0111	4.7 to 6.7	12/01/99	0.0006 J	0.0029 =	0.0010 U	0.0029 U	0.0035	2.0 U	0.124 U
SB-02	BF0211	6.0 to 8.0	12/01/99	0.0011 =	0.001 U	0.001 U	0.003 U	0.0011	1.4 U	0.122 U
SB-03	BF0311	6.0 to 8.0	12/01/99	0.0011 U	0.0025 =	0.0011 U	0.0033 U	0.0025	1.2 U	0.119 U
SB-04	BF0411	8.0 to 9.1	12/03/99	0.001 U	0.0010 J	0.001 U	0.003 U	0.0010	2.7 UJ	0.122 U
SB-07	BF0711[5]	1.5 to 3.0	12/02/99	***<1.350***	**<1.350**	**<1.350**	<4.040	<8.09	74.0	2.33
SB-09	BF0911[5]	0.55 to 2.0	12/03/99	**<0.110**	<0.110	<0.110	<0.331	<0.661	11.2 J	27.2 =
SB-10	BF1011[5]	2.0 to 3.5	12/02/99	**<0.164**	<0.164	0.333 =	0.400 J	<1.061	136 =	290 =
SB-11	BF1111	1.0 to 3.0	12/02/99	0.001 J	0.001 J	0.0014 U	0.0044 U	0.002	0.77 U	0.112 U
SB-12	BF1211	0.5 to 2.5	12/04/99	0.0005 J	0.0007 J	0.0008 J	0.001 J	0.003	0.51 UJ	0.197 =
SB-13	BF1311	7.0 to 8.9	11/30/99	0.0006 J	0.001 J	0.0011 U	0.0033 U	0.0016	1.1 U	0.07 =
SB-14	BF1411	0.5 to 2.5	12/01/99	0.0045 =	0.0009 J	0.0008 J	0.0006 J	0.0068	6.5 =	0.592 =
SB-17	BF1711[5]	2.0 to 4.0	12/03/99	**<0.105**	<0.105	**0.792 =**	5.9 =	6.902	87.4 =	223.0 =
SB-18	BF1811	4.1 to 6.1	12/01/99	0.0011 U	0.0009 J	0.0011 U	0.0034 U	0.009	1.8 U	0.121 U
Soil Threshold Levels[2]				0.005	0.400	0.370	20.0	NRC	NRC	NRC
Alternate Threshold Levels[3]				0.387	12.210	61.850	74.6	NRC	NRC	NRC

NOTE:
[1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the soil analytical data is provided on Table V-A, Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]Refer to Appendix VI for the Alternate Threshold Level calculations.
[4]The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[5]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits instead of as non-detects.
[6]Analytical data from the duplicate sample collected from SB-20 were used for evaluation purposes because the volatile reporting levels for the primary sample were not achieved.

BDL - Below detection limit; volatile organic compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates that the compound was detected at the concentration reported.
Bold values exceed the applicable GA DNR Soil Threshold Levels.
Italicized values exceed Alternate Threshold Levels.

TABLE 2a: CAP-PART A SOIL ANALYTICAL RESULTS[1] (continued)

(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[4] (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
SB-19	BF1911	6.0 to 8.0	11/30/99	0.0006 J	0.0044 =	0.001 U	0.003 U	0.005	1.6 U	0.120 U
SB-20	BF2013[6]	2.0 to 4.0	12/05/99	**0.0382 J**	0.100 U	**0.645 =**	4.480 =	5.1632	425 =	2450 =
SB-22	BF2211	0.0 to 2.0	12/05/99	***1.130 =***	**0.404 =**	**13.6 J**	**74.6 J**	89.734	3420 =	4520 J
SB-23	BF2311	2.0 to 4.0	12/04/99	0.001 U	0.001 U	0.001 U	0.003 U	BDL	2.1 UJ	0.132 =
SB-24	BF2411	4.0 to 6.0	12/02/99	0.008 J	0.0054 =	0.0012 U	0.0036 U	0.0134	7.7 J	0.180 =
SB-25	BF2511	5.6 to 7.6	12/02/99	0.0009 J	0.0025 =	0.0012 U	0.0035 U	0.0034	1.4 U	0.305 =
SB-27	BF2711	5.0 to 7.0	01/11/99	0.0012 U	0.0011 J	0.0012 U	0.0037 U	BDL	2.0 U	0.211 =
SB-28	BF2811	2.0 to 2.8	01/11/99	0.0014 U	0.0005 J	0.0009 J	0.0043 U	0.0014	2.5 U	1.690 =
SB-29	BF2911	4.0 to 5.7	01/11/99	0.0009 J	0.0015 =	0.0006 J	0.279 =	0.282	2.6 U	0.871 =
SB-30	BF3011	4.0 to 5.9	01/11/99	0.0011 U	0.0011 U	0.0011 U	0.0033 U	BDL	1.9 U	0.0939 J
SB-31	BF3111	4.0 to 5.7	01/11/99	0.0015 U	0.0015 U	0.0015 U	0.0044 U	BDL	1.5 U	0.297 =
Soil Threshold Levels[2]				0.005	0.400	0.370	20.0	NRC	NRC	NRC
Alternate Threshold Levels[3]				0.387	12.210	61.850	74.6	NRC	NRC	NRC

NOTE:
[1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the soil analytical data is provided on Table V-A, Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]Refer to Appendix VI for the Alternate Threshold Level calculations.
[4]The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[5]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits instead of as non-detects.
[6]Analytical data from the duplicate sample collected from SB-20 were used for evaluation purposes because the volatile reporting levels for the primary sample were not achieved.

BDL - Below detection limit; volatile organic compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates that the compound was detected at the concentration reported.
Bold values exceed the applicable GA DNR Soil Threshold Levels.
Italicized values exceed Alternate Threshold Level calculations.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 2b: CAP-PART A SOIL ANALYTICAL RESULTS[1]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)				Total PAHs[3] (mg/kg)
				Benzo(b)fluoranthene	Benzo(k)fluoranthene	Fluoranthene	Naphthalene	
SB-07	BF0711	1.5 to 3.0	12/02/99	BDL	BDL	BDL	0.0841 =	0.0841
SB-10	BF1011	2.0 to 3.5	12/02/99	BDL	BDL	BDL	0.268 =	0.268
SB-15	BF1511	1.5 to 3.5	12/02/99	0.0404 =	0.136 =	BDL	BDL	0.176
SB-17	BF1711	2.0 to 4.0	12/03/99	BDL	BDL	BDL	0.350 =	0.350
SB-20	BF2013[4]	2.0 to 4.0	12/05/99	BDL	BDL	BDL	0.681 =	0.681
SB-22	BF2211	0.0 to 2.0	12/05/99	BDL	BDL	0.154 =	14.2 =	14.354
Applicable Standards[2]				0.820	1.6	NA	NA	NRC

NOTES: [1]Only the samples with detected PAH concentrations are listed on the table. A complete summary of the soil analytical data is provided on Table V-A, Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]The total value reported represents the sum of all detected compounds.
[4]Analytical data from the duplicate sample collected from SB-20 were used for evaluation purposes because the volatile reporting levels for the primary sample were not achieved.

BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
NA - Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers
= - Indicates that the compound was detected at the concentration reported.

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TABLE 2c: CAP-PART B SOIL ANALYTICAL RESULTS[1]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[4] (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
SB-32	BF3211	0.0 to 2.3	11/30/00	0.0016 U	0.00043 J	0.0016 U	0.0047 U	0.00043	0.81 U	0.118 U
SB-33	BF3311	0.0 to 2.1	11/30/00	0.0018 U	0.00079 J	0.0018 U	0.0053 U	0.00079	2.5 U	0.118 U
SB-34	BF3411	0.5 to 2.2	11/30/00	0.0013 U	0.00044 J	0.0013 U	0.0039 U	0.00044	1.4 U	0.113 U
SB-35	BF3511	0.0 to 2.0	11/30/00	0.0019 U	0.00062 J	0.0019 U	0.0056 U	0.00062	41.6 =	0.0644 J
SB-36	BF3611	0.0 to 2.0	11/30/00	0.0039 =	0.0388 =	0.134 =	1.960 =	2.137	829 =	1320 =
SB-37	BF3711	0.0 to 3.5	11/30/00	0.0018 =	0.00099 J	0.0064 =	0.0362 =	0.0454	8.6 =	0.843 =
SB-37	BF3713[5]	0.0 to 3.5	11/30/00	0.0026 =	0.0012 J	0.0104 =	0.0474 =	0.0616	8.1 =	0.285 =
SB-38	BF3811	0.0 to 3.4	11/30/00	**0.0763 J**	0.185 U	**1.620** =	4.630 =	6.3263	1660 =	3240.0 J
Soil Threshold Levels[2]				0.005	0.400	0.370	20.0	NRC	NRC	NRC
Alternate Threshold Levels[3]				0.387	12.210	61.850	74.6	NRC	NRC	NRC

NOTE: [1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the soil analytical data is provided in Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]Refer to Appendix VI for the Alternate Threshold Level calculations.
[4]The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[5]Duplicate sample.

BDL - Below detection limit; volatile organic compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates that the compound was detected at the concentration reported.
Bold values exceed the applicable standard.

TABLE 2c: CAP-PART B SOIL ANALYTICAL RESULTS[1] (continued)
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[4] (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
MW-32	BF321B	2.0 to 3.3	12/01/00	0.0021 U	0.0018 J	0.0021 U	0.0062 U	0.0018	0.61 U	0.190 =
MW-E1[6]	MW-01-01	0.0 to 2.0	01/11/00	0.003 U	0.003 U	0.009 =	0.003 U	0.009	530 J	440 J
MW-E1[6]	MW-01-02	2.0 to 4.0	01/11/00	0.003 U	0.003 U	0.003 U	0.003U	BDL	1300 J	6.1 U
MW-E1[6]	MW-01-03[5]	0.0 to 1.0	01/11/00	0.003U	0.003 UJ	0.024 J	0.003 UJ	0.024 J	230 =	380 J
MW-E2[6]	MW-02-01	0.0 to 2.0	01/11/00	0.003 U	0.003 U	0.016 =	0.008 =	0.024	29 U	72 J
MW-E2[6]	MW-02-02	2.0 to 4.0	01/11/00	0.003 U	0.003 U	0.003 U	0.003 U	BDL	31 U	70 J
MW-E3[6]	MW-03-01	0.0 to 2.0	01/11/01	0.002 J	0.002 U	**4.5** =	17.0 =	21.5	31 U	1100 J
MW-E3[6]	MW-03-02	2.0 to 4.0	01/11/00	0.002 J	0.003 U	0.180 =	3.5 =	3.68	31 U	100 J
MW-E3[6]	MW-03-03[5]	2.0 to 4.0	01/11/00	0.001 J	0.003 U	0.076 =	0.810 =	0.886	31 U	130 J
MW-E4[6]	MW-04-01	0.0 to 2.0	01/11/00	0.003 U	0.003 U	0.003 U	0.001 J	0.001	31 U	20 =
MW-E4[6]	MW-04-02	2.0 to 4.0	01/11/00	0.004 U	0.004 U	0.004 U	0.004 U	BDL	32 U	30 =
MW-E5[6]	MW-05-01	0.0 to 2.0	01/11/00	0.004 U	0.004 U	0.004 U	0.002 J	0.002	390 =	8.80 =
MW-E5[6]	MW-05-02	2.0 to 4.0	01/11/00	0.004 U	0.001 U	0.004 U	0.004 U	BDL	32 U	12 =
Soil Threshold Levels[2]				0.005	0.400	0.370	20.0	NRC	NRC	NRC
Alternate Threshold Levels[3]				0.387	12.210	61.850	74.6	NRC	NRC	NRC

NOTE:
[1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the soil analytical data is provided in Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]Refer to Appendix VI for the Alternate Threshold Level calculations.
[4]The total value reported represents the sum of all detected compounds. A total is not reported if all the compounds are below the laboratory detection limits.
[5]Duplicate sample.
[6]Soil boring installed by Earth Tech.

BDL - Below detection limit; volatile organic compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates that the compound was detected at the concentration reported.
Bold values exceed the applicable standard.

TABLE 2d: CAP-PART B SOIL ANALYTICAL RESULTS[1]

(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)														Total PAHs[3] (mg/kg)
				Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
SB-36	BF3611	0.0 to 2.0	11/30/00	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.0384 U	0.457 =	0.0384 U	0.0384 U	0.457
SB-37	BF3711	0.0 to 3.5	11/30/00	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0391 U	0.0224 J	0.0391 U	0.0391 U	0.0224
SB-37	BF3713[4]	0.0 to 3.5	11/30/00	0.0494 =	0.258 =	0.229 =	0.245 =	0.129 =	0.213 =	0.244 =	0.0505 =	0.497 =	0.0396 U	0.121 =	0.0396 U	0.0746 =	0.472 =	2.582
SB-38	BF3811	0.0 to 3.4	11/30/00	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	0.163 U	6.810 =	0.163 U	0.163 U	6.810
MW-32	BF321B	2.0 to 3.3	12/01/00	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0359 U	0.0371 =	0.0359 U	0.0359 U	0.0371
MW-E1[5]	MW-01-01	0.0 to 2.0	01/11/00	0.086 J	0.740 J	0.0076 U	0.015 U	0.015 U	0.0076 U	0.0076 U	0.015 U	0.970 J	0.180 J	0.0076 U	0.076 U	0.490 J	0.550 J	3.016
MW-E1[5]	MW-01-02	2.0 to 4.0	01/11/00	0.290 J	2.0 J	0.0082 U	0.040 J	0.016 U	0.052 J	0.320 J	0.016 U	3.0 J	0.620 J	0.0082 U	0.300 J	1.5 J	1.8 J	9.922
MW-E1[5]	MW-01-03[4]	0.0 to 1.0	01/11/00	0.060 J	0.008 U	0.008 U	0.015 U	0.015 U	0.008 U	0.085 J	0.015 U	0.660 J	0.130 J	0.008 U	0.080 U	0.310 J	0.420 J	1.605
MW-E2[5]	MW-02-01	0.0 to 2.0	01/11/00	0.0079 U	0.0079 U	0.0079 U	0.015 U	0.017 =	0.0079 U	0.0079 U	0.015 U	0.015 U	0.0079 U	0.0082 =	0.079 U	0.0079 U	0.0079 U	0.0252
MW-E3[5]	MW-03-01	0.0 to 2.0	01/11/00	0.0083 U	0.0083 U	0.020 J	0.016 U	0.016 U	0.0083 U	0.0083 U	0.016 U	0.016 U	0.0083 U	0.030 =	0.083 U	0.0089 =	0.0083 U	0.0589
MW-E4[5]	MW-04-01	0.0 to 2.0	01/11/00	0.0084 U	0.0084 U	0.0084 U	0.025 =	0.016 U	0.096 J	0.0084 U	0.016 U	0.016 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.121
MW-E4[5]	MW-04-02	2.0 to 4.0	01/11/01	0.0087 U	0.0087 U	0.0087 U	0.024 =	0.017 U	0.0087 U	0.0087 U	0.017 U	0.017 U	0.0087 U	0.0087 U	0.0087 U	0.0087 U	0.0087 U	0.024
MW-E5[5]	MW-05-01	0.0 to 2.0	01/11/00	0.0078 U	0.0078 U	0.0078 U	0.015 U	0.023 J	0.0078 U	0.0078 U	0.015 U	0.040 =	0.0078 U	0.0078 U	0.078 U	0.0078 U	0.092 J	0.155
MW-E5[5]	MW-05-02	2.0 to 4.0	01/11/00	0.0085 U	0.0085 U	0.0085 U	0.016 U	0.016 U	0.240 =	0.0085 U	0.016 U	0.016 U	0.0085 U	0.0085 U	0.085 U	0.0085 U	0.0085 U	0.240
Applicable Standards[2]				NA	NA	0.660	0.820	NA	1.6	0.660	1.5	NA	NA	0.660	NA	NA	NA	NRC

NOTES: [1]Only the samples with detected PAH concentrations are listed on the table. A complete summary of the soil analytical data is provided in Appendix V.
[2]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]The total value reported represents the sum of all detected compounds.
[4]Duplicate sample.
[5]Soil boring installed by Earth Tech.

BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit.
BGS - Below ground surface.
NA - Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates that the compound was detected at the concentration reported.
Bold values exceed the applicable standard.

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TABLE 2e: CAP-PART A/B - SEDIMENT ANALYTICAL RESULTS
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX[3] (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
CAP-Part A Investigation										
SD-1	BF0118	0.0 to 0.5	12/06/99	0.0013 UJ	0.0013 UJ	0.0013 UJ	0.0040B UJ	BDL	3.7 U	0.144 U
SD-2	BF0218	0.0 to 0.5	12/06/99	0.0019 U	0.0123 =	0.0019 U	0.0057 U	0.123	9.2 =	0.184 UJ
SD-3	BF0318[4]	0.0 to 0.5	12/06/99	**<0.154**	**2.810**	<0.154	<0.463	<3.581	5.4 UJ	0.173 U
SD-4	BF0418	0.0 to 0.5	12/06/99	0.0014 U	0.0402 J	0.0014 U	0.0042 U	0.0402	3.0 UJ	0.136 U
SD-5	BF0518	0.0 to 0.5	12/06/99	0.0012 UJ	0.0043 =	0.0012 U	0.0036 U	0.0043	5.4 UJ	0.134 U
SD-6	BF0618	0.0 to 0.5	12/06/99	0.0016 U	0.00042 J	0.0016 U	0.0048 U	0.00042	9.2 J	0.232 =
SD-7	BF0718	0.0 to 0.5	12/06/99	0.0015 U	0.0015 U	0.0015 U	0.0044 U	BDL	2.1 UJ	0.165 U
SD-8	BF0818	0.0 to 0.5	12/06/99	0.0012 UJ	0.00036 J	0.0012 UJ	0.0037 UJ	0.00036	1.5 UJ	0.160 =
SD-9	BF0918	0.0 to 0.5	12/06/99	0.0013 U	0.00058 J	0.0013 U	0.0038 U	0.00058	3.6 UJ	0.137 U
CAP-Part B Investigation										
SD-10	BF1018	0.0 to 0.5	12/01/2000	0.0023 U	0.0023 U	0.0023 U	0.007 U	BDL	2.90 U	0.140 U
SD-11	BF1118	0.0 to 0.5	12/01/2000	0.0023 U	0.0023 U	0.0023 U	0.0068 U	BDL	2.2 U	0.136 U
Soil Threshold Levels[1]				0.005	0.400	0.370	20	NRC	NRC	NRC
Alternate Threshold Levels[2]				0.387	12.210	61.850	74.6	NRC	NRC	NRC

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Refer to Appendix VI for the Alternate Threshold Level calculations.
[3]The total value reported represents the sum of all detected compounds.
[4]Volatile detection limits were not achieved in the sample due to the elevated toluene concentration. Therefore, the volatile concentrations are reported as less than the elevated detection limit instead of as non-detects.

BDL - Below detection limit.
BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NRC - No regulatory criteria.
TPH-DRO - Total petroleum hydrocarbon--diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon--gasoline-range organics.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.
Bold values exceed the applicable standard.

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TABLE 2f: CAP-PART A/B - SEDIMENT ANALYTICAL RESULTS[1]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)								Total PAHs[3] (mg/kg)
				Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Chrysene	Fluoran-thene	Fluorene	Phenan-threne	Pyrene	
CAP-Part A Investigation												
SD-2	BF0218	0.0 to 0.5	12/06/99	0.0612 U	0.0612 U	0.0612 U	0.0612 U	0.0612 U	0.107 =	0.0612 U	0.0941 =	0.1111
SD-9	BF0918	0.0 to 0.5	12/06/99	0.336 =	0.282 =	0.474 =	0.422 =	0.645 =	0.438 U	0.0625 =	0.736 =	2.9575
CAP-Part B Investigation[4]												
Applicable Standards[2]				NA	0.660	0.820	0.660	NA	NA	NA	NA	NRC

NOTE: [1]Only the samples with detected PAH concentrations are listed on the table. A complete summary of the sediment analytical data for both the CAP-Part A and B investigations is provided in Appendix V.
[2]Georgia Department of Natural Resources.(GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[3]The total value reported represents the sum of all detected compounds.
[4]PAH compounds were not detected above the laboratory detection limit for the two sediment samples collected during the CAP-Part B investigation.

BGS - Below ground surface.
NA - Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
= - Indicates the compound was detected at the concentration reported.

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TABLE 3a: CAP-PART A GROUNDWATER ANALYTICAL RESULTS[1]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX[5] (µg/L)
MW-04	BF0412	8.5 to 12.5	12/03/99	1.0 U	0.33 J	1.0 U	3.0 U	0.33
MW-05	BF0512	8.0 to 12.0	12/03/99	1.0 U	0.51 J	1.0 U	3.0 U	0.51
MW-07	BF0712	6.5 to 10.5	12/02/99	1.0 U	1.0 U	4.4 =	2.1 J	6.5
MW-09	BF0912	8.5 to 12.5	12/03/99	1.0 UJ	0.42 J	1.4 =	3.0 U	1.82
MW-10	BF1012	6.0 to 10.0	12/02/99	4.8 =	0.53 J	9.5 =	3.8 =	18.63
MW-12	BF1212	8.0 to 12.0	12/04/99	1.0 UJ	0.36 J	1.0 UJ	3.0 UJ	0.36
MW-15	BF1512	6.0 to 10.0	12/02/99	1.0 U	1.0 U	1.0 U	1.3 J	1.3
MW-17	BF1712	3.04 to 12.50	12/08/99	0.44 J	1.0 U	2.0 =	14.2 =	16.64
MW-20	BF2012	2.2 to 11.70	12/07/99	0.60 J	1.0 U	3.1 =	21.0 =	24.70
MW-21	BF2112	3.4 to 12.9	12/07/99	**130** =	2.8 =	14.7 =	710 =	857.50
MW-22	BF2212	2.43 to 11.9	12/07/99	**553** =	0.86 J	86.7 =	352 =	992.56
MW-23	BF2312	2.73 to 12.19	12/07/99	1.1 =	1.0 U	0.48 J	1.4 J	2.98
MW-29	BF2912	5.7 to 10.7	01/11/99	1.0 UJ	0.40 J	1.0 UJ	376 J	376.4
Maximum Contaminant Level[2]				5	1,000	700	10,000	NRC
In-Stream Water Quality Standard (Chapter 391-3-6.03)[3]				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Level[4]				634.4	NA	NA	NA	NRC

NOTE: [1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the groundwater analytical data is provided on Table VIII-A, Appendix VIII.
[2]U.S. Environmental Protection Agency maximum contaminant level.
[3]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[4]Refer to Appendix VI for the Alternate Concentration Level (ACL) calculations.
[5]The total value reported represents the sum of all detected compounds.

BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NA - Not applicable; ACL not calculated.
NRC - No regulatory criteria.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.
Bold values exceed the applicable standard.
Italicized values exceed the ACL.

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TABLE 3a: CAP-PART A GROUNDWATER ANALYTICAL RESULTS[1] (continued)
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX[5] (µg/L)
VP-2	BFV212	12.0 to 17.0	12/04/99	1.0 U	0.42 J	1.0 U	3.0 U	0.42
VP-2	BFV232	22.0 to 27.0	12/04/99	1.0 U	0.30 J	1.0 U	3.0 U	0.30
VP-2	BFV242	27.0 to 32.0	12/04/99	0.22 J	0.40 J	1.0 U	3.0 U	0.62
VP-2	BFV252	32.0 to 37.0	12/04/99	1.0 U	0.36 J	1.0 U	3.0 U	0.36
VP-2	BFV262	37.0 to 42.0	12/04/99	1.0 U	0.35 J	1.0 U	3.0 U	0.35
VP-3	BFV312	12.0 to 17.0	12/05/99	1.0 U	0.33 J	1.0 U	3.0 U	0.33
VP-3	BFV322	17.0 to 22.0	12/05/99	1.0 U	0.80 J	1.0 U	3.0 U	0.80
VP-3	BFV332	22.0 to 27.0	12/05/99	1.0 U	0.31 J	1.0 U	3.0 U	0.31
VP-3	BFV342	27.0 to 32.0	12/05/99	1.0 U	0.37 J	1.0 U	3.0 U	0.37
VP-3	BFV352	32.0 to 37.0	12/05/99	1.0 UJ	0.28 J	1.0 UJ	3.0 UJ	0.28
VP-3	BFV362	37.0 to 42.0	12/05/99	1.0 UJ	0.28 J	1.0 UJ	3.0 UJ	0.28
VP-4	BFV412	13.0 to 18.0	12/04/99	**81.8** =	0.42 J	1.0 U	31.5 =	113.72
VP-4	BFV422	18.0 to 23.0	12/04/99	1.4 =	0.44 J	1.0 U	0.36 J	2.20
VP-4	BFV432	23.0 to 28.0	12/04/99	0.60 J	0.70 J	0.22 J	3.0 U	1.52
VP-4	BFV442	28.0 to 33.0	12/04/99	0.29 J	0.42 J	0.16 J	3.0 UJ	0.87
VP-4	BFV452	33.0 to 38.0	12/04/99	0.24 J	1.0 U	1.0 U	3.0 U	0.24
VP-4	BFV462	38.0 to 43.0	12/04/99	0.21 J	0.79 J	1.0 U	3.0 U	1.0
VP-5	BFV532	22.5 to 27.5	12/02/99	1.0 UJ	0.51 J	1.0 UJ	3.0 UJ	0.51
VP-5	BFV552	32.5 to 37.5	12/02/99	1.0 U	0.58 J	1.0 U	3.0 U	0.58
VP-6	BFV612	13.0 to 18.0	12/03/99	4.4 J	0.56 J	0.44 J	2.7 J	8.1
VP-6	BFV622	18.0 to 23.0	12/03/99	0.26 J	0.46 J	0.11 J	3.0 UJ	0.83
VP-6	BFV632	23.0 to 28.0	12/03/99	1.0 U	0.43 J	1.0 UJ	3.0 UJ	0.43
VP-6	BFV642	28.0 to 33.0	12/03/99	1.0 UJ	0.45 J	1.0 UJ	3.0 UJ	0.45
VP-6	BFV652	33.0 to 38.0	12/03/99	1.0 UJ	0.47 J	0.16 J	3.0 UJ	0.63
VP-6	BFV662	38.0 to 43.0	12/03/99	1.0 UJ	0.44 J	0.15 J	3.0 UJ	0.59
VP-7	BFV712	12.0 to 17.0	12/04/99	1.0 UJ	0.60 J	0.10 J	0.33 J	1.03
VP-7	BFV722	17.0 to 22.0	12/04/99	1.0 UJ	0.35 J	1.0 UJ	3.0 UJ	0.35
VP-7	BFV732	22.0 to 27.0	12/04/99	0.23 J	0.70 J	0.12 J	3.0 UJ	1.05
VP-7	BFV742	27.0 to 32.0	12/04/99	0.31 J	0.58 J	1.0 UJ	3.0 UJ	0.89
VP-7	BFV752	32.0 to 37.0	12/04/99	0.25 J	0.74 J	0.12 J	3.0 UJ	1.11
VP-7	BFV762	37.0 to 42.0	12/04/99	1.0 U	0.56 J	0.15 J	3.0 U	0.71
Maximum Contaminant Level[2]				5	1,000	700	10,000	NRC
In-Stream Water Quality Standard (Chapter 391-3-6.03)[3]				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Level[4]				634.4	NA	NA	NA	NRC

NOTE: [1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the groundwater analytical data is provided on Table VIII-A, Appendix VIII.
[2]U.S. Environmental Protection Agency maximum contaminant level.
[3]Geoergia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[4]Refer to Appendix VI for the Alternate Concentration Level (ACL) calculations.
[5]The total value reported represents the sum of all detected compounds.

BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NA - Not applicable; ACL not calculated.
NRC - No regulatory criteria.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.
Bold values exceed the applicable standard.
Italicized values exceed the ACL.

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TABLE 3b: CAP-PART A GROUNDWATER ANALYTICAL RESULTS[1]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAHs[6] (µg/L)
				Naphthalene	BDL[5]	BDL[5]	BDL[5]	
MW-07	BF0712	6.5 to 10.5	12/02/99	5.8 =				5.8
MW-10	BF1012	6.0 to 10.0	12/02/99	41.20=				41.20
MW-20	BF2012	2.2 to 11.70	12/07/99	2.0 =				2.0
MW-21	BF2112	3.4 to 12.9	12/07/99	18.30 =				18.30
MW-22	BF2212	2.43 to 11.93	12/07/99	101 =				101.0
Maximum Contaminant Level[2]				NRC				NRC
In-Stream Water Quality Standard (Chapter 391-3-6.03)[3]				NRC				NRC
Alternate Concentration Level[4]				820.9				NRC

NOTE: [1]Only the samples with detected PAH concentrations are listed on the table. A complete summary of the groundwater analytical data is provided on Table VIII-A, Appendix VIII.
[2]U.S. Environmental Protection Agency maximum contaminant level.
[3]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[4]During the CAP-Part A investigation, the Alternate Concentration Level (ACL) for naphthalene was calculated to be 57.85. However, during the CAP-Part B investigation, the ACL was revised based on site conditions. The new calculated ACL is 820.9. Refer to Appendix VI for the ACL calculations.
[5]BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit. Refer to Appendix VIII, Table VIII-A, for complete list of PAH results.
[6]The total value reported represents the sum of all detected compounds.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers

= - Indicates the compound was detected at the concentration reported.

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TABLE 3c: CAP-PART B GROUNDWATER ANALYTICAL RESULTS[1]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX[5] (µg/L)
MW-07	BF0722	2.9 to 12.4	12/02/00	1.0 U	1.0 U	0.21 J	3.0 U	0.21
MW-09	BF0922	2.9 to 12.4	12/02/00	3.8 =	0.29 J	6.9 =	3.0 U	10.99
MW-10	BF1022	2.3 to 11.8	12/02/00	2.4 =	0.4 J	10.1 =	2.9 J	15.8
MW-10	BF1024[6]	2.3 to 11.8	12/02/00	2.2 =	0.63 J	9.9 =	3 =	15.73
MW-11	BF1122	2.3 to 11.8	12/02/00	1.0 U	0.4 J	0.18 J	3.0 U	0.58
MW-16	BF1622	2.7 to 12.2	12/02/00	1.0 U	1.0 U	0.15 U	0.64 J	0.79
MW-17	BF1722	3.0 to 12.5	12/02/00	1.0 U	1.0 U	0.25 J	1.6 J	1.85
MW-20	BF2022	2.2 to 11.7	12/03/00	3.1 =	1.0 U	2.1 =	7.3 =	12.5
MW-20	BF2024[6]	2.2 to 11.7	12/03/00	2.7 =	1.0 U	2.3 =	7.7 =	12.7
MW-21	BF2122	3.4 to 12.9	12/02/00	**251 =**	1.3 =	17.4 =	734 =	1003.7
MW-22	BF2222	2.4 to 11.9	12/02/00	**174 =**	5.7 =	128.0 =	662 =	969.7
MW-29	BF2922	2.0 to 11.5	12/03/00	0.35 J	1.0 U	0.88 J	106 =	107.23
MW-32	BF3222	1.4 to 11.0	12/01/00	**109 J**	0.65 J	1.1 =	115 =	225.75
MW-33	BF3322	1.6 to 11.2	12/01/00	1.0 =	1.0 U	1.0 U	3.0 U	1.0
MW-33	BF3324[6]	1.6 to 11.2	12/01/00	0.94 J	1.0 U	1.0 U	3.0 U	0.94
MW-34	BF3422	3.1 to 13.3	12/01/00	1.0 U	1.0 U	1.0 U	0.36 J	0.36
MW-E1	BFE122	4.6 to 14.6	12/01/00	1.0 U	1.0 U	0.99 J	0.45 J	1.44
MW-E2	BFE222	3.94 to 13.94	12/02/00	1.0 U	0.3 J	1.0 U	3.0 U	0.30
MW-E3	BFE322	4.4 to 14.4	12/02/00	1.0 U	0.48 J	1.0 U	0.3 J	0.78
MW-E3	BFE324[6]	4.4 to 14.4	12/02/00	1.0 U	0.29 J	1.0 U	3.0 U	0.29
MW-E4	BFE433	4.6 to 14.6	12/02/00	0.29 J	0.27 J	0.28 J	0.36 J	1.2
MW-E5	BFE522	4.8 to 14.8	12/02/00	3.6 =	1.0 =	17.2 =	19.0 =	40.8
Maximum Contaminant Level[2]				5	1,000	700	10,000	NRC
In-Stream Water Quality Standard (Chapter 391-3-6.03)[3]				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Level[4]				634.4	NA	NA	NA	NRC

NOTE: [1]Only the samples with detected BTEX concentrations are listed on the table. A complete summary of the groundwater analytical data is provided on Table VIII-B, Appendix VIII.
[2]U.S. Environmental Protection Agency maximum contaminant level.
[3]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[4]Refer to Appendix VI for the Alternate Concentration Level (ACL) calculations.
[5]The total value reported represents the sum of all detected compounds.
[6]Duplicate sample.

BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NA - Not applicable; ACL not calculated.
NRC - No regulatory criteria.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.
Bold values exceed the applicable standard.

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TABLE 3d: CAP-PART B GROUNDWATER ANALYTICAL RESULTS[1]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAHs[6] (µg/L)
				Acenaphthene	Fluorene	Naphthalene	Phenanthrene	
MW-07	BF0722	2.9 to 12.4	12/02/00	BDL	BDL	4.8 =	BDL	4.8
MW-09	BF0922	2.9 to 12.4	12/02/00	BDL	BDL	7.1 =	BDL	7.1
MW-10	BF1022	2.3 to 11.8	12/02/00	BDL	BDL	23.4 =	BDL	23.4
MW-10	BF1024[7]	2.3 to 11.8	12/02/00	BDL	BDL	22.2 =	BDL	22.2
MW-11	BF1122	2.3 to 11.8	12/02/00	BDL	BDL	0.64 J	BDL	0.64
MW-20	BF2022	2.2 to 11.7	12/03/00	BDL	BDL	7.8 =	BDL	7.8
MW-20	BF2024[7]	2.2 to 11.7	12/03/00	BDL	BDL	7.4 =	BDL	7.4
MW-21	BF2122	3.4 to 12.9	12/02/00	BDL	BDL	22 =	BDL	22
MW-22	BF2222	2.4 to 11.9	12/02/00	BDL	BDL	528 =	BDL	528
MW-30	BF3022	1.9 to 11.4	12/03/00	BDL	BDL	0.65 J	BDL	0.65
MW-31	BF3122	1.5 to 11.0	12/03/00	BDL	BDL	0.58 J	BDL	0.58
MW-32	BF3222	1.4 to 11.0	12/01/00	BDL	BDL	2.0 =	BDL	2.0
MW-E1	BFE122	4.6 to 14.6	12/01/00	2.2 =	4 =	9.1 =	BDL	15.3
MW-E5	BFE522	4.8 to 14.8	12/02/00	0.55 J	1 =	16.6 =	0.73 J	18.88
Maximum Contaminant Level[2]				NRC	NRC	NRC	NRC	NRC
In-Stream Water Quality Standard (Chapter 391-3-6)[3]				NRC	14,000	NRC	NRC	NRC
Alternate Concentration Level[4]				NA	NA	820.9	NA	NRC

NOTE: [1]Only the samples with detected PAH concentrations are listed on the table. A complete summary of the groundwater analytical data is provided on Table VIII-A, Appendix VIII.
[2]U.S. Environmental Protection Agency maximum contaminant level.
[3]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[4]Refer to Appendix VI for the Alternate Concentration Level calculations.
[5]BDL - Below detection limit; PAH compounds were not detected above the laboratory detection limit. Refer to Appendix VIII, Table VIII-B, for complete list of PAH results.
[6]The total value reported represents the sum of all detected compounds.
[7]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers

= - Indicates the compound was detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

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TABLE 3e: CAP-PART A SURFACE WATER ANALYTICAL RESULTS[1,2]
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX[6] (µg/L)
SD-02	BF0217	NA	12/06/99	0.17 J	1.0 U	1.0 U	3.0 U	0.17 J
Maximum Contaminant Level[3]				5	1,000	700	10,000	NRC
In-Stream Water Quality Standard (Chapter 391-3-6)[4]				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Level[5]				634.4	NA	NA	NA	NA

TABLE 3f: CAP-PART A SURFACE WATER ANALYTICAL RESULTS[1,2]
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)[7]				Total PAHs (µg/L)
Applicable Standards								

NOTE: [1]Only the samples with detected concentrations are listed on the table. A complete summary of surface water analytical data is provided on Table VIII-B, Appendix VIII of the CAP-Part A Report (SAIC 2000).
[2]Surface water samples were not collected as part of the CAP-Part B investigation activities.
[3]U.S. Environmental Protection Agency maximum contaminant level.
[4]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[5]Refer to Appendix VI for the Alternate Concentration Level calculations.
[6]The total value reported represents the sum of all detected compounds.
[7]PAH compounds were not detected above the laboratory detection limit. Refer to Appendix VIII, Table VIII-B of the CAP-Part A Report, for complete list of PAH results.

BGS - Below ground surface.
BTEX - Benzene, toluene, ethylbenzene, and xylene.
NA - Not applicable.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

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TABLE 4: CAP-PART A/B FREE PRODUCT REMOVAL

Monitoring Well Number: MW-22[1]				
Date of Measurement	Groundwater Elev. (ft MSL)	Product Thickness (ft)	Corrected Water Elev. (ft MSL)	Product Removed (gal)
12/01/00	10.61	0.58[1]	10.03	0.066
02/01/01	11.30	0	11.30	0
03/12/01	11.40	0	11.40	0
			TOTAL	0.066

NOTE: MSL - Mean sea level.
[1]Free product was found in MW-22 only on December 1, 2000. On this date, all product was pumped from the well resulting in the recovery of approximately 0.066 gal. Free product has not been detected in any of the other wells located at this site.

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TABLE 5: CAP-PART A/B GEOTECHNICAL RESULTS[1]

Site	Former UST 117
Sample ID	BFGT11
Sample Depth Interval (feet BGS)	2.0 to 4.0
Grain Size Analysis - % Fines	67.02
Grain Size Analysis - % Sand	32.98
Grain Size Analysis - % Gravel	0
Classification	CH
Liquid Limit	5.7
Plastic Limit	21.6
Plasticity Index	30.1
Moisture (%)	28.9
Total Organic Carbon (%)	0.1
Specific Gravity	2.65
Porosity (n)	0.49
Permeability (cm/s)	1.42×10^{-8}
Liquid Limit	5.7

NOTE: CH = Sandy, fat clay.
UST= Underground storage tank.
[1]Only the data for the undisturbed (Shelby Tube) geotechnical soil sample are represented on this table. All other site soil geotechnical data (collected as disturbed samples during the CAP-Part A investigation) were reported in Appendix V of the CAP-Part A Report (SAIC 2000). Geotechnical samples were not collected during the CAP-Part B Investigation.

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TABLE 6: CAP–PART A/B – WELL CONSTRUCTION DETAILS

Boring/Well Number	Date Installed	Boring Depth (ft BGS)	Screened Interval (ft BGS)	Type of Completion	Coordinates (NAD 83)		Elevation (NGVD 88)	
					Northing	Easting	Ground Surface	Top of Casing
CAP–Part A Investigation								
MW-1	12/01/99	13.00	3.5 to 12.5	1-inch PVC	739524.8	972617.1	15.8	15.47
MW-2	12/01/99	13.50	3.5 to 13.0	1-inch PVC	739706.6	972903.5	16.5	16.24
MW-3	12/01/99	13.50	3.6 to 13.1	1-inch PVC	739890.8	973195.5	16.7	16.39
MW-4	12/03/99	13.00	2.8 to 12.3	1-inch PVC	739856.3	973410.3	17.3	17.11
MW-5	12/03/99	13.00	2.9 to 12.4	1-inch PVC	739796.8	973303.1	17.2	16.99
MW-6	12/02/99	13.00	2.7 to 12.2	1-inch PVC	739740.1	973217.2	17.2	16.8
MW-7	12/02/99	13.00	2.9 to 12.4	1-inch PVC	739657.6	973084.8	16.9	16.74
MW-8	12/03/99	12.50	2.3 to 11.8	1-inch PVC	739744.2	973095.6	16.8	16.4
MW-9	12/03/99	13.00	2.9 to 12.4	1-inch PVC	739583.0	972969.0	16.8	16.6
MW-10	12/02/99	12.50	2.3 to 11.8	1-inch PVC	739487.2	972881.3	15.6	15.33
MW-11	12/02/99	12.50	2.3 to 11.8	1-inch PVC	739463.8	972941.7	15.9	15.42
MW-12	12/04/99	13.00	3.0 to 12.5	1-inch PVC	739442.0	972750.5	16.6	16.35
MW-13	11/30/99	13.50	2.3 to 11.8	1-inch PVC	739297.6	972484.6	14.0	13.72
MW-14	12/01/99	13.00	2.8 to 12.3	1-inch PVC	739362.0	972546.0	15.5	15.26
MW-15[2]	12/02/99	13.00	2.5 to 12.0	1-inch PVC	739364.8	972811.6	15.3	15.01
MW-16	12/02/99	12.50	2.7 to 12.2	1-inch PVC	739107.2	972715.7	12.8	12.61
MW-17	12/03/99	12.80	3.0 to 12.5	1-inch PVC	739185.9	972981.8	13.5	13.15
MW-18	12/01/99	13.50	3.4 to 12.9	1-inch PVC	739088.2	973029.8	13.4	12.99
MW-19	11/30/99	13.00	2.0 to 11.5	1-inch PVC	739230.2	973262.1	13.8	13.88
MW-20	12/05/99	12.00	2.2 to 11.7	1-inch PVC	739326.6	973129.5	15.0	14.79
MW-21	12/05/99	13.25	3.4 to 12.9	1-inch PVC	739342.7	973246.3	14.6	14.34
MW-22	12/05/99	13.00	2.4 to 11.9	1-inch PVC	739409.7	973200.6	14.9	14.6
MW-23	12/04/99	12.45	2.7 to 12.2	1-inch PVC	739490.6	973144.7	14.9	14.74
MW-24	12/02/99	13.50	3.2 to 12.7	1-inch PVC	739430.2	973427.2	14.1	14.0
MW-25	12/02/99	13.50	3.6 to 13.1	1-inch PVC	739626.7	973569.7	13.8	13.6
MW-26	12/02/99	12.50	2.4 to 11.9	1-inch PVC	739842.9	973638.1	13.8	13.62
MW-27	01/11/00	12.50	2.5 to 12.0	1-inch PVC	739785.7	97345.6	14.9	17.9
MW-28	01/11/00	12.50	2.0 to 11.5	1-inch PVC	739617.8	973272.9	15.3	15.49
MW-29	01/11/00	12.00	2.0 to 11.5	1-inch PVC	739527.9	973277.6	14.7	14.49
MW-30	01/11/00	12.00	1.9 to 11.4	1-inch PVC	739472.2	973295.5	14.6	14.19
MW-31	01/10/00	12.00	1.5 to 11.0	1-inch PVC	739524.3	973397.2	14.8	14.46
MW-E1[1]	01/12/00	14.60	4.6 to 14.6	2-inch PVC	739743.1	973518.9	13.9	14.00
MW-E2[1]	01/12/00	13.94	3.94 to 13.94	2-inch PVC	739689.5	973546.5	13.6	13.76
MW-E3[1]	01/12/00	14.40	4.4 to 14.4	2-inch PVC	739687.5	973573.1	13.9	13.99
MW-E4[1]	01/12/00	14.60	4.6 to 14.6	2-inch PVC	739712.7	973602.7	13.8	13.88
MW-E5[1]	01/12/00	14.80	4.8 to 14.8	2-inch PVC	739717.1	973575.3	13.9	14.00
MW-E6[1]	01/12/00	13.70	3.7 to 13.7	2-inch PVC	739781.1	973562.0	13.7	13.76
VP-2	12/04/99	42.0	NA	Vertical	739499.3	972854.9	16.33	NA
VP-3	12/05/99	42.0	NA	Vertical	739806.7	973318.4	17.13	NA
VP-4	12/04/99	43.0	NA	Vertical	739306.1	973302.4	16.04	NA
VP-5	12/02/99	42.5	NA	Vertical	739130.8	973036.2	14.69	NA
VP-6	12/03/99	43.0	NA	Vertical	739545.1	973384.1	14.36	NA
VP-7	12/04/99	42.0	NA	Vertical	739442.7	972751.8	16.59	NA
CAP–Part B Investigation								
MW-32	12/01/00	11.5	1.4 to 11.2	1-inch PVC	739310.5	973315.2	16.0	15.74
MW-33	12/01/00	11.5	1.6 to 11.4	1-inch PVC	739274.7	973411.0	14.2	13.95
MW-34	12/01/00	13.0	3.1 to 13.1	1-inch PVC	739179.4	973208.7	15.1	14.87

NOTES: [1]Monitoring wells installed by Earth Tech, Inc. as part of facility upgrade activities around AST 7009.
[2]Monitoring well MW-15 destroyed after January 2001.
BGS – Below ground surface.
NAD – North American Datum.
NGVD – National Geodetic Vertical Datum
PVC – Polyvinyl chloride.
NA – Not applicable. PVC casing and screen not installed in vertical profiles. Water samples were collected with stainless steel screen at various intervals during borehole installation. Borehole abandoned after groundwater samples collected.

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TABLE 7a: CAP-PART A GROUNDWATER ELEVATIONS

Well Number	Date Measured	Ground Surface Elev. (ft MSL)	Top of Casing Elev. (ft MSL)	Depth of Screened Interval (ft BGS)	Depth of Free Product (ft BTOC)	Water Depth (ft BTOC)	Product Thickness (ft)	Specific Gravity Adjustment	Corrected Groundwater Elev. (ft MSL)
MW-1	01-14-00	15.8	15.47	3.5 to 12.5	N/A	4.05	N/A	N/A	11.42
MW-2	01-14-00	16.5	16.24	3.5 to 13.0	N/A	4.04	N/A	N/A	12.20
MW-3	01-14-00	16.7	16.39	3.6 to 13.1	N/A	3.76	N/A	N/A	12.63
MW-4	01-14-00	17.3	17.11	2.8 to 12.3	N/A	4.79	N/A	N/A	12.32
MW-5	01-14-00	17.2	16.99	2.9 to 12.4	N/A	4.59	N/A	N/A	12.40
MW-6	01-14-00	17.2	16.8	2.7 to 12.2	N/A	4.54	N/A	N/A	12.26
MW-7	01-14-00	16.9	16.74	2.9 to 12.4	N/A	4.46	N/A	N/A	12.28
MW-8	01-14-00	16.8	16.4	2.3 to 11.8	N/A	3.86	N/A	N/A	12.54
MW-9	01-14-00	16.8	16.6	2.9 to 12.4	N/A	4.67	N/A	N/A	11.93
MW-10	01-14-00	15.6	15.33	2.3 to 11.8	N/A	3.70	N/A	N/A	11.63
MW-11	01-14-00	15.9	15.42	2.3 to 11.8	N/A	3.84	N/A	N/A	11.58
MW-12	01-14-00	16.6	16.35	3.0 to 12.5	N/A	4.65	N/A	N/A	11.70
MW-13	01-14-00	14.0	13.72	2.3 to 11.8	N/A	3.60	N/A	N/A	10.12
MW-14	01-14-00	15.5	15.26	2.8 to 12.3	N/A	4.30	N/A	N/A	10.96
MW-15	01-14-00	15.3	15.01	2.5 to 12.0	N/A	3.63	N/A	N/A	11.38
MW-16	01-14-00	12.8	12.61	2.7 to 12.2	N/A	4.16	N/A	N/A	8.45
MW-17	01-14-00	13.5	13.15	3.0 to 12.5	N/A	3.07	N/A	N/A	10.08
MW-18	01-14-00	13.4	12.99	3.4 to 12.9	N/A	3.40	N/A	N/A	9.59
MW-19	01-14-00	13.8	13.88	2.0 to 11.5	N/A	3.90	N/A	N/A	9.98
MW-20	01-14-00	15.0	14.79	2.2 to 11.7	N/A	3.74	N/A	N/A	11.05
MW-21	01-14-00	14.6	14.34	3.4 to 12.9	N/A	3.45	N/A	N/A	10.89
MW-22	01-14-00	14.9	14.6	2.4 to 11.9	N/A	3.47	N/A	N/A	11.13
MW-23	01-14-00	14.9	14.74	2.7 to 12.2	N/A	3.59	N/A	N/A	11.15
MW-24	01-14-00	14.1	14.0	3.2 to 12.7	N/A	2.95	N/A	N/A	11.05
MW-25	01-14-00	13.8	13.6	3.6 to 13.1	N/A	3.49	N/A	N/A	10.11
MW-26	01-14-00	13.8	13.62	2.4 to 11.9	N/A	2.26	N/A	N/A	11.36
MW-27	01-14-00	14.9	17.9	2.5 to 12.0	N/A	6.70	N/A	N/A	11.20
MW-28	01-14-00	15.3	15.49	2.0 to 11.5	N/A	4.38	N/A	N/A	11.11
MW-29	01-14-00	14.7	14.49	2.0 to 11.5	N/A	3.33	N/A	N/A	11.16
MW-30	01-14-00	14.6	14.19	1.9 to 11.4	N/A	3.31	N/A	N/A	10.88
MW-31	01-14-00	14.8	14.46	1.5 to 11.0	N/A	3.59	N/A	N/A	10.87

NOTE: BGS - Below ground surface.
BTOC - Below top of casing.
MSL - Mean sea level.
N/A - Not applicable.

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TABLE 7b: CAP-PART B GROUNDWATER ELEVATIONS

Well Number	Date Measured	Ground Surface Elev. (ft MSL)	Top of Casing Elev. (ft MSL)	Depth of Screened Interval (ft BGS)	Depth of Free Product (ft BTOC)	Water Depth (ft BTOC)	Product Thickness (ft)	Specific Gravity Adjustment	Corrected Groundwater Elev. (ft MSL)
MW-1	03/12/01	15.8	15.47	3.5 to 12.5	N/A	3.74	N/A	N/A	11.73
MW-2	03/12/01	16.5	16.24	3.5 to 13.0	N/A	3.68	N/A	N/A	12.56
MW-3	03/12/01	16.7	16.39	3.6 to 13.1	N/A	3.68	N/A	N/A	12.71
MW-4	03/12/01	17.3	17.11	2.8 to 12.3	N/A	4.58	N/A	N/A	12.53
MW-5	03/12/01	17.2	16.99	2.9 to 12.4	N/A	4.49	N/A	N/A	12.5
MW-6	03/12/01	17.2	16.8	2.7 to 12.2	N/A	4.21	N/A	N/A	12.59
MW-7	03/12/01	16.9	16.74	2.9 to 12.4	N/A	4.28	N/A	N/A	12.46
MW-8	03/12/01	16.8	16.4	2.3 to 11.8	N/A	3.80	N/A	N/A	12.6
MW-9	03/12/01	16.8	16.6	2.9 to 12.4	N/A	4.51	N/A	N/A	12.09
MW-10	03/12/01	15.6	15.33	2.3 to 11.8	N/A	3.41	N/A	N/A	11.92
MW-11	03/12/01	15.9	15.42	2.3 to 11.8	N/A	3.52	N/A	N/A	11.9
MW-12	03/12/01	16.6	16.35	3.0 to 12.5	N/A	4.66	N/A	N/A	11.69
MW-13	03/12/01	14.0	13.72	2.3 to 11.8	N/A	3.84	N/A	N/A	9.88
MW-14	03/12/01	15.5	15.26	2.8 to 12.3	N/A	4.49	N/A	N/A	10.77
MW-15[a]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-16	03/12/01	12.8	12.61	2.7 to 12.2	N/A	4.58	N/A	N/A	8.03
MW-17	03/12/01	13.5	13.15	3.0 to 12.5	N/A	2.81	N/A	N/A	10.34
MW-18	03/12/01	13.4	12.99	3.4 to 12.9	N/A	3.54	N/A	N/A	9.45
MW-19	03/12/01	13.8	13.88	2.0 to 11.5	N/A	3.73	N/A	N/A	10.15
MW-20	03/12/01	15.0	14.79	2.2 to 11.7	N/A	3.35	N/A	N/A	11.44
MW-21	03/12/01	14.6	14.34	3.4 to 12.9	N/A	3.31	N/A	N/A	11.03
MW-22[b]	03/12/01	14.9	14.6	2.4 to 11.9	N/A	3.20	N/A	N/A	11.4
MW-23	03/12/01	14.9	14.74	2.7 to 12.2	N/A	3.16	N/A	N/A	11.58
MW-24	03/12/01	14.1	14.0	3.2 to 12.7	N/A	3.00	N/A	N/A	11
MW-25	03/12/01	13.8	13.6	3.6 to 13.1	N/A	3.57	N/A	N/A	10.03
MW-26	03/12/01	13.8	13.62	2.4 to 11.9	N/A	2.26	N/A	N/A	11.36
MW-27[c]	03/12/01	14.9	17.9	2.5 to 12.0	N/A	3.02	N/A	N/A	14.88
MW-28	03/12/01	15.3	15.49	2.0 to 11.5	N/A	4.07	N/A	N/A	11.42
MW-29	03/12/01	14.7	14.49	2.0 to 11.5	N/A	2.92	N/A	N/A	11.57
MW-30	03/12/01	14.6	14.19	1.9 to 11.4	N/A	2.86	N/A	N/A	11.33
MW-31	03/12/01	14.8	14.46	1.5 to 11.0	N/A	3.44	N/A	N/A	11.02
MW-32	03/12/01	16.0	15.7	1.4 to 11.0	N/A	4.96	N/A	N/A	10.74
MW-33	03/12/01	14.2	13.9	1.6 to 11.2	N/A	4.52	N/A	N/A	9.38
MW-34	03/12/01	15.1	14.8	3.1 to 13.3	N/A	4.83	N/A	N/A	9.97
MW-E1	03/12/01	13.9	14.0	4.6 to 14.6	N/A	3.63	N/A	N/A	10.37
MW-E2	03/12/01	13.6	13.8	3.9 to 13.9	N/A	3.67	N/A	N/A	10.13
MW-E3	03/12/01	13.9	14.0	4.4 to 14.4	N/A	4.03	N/A	N/A	9.97
MW-E4	03/12/01	13.8	13.9	4.6 to 14.6	N/A	4.47	N/A	N/A	9.43
MW-E5	03/12/01	13.9	14.0	4.8 to 14.8	N/A	4.06	N/A	N/A	9.94
MW-E6	03/12/01	13.7	13.8	3.7 to 13.7	N/A	3.50	N/A	N/A	10.3

NOTE: BGS - Below ground surface. MSL - Mean sea level.
N/A - Not applicable. BTOC - Below top of casing.

[a]MW-15 was destroyed during the Bulk Fuel Facility upgrade activities.
[b]On December 1, 2000, 0.58 feet of free product was detected in MW-22. The product was removed from the well and subsequent measurements were collected on February 1 and March 21, 2001. Free product was not detected during either event.
[c]The top of casing elevation for MW-27 was established when a 3.0-foot stick-up existed. However, after the facility upgrade was completed, the stick-up was removed and the well completed as a flush-mount. A resurvey of the well was not completed; therefore, the top of casing and groundwater elevation provided are estimated.

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TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	SB-01 BF0111 12/01/99 4.7 to 6.7	SB-02 BF0211 12/01/99 6.0 to 8.0	SB-03 BF0311 12/01/99 6.0 to 8.0	SB-04 BF0411 12/03/99 8.0 to 9.1	SB-05 BF0511 12/03/99 5.5 to 7.5	SB-06 BF0611 12/02/99 8.8 to 10.4	SB-07 BF0711[3] 12/02/99 1.5 to 3.0	SB-08 BF0811 12/03/99 1.1 to 3.1	SB-09 BF0911[3] 12/03/99 0.55 to 2.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.0006 J	0.0011 =	0.0011 U	0.001 U	0.001 U	0.0013 U	**<u><1.350</u>**	0.001 U	**<u><0.110</u>**
Toluene	0.400	408,800	8.79	0.0029 =	0.001 U	0.0025 =	0.0010 J	0.001 U	0.0013 U	**<1.350**	0.001 U	<0.110
Ethylbenzene	0.370	204,400	14.98	0.0010 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.0013 U	**<1.350**	0.001 U	<0.110
Xylenes	20.0	408,800	170.20	0.0029 U	0.003 U	0.0033 U	0.003 U	0.0031 U	0.0038 U	<4.040	0.0031 U	<0.331
TPH-DRO	NRC	--	--	2.0 U	1.4 U	1.2 U	2.7 UJ	2.2 UJ	1.2 U	74.0 =	1.4 UJ	11.2 J
TPH-GRO	NRC	--	--	0.124 U	0.122 U	0.119 U	0.122 U	.128 U	0.122 U	2.33 =	0.114 U	27.2 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Acenaphthene	N/A[2]	122,640	104.83	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Acenaphthylene[d]	N/A[2]	61,320	682.00	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Anthracene	N/A[2]	613,200	465.60	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Chrysene	0.660	784	146.09	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Fluoranthene	N/A[2]	81,760	6254.6	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Fluorene	N/A[2]	81,760	135.29	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Naphthalene	N/A[2]	40,880	0.15	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0841 =	0.038 UJ	0.0377 U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U
Pyrene	N/A[2]	61,320	682.00	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U	0.038 UJ	0.0377 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
<u>Laboratory Qualifiers</u>
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon--diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon--gasoline-range organics.
VOCs - Volatile organic compounds.
<u>Underlined</u> values indicate results exceeding leaching to groundwater screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	SB-10 BF1011[3] 12/02/99 2.0 to 3.5	SB-10 BF1013[3] 12/02/99 2.0 to 3.5	SB-11 BF1111 12/02/99 1.0 to 3.0	SB-12 BF1211 12/04/99 0.5 to 2.5	SB-13 BF1311 11/30/99 7.0 to 8.9	SB-14 BF1411 12/01/99 0.5 to 2.5	SB-15 BF1511 12/02/99 1.5 to 3.5	SB-16 BF1611 12/02/99 4.3 to 6.3	SB-17 BF1711[3] 12/03/99 2.0 to 4.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	**<0.164**	**<0.116**	0.001 J	0.0005 J	0.0006 J	0.0045 =	0.0013 U	0.001 U	**<0.105**
Toluene	0.400	408,800	8.79	<0.164	<0.116	0.001 J	0.0007 J	0.001 J	0.0009 J	0.0013 U	0.001 U	<0.105
Ethylbenzene	0.370	204,400	14.98	0.333 =	0.217 =	0.0014 U	0.0008 J	0.0011 U	0.0008 J	0.0013 U	0.001 U	**0.792 =**
Xylenes	20.0	408,800	170.20	0.400 J	0.318 J	0.0044 U	0.001 J	0.0033 U	0.0006 J	0.0038 U	0.0031 U	5.9 =
TPH-DRO	NRC	--	--	136 =	180 =	0.77 U	0.51 UJ	1.1 U	6.5 =	0.99 U	0.92 U	87.4 =
TPH-GRO	NRC	--	--	290.0 =	290 =	0.112 U	0.197 =	0.07 =	.592 =	0.12 U	0.123 U	223.0 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Acenaphthene	N/A[2]	122,640	104.83	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Acenaphthylene	N/A[2]	61,320	682.00	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Anthracene	N/A[2]	613,200	465.60	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Benzo(a)pyrene	0.660	0.78	0.37	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.0404 =	0.041 U	0.0396 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.136 =	0.041 U	0.0396 U
Chrysene	0.660	784	146.09	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Fluoranthene	N/A[2]	81,760	6254.6	0.160 U	0.0463 =	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Fluorene	N/A[2]	81,760	135.29	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Naphthalene	N/A[2]	40,880	0.15	0.268 =	0.315 =	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.350 =
Phenanthrene[d]	N/A[2]	61,320	682.00	0.160 U	0.0528 =	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U
Pyrene	N/A[2]	61,320	682.00	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U	0.04 U	0.041 U	0.0396 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Underlined values indicate results exceeding leaching to groundwater screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	SB-18 BF1811 12/01/99 6.1 to 11.1	SB-19 BF1911 11/30/99 4.1 to 6.1	SB-20 BF2011[3] 12/05/99 2.0 to 4.0	SB-20 BF2013[4] 12/05/99 2.0 to 4.0	SB-21 BF2111 12/05/99 4.0 to 6.0	SB-22 BF2211 12/05/99 0.0 to 2.0	SB-23 BF2311 12/04/99 2.0 to 4.0	SB-24 BF2411 12/02/99 4.0 to 6.0	SB-25 BF2511 12/02/99 5.6 to 7.6
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.0011 U	0.0006 J	<u>**<0.103**</u>	<u>**0.0382 J**</u>	0.0011 U	<u>**1.130 =**</u>	0.001 U	0.0008 J	0.0009 J
Toluene	0.400	408,800	8.79	0.0009 J	0.0044 =	<0.103	0.100 U	0.0011 U	**0.404 =**	0.001 U	0.0054 =	0.0025 =
Ethylbenzene	0.370	204,400	14.98	0.0011 U	0.001 U	**0.851 =**	**0.645 =**	0.0011 U	**13.6 J**	0.001 U	0.0012 U	0.0012 U
Xylenes	20.0	408,800	170.20	0.0034 U	0.003 U	6.640 =	4.480 =	0.0034 U	**74.6 J**	0.003 U	0.0036 U	0.0035 U
TPH-DRO	NRC	--	--	1.8 U	1.6 U	205 =	425 =	2.9 U	3420 =	2.1 UJ	7.7 J	1.4 U
TPH-GRO	NRC	--	--	0.121 U	0.120 U	792.0 J	2450 =	0.129 U	4520 J	0.132 =	0.180 =	0.305 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Acenaphthene	N/A[2]	122,640	104.83	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Acenaphthylene	N/A[2]	61,320	682.00	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Anthracene	N/A[2]	613,200	465.60	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Chrysene	0.660	784	146.09	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Fluoranthene	N/A[2]	81,760	6254.6	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Fluorene	N/A[2]	81,760	135.29	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.154 =	0.0409 U	0.0413 U	0.0426 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Naphthalene	N/A[2]	40,880	0.15	0.0405 U	0.0399 U	<u>0.451 =</u>	<u>0.681 =</u>	0.0429 U	<u>14.2 =</u>	0.0409 U	0.0413 U	0.0426 U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U
Pyrene	N/A[2]	61,320	682.00	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U	0.0376 U	0.0409 U	0.0413 U	0.0426 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
<u>Laboratory Qualifiers</u>
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
<u>Underlined</u> values indicate results exceeding leaching to groundwater screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	SB-26 BF2611 12/02/99 1.2 to 3.2	SB-27 BF2711 01/11/99 5.0 to 7.0	SB-28 BF2811 01/11/99 2.0 to 2.8	SB-29 BF2911 01/11/99 4.0 to 5.7	SB-30 BF3011 01/11/99 4.0 to 5.9	SB-30 BF3013[4] 01/11/99 4.0 to 5.9	SB-31 BF3111 01/10/99 4.0 to 5.7	SB-32 BF3211 11/30/00 0.0 to 2.3	SB-33 BFE3311 11/30/00 0.0 to 2.1
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.0012 U	0.0012 U	0.0014 U	0.0009 J	0.0011 U	0.0011 U	0.0015 U	0.0016 U	0.0018 U
Toluene	0.400	408,800	8.79	0.0012 U	0.0011 J	0.0005 J	0.0015 =	0.0011 U	0.0011 U	0.0015 U	0.00043 J	0.00079 J
Ethylbenzene	0.370	204,400	14.98	0.0012 U	0.0012 U	0.0009 J	0.0006 J	0.0011 U	0.0011 U	0.0015 U	0.0016 U	0.0018 U
Xylenes	20.0	408,800	170.20	0.0035 U	0.0037 U	0.0043 U	0.279 =	0.0033 U	0.0034 U	0.0044 U	0.0047 U	0.0053 U
TPH-DRO	NRC	--	--	0.59 U	2.0 U	2.5 U	2.6 U	1.9 U	1.9 U	1.5 U	0.81 U	2.5 U
TPH-GRO	NRC	--	--	0.131 U	0.211 =	1.690 =	0.871 =	0.0939 J	0.532 =	0.297 =	0.118 U	0.118 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Acenaphthene	N/A[2]	122,640	104.83	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Acenaphthylene	N/A[2]	61,320	682.00	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Anthracene	N/A[2]	613,200	465.60	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Chrysene	0.660	784	146.09	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Fluoranthene	N/A[2]	81,760	6254.6	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Fluorene	N/A[2]	81,760	135.29	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Naphthalene	N/A[2]	40,880	0.15	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U
Pyrene	N/A[2]	61,320	682.00	0.0436 U	0.0424 U	0.0421 U	0.0445 U	0.0427 U	0.0418 U	0.0418 U	0.0394 U	0.0392 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon--diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon--gasoline-range organics.
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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	SB-34 BF3411 11/30/00 0.5 to 2.2	SB-35 BF3511 11/30/00 0.0 to 2.0	SB-36 BF3611 11/30/00 0.0 to 2.0	SB-37 BF3711 11/30/00 0.0 to 3.5	SB-37 BF3713[3] 11/30/00 0.0 to 3.5	SB-38 BF3811 11/30/00 0.0 to 3.4	MW-32 BF321B 12/01/00 2.0 to 3.3	MW-33 BF331B 12/01/00 4.0 to 6.2	MW-34 BF341B 12/01/00 8.0 to 9.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.0013 U	0.0019 U	0.0039 =	0.0018 =	0.0026 =	**0.0763 J**	0.0021 U	0.0012 U	0.0015 U
Toluene	0.400	408,800	8.79	0.00044 J	0.00062 J	0.0388 =	0.00099 J	0.0012 J	0.185 U	0.0018 J	0.0012 U	0.0015 U
Ethylbenzene	0.370	204,400	14.98	0.0013 U	0.0019 U	0.134 =	0.0064 =	0.0104 =	**1.620 =**	0.0021U	0.0012 U	0.0015 U
Xylenes	20.0	408,800	170.20	0.0039 U	0.0056 U	1.960 =	0.0362 =	0.0474 =	4.630 =	0.0062U	0.0037 U	0.0044 U
TPH-DRO	NRC	--	--	1.4 U	41.6 =	829 =	8.6 =	8.1 =	1660 =	0.61 U	2.2 U	1.5 U
TPH-GRO	NRC	--	--	0.113 U	0.0644 J	1320.0=	0.843 =	0.285 =	3240.0 J	0.190 =	0.124 U	0.118 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U	0.0359 U	0.0415 U	0.0392 U
Acenaphthene	N/A[2]	122,640	104.83	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U	0.0359 U	0.0415 U	0.0392 U
Acenaphthylene	N/A[2]	61,320	682.00	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U	0.0359 U	0.0415 U	0.0392 U
Anthracene	N/A[2]	613,200	465.60	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0494 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.258 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.229 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.245 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.129 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.213 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Chrysene	0.660	784	146.09	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.244 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
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Fluoranthene	N/A[2]	81,760	6254.6	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.497 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Fluorene	N/A[2]	81,760	135.29	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U	0.0359 U	0.0415 U	0.0392 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.121 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Naphthalene	N/A[2]	40,880	0.15	0.0377 U	0.0360 U	0.457 =	0.0224 J	0.0396 U	6.810 =	0.0371 =	0.0415 U	0.0392U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0746 =	0.163 U	0.0359 U	0.0415 U	0.0392 U
Pyrene	N/A[2]	61,320	682.00	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.472 =	0.163 U	0.0359 U	0.0415 U	0.0392 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
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U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
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Underlined values indicate results exceeding leaching to groundwater screening levels.
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= - Indicates the compound was detected at the concentration reported.

TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	MW-E1[5] MW-01-01 01/11/00 0.0 to 2.0	MW-E1[5] MW-01-02 01/11/00 2.0 to 4.0	MW-E1[5] MW-01-03[3] 01/11/00 0.0 to 1.0	MW-E2[5] MW-02-01 01/11/00 0.0 to 2.0	MW-E2[5] MW-02-02 01/11/00 2.0 to 4.0	MW-E3[5] MW-03-01 01/11/01 0.0 to 2.0	MW-E3[5] MW-03-02 01/11/00 2.0 to 4.0	MW-E3[5] MW-03-03[3] 01/11/00 2.0 to 4.0	MW-E4[5] MW-04-01 01/11/00 0.0 to 2.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.002 J	0.002 J	0.001 J	0.003 U
Toluene	0.400	408,800	8.79	0.003 U	0.003 U	0.003 UJ	0.003 U	0.003 U	0.002 U	0.003 U	0.003 U	0.003 U
Ethylbenzene	0.370	204,400	14.98	0.009 =	0.003 U	0.024 J	0.016 =	0.003 U	**4.500 =**	0.180 =	0.076=	0.003 U
Xylenes	20.0	408,800	170.20	0.003 U	0.003 U	0.003 UJ	0.008 =	0.003U	17.000=	3.5 =	0.810 =	0.001 J
TPH-DRO	NRC	--	--	530.0 J	1300 J	230.0 =	29.00 U	31 U	31 U	31 U	31 U	31.0 U
TPH-GRO	NRC	--	--	440.0 J	6.1 U	380.0 J	72.00 J	70 J	1100 J	100 J	130 J	20.0 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]
Acenaphthene	N/A[2]	122,640	104.83	0.076 U	0.082 U	0.080 U	0.079 U	0.083 U	0.083 U	0.083 U	0.083 U	0.084 U
Acenaphthylene	N/A[2]	61,320	682.00	0.150 U	0.160 U	0.150 U	0.150 U	0.160 U	0.160 U	0.160 U	0.160 U	0.160 U
Anthracene	N/A[2]	613,200	465.60	0.086 J	0.290 J	0.060 J	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.0084 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.740 J	2.0 J	0.008 U	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.0084 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0076 U	0.0082 U	0.008 U	0.0079 U	0.0083 U	0.020 J	0.0083 U	0.0083 U	0.0084 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.015 U	0.040 J	0.015 U	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.025 =
Benzo(g,h,i)perylene	N/A[2]	--	--	0.015 U	0.016 U	0.015 U	0.017 =	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0076 U	0.052 J	0.008 U	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.096 J
Chrysene	0.660	784	146.09	0.0076 U	0.320 J	0.085 J	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.0084 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.015 U	0.016 U	0.015 U	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Fluoranthene	N/A[2]	81,760	6254.6	0.970 J	3.0 J	0.660 J	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Fluorene	N/A[2]	81,760	135.29	0.180 J	0.620 J	0.130 J	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.0084 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0076 U	0.0082 U	0.008 U	0.0082 =	0.0083 U	0.030 =	0.0083 U	0.0083 U	0.0084 U
Naphthalene	N/A[2]	40,880	0.15	0.076 U	0.300 J	0.080 U	0.079 U	0.083 U	0.083 U	0.083 U	0.083 U	0.084 U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.490 J	1.5 J	0.310 J	0.0079 U	0.0083 U	0.0089 =	0.0083 U	0.0083 U	0.0084 U
Pyrene	N/A[2]	61,320	682.00	0.550 J	1.8 J	0.420 J	0.0079 U	0.0083 U	0.0083 U	0.0083 U	0.0083 U	0.0084 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[5]Soil sample collected from boring installed by Earth Tech.
[6]Result not available. 2-Chloronapthalene was not analyzed for by Earth Tech's subcontracted laboratory (LAUCKS Testing Laboratories).
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Underlined values indicate results exceeding leaching to groundwater screening levels.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 8: SOIL DATA RISK-BASED SCREENING RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	Risk-based Screening Level[a]	Leaching to Groundwater[b]	MW-E4[5] MW-04-02 01/11/00 2.0 to 4.0	MW-E5[5] MW-05-01 01/11/00 0.0 to 2.0	MW-E5[5] MW-05-02 01/11/00 2.0 to 4.0	MW-E6[5] MW-06-01 01/11/00 0.0 to 2.0	MW-E6[5] MW-06-02 01/11/00 2.0 to 4.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	104.1	0.0018	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U
Toluene	0.400	408,800	8.79	0.004 U	0.004 U	0.001 U	0.003 U	0.003 U
Ethylbenzene	0.370	204,400	14.98	0.004 U	0.004 U	0.004 U	0.003 U	0.003 U
Xylenes	20.0	408,800	170.20	0.004 U	0.002 J	0.004 U	0.003 U	0.003 U
TPH-DRO	NRC	--	--	32.0 U	390.0 =	32.0 U	30.0 U	32.0 U
TPH-GRO	NRC	--	--	30.0 =	8.80 =	12.0 =	6.0 U	6.30 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene[c]	N/A[2]	40,880	0.15	[6]	[6]	[6]	[6]	[6]
Acenaphthene	N/A[2]	122,640	104.83	0.087 U	0.078 U	0.085 U	0.080 U	0.085 U
Acenaphthylene	N/A[2]	61,320	682.00	0.170 U	0.150 U	0.160 U	0.150 U	0.160 U
Anthracene	N/A[2]	613,200	465.60	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(a)anthracene	N/A[2]	7.8	1.46	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(a)pyrene	0.660	0.78	0.37	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(b)fluoranthene	0.820	7.8	4.51	0.024 =	0.015 U	0.016 U	0.015 U	0.016 U
Benzo(g,h,i)perylene	N/A[2]	--	--	0.017 U	0.023 J	0.016 U	0.015 U	0.016 U
Benzo(k)fluoranthene	1.6	78.4	45.14	0.0087 U	0.0078 U	0.240 =	0.008 U	0.0085 U
Chrysene	0.660	784	146.09	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Dibenzo(a,h)anthracene	1.5	0.78	1.39	0.017 U	0.015 U	0.016 U	0.015 U	0.016 U
Fluoranthene	N/A[2]	81,760	6254.6	0.017 U	0.040 =	0.016 U	0.015 U	0.016 U
Fluorene	N/A[2]	81,760	135.29	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Indeno(1,2,3-cd)pyrene	0.660	7.8	12.73	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Naphthalene	N/A[2]	40,880	0.15	0.087 U	0.078 U	0.085 U	0.080 U	0.085 U
Phenanthrene[d]	N/A[2]	61,320	682.00	0.0087 U	0.0078 U	0.0085 U	0.008 U	0.0085 U
Pyrene	N/A[2]	61,320	682.00	0.0087 U	0.092 J	0.0085 U	0.008 U	0.0085 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[5]Soil sample collected from boring installed by Earth Tech.
[6]Result not available. 2-Chloronapthalene was not analyzed for by Earth Tech's subcontracted laboratory (LAUCKS Testing Laboratories).
[a]Protective of soil exposure during industrial land use.
[b]Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
Bold values exceed soil threshold levels.
[c]Values based on naphthalene as a surrogate chemical.
[d]Values based on pyrene as a surrogate chemical.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Underlined values indicate results exceeding leaching to groundwater screening levels.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
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Chatham County, Facility ID: 9-025113*1

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-01 BF0112 12/01/99 6.7 to 11.7	MW-02 BF0212 12/01/99 8.0 to 13.0	MW-03 BF0312 12/01/99 8.0 to 13.0	MW-04 BF0412 12/03/99 8.5 to 12.5	MW-05 BF0512 12/03/99 8.0 to 12.0	MW-06 BF0612 12/02/99 8.0 to 12.0	MW-07 BF0712 12/02/99 6.5to 10.5	MW-08 BF0812 12/03/99 6.5 to 11.5	MW-09 BF0912 12/03/99 8.5 to 12.5	MW-10 BF1012 12/02/99 6.0 to 10.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	4.8 =
Toluene	1,000	200,000	750	1.0 U	1.0 U	1.0 U	0.33 J	0.51 J	1.0 U	1.0 U	1.0 UJ	0.42 J	0.53 J
Ethylbenzene	700	28,718	1,300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.4 =	1.0 UJ	1.4 =	9.5 =
Xylenes	10,000	NRC	12,000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	2.1 J	3.0 UJ	3.0 U	3.8 =
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	10.0 U	9.90 UJ	9.80 U	9.80 U	9.8 U	10.9 UJ	11.1 U	1.0 UJ	9.8 U	10.0 U
Acenaphthene	NRC	NRC	365	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Acenaphthylene	NRC	NRC	182.5	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Anthracene	NRC	110,000	182.5	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Fluoranthene	NRC	370	1,460	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Fluorene	NRC	14,000	243	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**0.99 UJ**	**0.98 U**	**0.98 U**	**0.98 U**	**1.1 UJ**	**1.1 U**	**1.0 UJ**	**0.98 U**	**1.0 U**
Naphthalene	NRC	NRC	6.5	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	5.8 =	1.0 UJ	0.98 U	41.2 =
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U
Pyrene	NRC	11,000	182.5	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U	1.0 UJ	0.98 U	1.0 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (IWQS) (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-10 BF1014[3] 12/02/99 6.0 to 10.0	MW-11 BF1112 12/02/99 6.0 to 10.0	MW-12 BF1212 12/04/99 8.0 to 12.0	MW-13 BF1312 11/30/99 12.5 to 16.5	MW-14 BF1412 12/01/99 7.2 to 12.2	MW-15 BF1512 12/02/99 6.0 to 10	MW-16 BF1612 12/02/99 6.3 to 11.3	MW-17 BF1712 12/ 8/99 3.0 to 12.5	MW-18 BF1812 12/01/99 6.1 to 11.1	MW-19 BF1912 11/30/99 8.0 to 13.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	4.7 =	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.44 J	1.0 U	1.0 U
Toluene	1,000	200,000	750	0.60 J	1.0 U	0.36 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1,300	8.9 =	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 =	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	3.6 =	3.0 U	3.0 UJ	3.0 U	3.0 U	1.3 J	3.0 U	14.2 =	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	9.7 U	10.0 U	10.5 U	9.52 U	10.0 U	10.0 U	9.9 U	0.95 U	10.0 U	9.90 UJ
Acenaphthene	NRC	NRC	365	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Acenaphthylene	NRC	NRC	182.5	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Anthracene	NRC	110,000	182.5	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Benzo(a)anthracene	NRC	0.0311	0.092	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Benzo(a)pyrene	0.2	0.0311	0.00092	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Benzo(b)fluoranthene	NRC	NRC	0.0092	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Benzo(g,h,i)perylene	NRC	NRC	--	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Benzo(k)fluoranthene	NRC	0.0311	0.92	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Chrysene	NRC	0.0311	9.2	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Fluoranthene	NRC	370	1,460	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Fluorene	NRC	14,000	243	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**0.97 U**	**1.0 U**	**1.0 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.95 U**	**1.0 U**	**0.99 UJ**
Naphthalene	NRC	NRC	6.5	38.8 =	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Phenanthrene[c]	NRC	NRC	182.5	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ
Pyrene	NRC	11,000	182.5	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-20 BF2012 12/ 7/99 2.2 to 11.7	MW-20 BF2014[3] 12/7/99 2.2 to 11.7	MW-21 BF2112 12/07/99 3.4 to 12.9	MW-22 BF2212 12/07/99 2.4 to 11.9	MW-23 BF2312 12/07/99 2.7 to 12.2	MW-24 BF2412 12/ 02/99 7.5 to 12.5	MW-25 BF2512 12/02/99 7.6 to 12.6	MW-26 BF2612 12/02/99 7.2 to 12.2	MW-27 BF2712 01/11/99 7.0 to 12.0	MW-28 BF2812 01/11/99 7.5 to 12.5
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	0.60 J	0.59 J	**130 =**	**553 =**	1.1 =	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Toluene	1,000	200,000	750	1.0 U	1.0 U	2.8 =	0.86 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethylbenzene	700	28,718	1,300	3.1 =	3.0 =	14.7 =	86.7 =	0.48 J	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Xylenes	10,000	NRC	12,000	21.0 =	20.4 =	710 =	352 =	1.4 J	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	9.9 UJ	9.8 UJ	10.0 U	1.1 U	1.0 UJ
Acenaphthene	NRC	NRC	365	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Acenaphthylene	NRC	NRC	182.5	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Anthracene	NRC	110,000	182.5	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(a)anthracene	NRC	0.0311	0.092	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(g,h,i)perylene	NRC	NRC	--	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Chrysene	NRC	0.0311	9.2	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Fluoranthene	NRC	370	1,460	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Fluorene	NRC	14,000	243	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.1 U**	**0.95 U**	**0.95 U**	**1.0 U**	**1.0 U**	**0.99 UJ**	**0.98 UJ**	**1.0 U**	**1.1 U**	**1.0 UJ**
Naphthalene	NRC	NRC	6.5	2.0 =	2.6 =	18.3 =	101 =	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Phenanthrene[c]	NRC	NRC	182.5	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Pyrene	NRC	11,000	182.5	1.1 U	0.95 U	0.95 U	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-29 BF2912 01/11/99 5.7 to 10.7	MW-30 BF3012 01/11/99 5.9 to10.9	MW-30 BF3014[3] 01/11/99 5.9 to 10.9	MW-31 BF3112 01/ 10/99 5.7 to 10.7	VP-2 BFV212 12/04/99 12.0 to 17.0	VP-2 BFV222 12/04/99 17.0 to 22.0	VP-2 BFV232 12/ 04/99 22.0 to 27.0	VP-2 BFV242 12/04/99 27.0 to 32.0	VP-2 BFV244[3] 12/04/99 27.0 to 32.0	VP-2 BFV252 12/04/99 32.0 to 37.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J	0.24 J	1.0 U
Toluene	1,000	200,000	750	0.40 J	1.0 U	1.0 U	1.0 U	0.42 J	1.0 U	0.30 J	0.40 J	0.27 J	0.36 J
Ethylbenzene	700	28,718	1,300	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	376 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Acenaphthene	NRC	NRC	365	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Acenaphthylene	NRC	NRC	182.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Anthracene	NRC	110,000	182.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Chrysene	NRC	0.0311	9.2	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Fluoranthene	NRC	370	1,460	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Fluorene	NRC	14,000	243	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.1 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**1.0 U**
Naphthalene	NRC	NRC	6.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Phenanthrene[c]	NRC	NRC	182.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U
Pyrene	NRC	11,000	182.5	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	VP-2 BFV262 12/ 04/99 31.0 to 42.0	VP-3 BFV312 12/05/99 12.0 to 17.0	VP-3 BFV322 12/05/99 17.0 to 22.0	VP-3 BFV332 12/ 05/99 22.0 to 27.0	VP-3 BFV342 12/05/99 27.0 to 32.0	VP-3 BFV352 12/05/99 32.0 to 37.0	VP-3 BFV362 12/05/99 37.0 to 42.0	VP-4 BFV412 12/04/99 13.0 to 18.0	VP-4 BFV422 12/04/99 18.0 to 23.0	VP-4 BFV424[3] 12/04/99 18.0 to 23.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	**81.8 =**	1.4 =	2.6 =
Toluene	1,000	200,000	750	0.35 J	0.33 J	0.80 J	0.31J	0.37 J	0.28 J	0.28 J	0.42 J	0.44 J	0.54 J
Ethylbenzene	700	28,718	1,300	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 UJ	31.5 =	0.36 J	0.35 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Acenaphthene	NRC	NRC	365	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Acenaphthylene	NRC	NRC	182.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Anthracene	NRC	110,000	182.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Fluoranthene	NRC	370	1,460	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Fluorene	NRC	14,000	243	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**0.99 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 UJ**
Naphthalene	NRC	NRC	6.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Pyrene	NRC	11,000	182.5	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	VP-4 BFV432 12/ 04/99 23.0 to 28.0	VP-4 BFV442 12/04/99 28.0 to 33.0	VP-4 BFV452 12/04/99 33.0 to 38.0	VP-4 BFV462 12/ 04/99 38.0 to 43.0	VP-5 BFV512 12/02/99 12.5 to 17.5	VP-5 BFV522 12/02/99 17.5 to 22.5	VP-5 BFV532 12/ 02/99 22.5 to 27.5	VP-5 BFV542 12/02/99 27.5 to 32.5	VP-5 BFV552 12/02/99 32.5 to 37.5	VP-5 BFV562 12/02/99 37.5 to 42.5
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	0.60 J	0.29 J	0.24 J	0.21 J	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Toluene	1,000	200,000	750	0.70 J	0.42 J	1.0 U	0.79 J	1.0 U	1.0 U	0.51 J	1.0 UJ	0.58 J	1.0 UJ
Ethylbenzene	700	28,718	1,300	0.22 J	0.16 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Xylenes	10,000	NRC	12,000	3.0 U	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 UJ	3.0 U	3.0 UJ
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	0.98 U	1.0 U	0.99 U	1.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	9.9 U
Acenaphthene	NRC	NRC	365	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Acenaphthylene	NRC	NRC	182.5	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Anthracene	NRC	110,000	182.5	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Benzo(a)anthracene	NRC	0.0311	0.092	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Benzo(g,h,i)perylene	NRC	NRC	--	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Chrysene	NRC	0.0311	9.2	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Fluoranthene	NRC	370	1,460	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Fluorene	NRC	14,000	243	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**0.98 U**	**1.0 U**	**0.99 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**
Naphthalene	NRC	NRC	6.5	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Phenanthrene[c]	NRC	NRC	182.5	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U
Pyrene	NRC	11,000	182.5	0.98 U	1.0 U	0.99 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.

UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	VP-5 BFV564[3] 12/02/99 37.5 to 42.5	VP-6 BFV612 12/03/99 13.0 to 18.0	VP-6 BFV622 12/03/99 18.0 to 23.0	VP-6 BFV632 12/ 03/99 23.0 to 28.0	VP-6 BFV642 12/03/99 28.0 to 33.0	VP-6 BFV652 12/03/99 33.0 to 38.0	VP-6 BFV662 12/ 03/99 38.0 to 43.0	VP-7 BFV712 12/04/99 12.0 to 17.0	VP-7 BFV722 12/04/99 17.0 to 22.0	VP-7 BFV732 12/ 04/99 22.0 to 27.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 UJ	4.4 J	0.26 J	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	0.23 J
Toluene	1,000	200,000	750	0.58 J	0.56 J	0.46 J	0.43 J	0.45 J	0.47 J	0.44 J	0.60J	0.35 J	0.70 J
Ethylbenzene	700	28,718	1,300	0.17 J	0.44J	0.11 J	1.0 UJ	1.0 UJ	0.16 J	0.15 J	0.10 J	1.0 UJ	0.12 J
Xylenes	10,000	NRC	12,000	3.0 UJ	2.7 J	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	0.33 J	3.0 UJ	3.0 UJ
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	9.8 U	1.0 UJ	10.0 U	1.0 UJ	10.0 U	10.0 U	10.0 U	9.9 U	9.8 U	9.9 U
Acenaphthene	NRC	NRC	365	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Acenaphthylene	NRC	NRC	182.5	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Anthracene	NRC	110,000	182.5	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Benzo(a)anthracene	NRC	0.0311	0.092	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Benzo(g,h,i)perylene	NRC	NRC	--	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Chrysene	NRC	0.0311	9.2	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Fluoranthene	NRC	370	1,460	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Fluorene	NRC	14,000	243	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**0.98 U**	**1.0 UJ**	**1.0 U**	**1.0 UJ**	**1.0 U**	**1.0 U**	**1.0 U**	**0.99 U**	**0.98 U**	**0.99 U**
Naphthalene	NRC	NRC	6.5	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Phenanthrene[c]	NRC	NRC	182.5	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U
Pyrene	NRC	11,000	182.5	0.98 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U	0.99 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.

UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	VP-7 BFV742 12/04/99 27.0 to 32.0	VP-7 BFV744[3] 12/04/99 32.0 to 37.0	VP-7 BFV752 12/04/99 32.0 to 37.0	VP-7 BFV762 12/04/99 37.0 to 42.0	MW-01 BF0122 12/02/00 3.5 to 12.5	MW-02 BF0222 12/02/00 3.5 to 13.0	MW-03 BF0322 12/02/00 3.6 to 13.1	MW-04 BF0422 12/02/00 2.8 to 12.3	MW-05 BF0522 12/02/00 2.9 to 12.4	MW-06 BF0622 12/02/00 2.7 to 12.2
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	0.31 J	0.28 J	0.25 J	1.0 U	1.0 U	1.0 U	1.0U	1.0U	1.0U	1.0U
Toluene	1,000	200,000	750	0.58 J	0.70 J	0.74 J	0.56 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1,300	1.0 UJ	1.0 UJ	0.12 J	0.15 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	3.0 UJ	3.0 UJ	3.0 UJ	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	10.5 U	10.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	365	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	182.5	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Anthracene	NRC	110,000	182.5	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Fluoranthene	NRC	370	1,460	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Fluorene	NRC	14,000	243	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.2 U**	**1.0 U**	**1.1 U**	**0.99 U**	**1.0 U**	**1.0 U**
Naphthalene	NRC	NRC	6.5	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U
Pyrene	NRC	11,000	182.5	1.0 U	1.0 U	1.0 U	1.0 U	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.

UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-07 BF0722 12/02/00 2.9 to 12.4	MW-08 BF0822 12/02/00 2.3 to 11.8	MW-09 BF0922 12/02/00 2.9 to 12.4	MW-10 BF1022 12/02/00 2.3 to 11.8	MW-10 BF1024[3] 12/02/00 2.3 to 11.8	MW-11 BF1122 12/02/00 2.3 to 11.8	MW-12 BF1222 12/02/00 3.0 to 12.5	MW-13 BF1322 12/02/00 2.3 to 11.8	MW-14 BF1422 12/02/00 2.8 to 12.3	MW-16 BF1622 12/02/00 2.7 to 12.2
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	3.8 =	2.4 =	2.2 =	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	750	1.0 U	1.0 U	0.29 J	0.4 J	0.63 J	0.4 J	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1,300	0.21 J	1.0 U	6.9 =	10.1 =	9.9 =	0.18 J	1.0 U	1.0 U	1.0 U	0.15 J
Xylenes	10,000	NRC	12,000	3.0 U	3.0 U	3.0 U	2.9 J	3 =	3.0 U	3.0 U	3.0 U	3.0 U	0.64 J
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Acenaphthene	NRC	NRC	365	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Acenaphthylene	NRC	NRC	182.5	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Anthracene	NRC	110,000	182.5	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Fluoranthene	NRC	370	1,460	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Fluorene	NRC	14,000	243	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**0.98 U**	**0.95 U**	**0.98 U**	**0.98 U**	**1.0 U**	**1.0 U**	**0.96 U**	**1.0 U**
Naphthalene	NRC	NRC	6.5	4.8 =	1.0 U	7.1 =	23.4 =	22.2 =	0.64 J	1.0 U	1.0 U	0.96 U	1.0 U
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U
Pyrene	NRC	11,000	182.5	1.0 U	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Underlined values indicate results exceeding risk-based screening levels.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-17 BF1722 12/02/00 3.0 to 12.5	MW-18 BF1822 12/02/00 3.4 to 12.9	MW-19 BF1922 12/02/00 2.0 to 11.5	MW-20 BF2022 12/03/00 2.2 to 11.7	MW-20 BF2024[3] 12/03/00 2.2 to 11.7	MW-21 BF2122 12/02/00 3.4 to 12.9	MW-22 BF2222 12/02/00 2.4 to 11.9	MW-23 BF2322 12/02/00 2.7 to 12.2	MW-24 BF2422 12/02/00 7.5 to 12.5	MW-25 BF2522 12/02/00 3.6 to 13.1
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	1.0 U	3.1 =	2.7 =	**251 =**	**174 =**	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	750	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 =	5.7 =	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1,300	0.25 J	1.0 U	1.0 U	2.1 =	2.3 =	17.4 =	128 =	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	1.6 J	3.0 U	3.0 U	7.3 =	7.7 =	734 =	662 =	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Acenaphthene	NRC	NRC	365	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Acenaphthylene	NRC	NRC	182.5	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Anthracene	NRC	110,000	182.5	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Fluoranthene	NRC	370	1,460	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Fluorene	NRC	14,000	243	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**1.0 U**	**0.98 U**	**0.99 U**	**1.0 U**	**1.0 U**	**19.0 U**	**0.95 U**	**0.96 U**	**0.98 U**
Naphthalene	NRC	NRC	6.5	1.0 U	1.0 U	0.98 U	7.8 =	7.4 =	22 =	528 =	0.95 U	0.96 U	0.98 U
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U
Pyrene	NRC	11,000	182.5	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U	0.95 U	0.96 U	0.98 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.

UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-26 BF2622 12/02/00 2.4 to 11.9	MW-27 BF2722 12/03/00 2.5 to 12.0	MW-28 BF2822 12/03/00 2.0 to 11.5	MW-29 BF2922 12/03/00 2.0 to 11.5	MW-30 BF3022 12/03/00 1.9 to 11.4	MW-31 BF3122 12/03/00 1.5 to 11.0	MW-32 BF3222 12/01/00 1.4 to 11.0	MW33 BF3322 12/01/00 1.6 to 11.2	MW-33 BF3324[3] 12/01/00 1.6 to 11.2	MW-34 BF3422 12/01/00 3.1 to 13.3
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	1.0 U	0.35 J	1.0 U	1.0 U	**109 J**	1.0 =	0.94 J	1.0 U
Toluene	1,000	200,000	750	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.65 J	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1,300	1.0 U	1.0 U	1.0 U	0.88 J	1.0 U	1.0 U	1.1 =	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	12,000	3.0 U	3.0 U	3.0 U	106 =	3.0 U	3.0 U	115 =	3.0 U	3.0 U	0.36 J
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Acenaphthene	NRC	NRC	365	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Acenaphthylene	NRC	NRC	182.5	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Anthracene	NRC	110,000	182.5	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Chrysene	NRC	0.0311	9.2	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Dibenzo(a,h)anthracen	NRC	0.0311	0.0092	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Fluoranthene	NRC	370	1,460	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Fluorene	NRC	14,000	243	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.1 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.0 U**	**1.1 U**	**1.0 U**	**1.0 U**	**0.97 U**
Naphthalene	NRC	NRC	6.5	1.1 U	1.0 U	1.0 U	1.0 U	0.65 J	0.58 J	2.0 =	1.0 U	1.0 U	0.97 U
Phenanthrene[c]	NRC	NRC	182.5	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U
Pyrene	NRC	11,000	182.5	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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TABLE 9: GROUNDWATER DATA RISK-BASED SCREENING LEVELS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	Risk-based[a]	MW-E1 BFE122 12/01/00 4.6 to 14.6	MW-E2 BFE222 12/02/00 3.94 to 13.94	MW-E3 BFE322 12/02/00 4.4 to 14.4	MW-E3[3] BFE324 12/02/00 4.4 to 14.4	MW-E4 BFE422 12/02/00 4.6 to 14.6	MW-E5 BFE522 12/02/00 4.8 to 14.8	MW-E6 BFE622 12/02/00 3.7 to 13.7
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	0.36	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J	3.6 =	1.0 U
Toluene	1,000	200,000	750	1.0 U	0.3 J	0.48 J	0.29 J	0.27 J	1.0 =	1.0 U
Ethylbenzene	700	28,718	1,300	0.99 J	1.0 U	1.0 U	1.0 U	0.28 J	17.2 =	1.0 U
Xylenes	10,000	NRC	12,000	0.45 J	3.0 U	0.3 J	3.0 U	0.36 J	19 =	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene[b]	NRC	NRC	6.5	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Acenaphthene	NRC	NRC	365	2.2 =	0.98 U	0.96 U	0.98 U	0.98 U	0.55 J	0.97 U
Acenaphthylene	NRC	NRC	182.5	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Anthracene	NRC	110,000	182.5	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(a)anthracene	NRC	0.0311	0.092	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Benzo(a)pyrene	0.2	0.0311	0.00092	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Benzo(b)fluoranthene	NRC	NRC	0.0092	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(g,h,i)perylene	NRC	NRC	--	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(k)fluoranthene	NRC	0.0311	0.92	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Chrysene	NRC	0.0311	9.2	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Dibenzo(a,h)anthracene	NRC	0.0311	0.0092	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Fluoranthene	NRC	370	1,460	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Fluorene	NRC	14,000	243	4 =	0.98 U	0.96 U	0.98 U	0.98 U	1 =	0.97 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.092	**1.0 U**	**0.98 U**	**0.96 U**	**0.98 U**	**0.98 U**	**0.96 U**	**0.97 U**
Naphthalene	NRC	NRC	6.5	9.1 =	0.98 U	0.96 U	0.98 U	0.98 U	16.6 =	0.97 U
Phenanthrene[c]	NRC	NRC	182.5	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.73 J	0.97 U
Pyrene	NRC	11,000	182.5	1.0 U	0.98 U	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U

NOTE:
[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.
[a]Protective of tap water ingestion by a resident.
[b]Values based on naphthalene as a surrogate chemical.
[c]Values based on pyrene as a surrogate chemical.
BGS - Below ground surface.
MW - Monitoring well.
NRC - No regulatory criteria.
Bold values indicate results exceeding Georgia IWQS.
Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.

PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Underlined values indicate results exceeding risk-based screening levels.

UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
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TABLE 10: CAP–PART B NATURAL ATTENUATION MODELING RESULTS (BENZENE CONCENTRATION VS. TIME) FOR THE FORMER UST 117 SITE

Time (year)	Predicted Maximum Benzene Concentration in Groundwater (μg/L)	
	MW-22	MW-32
0.0 (12/00)	174.0	109.0
0.5 (06/01)	114.0	89.1
1.0 (12/01)	75.9	84.3
1.5 (06/02)	51.6	74.2
2.0 (12/02)	31.6	62.3

Note: Time 0.0 is equal to December 2000, which was the last groundwater sampling event conducted at the site. Monitoring wells MW-22 and MW-32 will be sampled semiannually for 1 year as part of the monitoring only program to validate the fate and transport modeling results. As predicted by the model, benzene concentrations in both wells should be below the In-stream Water Quality Standard (IWQS) of 71.28 μg/L by the end of year 2 (i.e., December 2002).

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APPENDIX III

WATER RESOURCES SURVEY DOCUMENTATION

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WATER RESOURCES SURVEY DOCUMENTATION

1.0 LOCAL WATER RESOURCES

As required by the Georgia Department of Natural Resources (GA DNR) Underground Storage Tank (UST) Corrective Action Plan (CAP)-Part A Guidance (GA DNR 1998b), a water resource survey documenting information for public and non-public water supply wells, surface water bodies, underground utilities, and potential receptors was conducted at Hunter Army Airfield (HAAF) in April, May, and June 1998 for previous Former UST CAP-Part A Investigations and in May 1999 for this CAP-Part A Investigation. The information presented in this section provides the supporting documentation for Section II.D.3 of the CAP-Part A form.

1.1 WATER SUPPLY WELL SURVEY

The water supply well survey was conducted using the following GA DNR guidelines/requirements:

- Determine if HAAF is located in an area of average or higher groundwater pollution susceptibility (GA DNR 1976).
- Locate all public supply wells, as defined by the GA DNR, that exist within 2 miles of the investigation sites.
- Locate all non-public supply wells that exist within 0.5 miles of the investigation sites.
- Locate all supply wells nearest the investigation sites.
- Locate all wells downgradient of the investigation sites.

The required survey was accomplished by obtaining information from the Fort Stewart Directorate of Public Works (FS DPW) and the City of Savannah Bureau of Water Operations, performing a field survey, and conducting a U.S. Geological Survey (USGS) database search. A summary of the information obtained during the survey is provided in the following sections.

1.1.1 Fort Stewart Directorate of Public Works Survey Summary

According to the FS DPW, nine water supply wells are located within the confines of the HAAF area (Figure 17, Appendix I). These wells have the potential to provide up to 3,890 gallons per minute (gpm) of water to occupants of the HAAF installation. The FS DPW was unable to provide documentation listing the companies responsible for well installation, and drillers' logs showing as-built information and subsurface geologic data. Information concerning such documentation was requested from several water well drilling companies in the Chatham County area; however, data were procured with very limited success. The FS DPW provided well locations, pump rates, treatment methods, casing depths, and total depths for eight of the nine wells located at HAAF (Table III-A). However, documentation of subsurface geology based on HAAF drill logs remains extremely limited. Therefore, other references providing deep-well information were used to document the subsurface geology and aquifer characteristics beneath the HAAF area. Refer to Appendix X, Section 1.0, for further geologic discussion.

Wells 1 and 2, both public water supply wells located in the cantonment area of HAAF, constitute the main water supply system at the HAAF installation. Well 1, located at Building 711 on the corner of Moore Road and Douglas Street, is a 12-inch-diameter well with a 100-hp turbine pump serving a 100,000-gallon elevated storage tank (Tank 1) through 10-inch lines. Water from Well 1 is injected with hydrofluosilic acid and chlorine gas solution at the well house. Well 2, located at Building 1205 on the corner of Neal Street and Strachan Road, is a 12-inch-diameter well with a 100-hp turbine pump serving a 200,000-gallon elevated tank (Tank 2) through 10-inch lines. Water from Well 2 is also injected with hydrofluosilic acid and chlorine gas solution at the well house. Wells 1 and 2 provide water to a 500,000-gallon elevated storage tank (Tank 3) located on Middleground Road behind noncommissioned officer (NCO) family housing. This tank provides potable water to 694 service connections, which are used by an average of at least 5,000 individuals year-round.

Wells 3, 4A, and 7 are public supply wells located outside the cantonment area of HAAF. Well 3, located at Building 8455, is a 4.0-inch-diameter well with a 1.0-hp electric submersible pump serving a 1,000-gallon hydropneumatic storage tank through 1.5-inch galvanized steel lines. Water from Well 3 is treated with calcium hypochlorite solution and is consumed by approximately 25 people during daytime hours, year-round. Well 4A, located at Building 8581 at the 117th Air National Guard Facility, is a 4.0-inch-diameter well. Pumpage is accomplished with a 0.75-hp turbine pump with 80 gpm capacity. Well 4A provides water for approximately 50 people per day year-round. Well 7 is located at Building 8703 on the Forest River, west of Rio Road. Well 7 is a 4.0-inch well with a 3.0-hp submersible pump serving a 5,000-gallon hydropneumatic tank through 2.0-inch galvanized steel lines. Well 7 serves approximately 500 people on a part-time basis. Sanitary protection for Wells 3, 4A, and 7 is provided by a pump motor block, concrete slab, sealed well head, and screened casing vent.

Based on the GA DNR criteria of serving potable water to less than 25 occupants per day and having less than 15 service connections, wells 5, 8, and 9 are classified as non-public supply wells (Figure Xb, Appendix I). Pump rates, casing depths, bore depths, treatment methods, and storage tank information are provided in Table III-A.

Well 10 is a non-potable water source (Figure Xb, Appendix I). Water from Well 10 is used for the cleaning of military equipment at a wash-rack facility. Additional information including capacity, borehole depth, and casing depth is not available.

1.1.2 City of Savannah Bureau of Water Operations Survey Summary

The locations of supply wells found outside the boundary of HAAF that are within 2 miles of one or more of the CAP-Part A investigation sites are shown on Figure 3b, Appendix I. These wells include 25, 15, 27, 14, 23, 6, and 9. Data concerning casing depths, borehole depths, casing sizes, and capacities are listed in Table III-B. The City of Savannah Bureau of Water Operations was unable to provide drill logs or as-built well information.

1.1.3 U.S. Geological Survey Summary

Chatham County encompasses three watersheds: Lower Savannah, Lower Ogeechee, and Ogeechee Coastal (EPA 1998). The HAAF installation is located within the Ogeechee Coastal watershed which covers 1,477 square miles; includes 18 rivers and streams, including the Little Ogeechee River which borders the south western portion of HAAF; and contains land usage areas classified as 2 percent urban, 67 percent forest, and 24 percent agricultural. Water use survey data for the watershed estimate that the area has a total population of 200,000 with domestic, industrial, and commercial water supplies mainly derived from groundwater sources (USGS 1990). Domestic water supply data show that a population of

144,000 receives public-supplied water from groundwater sources, 48,000 receive water from self-supplied groundwater sources, and 8,000 from public-supplied surface water sources. The water use survey also reports that two industrial facilities within the watershed are self-supplied with water obtained from groundwater sources. The survey also notes that a total of five wastewater facilities are located in the area with three reported as public wastewater treatment facilities.

1.2 SURFACE WATER BODIES

Surface water(s) in the State of Georgia, as defined by *Rules and Regulations for Water Quality Control, Chapter 391-3-6* (GA DNR 1998a), shall mean any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs producing 100,000 gallons per day, and all other bodies of surface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation The surface water body survey was conducted using the following GA DNR guidelines/requirements:

- surface water bodies that exist within 1 mile of the investigation site,
- all surface water bodies nearest the investigation site if these bodies lie outside the 1-mile radius of concern,
- all surface water bodies downgradient of the investigation site, and
- the storm and sanitary sewers adjacent to investigation site.

The locations of surface water bodies at HAAF were obtained from USGS aerial photographs, USGS topographic maps, and from maps provided by the FS DPW. Storm and sanitary sewer location maps, storm sewer invert elevations, and storm sewer and culvert construction details were provided by the FS DPW and the City of Savannah Bureau of Water and Sewer Planning (1998).

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 southeast boundary of the HAAF installation (Figure Xb, Appendix I). Several unnamed drainage ditches exist throughout HAAF. Most of these ditches drain southwest into the Little Ogeechee River, which is part of the Lower Ogeechee watershed. The remaining drainage ditches located on the east 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 are perennial, whereas most of the drainage canals and ditches are intermittent. Most of the drainage canals and ditches are at least partially enclosed in culverts.

2.0 POTENTIAL RECEPTOR SURVEY SUMMARY OF THE FORMER UST 117, BUILDING 7002 SITE

A field potential receptor survey was conducted for the Former UST 117, Building 7002 site on May 5, 1999. The site and adjacent areas were surveyed for locations of surface water bodies, utility lines, and basements. Basements do not exist in the buildings at the Bulk Fuel Facility or adjacent to the site. Additional information, provided by the FS DPW, was used to determine the location of the nearest public and non-public water supply wells and downgradient surface water bodies not located during the field survey.

2.1 Water Supply Wells Near the Former UST 117, Building 7002 Site

HAAF Well 1, located at Building 711 at the corner of Moore Road and Douglas Street, is located approximately 2,700 feet east–northeast (cross-gradient) from the Former UST 117, Building 7002 site (Figure Xa, Appendix I). Well 1 is part of the main public water supply system at HAAF. This system supplies water to 7,500 persons through 525 service connections. As part of the long-term monitoring program for the Former Building 710 site, Well 1 is being sampled on a quarterly basis. Based on the groundwater flow direction and the estimated nature and extent of petroleum-related groundwater contamination at the site, there is no indication that Well 1 has been impacted (Figure Xb, Appendix I).

There are four other public water supply wells located within the 2-mile radius: PWS Well 4A, PWS Well 3, PWS Well 2, and PWS 25; however, none of these wells is located downgradient from the Former UST 117, Building 7002 site.

2.2 Surface Water Bodies Near the Former UST 117, Building 7002 Site

Lamar Canal is located approximately 180 feet south–southeast (downgradient) from the nearest point (southern fenced border) of the Bulk Fuel Facility and approximately 340 feet from the area of highest groundwater and soil contamination (SB-22) detected during the CAP-Part A Investigation. Lamar Canal drains the northwestern portion of HAAF and flows southwest into the Little Ogeechee (Forrest River), which is part of the Lower Ogeechee watershed.

Surface water sampling of Lamar Canal was conducted in May 1999 as part of the soil gas survey investigation for the Bulk Fuel Facility (SAIC 1999b) and in December 1999 as part of the CAP-Part A investigation (Figure 10, Appendix I of the CAP-Part A Report, SAIC 2000). The results of these sampling efforts indicate that the surface water in Lamar Canal has not been impacted by the Former UST 117, Building 7002 site or the Bulk Fuel Facility (Tables 8a and 8b, Appendix II and Appendix VIII of the CAP-Part A Report, SAIC 2000).

2.3 Underground Utility Lines Near the Former UST 117, Building 7002 Site

A series of storm drains and catch basins are located along the southern border of the Bulk Fuel Facility and are used to drain the bermed area around each of the five aboveground storage tanks (Figure 2, Appendix I). One of the storm drains is located approximately 120 feet from the area of greatest soil and groundwater contamination (SB-22). The invert elevation is unknown; however, based on the shallow depth to the water table (2.72 to 4.6 feet BGS), it is assumed that the storm drain is below the water table. Therefore, the storm drain is considered as a preferential pathway.

TABLES

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TABLE III-A. WATER SUPPLY WELL INFORMATION PROVIDED BY THE FORT STEWART/HAAF DPW

Building	Well ID	Year Drilled	Bore Depth	Casing Depth	Pump Rate (gpm)	Number of Service Connections	Population	Public or Non-Public Supply
711	1	1941	550	250	1,300	525	7,500	Public
1205	2	1941	600	250	1,300	525	7,500	Public
8455	3	1951	360	40	30	2	25	Public
8581	4A	Unk	300	92	80	10	50	Public
8641	5	1955	380	85	30	Unk	Unk	Non-public
8703	7	1980	450	330	70	8	500	Public
8632	8	1956	370	255	80	5	Unk	Non-public
8654	9	Unk	600	255	1,000	Unk	Unk	Non-public
8464	10	Unk	Unk	Unk	Unk	N/A	N/A	Non-public

NOTE: DPW - Directorate of Public Works.
gpm - Gallons per minute.
HAAF - Hunter Army Airfield.
N/A - Not applicable.
Unk - Unknown.

TABLE III-B. WATER SUPPLY WELL INFORMATION PROVIDED BY THE CITY OF SAVANNAH BUREAU OF WATER OPERATIONS

Well ID	Year Drilled	Bore Depth (feet)	Casing Depth (feet	Pump Rate (gpm)	Number of Service Connections	Population[1]	Public or Non-Public Supply[1]
1	Unk	1,006	300	1,362	Unk	Unk	Public
6	Unk	750	240	1,500	Unk	Unk	Public
9	Unk	710	267	2,700	Unk	Unk	Public
13	Unk	1,000	270	2,200	Unk	Unk	Public
14	Unk	800	338	571	Unk	Unk	Public
15	Unk	414	252	1,000	Unk	Unk	Public
23	Unk	639	320	1,056	Unk	Unk	Public
25	Unk	540	287	1,120	Unk	Unk	Public
27	Unk	550	321	1,468	Unk	Unk	Public
42	Unk	550	260	2,100	Unk	Unk	Public

NOTE: gpm - Gallons per minute.
Unk - Unknown.
[1]All wells are part of the same public water supply system serving the population of the City of Savannah.

APPENDIX IV

SOIL BORING LOGS

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This appendix contains soil boring logs associated with the Corrective Action Plan (CAP)-Part B investigation conducted by Science Applications International Corporation (SAIC) in November 2000. In addition, soil boring logs for the six monitoring wells installed by Earth Tech, Inc., in January 2000 as part of the aboveground storage tank (AST) 7009 upgrade activities are also included in this appendix.

Soil boring logs associated with the CAP-Part A investigation were provided in the *Corrective Action Plan-Part A Report for Underground Storage Tank 117, Building 7002, Facility Identification Number: 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, published by SAIC in June 2000.

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5

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER SB-32
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 1
3. PROJECT: Bulk Fuel Facility	4. LOCATION: HAAF	
5. NAME OF DRILLER: Mr. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" MacroCore Sampler, Acetate Liner	8. HOLE LOCATION: BFF	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11-30-00	11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 4.0'	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:	
14. TOTAL DEPTH OF HOLE: 8.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

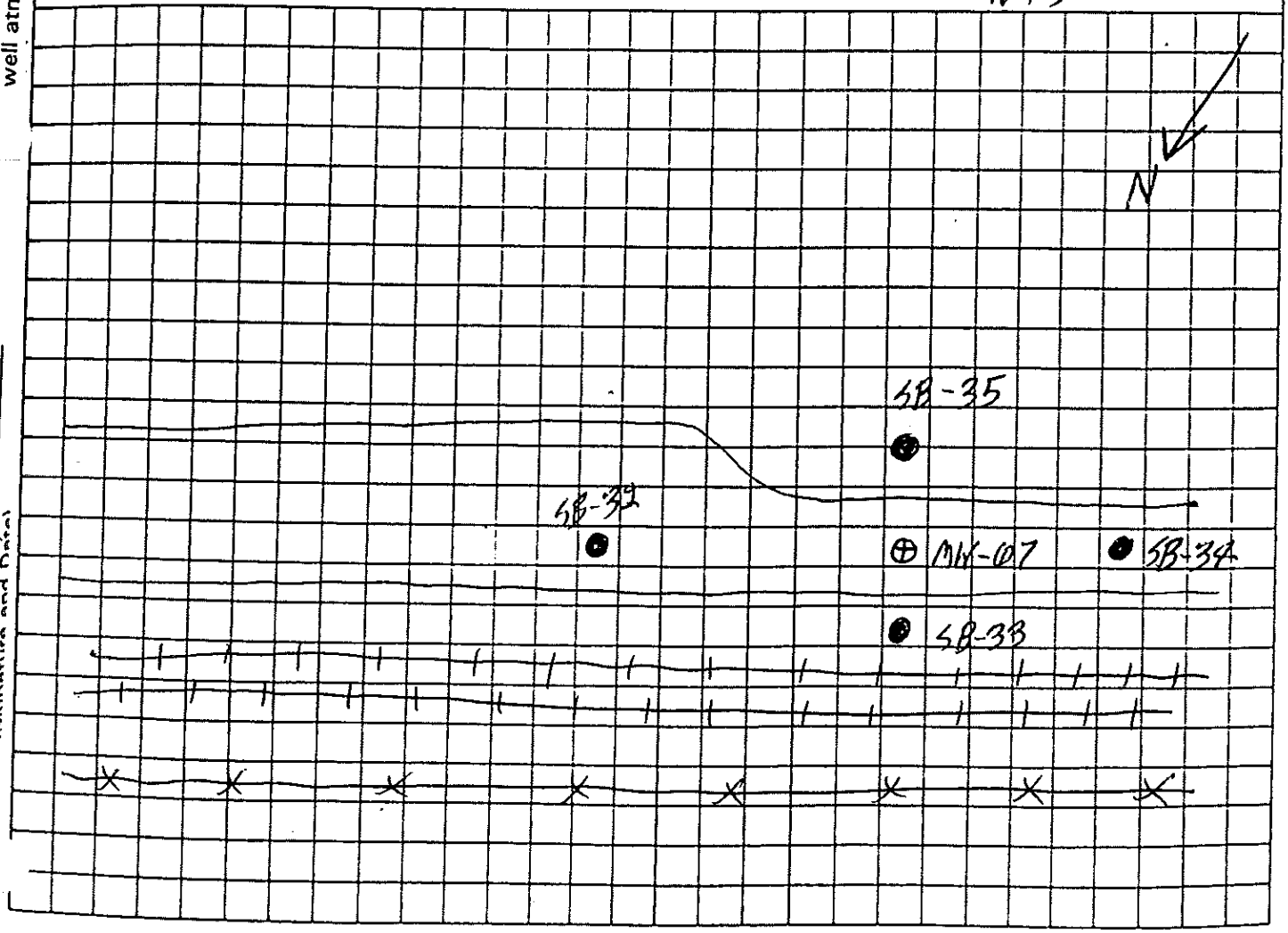
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-DRO	TPH-GRO	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Bentonite			Kenneth [illegible]

LOCATION SKETCH/COMMENTS

SCALE: NTS



* NOTE TYPE OF MONITORING (i.e., borehole cuttings, n oring well atmosphere, soil core, breathing zone, venting compressed air,

QA CHECK BY: Cynthia L Abbott 12/19/00 (Signature and Date)

HTRW DRILLING LOG

PROJECT: | INSPECTOR JKL | HOLE NUMBER SB-32 | SHEET 1 OF 1

4

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	CLAY with SAND, (CH), 25% sand, fine grained, low plasticity, firm, moist, Olive Gray, ~~5Y-5/2~~ 5Y-4/2	3.6 ppm		BF3211	Concrete from 0.0-0.6'
	2	~~No Recovery~~ JKL				JKL
	3	No Recovery				
	4	Same as above, saturated				▽ WL = 4.0'
	5					
	6					
	7	Increasing sand content				
	8					Bottom of hole = 8.0'
	9					
	10					

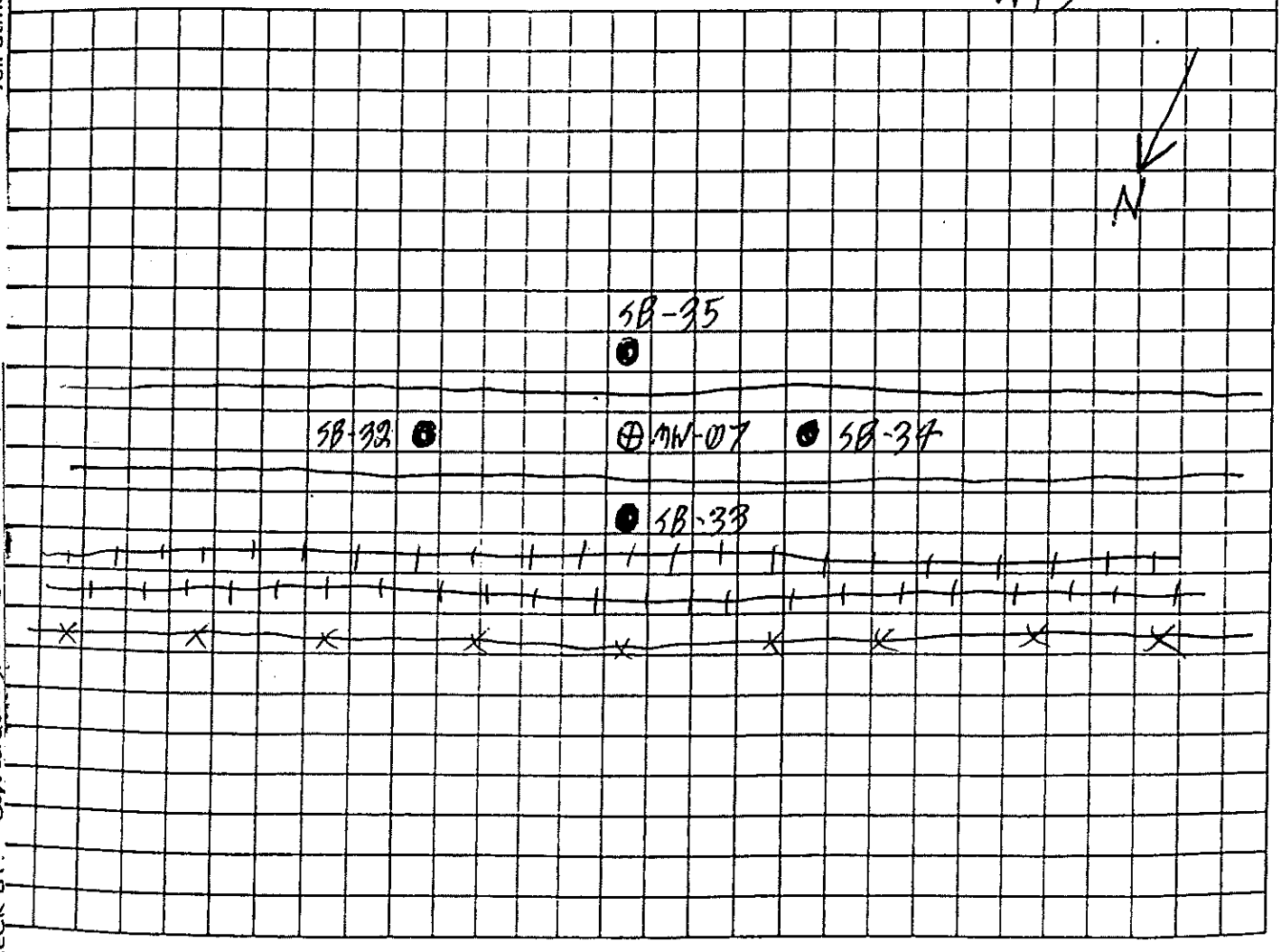
3

HTRW DRILLING LOG

1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	DISTRICT: Savannah
		HOLE NUMBER: SB-33
		SHEET 1 OF 1
3. PROJECT: Bulk Fuel Facility	4. LOCATION: HAAF	
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" MacroCore Sampler, Acetate Liner	8. HOLE LOCATION: BFF	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 11-30-00	11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 2.1	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:	
14. TOTAL DEPTH OF HOLE: 8.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	PAH		BTEX	TPH-GRO	TPH-DRO	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: Kenneth [illegible]		
	Bentonite					

LOCATION SKETCH/COMMENTS — SCALE: NTS



NOTE TYPE OF MONITORING (i.e., borehole cuttings, monitoring well atmosphere, soil core, breathing zone, venting compressor,

QA CHECK BY: Cynthia J. Abbott 12/19/00

HTRW DRILLING LOG

HOLE NUMBER SB-33

4

PROJECT:

INSPECTOR JKL

SHEET 1 OF 1

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	SILTY SAND (SM) 25% silt, fine grained, dry, Subangular, very soft, Brown, 10YR-4/3, grading to Yellowish Brown, 10YR-4/6				
	2					▽ WT = 2.1'
	3	Saturated				
	4	No Recovery				
	5	Same as above				
	6					
	7	No Recovery				
	8					Bottom of hole = 8.0'
	9					
	10					

12

HTRW DRILLING LOG

1. COMPANY NAME: SAIC	DISTRICT: Savannah	HOLE NUMBER SB-3A
	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 1

3. PROJECT:	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3" Macro Core Sampler, Acetate Liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11-30-00 / 11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 2.2
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 8.0	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA				
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC: BTEX	METALS	OTHER (SPECIFY): PAH	OTHER (SPECIFY): TPH-GRO	OTHER (SPECIFY): TPH-DRO	21. TOTAL CORE RECOVERY %	
22. DISPOSITION OF HOLE	BACKFILLED: Bentonite	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: [illegible]			

LOCATION SKETCH/COMMENTS: See Page 3

SCALE:

* NOTE TYPE OF MONITORING (i.e., borehole cuttings, monit
ll atmosphere, soil core, breathing zone, venting compressed

QA CHECK BY: Cynthia Abbott 12/19/00
(Signature and Date)

HTRW DRILLING LOG

HOLE NUMBER SB-34 13

PROJECT:

INSPECTOR JKL

SHEET / OF

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Concrete.				
	1	CLAY with SAND (CH), 35% fine sand, moist, firm, low plasticity, Dark Olive Gray, 5Y-3/2	31.5 ppm		BF9411	
	2					▽ WL = 2.2
	3	Grading to SAND with CLAY, SW-SC, 15% clay, fine grained, non plastic, Wet Gray, 5Y-5/1				
	4	No Recovery.				
	5	Same as above				
	6					
	7	No Recovery				
	8					Bottom of hole = 8.0'
	9					
	10					

12

HTRW DRILLING LOG

DISTRICT: Savannah	HOLE NUMBER SB-35
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC
	SHEET 1 OF 1

3. PROJECT:	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 54000
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Macro Core Sampler, Acetate Liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11-30-00 / 11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 4.0'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 8.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX					
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: Kenny [illegible]		
	Bentonite					

LOCATION SKETCH/COMMENTS: See Page 3

SCALE:

NOTE TYPE OF MONITORING (i.e., borehole cuttings, monitoring well atmosphere, soil core, breathing zone, venting compressed air, [illegible])

QA CHECK BY: [illegible] 12/19/00

HTRW DRILLING LOG

HOLE NUMBER SB-35 13

PROJECT:

INSPECTOR JKL

SHEET 1 OF 1

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Gravel				
	1	SILTY SAND (SM), 20% silt, fine grained, dry, subrounded, very silt, Gray, 10YR-5/1	7.3 ppm			
	2	Clayey SAND (SC), 15% clay, fine grained, moist, low plasticity, soft, Brown, (10YR-4/3), mottled with Brownish Yellow, 10YR-6/8				
	3	SILTY SAND (SM) 20% silt, fine grained, soft, dry, Yellowish Brown, 10YR-5/4				
	4	No Recovery				▽ WT = 4.0
	5	FAT CLAY (CH), soft, Wet, Olive Gray, 5Y-4/2 mottled with Yellow, 10YR-7/8				
	6					
	7	Grading to SANDY FAT CLAY, (CH), fine grained, 25% sand, Firm, wet, medium plasticity, Light Olive Gray, 5Y-6/2				
	8	No Recovery				
						Bottom of Hole = 8.0'
	9					
	10					

39

HTRW DRILLING LOG

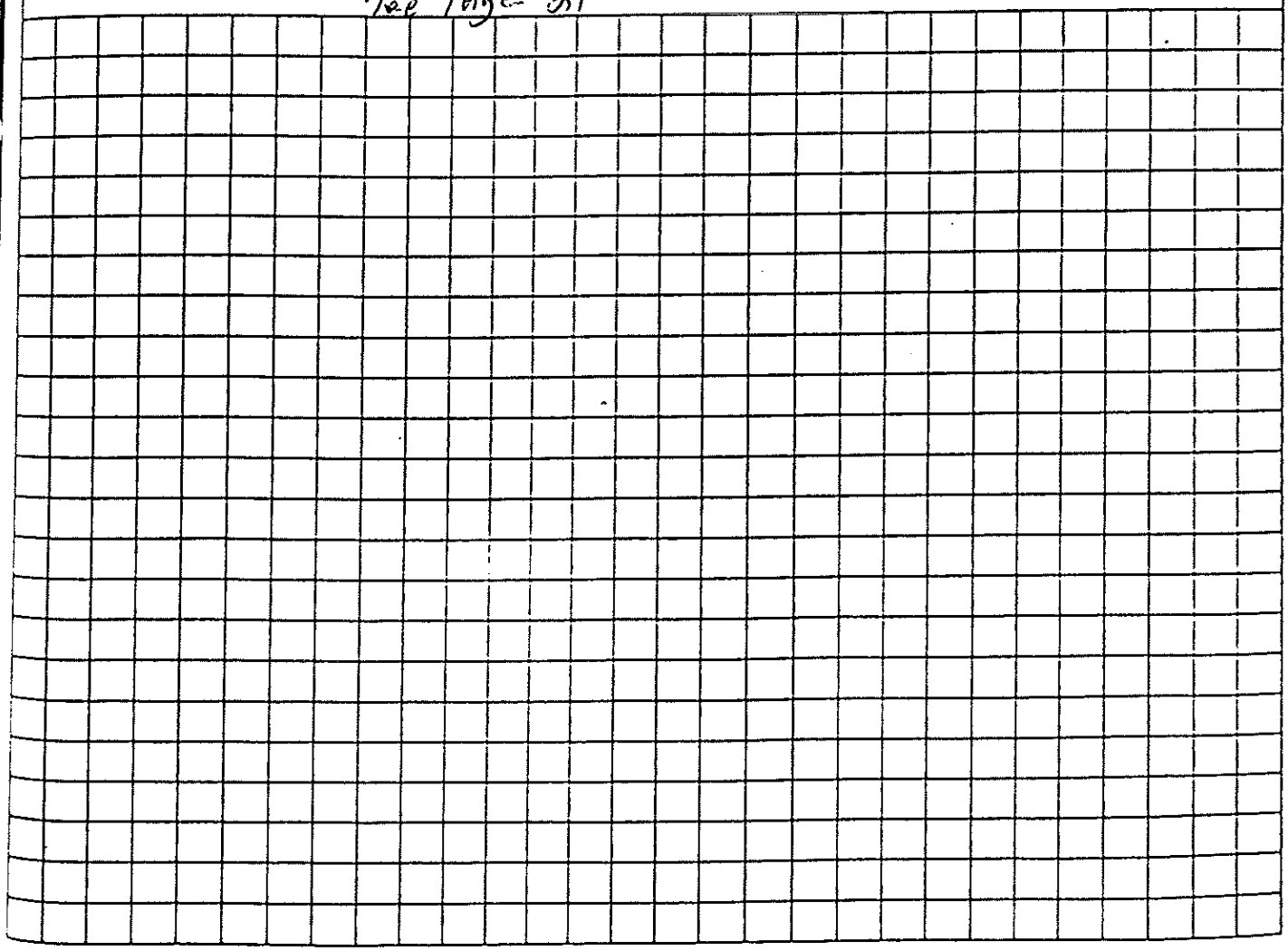
DISTRICT: Savannah	HOLE NUMBER SB-36
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC — SHEET 1 OF 1
3. PROJECT:	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Bock	6. MANUFACTURERS DESIGNATION OF DRILL: Portable GeoProbe
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Macrocore Sampler, Acetate Liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11-30-00 — 11. DATE COMPLETED: 11-30-000
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 3.6'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 6.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-DRO	TPH-GRO	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	Bentonite			[signature]

LOCATION SKETCH/COMMENTS: See Page 21 — SCALE:



well atmosphere, soil core, breathing zone, venting compress ir, etc.)

[signature] 10/17/00
(Signature and Date)

HTRW DRILLING LOG

HOLE NUMBER SB-36

PROJECT:

INSPECTOR JKL

SHEET 1 OF

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Gravel & Coarse Sand	1210 ppm		BF3611	
	1	CLAY with SAND (CH), 30% fine sand, low plasticity, firm, dry, Dark Brown, 10YR-3/3				
	2		752 ppm			
	3	No Recovery				
		Same as above				
	4	CLAY (CH), high plasticity, firm, wet, Dark Gray, 10YR-4/1				▽ WL = 3.6'
	5					
		No Recovery				
	6					Bottom of hole = 6.0'
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER SB-37
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 1

3. PROJECT:	4. LOCATION: HAAF Portable
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" MacroCore Sampler, Acetate liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11-30-00 / 11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 3.5'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 6.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-GRO	TPH-DRO	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: Kenneth [illegible]		
	Bentonite					

LOCATION SKETCH/COMMENTS: See Page 21

SCALE:

HTRW DRILLING LOG

HOLE NUMBER B-37

31

PROJECT:

INSPECTOR JKL

SHEET 1 OF

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		GRAVEL with Coarse Sand	15.4 ppm		BF3711	
	1	SILTY SAND (SM), 15% silt, fine grained, soft, dry, Dark Brown, 10YR-3/3 HC odor				
	2	No Recovery				
	3	SANDY CLAY (CH), 35% fine sand low plasticity, Firm, moist, Dark Brown, 10YR-3/3				▽ WL = 3.5'
	4	Grading to CLAY (CH) high plasticity, firm, ~~moist~~ JKL wet, Dark Gray, 10YR-4/1, HC odor				
	5					
	6					Bottom of hole = 6.0'
	7					
	8					
	9					
	10					

21

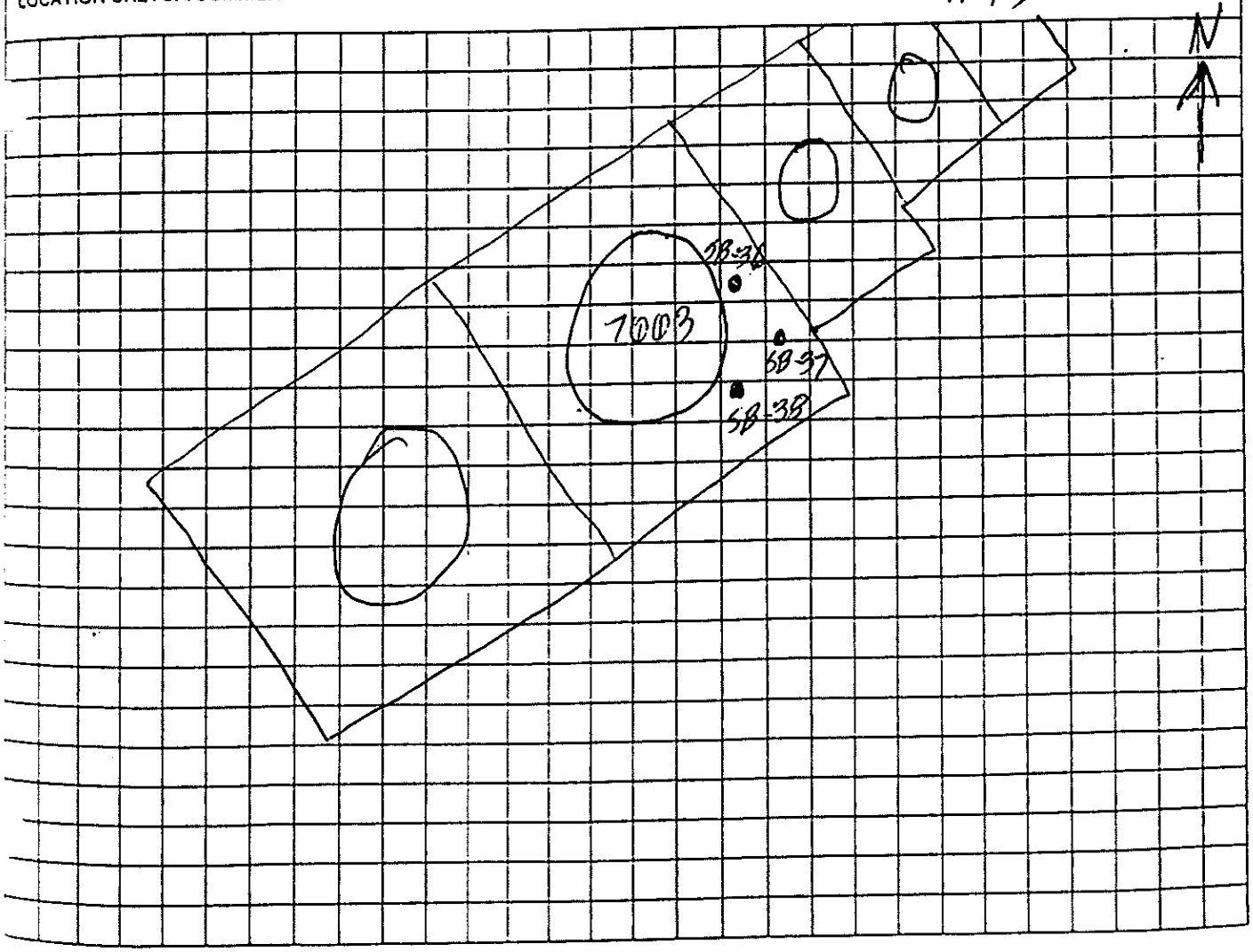
HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER SB-38
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 1

3. PROJECT:	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: Portable GeoProbe
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3" MacroCore Sampler, Acetate Liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 11-30-00 / 11. DATE COMPLETED: 11-30-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 3.4'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:
14. TOTAL DEPTH OF HOLE: 6.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES: NA			
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-DRO	TPH-GRO	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: [illegible]		
	Bentonite					

LOCATION SKETCH/COMMENTS — SCALE: NTS



HTRW DRILLING LOG

HOLE NUMBER SB-38

22

PROJECT:

INSPECTOR SKL

SHEET 1 OF 1

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SANDY CLAY (CH), 50% fine grained sand, low plasticity, dry, soft, Reddish Brown, 5YR-4/3	2020 ppm		BF3811	
	1	CLAY with SAND (CH) 15% fine sand, medium plasticity, moist, firm, Dark Olive Gray, 5Y-3/2, HC odor				
	2					
	3	No Recovery				
		Same as above				
	4	SILTY SAND (SM), 20% silt, fine grained, soft, wet, Yellowish Brown, 10YR-5/4				▽ WT = 3.4'
	5	CLAY (CH), high plasticity, Firm, wet, Dark Greenish Gray, 10GY-3/1, strong HC odor.				
	6	No Recovery				
						Bottom of hole = 6.0'
	7					
	8					
	9					
	10					

HTRW DRILLING LOG

DISTRICT: Savannah		HOLE NUMBER MW-32
1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	SHEET 1 OF 1

3. PROJECT: UST 117	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" MacroCore Sampler, Acetate liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 12-1-00 / 11. DATE COMPLETED: 12-1-00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 5.2'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 8.0 @ 1430
14. TOTAL DEPTH OF HOLE: 11.5'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES: NA	DISTURBED		UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES		
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-DRO	TPH-GRO	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: [signature]		
		X				

LOCATION SKETCH/COMMENTS: See Page 3

SCALE:

HTRW DRILLING LOG

PROJECT: UST 117 - HAAF | INSPECTOR JKL | HOLE NUMBER MW-32 | SHEET 1 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	SAND with CLAY (SP-SC) 30% clay, fine grained, subangular, non-plastic, dry, firm, Brown, 10YR-5/3	3.8 ppm			
	2		4.1 ppm		BF321B	
	3	SILTY SAND (SM), 15% silt, fine grained, subangular, soft, moist, Pale Brown, 10YR-6/3				
	4					
	5	Same as above CLAY (CH), high plasticity, firm, moist, Gray, 10YR-5/1 mottled with Yellow, 10YR-7/6; with <.1' thick lenses of silty sand at ≈ 5.3', 6.0' and 7.3'.	3.5 ppm			▽ WT = 5.2'
	6					
	7					
	8					
	9					Stopped MacroCoring and pushed to 11.5' with well-building rods.
	10					

HTRW DRILLING LOG

HOLE NUMBER MW-32

SHEET 2 OF 2

PROJECT:

INSPECTOR JKL

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11					
	12					Bottom of hole = 11.5'
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	19					

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HTRW DRILLING LOG

1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	DISTRICT: Savannah
		HOLE NUMBER: MW-33
		SHEET 1 OF 1
3. PROJECT: UST 117 Bulk fuel Facility	4. LOCATION: HAAF	
5. NAME OF DRILLER: M. Back	6. MANUFACTURERS DESIGNATION OF DRILL: GeoProbe 5400	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Macro Core Sampler, Acetate Liner	8. HOLE LOCATION: BFF	
	9. SURFACE ELEVATION:	
	10. DATE STARTED: 12-1-00	11. DATE COMPLETED: 12/01/00
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED:	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED:	
14. TOTAL DEPTH OF HOLE: 11.5'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES			
NA						
20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTXX		PAH	TPH-GRO	TPH-DRO	
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR: Kenny [illegible]		
		X				

LOCATION SKETCH/COMMENTS: See Page 3

SCALE:

NOTE: USE OF MONITORING (i.e., borehole cuttings, monitoring well atmosphere, soil core, breathing zone, venting compressor
QA CHECK BY: [illegible] 12/04/00
(Signature and Date)

HTRW DRILLING LOG

PROJECT: | INSPECTOR JKL | SHEET 1 OF

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	CLAY (CH), ~~low pl~~ JKL medium plasticity, firm moist, Dark Brown, 10YR-3/3, some plant matter and roots near top, some fine grained sand, 10% between 0.7' and 2.1'				
	2					
	3					
	4	No Recovery				
	5					
	6					▽ WT = 6.2'
	7	Grading to SANDY CLAY (CH), 20% fine sand, medium plasticity, firm, wet, Olive Gray, 5Y-4/2				
	8	No Recovery				
	9					Stopped MacroCoring + pushed to 11.5' with well building rods.
	10					

HTRW DRILLING LOG

HOLE NUMBER MW-32

PROJECT:

INSPECTOR JKh

SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11					
	12					Bottom of hole = 11.5'
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					

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HTRW DRILLING LOG

1. COMPANY NAME: SAIC	2. DRILL SUBCONTRACTOR: SAIC	DISTRICT: Savannah
		HOLE NUMBER: MW-34
		SHEET 1 OF 1

3. PROJECT: UST 117	4. LOCATION: HAAF
5. NAME OF DRILLER: M. Bock	6. MANUFACTURERS DESIGNATION OF DRILL: Geoprobe 5400D
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" Macro Core Sampler, Acetate Liner	8. HOLE LOCATION: BFF
	9. SURFACE ELEVATION:
	10. DATE STARTED: 12-1-00 / 11. DATE COMPLETED:
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 9.0
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 6.6' @ 1215
14. TOTAL DEPTH OF HOLE: 13.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

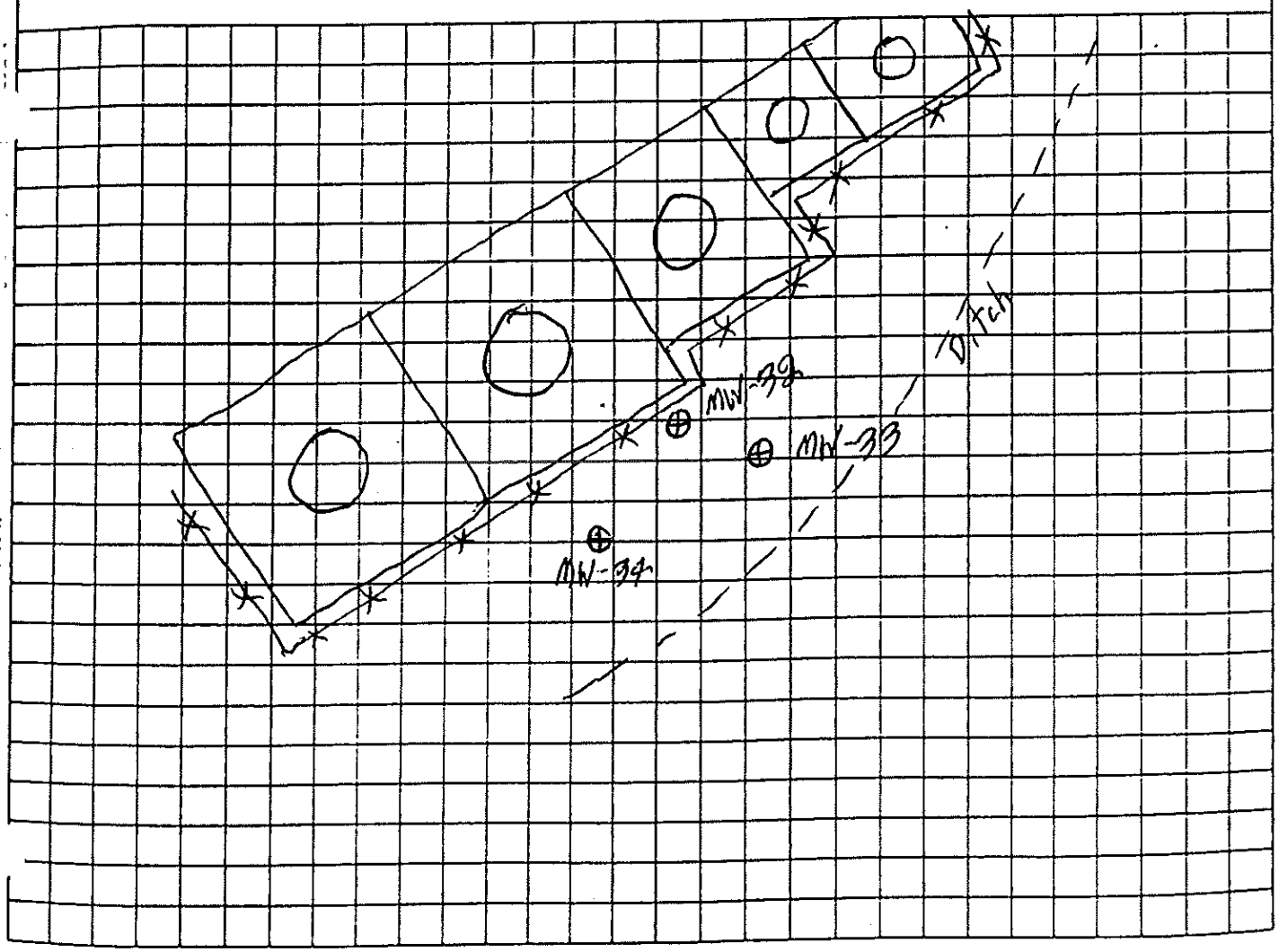
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY %
	BTEX		PAH	TPH-GRO	TPH-DRO	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		3/4" PVC		[illegible]

LOCATION SKETCH/COMMENTS

SCALE:



QA CHECK BY: Cynthia Gilbert (Signature and Date)

* NOTE TYPE OF MONITORING (i.e., borehole cuttings, monitoring well atmosphere, soil core, breathing zone, venting compres air,

HTRW DRILLING LOG

HOLE NUMBER MW-34

PROJECT:

INSPECTOR JKL

SHEET 2 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Same as above				
	11					
	12					Stopped Macro Coring + pushed to 13' with well building rods.
	13					Bottom of hole = 13.0'
	14					
	15					
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG

HOLE NUMBER MW-39

PROJECT: UST 117 Bulk Fuel Facility | INSPECTOR JKL | SHEET 1 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	HEADSPACE SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SILTY SAND (SM), 15% silt, fine grained, subangular, very soft, dry, Dark Gray, 10YR-4/1.	2.7 ppm			
	1	SAND (SP), fine grained, subangular, very soft, dry, Light Brownish Gray, 10YR-6/2				
	2		2.8 ppm			
	3	Color grading to Very Pale Brown, 10YR-7/4				
	4	No Recovery				
		Same as above	3.4 ppm			
	5	CLAY with SAND (CH), 15% fine grained sand, firm moist, medium plasticity, Light Brownish Gray, 10YR-6/2.				
	6	No Recovery				
	7					
	8	Same as above	3.9 ppm		BF34-1B	JKL
		Color changes to Brownish Yellow, 10YR-6/8				▽ WT = 9.0'
	9	CLAY with SAND (CH), 25% fine grained sand, soft, wet, medium plasticity, Gray, 10YR-5/1				
	10					

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The Earth Technology Corporation

Borehole Log

Project Name: HAAF Bulk Fuel		Project Number: Earth Tech Wells	
Borehole Location: Bulk Fuel Storage Area	Borehole No. EV MW-1	Sheet 1 of	
Drilling Agency: Alliance Environmental	Driller: Richard Mooney		
Drilling Equipment: Mobile B-59	Date Started: 1/11/00	Total Depth (feet):	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 4'	
Completion Information:	Borehole Diameter (in): 6½"	Elevation and Datum:	
	Logged by: K.E. Owens		
	Checked by:	Date:	

Depth (feet)	Sample: Number	Sample: Interval	Sample: Blow Count	Sample: Recovery	Sample: Time	Field Analysis: FID (ppm) S/B*	Field Analysis: PID (ppm) S/B*	LOG: Graphic	LOG: USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	4 3 3 6	12			527.0			FINE SAND, SILT, BROWN 7.5YR 5/3 DAMP	
	2	2-4	6 8 13 12	24			24.0			FINE SAND, TRACE SILT, LT. GRAY 7.5YR N7 WET	
5											WATER STOP SS, AUGER TO 14'
10											
15											
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form F-9

The Earth Technology Corporation

Borehole Log

Project Name: HAAF Bulk Fuel		Project Number: EarthTech wells	
Borehole Location: Bulk Fuel Storage Area	Borehole No. MW-E2	Sheet 1 of	
Drilling Agency: Alliance Environmental	Driller: Richard Mooney		
Drilling Equipment: Mobile B-59	Date Started: 1/11/00	Total Depth (feet):	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 4	
Completion Information:	Borehole Diameter (in): 6½"	Elevation and Datum:	
	Logged by: K.E. Owens		
	Checked by:	Date:	

Depth (feet)	Sample Number	Sample Interval	Blow Count	Recovery	Time	Field Analysis FID (ppm) S/B*	Field Analysis PID (ppm) S/B*	LOG Graphic	LOG USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	3 4 4 2	8"			3.1			V. FINE SAND, SILTY, DK. BROWN 7.5YR 3/2 WET	BOREHOLE IN PUDDLE
	2	2-4	2 6 7 12	24			5.0			V. FINE SAND, SILTY PINKISH GRAY 7.5YR N7 WET	
5			2 3 4 4	18"			2.6			V. FINE SAND, SILTY, GRAY 7.5YR 5/2 WET	WATER STOP SS, AUGER TO 14'
10											
15											
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form I

The Earth Technology Corporation

Borehole Log

Project Name: HAAF BULK FUEL		Project Number: Earth Tech Wells	
Borehole Location: BULK FUEL STORAGE AREA	Borehole No. MW~~3~~ E	Sheet 1 of 1	
Drilling Agency: ALLIANCE ENVIRONMENTAL	Driller: RICHARD MOONEY		
Drilling Equipment: Mobile B-59	Date Started: 1/11/00	Total Depth (feet):	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 6'	
Completion Information:	Borehole Diameter (in): 6½"	Elevation and Datum:	
	Logged by: K.E. OWENS		
	Checked by:	Date:	

Depth (feet)	Sample Number	Sample Interval	Sample Blow Count	Sample Recovery	Sample Time	Field Analysis FID (ppm) S/B*	Field Analysis PID (ppm) S/B*	LOG Graphic	LOG USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	7 4 4 5	8"			11.6			SILTY SAND, SOME GRAVEL, V. DARK GRAY 7.5YR N3 MOIST	
	2	2-4	7 12 9 11	21"			43.4			FINE SAND, SILTY, LT GRAY 7.5YR N7 DAMP	
5			3 4 4 5	12"			0.5			FINE SAND, SOME SILT, GRAY 7.5YR N6 WET	WATER STOP SS, AUGER TO 14'
10											
											TD 14'
15											
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form F-

The Earth Technology Corporation

Borehole Log

Project Name: HAAF BULK FUEL		Project Number: Earth Tech Wells	
Borehole Location: BULK FUEL STORAGE AREA	Borehole No. MW-~~V4~~ E	Sheet 1 of 1	
Drilling Agency: ALLIANCE ENVIRONMENTAL	Driller: RICHARD MOONEY		
Drilling Equipment: Mobile B-59	Date Started: 1/11/00	Total Depth (feet): 14	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 6' BGS	
Completion Information:	Borehole Diameter (in): 6 1/2"	Elevation and Datum:	
	Logged by: K.L. OWENS		
	Checked by:	Date:	

Depth (feet)	Sample Number	Sample Interval	Blow Count	Recovery	Time	Field Analysis FID (ppm) S/B*	Field Analysis PID (ppm) S/B*	LOG Graphic	LOG USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	6 6 4 9	12"	~~[illegible]~~		2.4			FINE SAND, SILT, DK. REDDISH BROWN, DAMP, 5YR 3/4	
	2	2-4	7 6 7 7	18"			2.6			SILTY CLAY, DK REDDISH BROWN 5YR ~~6/4~~ 3/4 MOIST	
5			2 2 4 5	12"			0.0			SANDY CLAY, SOME SILT, GRAY 5YR 6/1 DAMP	WATER
			3 4 7 7	14"			0.0			FINE SAND, SOME SILT, GRAY 5YR 5/1 WET	STOP SS, AUGER TO 14'
10											
15											TD 14'
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form F-9

The Earth Technology Corporation

Borehole Log

Project Name: HAAF BULK FUEL		Project Number: EarthTech Wells	
Borehole Location: BULK FUEL STORAGE AREA	Borehole No. MW-E	Sheet 1 of 1	
Drilling Agency: ALLIANCE ENVIRONMENTAL	Driller: RICHARD MOONEY		
Drilling Equipment: Mobile B-57	Date Started: 1/11/00	Total Depth (feet):	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 4'	
Completion Information:	Borehole Diameter (in): 6½"	Elevation and Datum:	
	Logged by: K.E. OWENS		
	Checked by:	Date:	

Depth (feet)	Sample: Number	Sample: Interval	Sample: Blow Count	Sample: Recovery	Sample: Time	Field Analysis: FID (ppm) S/B*	Field Analysis: PID (ppm) S/B*	LOG: Graphic	LOG: USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	3/2/2/3	18"			1.8			FINE SAND, SOME SILT, LT. GRAY 5YR7/1 DAMP	
	2	2-4	2/2/2/3	20"			2.4			FINE SAND, SOME SILT, LT. GRAY 5YR7/1 WET	WATER
5											STOP SS, AUGER TO 14'
10											
											TD 14'
15											
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form F-S

The Earth Technology Corporation

Borehole Log

Project Name: HAAF BULK FUEL		Project Number: EarthTech Wells	
Borehole Location: BULK FUEL STORAGE AREA	Borehole No. MW-6 E	Sheet 1 of	
Drilling Agency: ALLIANCE ENVIRONMENTAL	Driller: RICHARD MOONEY		
Drilling Equipment: Mobile B-59	Date Started: 1/11/00	Total Depth (feet):	
Drilling Method: HSA/SS	Date Finished: 1/11/00	Depth to Bedrock (feet): N/A	
Drilling Fluid N/A	Number of Samples: 2	Depth to Water (feet): 6	
Completion Information:	Borehole Diameter (in): 6½"	Elevation and Datum:	
	Logged by: K.E. OWENS		
	Checked by:	Date:	

Depth (feet)	Sample: Number	Interval	Blow Count	Recovery	Time	Field Analysis: FID (ppm) S/B*	PID (ppm) S/B*	LOG: Graphic	USCS or Rock Type	Lithologic Description	Remarks
	1	0-2	3 4 4 3	12			8.7			V. FINE SAND, SILT, BROWN 7.5YR 4/3 DAMP	
	2	2-4	8 11 13 14	24			3.8			V. FINE SAND, SILT, DK BROWN 7.5YR 4/12 DAMP	
5			3 4 4 8	14			1.0			FINE SAND, TRACE SILT, PINKISH GRAY 7.5YR N7 WET	WATER STOPS, AUGER TO 14'
10											
											TD 14'
15											
20											
25											
30											

Key * S/B = Sample reading / background reading; NA = not analyzed

Form F-5

APPENDIX V

SOIL LABORATORY RESULTS

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This appendix includes summary tables for both the Corrective Action Plan (CAP)-Part A and CAP-Part B soil and sediment analytical data (Tables V-A through V-D). Also included are the soil and sediment analytical data sheets for the CAP-Part B investigation conducted by Science Applications International Corporation (SAIC) and the monitoring well installation activity conducted by Earth Tech, Inc., as part of the aboveground storage tank (AST) 7009 upgrade.

The soil and sediment analytical data sheets associated with the CAP-Part A investigation were provided in the *Corrective Action Plan – Part A Report for Former Underground Storage Tank 117, Building 7002, Facility Identification Number: 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, published by SAIC in June 2000.

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE V-A. SUMMARY OF CAP-PART A SOIL ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-01 BF0111 12/01/99 4.7 to 6.7	SB-02 BF0211 12/01/99 6.0 to 8.0	SB-03 BF0311 12/01/99 6.0 to 8.0	SB-04 BF0411 12/03/99 8.0 to 9.1	SB-05 BF0511 12/03/99 5.5 to 7.5	SB-06 BF0611 12/02/99 8.8 to 10.4	SB-07 BF0711[3] 12/02/99 1.5 to 3.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0006 J	0.0011 =	0.0011 U	0.001 U	0.001 U	0.0013 U	**<1.350**
Toluene	0.400	0.0029 =	0.001 U	0.0025 =	0.0010 J	0.001 U	0.0013 U	**<1.350**
Ethylbenzene	0.370	0.0010 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.0013 U	**<1.350**
Xylenes	20.0	0.0029 U	0.003 U	0.0033 U	0.003 U	0.0031 U	0.0038 U	<4.040
TPH-DRO	NRC	2.0 U	1.4 U	1.2 U	2.7 UJ	2.2 UJ	1.2 U	74.0 =
TPH-GRO	NRC	0.124 U	0.122 U	0.119 U	0.122 U	0.128 U	0.122 U	2.33 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Acenaphthene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Acenaphthylene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Anthracene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Benzo(a)anthracene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Benzo(a)pyrene	0.660	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Benzo(b)fluoranthene	0.820	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Benzo(g,h,i)perylene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Benzo(k)fluoranthene	1.6	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Chrysene	0.660	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Dibenzo(a,h)anthracene	1.5	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Fluoranthene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Fluorene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Indeno(1,2,3-cd)pyrene	0.660	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Naphthalene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0841 =
Phenanthrene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U
Pyrene	N/A[2]	0.0414 U	0.0407 U	0.0396 U	0.0408 U	0.0425 U	0.0408 U	0.0369 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-A. SUMMARY OF SOIL CAP-PART A ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-08 BF0811 12/03/99 1.1 to 3.1	SB-09 BF0911[3] 12/03/99 0.55 to 2.0	SB-10 BF1011[3] 12/02/99 2.0 to 3.5	SB-10 BF1013[4] 12/02/99 2.0 to 3.5	SB-11 BF1111 12/02/99 1.0 to 3.0	SB-12 BF1211 12/04/99 0.5 to 2.5	SB-13 BF1311 11/30/99 7.0 to 8.9	SB-14 BF1411 12/01/99 0.5 to 2.5
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.001 U	**<0.110**	**<0.164**	**<0.116**	0.001 J	0.0005 J	0.0006 J	0.0045 =
Toluene	0.400	0.001 U	<0.110	<0.164	**<0.116**	0.001 J	0.0007 J	0.001 J	0.0009 J
Ethylbenzene	0.370	0.001 U	<0.110	0.333 =	0.217 =	0.0014 U	0.0008 J	0.0011 U	0.0008 J
Xylenes	20.0	0.0031 U	<0.331	0.400 J	0.318 J	0.0044 U	0.001 J	0.0033 U	0.0006 J
TPH-DRO	NRC	1.4 UJ	11.2 J	136 =	180 =	0.77 U	0.51 UJ	1.1 U	6.5 =
TPH-GRO	NRC	0.114 U	27.2 =	290.0 =	290 =	0.112 U	0.197 =	0.07 =	.592 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Acenaphthene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Acenaphthylene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Anthracene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Benzo(a)anthracene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Benzo(a)pyrene	0.660	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Benzo(b)fluoranthene	0.820	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Benzo(g,h,i)perylene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Benzo(k)fluoranthene	1.6	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Chrysene	0.660	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Dibenzo(a,h)anthracene	1.5	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Fluoranthene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0463 =	0.0375 U	0.038 U	0.041 U	0.0383 U
Fluorene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Indeno(1,2,3-cd)pyrene	0.660	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U
Naphthalene	N/A[2]	0.038 UJ	0.0377 U	0.268 =	0.315 =	0.0375 U	0.038 U	0.041 U	0.0383 U
Phenanthrene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0528 =	0.0375 U	0.038 U	0.041 U	0.0383 U
Pyrene	N/A[2]	0.038 UJ	0.0377 U	0.160 U	0.0401 U	0.0375 U	0.038 U	0.041 U	0.0383 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
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TABLE V-A. SUMMARY OF CAP-PART A SOIL ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-15 BF1511 12/02/99 1.5 to 3.5	SB-16 BF1611 12/02/99 4.3 to 6.3	SB-17 BF1711[3] 12/03/99 2.0 to 4.0	SB-18 BF1811 12/01/99 6.1 to 11.1	SB-19 BF1911 11/30/99 4.1 to 6.1	SB-20 BF2011[3] 12/05/99 2.0 to 4.0	SB-20 BF2013[4,5] 12/05/99 2.0 to 4.0	SB-21 BF2111 12/05/99 4.0 to 6.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0013 U	0.001 U	**<0.105**	0.0011 U	0.0006 J	**<0.103**	**0.0382 J**	0.0011 U
Toluene	0.400	0.0013 U	0.001 U	<0.105	0.0009 J	0.0044 =	<0.103	0.100 U	0.0011 U
Ethylbenzene	0.370	0.0013 U	0.001 U	**0.792 =**	0.0011 U	0.001 U	0.851 =	**0.645 =**	0.0011 U
Xylenes	20.0	0.0038 U	0.0031 U	5.9 =	0.0034 U	0.003 U	6.640 =	4.480 =	0.0034 U
TPH-DRO	NRC	0.99 U	0.92 U	87.4 =	1.8 U	1.6 U	205 =	425 =	2.9 U
TPH-GRO	NRC	0.12 U	0.123 U	223.0 =	0.121 U	0.120 U	792.0 J	2450 =	0.129 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Acenaphthene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Acenaphthylene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Anthracene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Benzo(a)anthracene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Benzo(a)pyrene	0.660	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Benzo(b)fluoranthene	0.820	0.0404 =	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Benzo(g,h,i)perylene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Benzo(k)fluoranthene	1.6	0.136 =	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Chrysene	0.660	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Dibenzo(a,h)anthracene	1.5	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Fluoranthene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Fluorene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Indeno(1,2,3-cd)pyrene	0.660	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Naphthalene	N/A[2]	0.04 U	0.041 U	0.350 =	0.0405 U	0.0399 U	0.451 =	0.681 =	0.0429 U
Phenanthrene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U
Pyrene	N/A[2]	0.04 U	0.041 U	0.0396 U	0.0405 U	0.0399 U	0.0406 U	0.0401 U	0.0429 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.
[5]Analytical data from the duplicate sample collected from SB-20 were used for evaluation purposes because the volatile reporting levels for the primary sample were not achieved.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-A. SUMMARY OF CAP-PART A SOIL ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-22 BF2211 12/05/99 0.0 to 2.0	SB-23 BF2311 12/04/99 2.0 to 4.0	SB-24 BF2411 12/02/99 4.0 to 6.0	SB-25 BF2511 12/02/99 5.6 to 7.6	SB-26 BF2611 12/02/99 1.2 to 3.2	SB-27 BF2711 01/11/99 5.0 to 7.0	SB-28 BF2811 01/11/99 2.0 to 2.8
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	**1.130 =**	0.001 U	0.0008 J	0.0009 J	0.0012 U	0.0012 U	0.0014 U
Toluene	0.400	**0.404 =**	0.001 U	0.0054 =	0.0025 =	0.0012 U	0.0011 J	0.0005 J
Ethylbenzene	0.370	**13.6 J**	0.001 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0009 J
Xylenes	20.0	**74.6 J**	0.003 U	0.0036 U	0.0035 U	0.0035 U	0.0037 U	0.0043 U
TPH-DRO	NRC	3420 =	2.1 UJ	7.7 J	1.4 U	0.59 U	2.0 U	2.5 U
TPH-GRO	NRC	4520 J	0.132 =	0.180 =	0.305 =	0.131 U	0.211 =	1.690 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Acenaphthene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Acenaphthylene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Anthracene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Benzo(a)anthracene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Benzo(a)pyrene	0.660	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Benzo(b)fluoranthene	0.820	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Benzo(g,h,i)perylene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Benzo(k)fluoranthene	1.6	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Chrysene	0.660	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Dibenzo(a,h)anthracene	1.5	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Fluoranthene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Fluorene	N/A[2]	0.154 =	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Indeno(1,2,3-cd)pyrene	0.660	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Naphthalene	N/A[2]	14.2 =	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Phenanthrene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U
Pyrene	N/A[2]	0.0376 U	0.0409 U	0.0413 U	0.0426 U	0.0436 U	0.0424 U	0.0421 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-A. SUMMARY OF CAP-PART A SOIL ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-29 BF2911 01/11/99 4.0 to 5.7	SB-30 BF3011 01/11/99 4.0 to 5.9	SB-30 BF3013[4] 01/11/99 4.0 to 5.9	SB-31 BF3111 01/10/99 4.0 to 5.7
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0009 J	0.0011 U	0.0011 U	0.0015 U
Toluene	0.400	0.0015 =	0.0011 U	0.0011 U	0.0015 U
Ethylbenzene	0.370	0.0006 J	0.0011 U	0.0011 U	0.0015 U
Xylenes	20.0	0.279 =	0.0033 U	0.0034 U	0.0044 U
TPH-DRO	NRC	2.6 U	1.9 U	1.9 U	1.5 U
TPH-GRO	NRC	0.871 =	0.0939 J	0.532 =	0.297 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Acenaphthene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Acenaphthylene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Anthracene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Benzo(a)anthracene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Benzo(a)pyrene	0.660	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Benzo(b)fluoranthene	0.820	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Benzo(g,h,i)perylene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Benzo(k)fluoranthene	1.6	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Chrysene	0.660	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Dibenzo(a,h)anthracene	1.5	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Fluoranthene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Fluorene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Indeno(1,2,3-cd)pyrene	0.660	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Naphthalene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Phenanthrene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U
Pyrene	N/A[2]	0.0445 U	0.0427 U	0.0418 U	0.0418 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Volatile reporting levels were not achieved in the sample due to the inherently high concentrations of petroleum products (TPH-DRO/TPH-GRO) in the sample. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
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Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE V-B. SUMMARY OF CAP-PART B SOIL ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SB-32 BF3211 11/30/00 0.0 to 2.3	SB-33 BFE3311 11/30/00 0.0 to 2.1	SB-34 BF3411 11/30/00 0.5 to 2.2	SB-35 BF3511 11/30/00 0.0 to 2.0	SB-36 BF3611 11/30/00 0.0 to 2.0	SB-37 BF3711 11/30/00 0.0 to 3.5	SB-37 BF3713[3] 11/30/00 0.0 to 3.5	SB-38 BF3811 11/30/00 0.0 to 3.4
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0016 U	0.0018 U	0.0013 U	0.0019 U	0.0039 =	0.0018 =	0.0026 =	**0.0763 J**
Toluene	0.400	0.00043 J	0.00079 J	0.00044 J	0.00062 J	0.0388 =	0.00099 J	0.0012 J	0.185 U
Ethylbenzene	0.370	0.0016 U	0.0018 U	0.0013 U	0.0019 U	0.134 =	0.0064 =	0.0104 =	**1.620 =**
Xylenes	20.0	0.0047 U	0.0053 U	0.0039 U	0.0056 U	1.960 =	0.0362 =	0.0474 =	4.630 =
TPH-DRO	NRC	0.81 U	2.5 U	1.4 U	41.6 =	829 =	8.6 =	8.1 =	1660 =
TPH-GRO	NRC	0.118 U	0.118 U	0.113 U	0.0644 J	1320.0=	0.843 =	0.285 =	3240.0 J
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U
Acenaphthene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U
Acenaphthylene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U
Anthracene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0494 =	0.163 U
Benzo(a)anthracene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.258 =	0.163 U
Benzo(a)pyrene	0.660	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.229 =	0.163 U
Benzo(b)fluoranthene	0.820	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.245 =	0.163 U
Benzo(g,h,i)perylene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.129 =	0.163 U
Benzo(k)fluoranthene	1.6	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.213 =	0.163 U
Chrysene	0.660	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.244 =	0.163 U
Dibenzo(a,h)anthracene	1.5	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0505 =	0.163 U
Fluoranthene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.497 =	0.163 U
Fluorene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0396 U	0.163 U
Indeno(1,2,3-cd)pyrene	0.660	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.121 =	0.163 U
Naphthalene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.457 =	0.0224 J	0.0396 U	6.810 =
Phenanthrene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.0746 =	0.163 U
Pyrene	N/A[2]	0.0394 U	0.0392 U	0.0377 U	0.0360 U	0.0384 U	0.0391 U	0.472 =	0.163 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 1).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-B. SUMMARY OF CAP-PART B SOIL ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	MW-32 BF321B 12/01/00 2.0 to 3.3	MW-33 BF331B 12/01/01 4.0 to 6.2	MW-34 BF341B 12/01/01 8.0 to 9.0	MW-E1[4] MW-01-01 01/11/00 0.0 to 2.0	MW-E1[4] MW-01-02 01/11/00 2.0 to 4.0	MW-E1[5] MW-01-03[3] 01/11/00 0.0 to 1.0	MW-E2[4] MW-02-01 01/11/00 0.0 to 2.0	MW-E2[4] MW-02-02 01/11/00 2.0 to 4.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0021 U	0.0012 U	0.0015 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Toluene	0.400	0.0018 J	0.0012 U	0.0015 U	0.003 U	0.003 U	0.003 UJ	0.003 U	0.003 U
Ethylbenzene	0.370	0.0021U	0.0012 U	0.0015 U	0.009 =	0.003 U	0.024 J	0.016 =	0.003 U
Xylenes	20.0	0.0062U	0.0037 U	0.0044 U	0.003 U	0.003 U	0.003 UJ	0.008 =	0.003U
TPH-DRO	NRC	0.61 U	2.2 U	1.5 U	530.0 J	1300 J	230.0 =	29.00 U	31 U
TPH-GRO	NRC	0.190 =	0.124 U	0.118 U	440.0 J	6.1 U	380.0 J	72.00 J	70 J
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	[5]	[5]	[5]	[5]	[5]
Acenaphthene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.076 U	0.082 U	0.080 U	0.079 U	0.083 U
Acenaphthylene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.150 U	0.160 U	0.150 U	0.150 U	0.160 U
Anthracene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.086 J	0.290 J	0.060 J	0.0079 U	0.0083 U
Benzo(a)anthracene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.740 J	2.0 J	0.008 U	0.0079 U	0.0083 U
Benzo(a)pyrene	0.660	0.0359 U	0.0415 U	0.0392 U	0.0076 U	0.0082 U	0.008 U	0.0079 U	0.0083 U
Benzo(b)fluoranthene	0.820	0.0359 U	0.0415 U	0.0392 U	0.015 U	0.040 J	0.015 U	0.015 U	0.016 U
Benzo(g,h,i)perylene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.015 U	0.016 U	0.015 U	0.017 =	0.016 U
Benzo(k)fluoranthene	1.6	0.0359 U	0.0415 U	0.0392 U	0.0076 U	0.052 J	0.008 U	0.0079 U	0.0083 U
Chrysene	0.660	0.0359 U	0.0415 U	0.0392 U	0.0076 U	0.320 J	0.085 J	0.0079 U	0.0083 U
Dibenzo(a,h)anthracene	1.5	0.0359 U	0.0415 U	0.0392 U	0.015 U	0.016 U	0.015 U	0.015 U	0.016 U
Fluoranthene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.970 J	3.0 J	0.660 J	0.015 U	0.016 U
Fluorene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.180 J	0.620 J	0.130 J	0.0079 U	0.0083 U
Indeno(1,2,3-cd)pyrene	0.660	0.0359 U	0.0415 U	0.0392 U	0.0076 U	0.0082 U	0.008 U	0.0082 =	0.0083 U
Naphthalene	N/A[2]	0.0371 =	0.0415 U	0.0392U	0.076 U	0.300 J	0.080 U	0.079 U	0.083 U
Phenanthrene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.490 J	1.5 J	0.310 J	0.0079 U	0.0083 U
Pyrene	N/A[2]	0.0359 U	0.0415 U	0.0392 U	0.550 J	1.8 J	0.420 J	0.0079 U	0.0083 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Duplicate sample.
[4]Soil sample collected from boring installed by Earth Tech.
[5]Result not available. 2-Chloronapthalene was not analyzed for by Earth Tech's subcontracted laboratory (LAUCKS Testing Laboratories).

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-B. SUMMARY OF CAP-PART B SOIL ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	MW-E3[4] MW-03-01 01/11/01 0.0 to 2.0	MW-E3[4] MW-03-02 01/11/00 2.0 to 4.0	MW-E3[4] MW-03-03[3] 01/11/00 2.0 to 4.0	MW-E4[4] MW-04-01 01/11/00 0.0 to 2.0	MW-E4[4] MW-04-02 01/11/00 2.0 to 4.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.002 J	0.002 J	0.001 J	0.003 U	0.004 U
Toluene	0.400	0.002 U	0.003 U	0.003 U	0.003 U	0.004 U
Ethylbenzene	0.370	**4.500 =**	0.180 =	0.076=	0.003 U	0.004 U
Xylenes	20.0	17.000=	3.5 =	0.810 =	0.001 J	0.004 U
TPH-DRO	NRC	31 U	31 U	31 U	31.0 U	32.0 U
TPH-GRO	NRC	1100 J	100 J	130 J	20.0 =	30.0 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	[5]	[5]	[5]	[5]	[5]
Acenaphthene	N/A[2]	0.083 U	0.083 U	0.083 U	0.084 U	0.087 U
Acenaphthylene	N/A[2]	0.160 U	0.160 U	0.160 U	0.160 U	0.170 U
Anthracene	N/A[2]	0.0083 U	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Benzo(a)anthracene	N/A[2]	0.0083 U	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Benzo(a)pyrene	0.660	0.020 J	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Benzo(b)fluoranthene	0.820	0.016 U	0.016 U	0.016 U	0.025 =	0.024 =
Benzo(g,h,i)perylene	N/A[2]	0.016 U	0.016 U	0.016 U	0.016 U	0.017 U
Benzo(k)fluoranthene	1.6	0.0083 U	0.0083 U	0.0083 U	0.096 J	0.0087 U
Chrysene	0.660	0.0083 U	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Dibenzo(a,h)anthracene	1.5	0.016 U	0.016 U	0.016 U	0.016 U	0.017 U
Fluoranthene	N/A[2]	0.016 U	0.016 U	0.016 U	0.016 U	0.017 U
Fluorene	N/A[2]	0.0083 U	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Indeno(1,2,3-cd)pyrene	0.660	0.030 =	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Naphthalene	N/A[2]	0.083 U	0.083 U	0.083 U	0.084 U	0.087 U
Phenanthrene	N/A[2]	0.0089 =	0.0083 U	0.0083 U	0.0084 U	0.0087 U
Pyrene	N/A[2]	0.0083 U	0.0083 U	0.0083 U	0.0084 U	0.0087 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Duplicate sample.
[4]Soil sample collected from boring installed by Earth Tech.
[5]Result not available. 2-Chloronapthalene was not analyzed for by Earth Tech's subcontracted laboratory (LAUCKS Testing Laboratories).

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-B. SUMMARY OF SOIL CAP-PART B ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	MW-E5[4] MW-05-01 01/11/00 0.0 to 2.0	MW-E5[4] MW-05-02 01/11/2000 2.0 to 4.0	MW-E6[4] MW-06-01 01/11/2000 0.0 to 2.0	MW-E5 MW-06-02 01/11/2000 2.0 to 4.0
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.004 U	0.004 U	0.003 U	0.003 U
Toluene	0.400	0.004 U	0.001 U	0.003 U	0.003 U
Ethylbenzene	0.370	0.004 U	0.004 U	0.003 U	0.003 U
Xylenes	20.0	0.002 J	0.004 U	0.003 U	0.003 U
TPH-DRO	NRC	390.0 =	32.0 U	30.0 U	32.0 U
TPH-GRO	NRC	8.80 =	12.0 =	6.0 U	6.30 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	[5]	[5]	[5]	[5]
Acenaphthene	N/A[2]	0.078 U	0.085 U	0.080 U	0.085 U
Acenaphthylene	N/A[2]	0.150 U	0.160 U	0.150 U	0.160 U
Anthracene	N/A[2]	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(a)anthracene	N/A[2]	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(a)pyrene	0.660	0.0078 U	0.0085 U	0.008 U	0.0085 U
Benzo(b)fluoranthene	0.820	0.015 U	0.016 U	0.015 U	0.016 U
Benzo(g,h,i)perylene	N/A[2]	0.023 J	0.016 U	0.015 U	0.016 U
Benzo(k)fluoranthene	1.6	0.0078 U	0.240 =	0.008 U	0.0085 U
Chrysene	0.660	0.0078 U	0.0085 U	0.008 U	0.0085 U
Dibenzo(a,h)anthracene	1.5	0.015 U	0.016 U	0.015 U	0.016 U
Fluoranthene	N/A[2]	0.040 =	0.016 U	0.015 U	0.016 U
Fluorene	N/A[2]	0.0078 U	0.0085 U	0.008 U	0.0085 U
Indeno(1,2,3-cd)pyrene	0.660	0.0078 U	0.0085 U	0.008 U	0.0085 U
Naphthalene	N/A[2]	0.078 U	0.085 U	0.080 U	0.085 U
Phenanthrene	N/A[2]	0.0078 U	0.0085 U	0.008 U	0.0085 U
Pyrene	N/A[2]	0.092 J	0.0085 U	0.008 U	0.0085 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Duplicate sample.
[4]Soil sample collected from boring installed by Earth Tech.
[5]Result not available. 2-Chloronapthalene was not analyzed for by Earth Tech's subcontracted laboratory (LAUCKS Testing Laboratories).

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

SUMMARY TABLE
OF
SEDIMENT ANALYTICAL RESULTS

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE V-C. SUMMARY OF CAP-PART A SEDIMENT ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SD-01 BF0118 12/06/99 0.0 to 0.5	SD-02 BF0218 12/06/99 0.0 to 0.5	SD-03 BF0318[3] 12/06/99 0.0 to 0.5	SD-04 BF0418 12/06/99 0.0 to 0.5	SD-05 BF0518 12/06/99 0.0 to 0.5	SD-05 BF051A[4] 12/06/99 0.0 to 0.5	SD-06 BF0618 12/07/99 0.0 to 0.5
VOCs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0013 UJ	0.0019 U	**<0.154**	0.00140 U	0.0012 U	0.0013 UJ	0.0016 U
Toluene	0.400	0.0013 UJ	0.0123 =	**2.810 =**	0.0402 J	0.0043 =	0.0016 J	0.00042 J
Ethylbenzene	0.370	0.0013 UJ	0.0019 U	<0.154	0.0014 U	0.0012 U	0.0013 UJ	0.0016 U
Xylenes	20.0	0.0040 UJ	0.0057 U	<0.463	0.0042 U	0.0036 U	0.0040 UJ	0.0048 U
TPH-DRO	NRC	3.7 U	9.2 =	5.4 UJ	3.0 UJ	5.4 UJ	30.7 =	9.2 J
TPH-GRO	NRC	0.144 U	0.184 UJ	0.173 U	0.136 U	0.134 U	0.128 U	0.232 =
PAHs	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.481 U	0.612 U	0.578 U	0.455 U	0.445 U	0.410 U	0.567 U
Acenaphthene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Acenaphthylene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Anthracene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Benzo(a)anthracene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Benzo(a)pyrene	0.660	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Benzo(b)fluoranthene	0.820	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Benzo(g,h,i)perylene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Benzo(k)fluoranthene	1.6	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Chrysene	0.660	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Dibenzo(a,h)anthracene	1.5	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Fluoranthene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Fluorene	N/A[2]	0.0481 U	0.107 =	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Indeno(1,2,3-cd)pyrene	0.660	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Naphthalene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Phenanthrene	N/A[2]	0.0481 U	0.0612 U	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U
Pyrene	N/A[2]	0.0481 U	0.0941=	0.0578 U	0.0455 U	0.0455 U	0.0410 U	0.0567 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 2).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.
[3]Volatile reporting levels were not achieved in the sample due to the elevated toluene concentration. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE V-C. SUMMARY OF CAP-PART A SEDIMENT ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SD-07 BF0718 12/07/99 0.0 to 0.5	SD-08 BF0818 12/07/99 0.0 to 0.5	SD-09 BF0918 12/07/99 0.0 to 0.5
VOCs	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0015 U	0.0012 UJ	0.0013 U
Toluene	0.400	0.0015 U	0.00036 J	0.00058 J
Ethylbenzene	0.370	0.0015 U	0.0012 UJ	0.0013 U
Xylenes	20.0	0.0044 U	0.0037 UJ	0.0038 U
TPH-DRO	NRC	2.1 UJ	1.5 UJ	3.6 UJ
TPH-GRO	NRC	0.165 U	0.160 =	0.137 U
PAHs	mg/kg	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.550 U	0.484 U	0.438 U
Acenaphthene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Acenaphthylene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Anthracene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Benzo(a)anthracene	N/A[2]	0.0550 U	0.0484 U	0.336 U
Benzo(a)pyrene	0.660	0.0550 U	0.0484 U	0.282 =
Benzo(b)fluoranthene	0.820	0.0550 U	0.0484 U	0.474 =
Benzo(g,h,i)perylene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Benzo(k)fluoranthene	1.6	0.0550 U	0.0484 U	0.0438 U
Chrysene	0.660	0.0550 U	0.0484 U	0.422 =
Dibenzo(a,h)anthracene	1.5	0.0550 U	0.0484 U	0.0438 U
Fluoranthene	N/A[2]	0.0550 U	0.0484 U	0.645 =
Fluorene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Indeno(1,2,3-cd)pyrene	0.660	0.0550 U	0.0484 U	0.0438 U
Naphthalene	N/A[2]	0.0550 U	0.0484 U	0.0438 U
Phenanthrene	N/A[2]	0.0550 U	0.0484 U	0.0625 =
Pyrene	N/A[2]	0.0550 U	0.0484 U	0.736 =

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels.
[2]Not applicable; the health-based threshold level is exceeded only if free product exists.
[3]Volatile reporting levels were not achieved in the sample due to the elevated toluene concentration. Therefore, the concentrations are reported as less than the elevated detection limits.
[4]Duplicate sample.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAH - Polynuclear aromatic hydrocarbon.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE V-D. SUMMARY OF CAP-PART B SEDIMENT ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Applicable Standards[1]	SD-10 BF1018 12/01/2000 0.0 to 0.5	SD-11 BF1118 12/01/2000 0.0 to 0.5
VOCs	mg/kg	mg/kg	mg/kg
Benzene	0.005	0.0023 U	0.0023 U
Toluene	0.400	0.0023 U	0.0023 U
Ethylbenzene	0.370	0.0023 U	0.0023 U
Xylenes	20.0	0.007 U	0.0068 U
TPH-DRO	NRC	2.90 U	2.2 U
TPH-GRO	NRC	0.140 U	0.136 U
PAHs	mg/kg	mg/kg	mg/kg
2-Chloronaphthalene	N/A[2]	0.0466 U	0.0455 U
Acenaphthene	N/A[2]	0.0466 U	0.0455 U
Acenaphthylene	N/A[2]	0.0466 U	0.0455 U
Anthracene	N/A[2]	0.0466 U	0.0455 U
Benzo(a)anthracene	N/A[2]	0.0466 U	0.0455 U
Benzo(a)pyrene	0.660	0.0466 U	0.0455 U
Benzo(b)fluoranthene	0.820	0.0466 U	0.0455 U
Benzo(g,h,i)perylene	N/A[2]	0.0466 U	0.0455 U
Benzo(k)fluoranthene	1.6	0.0466 U	0.0455 U
Chrysene	0.660	0.0466 U	0.0455 U
Dibenzo(a,h)anthracene	1.5	0.0466 U	0.0455 U
Fluoranthene	N/A[2]	0.0466 U	0.0455 U
Fluorene	N/A[2]	0.0466 U	0.0455 U
Indeno(1,2,3-cd)pyrene	0.660	0.0466 U	0.0455 U
Naphthalene	N/A[2]	0.0466 U	0.0455 U
Phenanthrene	N/A[2]	0.0466 U	0.0455 U
Pyrene	N/A[2]	0.0466 U	0.0455 U

NOTE: [1]Georgia Department of Natural Resources (GA DNR) Applicable Soil Threshold Levels (i.e., Table A, column 2).
[2]Not applicable; the health-based threshold level exceeds the expected soil concentration under free-product conditions.

BGS - Below ground surface.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
TPH-DRO - Total petroleum hydrocarbon–diesel-range organics.
TPH-GRO - Total petroleum hydrocarbon–gasoline-range organics.
VOCs - Volatile organic compounds.
Bold values exceed soil threshold levels.

Laboratory Qualifier
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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CHAIN-OF-CUSTODY RECORDS

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Science Applications International Corporation

800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF00 1

PROJECT NAME: Hunter BFF L.B.

PROJECT NUMBER: 01-1624-04-1121-~~110~~-210

PROJECT MANAGER: Allison Bailey

Sampler (Signature): Laura Lumley (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF3211	11/30/00	1544	Soil	1		1	1	3	BTEX 34791 001	34793 001
BF3311	11/30/00	1051		1		1	1	3	002	002
BF3411	11/30/00	1617		1		1	1	3	003	003
BF3511	11/30/00	1129		1		1	1	3	004	004
BF3611	11/30/00	1444		1		1	1	3	005	005
BF3711	11/30/00	1405		1		1	1	3	006	006
BF3713	11/30/00	1405		1		1	1	3	007	007
BF3611	11/30/00	1310		1		1	1	3	008	008

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/1/00 1250	Patricia Dover	12/1/00 15:05
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time
[illegible]	12-1-00 1200		
COMPANY NAME: GEL		COMPANY NAME:	
RELINQUISHED BY: [illegible]	Date/Time 12-1-00 1505	RECEIVED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 24

Cooler ID: #607

Cooler Temperature: 3.0°

FEDEX NUMBER:

Encore samples enclosed.

V-23

SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFFØØ3

PROJECT NAME: Hunter BFF

PROJECT NUMBER: 01-1624-04-1121-110

PROJECT MANAGER: Allison Bailey

Sampler (Signature) Laura Lumley (Printed Name) Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
1	BF321B	12/1/00	1342	soil	1		1	1	3		
2	BF331B	12/1/00	1220	↓	1		1	1	3		
3	BF341B	12/1/00	1019	↓	1		1	1	3		
4	BF1Ø1S	12/1/00	0959	Sediment	1		1	1	3		
5	BF111S	12/1/00	1031	↓	1		1	1	3		
1	BF3222	12/1/00	1435	water	2				2		
2	BF3422	12/1/00	1137	↓	2				2		
3	BF3324	12/1/00	1255	↓	2				2		
4	BF3322	12/1/00	1235	↓	2				2		
5	BFE122	12/1/00	1630	↓	2				2		
6	BFE622	12/1/00	1515	↓	2				2		
7	BFTB1Ø	12/1/00	0630	↓	2				2		

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 29	Cooler Temperature: 70
Laura Lumley	12/2/00	Mike Kenelow	12-2-00	Cooler ID: #542	FEDEX NUMBER:
COMPANY NAME: SAIC	1040	COMPANY NAME: GEL	1340		
RECEIVED BY: Ron P Hanson	Date/Time 12/2/00	RELINQUISHED BY:	Date/Time		
COMPANY NAME: GEL	1040	COMPANY NAME:			
RELINQUISHED BY: Ron P Hanson	Date/Time 12-2-00	RECEIVED BY:	Date/Time		
COMPANY NAME: GEL	1340	COMPANY NAME:			

2000210673(BTEX) - 348120
2000210674 - 244110
200012
RIIQIF 3

SOIL ANALYTICAL DATA SHEETS

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3211

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791001

Sample wt/vol: 3.8 (g/mL) G Lab File ID: 1N112

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	1.6	U	4
108-88-3	Toluene	0.43	J	5
100-41-4	Ethylbenzene	1.6	U	4
1330-20-7	Xylenes (total)	4.7	U	4

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3211

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 007F0701

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	0.81	JB	U FD1, FD2

FORM I SV

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3211

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M404

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	118	U	u

FORM I VOA

DATA VALIDATION COPY

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3211

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y208

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/12/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	39.4	U
91-58-7	2-Chloronaphthalene	39.4	U
208-96-8	Acenaphthylene	39.4	U
83-32-9	Acenaphthene	39.4	U
86-73-7	Fluorene	39.4	U
85-01-8	Phenanthrene	39.4	U
120-12-7	Anthracene	39.4	U
206-44-0	Fluoranthene	39.4	U
129-00-0	Pyrene	39.4	U
56-55-3	Benzo(a)anthracene	39.4	U
218-01-9	Chrysene	39.4	U
205-99-2	Benzo(b)fluoranthene	39.4	U
207-08-9	Benzo(k)fluoranthene	39.4	U
50-32-8	Benzo(a)pyrene	39.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	39.4	U
53-70-3	Dibenz(a,h)anthracene	39.4	U
191-24-2	Benzo(g,h,i)perylene	39.4	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3311

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791002

Sample wt/vol: 3.3 (g/mL) G Lab File ID: 1N113

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	1.8	U	U
108-88-3	Toluene	0.79	J	J
100-41-4	Ethylbenzene	1.8	U	U
1330-20-7	Xylenes (total)	5.3	U	U

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3311

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 008F0801

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	2.5	B	U F01, F07

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3311

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793002

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M405

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	118	U	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3311

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y209

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	39.2	U
91-58-7	2-Chloronaphthalene	39.2	U
208-96-8	Acenaphthylene	39.2	U
83-32-9	Acenaphthene	39.2	U
86-73-7	Fluorene	39.2	U
85-01-8	Phenanthrene	39.2	U
120-12-7	Anthracene	39.2	U
206-44-0	Fluoranthene	39.2	U
129-00-0	Pyrene	39.2	U
56-55-3	Benzo(a)anthracene	39.2	U
218-01-9	Chrysene	39.2	U
205-99-2	Benzo(b)fluoranthene	39.2	U
207-08-9	Benzo(k)fluoranthene	39.2	U
50-32-8	Benzo(a)pyrene	39.2	U
193-39-5	Indeno(1,2,3-cd)pyrene	39.2	U
53-70-3	Dibenz(a,h)anthracene	39.2	U
191-24-2	Benzo(g,h,i)perylene	39.2	U

u

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3411

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791003

Sample wt/vol: 4.3 (g/mL) G Lab File ID: 1N114

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 12 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	1.3	U	U
108-88-3	Toluene	0.44	J	J
100-41-4	Ethylbenzene	1.3	U	U
1330-20-7	Xylenes (total)	3.9	U	U

DATA VALIDATION COPY

FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3411

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 009F0901

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/15/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	1.4	JB	U FD1, FD6

FORM I SV

DATA VALIDATION COPY

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3411

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793003

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M406

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 12 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	113	U	u

FORM I VOA

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3411

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y210

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 12 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	37.7	U
91-58-7	2-Chloronaphthalene	37.7	U
208-96-8	Acenaphthylene	37.7	U
83-32-9	Acenaphthene	37.7	U
86-73-7	Fluorene	37.7	U
85-01-8	Phenanthrene	37.7	U
120-12-7	Anthracene	37.7	U
206-44-0	Fluoranthene	37.7	U
129-00-0	Pyrene	37.7	U
56-55-3	Benzo(a)anthracene	37.7	U
218-01-9	Chrysene	37.7	U
205-99-2	Benzo(b)fluoranthene	37.7	U
207-08-9	Benzo(k)fluoranthene	37.7	U
50-32-8	Benzo(a)pyrene	37.7	U
193-39-5	Indeno(1,2,3-cd)pyrene	37.7	U
53-70-3	Dibenz(a,h)anthracene	37.7	U
191-24-2	Benzo(g,h,i)perylene	37.7	U

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FORM I SV-1 OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3511

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791004

Sample wt/vol: 2.9 (g/mL) G Lab File ID: 1N115

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 7 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	1.9	U	U
108-88-3	Toluene	0.62	J	J
100-41-4	Ethylbenzene	1.9	U	U
1330-20-7	Xylenes (total)	5.6	U	U

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3511

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 004F0401

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 7 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/20/00

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel Range Organics_____	41.6	B

= F01, F08

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3511

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793004

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M407

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 7 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	64.4	J	J

FORM I VOA

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3511

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y211

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 7 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/12/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	36.0	U
91-58-7	2-Chloronaphthalene	36.0	U
208-96-8	Acenaphthylene	36.0	U
83-32-9	Acenaphthene	36.0	U
86-73-7	Fluorene	36.0	U
85-01-8	Phenanthrene	36.0	U
120-12-7	Anthracene	36.0	U
206-44-0	Fluoranthene	36.0	U
129-00-0	Pyrene	36.0	U
56-55-3	Benzo(a)anthracene	36.0	U
218-01-9	Chrysene	36.0	U
205-99-2	Benzo(b)fluoranthene	36.0	U
207-08-9	Benzo(k)fluoranthene	36.0	U
50-32-8	Benzo(a)pyrene	36.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	36.0	U
53-70-3	Dibenz(a,h)anthracene	36.0	U
191-24-2	Benzo(g,h,i)perylene	36.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3611

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791005

Sample wt/vol: 3.2 (g/mL) G Lab File ID: 1N116

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 13 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	3.9	
108-88-3	Toluene	38.8	
100-41-4	Ethylbenzene	134	
1330-20-7	Xylenes (total)	1960 ~~917~~	~~E~~ D

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3611

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793005

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 004F0401

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 13 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/19/00

Injection Volume: 1.0(uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel Range Organics_____	829	B

= F01,F08

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3611

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793005

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4015

Level: (low/med) MED Date Received: 12/01/00

% Moisture: not dec. 13 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
	----------Gasoline Range Organics	1320000	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3611

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793005

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y212

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 13 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/12/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	457	
91-58-7	2-Chloronaphthalene	38.4	U
208-96-8	Acenaphthylene	38.4	U
83-32-9	Acenaphthene	38.4	U
86-73-7	Fluorene	38.4	U
85-01-8	Phenanthrene	38.4	U
120-12-7	Anthracene	38.4	U
206-44-0	Fluoranthene	38.4	U
129-00-0	Pyrene	38.4	U
56-55-3	Benzo(a)anthracene	38.4	U
218-01-9	Chrysene	38.4	U
205-99-2	Benzo(b)fluoranthene	38.4	U
207-08-9	Benzo(k)fluoranthene	38.4	U
50-32-8	Benzo(a)pyrene	38.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	38.4	U
53-70-3	Dibenz(a,h)anthracene	38.4	U
191-24-2	Benzo(g,h,i)perylene	38.4	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3711

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791006

Sample wt/vol: 3.8 (g/mL) G Lab File ID: 1N314

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	1.8	
108-88-3	Toluene	0.99	J
100-41-4	Ethylbenzene	6.4	
1330-20-7	Xylenes (total)	36.2	

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3711

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793006

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 005F0501

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/19/00

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	8.6	B	= F01, F08

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3711

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793006

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M408

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 15 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	843	_____	≤

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3711

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793006

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y213

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	22.4	J
91-58-7	2-Chloronaphthalene	39.1	U
208-96-8	Acenaphthylene	39.1	U
83-32-9	Acenaphthene	39.1	U
86-73-7	Fluorene	39.1	U
85-01-8	Phenanthrene	39.1	U
120-12-7	Anthracene	39.1	U
206-44-0	Fluoranthene	39.1	U
129-00-0	Pyrene	39.1	U
56-55-3	Benzo(a)anthracene	39.1	U
218-01-9	Chrysene	39.1	U
205-99-2	Benzo(b)fluoranthene	39.1	U
207-08-9	Benzo(k)fluoranthene	39.1	U
50-32-8	Benzo(a)pyrene	39.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	39.1	U
53-70-3	Dibenz(a,h)anthracene	39.1	U
191-24-2	Benzo(g,h,i)perylene	39.1	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3713
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791007

Sample wt/vol: 3.6 (g/mL) G Lab File ID: 1N118

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 16 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	2.6	
108-88-3	Toluene	1.2	J
100-41-4	Ethylbenzene	10.4	
1330-20-7	Xylenes (total)	47.4	

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3713
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793007

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 006F0601

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 16 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/19/00

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel Range Organics_____	8.1	B

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FORM I SV

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3713
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793007

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M504

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: not dec. 16 Date Analyzed: 12/08/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
	----------Gasoline Range Organics_____	285	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3713
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793007

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y214

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 16 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/12/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	39.6	U
91-58-7	2-Chloronaphthalene	39.6	U
208-96-8	Acenaphthylene	39.6	U
83-32-9	Acenaphthene	39.6	U
86-73-7	Fluorene	39.6	U
85-01-8	Phenanthrene	74.6	
120-12-7	Anthracene	49.4	
206-44-0	Fluoranthene	497	
129-00-0	Pyrene	472	
56-55-3	Benzo(a)anthracene	258	
218-01-9	Chrysene	244	
205-99-2	Benzo(b)fluoranthene	245	
207-08-9	Benzo(k)fluoranthene	213	
50-32-8	Benzo(a)pyrene	229	
193-39-5	Indeno(1,2,3-cd)pyrene	121	
53-70-3	Dibenz(a,h)anthracene	50.5	
191-24-2	Benzo(g,h,i)perylene	129	

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3811

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34791

Matrix: (soil/water) SOIL Lab Sample ID: 34791008

Sample wt/vol: 3.3 (g/mL) G Lab File ID: 1N312

Level: (low/med) MED Date Received: 12/01/00

% Moisture: not dec. 18 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	76.3	J
108-88-3	Toluene	185	U
100-41-4	Ethylbenzene	1620	
1330-20-7	Xylenes (total)	4630	

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF3811

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793008

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 007F0701

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 18 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/19/00

Injection Volume: 1.0(uL) Dilution Factor: 300.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	1660	B	= F01, F08

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3811

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793008

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4016

Level: (low/med) MED Date Received: 12/01/00

% Moisture: not dec. 18 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics	3240000		J G01

DATA VALIDATION

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3811

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34793

Matrix: (soil/water) SOIL Lab Sample ID: 34793008

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y304

Level: (low/med) LOW Date Received: 12/01/00

% Moisture: 18 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	6810	
91-58-7	2-Chloronaphthalene	163	U
208-96-8	Acenaphthylene	163	U
83-32-9	Acenaphthene	163	U
86-73-7	Fluorene	163	U
85-01-8	Phenanthrene	163	U
120-12-7	Anthracene	163	U
206-44-0	Fluoranthene	163	U
129-00-0	Pyrene	163	U
56-55-3	Benzo(a)anthracene	163	U
218-01-9	Chrysene	163	U
205-99-2	Benzo(b)fluoranthene	163	U
207-08-9	Benzo(k)fluoranthene	163	U
50-32-8	Benzo(a)pyrene	163	U
193-39-5	Indeno(1,2,3-cd)pyrene	163	U
53-70-3	Dibenz(a,h)anthracene	163	U
191-24-2	Benzo(g,h,i)perylene	163	U

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FORM I SV-1 OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF321B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34812

Matrix: (soil/water) SOIL Lab Sample ID: 34812001

Sample wt/vol: 2.6 (g/mL) G Lab File ID: 1N119

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 7 Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0 ~~should be 1:2 or more~~ ?

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	2.1	U	U
108-88-3	Toluene	1.8	J	J
100-41-4	Ethylbenzene	2.1	U	U
1330-20-7	Xylenes (total)	6.2	U	U

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF321B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 016F1601

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 7 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/15/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel Range Organics_____	0.61	JB

U F01, F06

FORM I SV

DATA VALIDATION COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF321B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4010

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 7 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
	----------Gasoline Range Organics	190	

DATA VALIDATION COPY

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF321B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y216

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 7 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	37.1	
91-58-7	2-Chloronaphthalene	35.9	U
208-96-8	Acenaphthylene	35.9	U
83-32-9	Acenaphthene	35.9	U
86-73-7	Fluorene	35.9	U
85-01-8	Phenanthrene	35.9	U
120-12-7	Anthracene	35.9	U
206-44-0	Fluoranthene	35.9	U
129-00-0	Pyrene	35.9	U
56-55-3	Benzo(a)anthracene	35.9	U
218-01-9	Chrysene	35.9	U
205-99-2	Benzo(b)fluoranthene	35.9	U
207-08-9	Benzo(k)fluoranthene	35.9	U
50-32-8	Benzo(a)pyrene	35.9	U
193-39-5	Indeno(1,2,3-cd)pyrene	35.9	U
53-70-3	Dibenz(a,h)anthracene	35.9	U
191-24-2	Benzo(g,h,i)perylene	35.9	U

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FORM I SV-1 OLM03.0

DATA VALIDATION COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF331B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34812

Matrix: (soil/water) SOIL Lab Sample ID: 34812002

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1N318

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 20 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	1.2	U
108-88-3	Toluene	1.2	U
100-41-4	Ethylbenzene	1.2	U
1330-20-7	Xylenes (total)	3.7	U

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DATA VALIDATION COPY

FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF331B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 017F1701

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 20 decanted: (Y/N) N Date Extracted:12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	2.2	B	U FD1, FD7

FORM I SV

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF331B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814002

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4011

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 20 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	124	U	U

DATA VALIDATION COPY

FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF331B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y217

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 20 decanted: (Y/N) N Date Extracted:12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	41.5	U
91-58-7	2-Chloronaphthalene	41.5	U
208-96-8	Acenaphthylene	41.5	U
83-32-9	Acenaphthene	41.5	U
86-73-7	Fluorene	41.5	U
85-01-8	Phenanthrene	41.5	U
120-12-7	Anthracene	41.5	U
206-44-0	Fluoranthene	41.5	U
129-00-0	Pyrene	41.5	U
56-55-3	Benzo(a)anthracene	41.5	U
218-01-9	Chrysene	41.5	U
205-99-2	Benzo(b)fluoranthene	41.5	U
207-08-9	Benzo(k)fluoranthene	41.5	U
50-32-8	Benzo(a)pyrene	41.5	U
193-39-5	Indeno(1,2,3-cd)pyrene	41.5	U
53-70-3	Dibenz(a,h)anthracene	41.5	U
191-24-2	Benzo(g,h,i)perylene	41.5	U

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FORM I SV-1 OLM03.0

DATA VALIDATION COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF341B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34812

Matrix: (soil/water) SOIL Lab Sample ID: 34812003

Sample wt/vol: 4.0 (g/mL) G Lab File ID: 1N315

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 15 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	1.5	U
108-88-3	Toluene	1.5	U
100-41-4	Ethylbenzene	1.5	U
1330-20-7	Xylenes (total)	4.4	U

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF341B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 018F1801

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	1.5	JB	U F01,F06

FORM I SV

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF341B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814003

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4012

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 15 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
	----------Gasoline Range Organics_____	118	U

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FORM I VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF341B

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y218

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 15 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	39.2	U
91-58-7	2-Chloronaphthalene	39.2	U
208-96-8	Acenaphthylene	39.2	U
83-32-9	Acenaphthene	39.2	U
86-73-7	Fluorene	39.2	U
85-01-8	Phenanthrene	39.2	U
120-12-7	Anthracene	39.2	U
206-44-0	Fluoranthene	39.2	U
129-00-0	Pyrene	39.2	U
56-55-3	Benzo(a)anthracene	39.2	U
218-01-9	Chrysene	39.2	U
205-99-2	Benzo(b)fluoranthene	39.2	U
207-08-9	Benzo(k)fluoranthene	39.2	U
50-32-8	Benzo(a)pyrene	39.2	U
193-39-5	Indeno(1,2,3-cd)pyrene	39.2	U
53-70-3	Dibenz(a,h)anthracene	39.2	U
191-24-2	Benzo(g,h,i)perylene	39.2	U

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LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

RELEASE OF DATA

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Respectfully submitted,

Jenna Gorham
Project Manager

23 Feb 2000
(DATE)

Mike Nelson
Technical Director

23 Feb 2000
(DATE)

HOW TO CONTACT US:

All Laucks Testing Laboratories staff members can be reached at the same telephone and facsimile numbers: (206) 767-5060 by phone, (206) 767-5063 by FAX.

REQUESTS FOR DUPLICATE COPIES:

This packet has been checked for accuracy. All pages are present and in sequential order. Please see Attachment B for a detailed record.

In the event that duplicate data copies are needed, Laucks will accommodate your request at a fee of twenty-five cents ($0.25) per copy, plus shipping. If the data are in storage, there will also be a fee for retrieval.

Site: Bulk Fuel Facility (HAA-09), Facility Identificaton Number 9-025113,Hunter Army Airfield

SOIL

MW-01-01 0 to 2 FT

Collection Date: 1/11/2000 1:30:0
Lab ID: 0001212-07

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	530		J	G01

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	440		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	9			
m,p-Xylene	3	U	U	
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	76	U	U	
Acenaphthylene	150	U	U	
Anthracene	86	P	J	G01, M01
Benzo(a)anthracene	740	DPX	J	G01, M01
Benzo(a)pyrene	7.6	U	U	
Benzo(b)fluoranthene	15	U	U	
Benzo(g,h,i)perylene	15	U	U	
Benzo(k)fluoranthene	7.6	U	U	
Chrysene	7.6	U	U	
Dibenzo(a,h)anthracene	15	U	U	
Fluoranthene	970	DPX	J	G01.M01
Fluorene	180	P	J	G01, M01
Indeno(1,2,3-cd)pyrene	7.6	U	U	
Naphthalene	76	U	U	
Phenanthrene	490	DX	J	G01
Pyrene	550	DPX	J	G01,M01

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-01-02 2 to 4 FT

Collection Date: 1/11/2000 1:40:0
Lab ID: 0001212-08

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	1300	D	J	G01

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	6.1	U	U	

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	3	U	U	
m,p-Xylene	3	U	U	
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	82	U	U	
Acenaphthylene	160	U	U	
Anthracene	290	P	J	G01,M01
Benzo(a)anthracene	2000	DPX	J	G01,M01
Benzo(a)pyrene	8.2	U	U	
Benzo(b)fluoranthene	40		J	G01
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	52	P	J	G01,M01
Chrysene	320	P	J	G01,M01
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	3000	DPX	J	G01,M01
Fluorene	620	P	J	G01,M01
Indeno(1,2,3-cd)pyrene	8.2	U	U	
Naphthalene	300		J	G01
Phenanthrene	1500	DX	J	G01
Pyrene	1800	DPX	J	G01,M01

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-01-03 0 to 1 FT

Collection Date: 1/11/2000 1:30:0
Lab ID: 0001212-09

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	230			

8015-GRO	Result mg/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	380		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	24		J	G01
m,p-Xylene	3	U	UJ	G01
o-Xylene	3	U	UJ	G01
Toluene	3	U	UJ	G01

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	80	U	U	
Acenaphthylene	150	U	U	
Anthracene	60	P	J	G01,M01
Benzo(a)anthracene	8	U	U	
Benzo(a)pyrene	8	U	U	
Benzo(b)fluoranthene	15	U	U	
Benzo(g,h,i)perylene	15	U	U	
Benzo(k)fluoranthene	8	U	U	
Chrysene	85	P	J	G01,M01
Dibenzo(a,h)anthracene	15	U	U	
Fluoranthene	660	DPX	J	G01,M01
Fluorene	130	P	J	G01,M01
Indeno(1,2,3-cd)pyrene	8	U	U	
Naphthalene	80	U	U	
Phenanthrene	310		J	G01
Pyrene	420	DPX	J	G01,M01

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-02-01 0 to 2 FT

Collection Date: 1/11/2000 1:05:0
Lab ID: 0001212-10

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	29	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	72		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	16			
m,p-Xylene	8			
o-Xylene	2	J	J	N01
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	79	U	U	
Acenaphthylene	150	U	U	
Anthracene	7.9000	U	U	
Benzo(a)anthracene	7.9000	U	U	
Benzo(a)pyrene	7.9000	U	U	
Benzo(b)fluoranthene	15	U	U	
Benzo(g,h,i)perylene	17			
Benzo(k)fluoranthene	7.9000	U	U	
Chrysene	7.9000	U	U	
Dibenzo(a,h)anthracene	15	U	U	
Fluoranthene	15	U	U	
Fluorene	7.9000	U	U	
Indeno(1,2,3-cd)pyrene	8.2			
Naphthalene	79	U	U	
Phenanthrene	7.9000	U	U	
Pyrene	7.9000	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-02-02 2 to 4 FT

Collection Date: 1/11/2000 1:20:0
Lab ID: 0001212-11

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	31	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	70		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	3	U	U	
m,p-Xylene	3	U	U	
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	83	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.3000	U	U	
Benzo(a)anthracene	8.3000	U	U	
Benzo(a)pyrene	8.3000	U	U	
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	8.3000	U	U	
Chrysene	8.3000	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.3000	U	U	
Indeno(1,2,3-cd)pyrene	8.3000	U	U	
Naphthalene	83	U	U	
Phenanthrene	8.3000	U	U	
Pyrene	8.3000	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-03-01 0 to 2 FT

Collection Date: 1/11/2000 10:45:
Lab ID: 0001212-12

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	31	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	1100		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	2	J	J	N01
Ethylbenzene	4500	D		
m,p-Xylene	17000	D		
o-Xylene	3	U	U	
Toluene	2	J	U	F03

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	83	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.3000	U	U	
Benzo(a)anthracene	8.3000	U	U	
Benzo(a)pyrene	20	P	J	M01
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	8.3000	U	U	
Chrysene	8.3000	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.3000	U	U	
Indeno(1,2,3-cd)pyrene	30			
Naphthalene	83	U	U	
Phenanthrene	8.9			
Pyrene	8.3000	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-03-02 2 to 4 FT

Collection Date: 1/11/2000 9:55:0
Lab ID: 0001212-13

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	31	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	100		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	2	J	J	N01
Ethylbenzene	180			
m,p-Xylene	3500	D		
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	83	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.3000	U	U	
Benzo(a)anthracene	8.3000	U	U	
Benzo(a)pyrene	8.3000	U	U	
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	8.3000	U	U	
Chrysene	8.3000	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.3000	U	U	
Indeno(1,2,3-cd)pyrene	8.3000	U	U	
Naphthalene	83	U	U	
Phenanthrene	8.3000	U	U	
Pyrene	8.3000	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-03-03 2 to 4 FT

Collection Date: 1/11/2000 10:00:
Lab ID: 0001212-14

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	31	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	130		J	G01

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	1	J	J	N01
Ethylbenzene	76			
m,p-Xylene	810	D		
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	83	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.3000	U	U	
Benzo(a)anthracene	8.3000	U	U	
Benzo(a)pyrene	8.3000	U	U	
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	8.3000	U	U	
Chrysene	8.3000	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.3000	U	U	
Indeno(1,2,3-cd)pyrene	8.3000	U	U	
Naphthalene	83	U	U	
Phenanthrene	8.3000	U	U	
Pyrene	8.3000	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-04-01 0 to 2 FT

Collection Date: 1/11/2000 8:10:0
Lab ID: 0001212-15

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	31	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	20			

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	3	U	U	
Fluoranthene	16	U	U	
m,p-Xylene	1	J	J	N01
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	84	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.4	U	U	
Benzo(a)anthracene	8.4	U	U	
Benzo(a)pyrene	8.4	U	U	
Benzo(b)fluoranthene	25			
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	96	P	J	M01
Chrysene	8.4	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluorene	8.4	U	U	
Indeno(1,2,3-cd)pyrene	8.4	U	U	
Naphthalene	84	U	U	
Phenanthrene	8.4	U	U	
Pyrene	8.4	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-04-02 2 to 4 FT

Collection Date: 1/11/2000
Lab ID: 0001212-16

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	32	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	30			

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	4	U	U	
Ethylbenzene	4	U	U	
m,p-Xylene	4	U	U	
o-Xylene	4	U	U	
Toluene	4	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	87	U	U	
Acenaphthylene	170	U	U	
Anthracene	8.7	U	U	
Benzo(a)anthracene	8.7	U	U	
Benzo(a)pyrene	8.7	U	U	
Benzo(b)fluoranthene	24			
Benzo(g,h,i)perylene	17	U	U	
Benzo(k)fluoranthene	8.7	U	U	
Chrysene	8.7	U	U	
Dibenzo(a,h)anthracene	17	U	U	
Fluoranthene	17	U	U	
Fluorene	8.7	U	U	
Indeno(1,2,3-cd)pyrene	8.7	U	U	
Naphthalene	87	U	U	
Phenanthrene	8.7	U	U	
Pyrene	8.7	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-05-01 0 to 2 FT

Collection Date: 1/11/2000
Lab ID: 0001212-03

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	390			

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	8.8000			

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	4	U	U	
Ethylbenzene	4	U	U	
m,p-Xylene	2	J	J	N01
o-Xylene	4	U	U	
Toluene	4	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	78	U	U	
Acenaphthylene	150	U	U	
Anthracene	7.8000	U	U	
Benzo(a)anthracene	7.8000	U	U	
Benzo(a)pyrene	7.8000	U	U	
Benzo(b)fluoranthene	15	U	U	
Benzo(g,h,i)perylene	23	P	J	M01
Benzo(k)fluoranthene	7.8000	U	U	
Chrysene	7.8000	U	U	
Dibenzo(a,h)anthracene	15	U	U	
Fluoranthene	40			
Fluorene	7.8000	U	U	
Indeno(1,2,3-cd)pyrene	7.8000	U	U	
Naphthalene	78	U	U	
Phenanthrene	7.8000	U	U	
Pyrene	92	P	J	M01

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-05-02 2 to 4 FT

Collection Date: 1/11/2000 9:35:0
Lab ID: 0001212-04

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	32	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	12			

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	4	U	U	
Ethylbenzene	4	U	U	
m,p-Xylene	4	U	U	
o-Xylene	4	U	U	
Toluene	1	J	U	F03

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	85	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.5	U	U	
Benzo(a)anthracene	8.5	U	U	
Benzo(a)pyrene	8.5	U	U	
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	240	P		M01
Chrysene	8.5	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.5	U	U	
Indeno(1,2,3-cd)pyrene	8.5	U	U	
Naphthalene	85	U	U	
Phenanthrene	8.5	U	U	
Pyrene	8.5	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-06-01	0 to 2 FT			Collection Date: 1/11/2000 3:35:0 Lab ID: 0001212-05
8015 - DRO	**Result MG/KG**	**Qualifiers Lab**	**Data**	**Data Validation Code**
Diesel (C12-C24)	30	U	U	
8015 - GRO	**Result mg/Kg**	**Qualifiers Lab**	**Data**	**Data Validation Code**
Gasoline	6	U	U	
8270B-BTEX	**Result UG/KG**	**Qualifiers Lab**	**Data**	**Data Validation Code**
Benzene	3	U	U	
Ethylbenzene	3	U	U	
m,p-Xylene	3	U	U	
o-Xylene	3	U	U	
Toluene	3	U	U	
8310- PAH	**Result ug/kg**	**Qualifiers Lab**	**Data**	**Data Validation Code**
Acenaphthene	80	U	U	
Acenaphthylene	150	U	U	
Anthracene	8	U	U	
Benzo(a)anthracene	8	U	U	
Benzo(a)pyrene	8	U	U	
Benzo(b)fluoranthene	15	U	U	
Benzo(g,h,i)perylene	15	U	U	
Benzo(k)fluoranthene	8	U	U	
Chrysene	8	U	U	
Dibenzo(a,h)anthracene	15	U	U	
Fluoranthene	15	U	U	
Fluorene	8	U	U	
Indeno(1,2,3-cd)pyrene	8	U	U	
Naphthalene	80	U	U	
Phenanthrene	8	U	U	
Pyrene	8	U	U	

Site: Bulk Fuel Facility (HAA-09), Hunter Army Airfield
ID number 9- 025113

MW-06-02 2 to 4 FT

Collection Date: 1/11/2000 3:45:0
Lab ID: 0001212-06

8015 - DRO	Result MG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Diesel (C12-C24)	32	U	U	

8015 - GRO	Result mg/Kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Gasoline	6.3000	U	U	

8270B-BTEX	Result UG/KG	Qualifiers Lab	Qualifiers Data	Data Validation Code
Benzene	3	U	U	
Ethylbenzene	3	U	U	
m,p-Xylene	3	U	U	
o-Xylene	3	U	U	
Toluene	3	U	U	

8310- PAH	Result ug/kg	Qualifiers Lab	Qualifiers Data	Data Validation Code
Acenaphthene	85	U	U	
Acenaphthylene	160	U	U	
Anthracene	8.5	U	U	
Benzo(a)anthracene	8.5	U	U	
Benzo(a)pyrene	8.5	U	U	
Benzo(b)fluoranthene	16	U	U	
Benzo(g,h,i)perylene	16	U	U	
Benzo(k)fluoranthene	8.5	U	U	
Chrysene	8.5	U	U	
Dibenzo(a,h)anthracene	16	U	U	
Fluoranthene	16	U	U	
Fluorene	8.5	U	U	
Indeno(1,2,3-cd)pyrene	8.5	U	U	
Naphthalene	85	U	U	
Phenanthrene	8.5	U	U	
Pyrene	8.5	U	U	

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SEDIMENT ANALYTICAL DATA SHEETS

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1018

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34812

Matrix: (soil/water) SOIL Lab Sample ID: 34812004

Sample wt/vol: 3.0 (g/mL) G Lab File ID: 1N316

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 29 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	2.3	U
108-88-3	Toluene	2.3	U
100-41-4	Ethylbenzene	2.3	U
1330-20-7	Xylenes (total)	7.0	U

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF1018

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 019F1901

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	2.9	B	U F01, F07

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1018

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814004

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4013

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 29 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	140	U	4

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1018

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y219

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/12/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	46.6	U
91-58-7	2-Chloronaphthalene	46.6	U
208-96-8	Acenaphthylene	46.6	U
83-32-9	Acenaphthene	46.6	U
86-73-7	Fluorene	46.6	U
85-01-8	Phenanthrene	46.6	U
120-12-7	Anthracene	46.6	U
206-44-0	Fluoranthene	46.6	U
129-00-0	Pyrene	46.6	U
56-55-3	Benzo(a)anthracene	46.6	U
218-01-9	Chrysene	46.6	U
205-99-2	Benzo(b)fluoranthene	46.6	U
207-08-9	Benzo(k)fluoranthene	46.6	U
50-32-8	Benzo(a)pyrene	46.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	46.6	U
53-70-3	Dibenz(a,h)anthracene	46.6	U
191-24-2	Benzo(g,h,i)perylene	46.6	U

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FORM I SV-1 OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1118

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34812

Matrix: (soil/water) SOIL Lab Sample ID: 34812005

Sample wt/vol: 3.0 (g/mL) G Lab File ID: 1N317

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 27 Date Analyzed: 12/13/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	2.3	U
108-88-3	Toluene	2.3	U
100-41-4	Ethylbenzene	2.3	U
1330-20-7	Xylenes (total)	6.8	U

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FORM I VOA OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAIC SAMPLE NO.

BF1118

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814005

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 020F2001

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 27 decanted: (Y/N) N Date Extracted: 12/13/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/15/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	
	----------Diesel Range Organics_____	2.2	JB	U F01, F06

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1118

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814005

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1M4014

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. 27 Date Analyzed: 12/07/00

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
	----------Gasoline Range Organics_____	136	U	4

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1118

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34814

Matrix: (soil/water) SOIL Lab Sample ID: 34814005

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4Y220

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: 27 decanted: (Y/N) N Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/12/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	45.5	U
91-58-7	2-Chloronaphthalene	45.5	U
208-96-8	Acenaphthylene	45.5	U
83-32-9	Acenaphthene	45.5	U
86-73-7	Fluorene	45.5	U
85-01-8	Phenanthrene	45.5	U
120-12-7	Anthracene	45.5	U
206-44-0	Fluoranthene	45.5	U
129-00-0	Pyrene	45.5	U
56-55-3	Benzo(a)anthracene	45.5	U
218-01-9	Chrysene	45.5	U
205-99-2	Benzo(b)fluoranthene	45.5	U
207-08-9	Benzo(k)fluoranthene	45.5	U
50-32-8	Benzo(a)pyrene	45.5	U
193-39-5	Indeno(1,2,3-cd)pyrene	45.5	U
53-70-3	Dibenz(a,h)anthracene	45.5	U
191-24-2	Benzo(g,h,i)perylene	45.5	U

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APPENDIX VI

ALTERNATE CONCENTRATION LIMIT AND ALTERNATE THRESHOLD LEVEL CALCULATIONS

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1.0 ALTERNATE CONCENTRATION LIMITS

Benzene and naphthalene were selected as contaminants of potential concern (COPCs) in groundwater for the site. The maximum benzene concentration in groundwater was 553 (µg/L) in December 1999 during the Corrective Action Plan (CAP)–Part A investigation. The maximum naphthalene concentration in groundwater was 528 (µg/L) in December 2000 during the CAP–Part B investigation. The modeling results estimated a dilution attenuation factor (DAF) of 8.9 for the lateral migration of benzene in groundwater from the area of the highest contamination (MW-22) to the closest potential receptor (storm drain) located 120 feet away from the center of the source area (Attachment A). The modeling results estimated a DAF of 126.3 for the lateral migration of naphthalene from the area of highest contamination (MW-22) to the storm drain (Attachment A).

Compound-specific regulatory levels or risk-based screening criteria were used in conjunction with the site-specific DAFs identified for the potential migration of contamination from the site to determine the alternate concentration limit (ACL) for each compound. The ACLs are presented in Table VI-A along with the maximum observed concentration for each constituent. The maximum detected concentrations for benzene and naphthalene do not exceed their respective ACLs.

Table VI-A. Alternate Concentration Limits for Contaminants in Groundwater

Constituent	Regulatory Level (µg/L)	DAF[a]	Calculated ACL (µg/L)	Maximum Observed Concentration (µg/L)	
				CAP–Part A	CAP–Part B
Benzene	71.28[c]	8.9	634.4[b]	553	251
Naphthalene	6.5[d]	126.3	820.9	101	558

CAP - Corrective Action Plan.
DAF - Dilution attenuation factor.
[a]DAF = Maximum observed concentration ÷ predicted concentration at the receptor.
= 553 ÷ 62.1 ≈ 8.9 for benzene at the storm drain.
= 558 ÷ 4.19 ≈ 126.3 for naphthalene at the storm drain.
[b]ACL = Regulatory level × DAF.
[c]In-stream Water Quality Standard.
[d]Risk-based screening criteria.
Bold value exceeds the calculated ACL.

2.0 ALTERNATE THRESHOLD LEVELS

Benzene, toluene, ethylbenzene, and xylenes (BTEX) were selected as COPCs for soil at the site. In addition, toluene was selected as a COPC for the sediment at the site. The closest receptor (storm drain) is located approximately 120 feet from the area of highest soil and groundwater contamination (SB/MW-22) in the vicinity of former aboveground storage tank (AST) 7003. Therefore, a DAF for lateral migration from the source to the nearest receptor was used in the ALT calculation. To be conservative, the benzene DAF of 8.9 was used in calculating the alternate threshold levels (ATLs) for each of the COPCs (Table VI-B). The maximum soil contamination levels at the site were detected in the soil sample collected above the water table [0.0 to 2.0 feet below ground surface (BGS), MW-22]; therefore, leaching to groundwater by percolating rainwater was used. The DAF for migration of leachate to the water table is calculated based on the SESOIL modeling results. SESOIL is used to simulate the vertical transport of contaminants from the source areas down through the vadose zone to the shallow

groundwater (water table). (SESOIL is an acronym for Seasonal Soil compartment model and is a one-dimensional, vertical transport code for the unsaturated soil zone.)

The ATLs for soil are presented in Table VI-C along with the maximum observed concentrations. The maximum detected benzene concentration in the soil (1.130 mg/kg) at location SB-22/MW-22 was the only compound found to exceed its ATL.

The ATLs were calculated using the following equation:

$$ATL = K_{oc} * f_{cs} * C_{std} * DAF_L * DAF_W ,$$

where

K_{oc} = organic carbon partitioning coefficient [Georgia Underground Storage Tank (GA UST) CAP–Part A Guidance, Appendix I, Table 1],
f_{cs} = fractional organic carbon content,
C_{std} = applicable water quality standard,
DAF_W = dilution attenuation factor for the lateral migration of groundwater,
DAF_L = dilution attenuation factor for the vertical migration of leachate.

Table VI-B. Values Used in ATL Calculation

Constituent	K_{oc} (mL/g)	f_{cs}	C_{std} (mg/L)[1]	DAF_L	DAF_W	Calculated ATL (mg/kg)
Benzene	81	0.0036	0.005	29.8	8.9	0.3867
Toluene	133	0.0036	1	25.5	8.9	12.210
Ethylbenzene	176	0.0036	0.7	15.7	8.9	61.85
Xylenes	639	0.0036	10	3.2	8.9	74.6

[1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level.
ATL - Alternate threshold level.
DAF - Dilution attenuation factor.

Table VI-C. Alternate Threshold Levels for Contaminated Soil/Sediment

Constituent	Regulatory Level (mg/kg)[a]	Calculated ATL (mg/kg)	Maximum Observed Concentration (mg/kg)	
			CAP–Part A	CAP–Part B
Benzene	0.005	0.3867	**1.130**	0.0763
Toluene	0.400	12.210	0.404 (Soil)	0.0388 (Soil)
			2.810 (Sediment)	ND (Sediment)
Ethylbenzene	0.370	61.85	13.6	4.5
Xylenes	20.0	74.6	74.6	17.0

[a]Georgia Underground Storage Tank Soil Threshold Levels (i.e., Table A, Column 1).
CAP - Corrective Action Plan.
ND - Not detected.
Bold value exceeds the calculated ATL.

APPENDIX VII

MONITORING WELL DETAILS

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This appendix contains monitoring well construction logs associated with the Corrective Action Plan (CAP)-Part B investigation conducted by Science Applications International Corporation (SAIC) in November 2000. In addition, monitoring well construction logs for the wells installed by Earth Tech, Inc., in January 2000 as part of the aboveground storage tank (AST) 7009 upgrade activities are also included in this appendix.

Monitoring well construction logs associated with the CAP-Part A investigation were provided in the *Corrective Action Plan – Part A Report for Underground Storage Tank 117, Building 7002, Facility Identification Number: 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, published by SAIC in June 2000. Please note that monitoring well MW-15 was destroyed prior to March 2001 during the facility upgrade activities, and monitoring wells MW-21 and MW-24 were destroyed in April 2001 during the removal efforts for ATSs 7001 and 7003.

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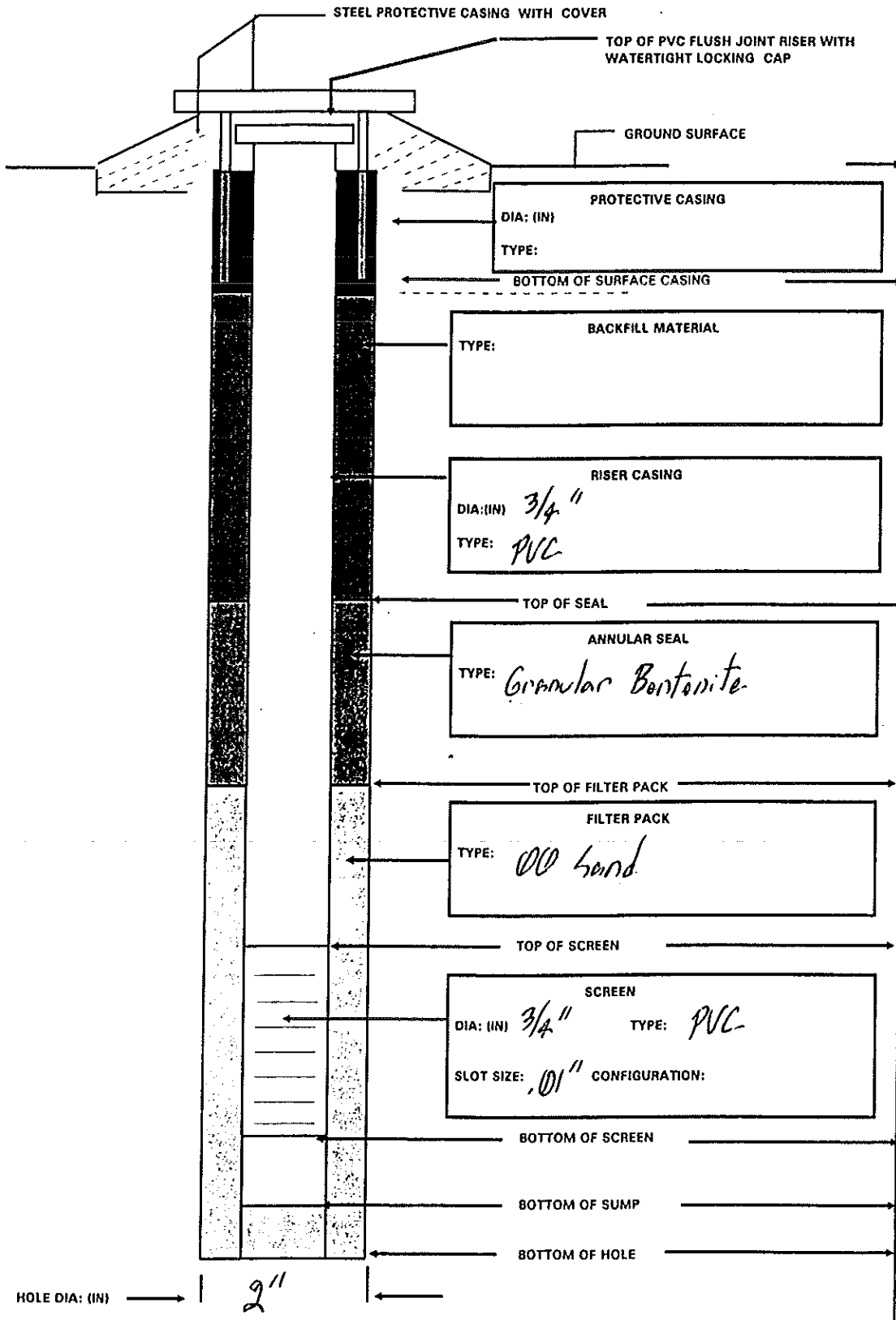
MONITORING WELL

PROJECT: Bulk Fuel Facility at HAAF

DELIVERY ORDER NO: 0051

WELL NUMBER: MW-32	BEGIN: 12-1-00	END: 12/01/00	
COORDINATES: N: 739310.5 E: 973315.2	REFERENCE POINT: TOC	ELEVATION: 15.74	DATUM/UNITS: NGVD 88
DATUM/UNITS:			



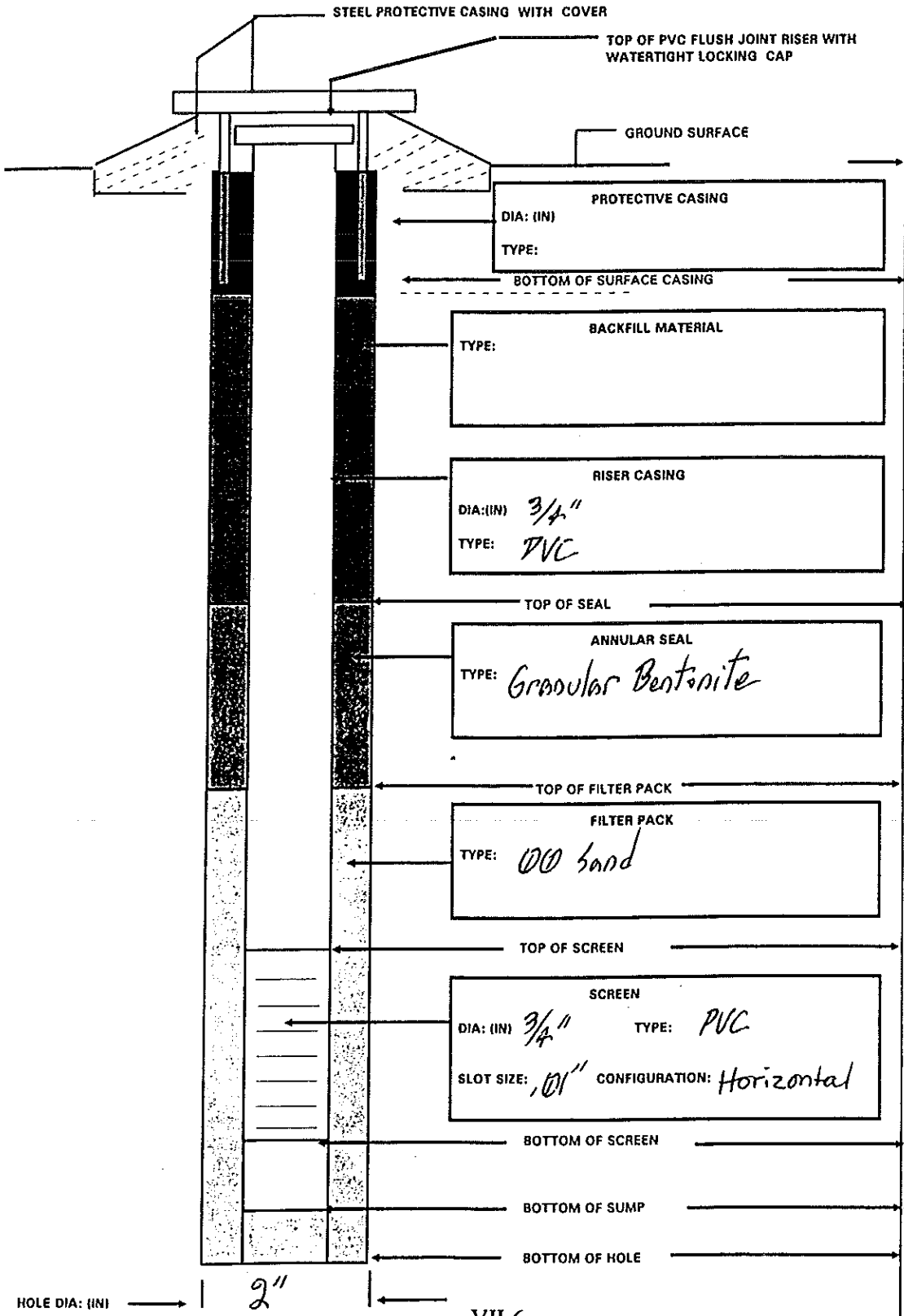
DEPTH (BGS)	ELEV
0	
0.3	
1.2'	
1.4'	
11.0	
11.2	
11.5'	

MONITORING WELL

PROJECT: Bulk Fuel Facility at HAAF

DELIVERY ORDER NO: 0051

WELL NUMBER: mw-33	BEGIN: 12-1-00	END: 12/01/00	
COORDINATES: N: 739274.7 E: 973411.0	REFERENCE POINT: TOC	ELEVATION: 13.950	DATUM/UNITS: NGVD 88
DATUM/UNITS:			



DEPTH (BGS)	ELEV
0	
0.3	
1.0'	
1.6'	
11.2'	
11.4'	
11.5'	

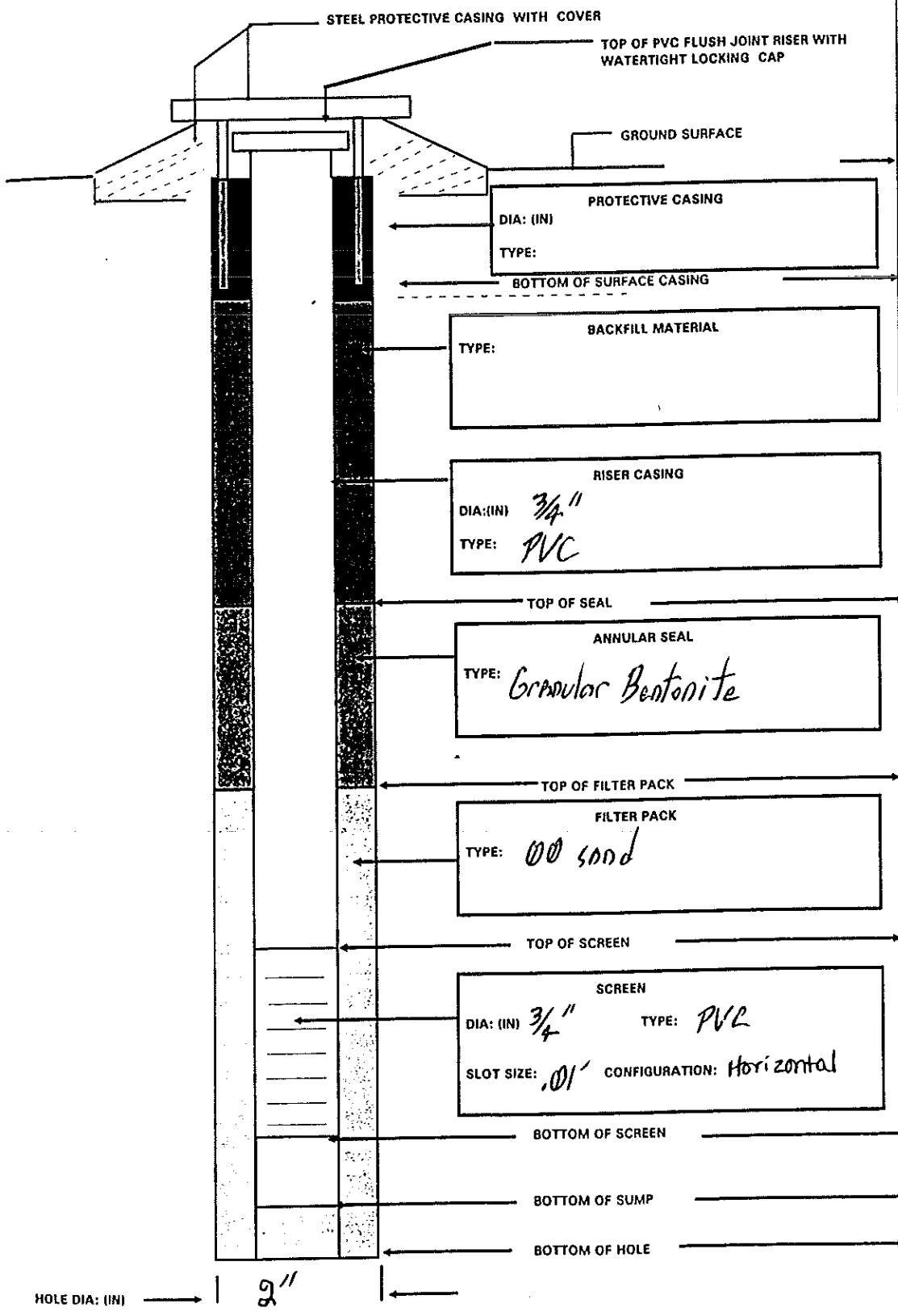
8

MONITORING WELL

PROJECT: Bulk Fuel Facility at HAAF

DELIVERY ORDER NO: 0051

WELL NUMBER: MW-34	BEGIN: 12-1-00	END: 12-1-00
COORDINATES: N: 739179.4 E: 973208.7	REFERENCE POINT: TOC	ELEVATION: 14.87
DATUM/UNITS:		DATUM/UNITS: NGVD88



DEPTH (BGS)	ELEV
0	
0.5'	
2.0'	
3.1'	
13.3'	
13.1'	
13.0'	

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EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF Bulk Fuel	Project Number: 34872-95.22	Date: 1/11/00
Well Location: Bulk Fuel	Well ID: MW-~~06~~ E	Sheet 1 of 1
Driller: Richard Mooney	Borehole Diameter (in): 6½"	Total Depth (ft): 13.7
Drilling Agency: Alliance Environmental	Date Started: 1/11/00	Depth to Water (ft): 3.4
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and Datum: TOC 13.76 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

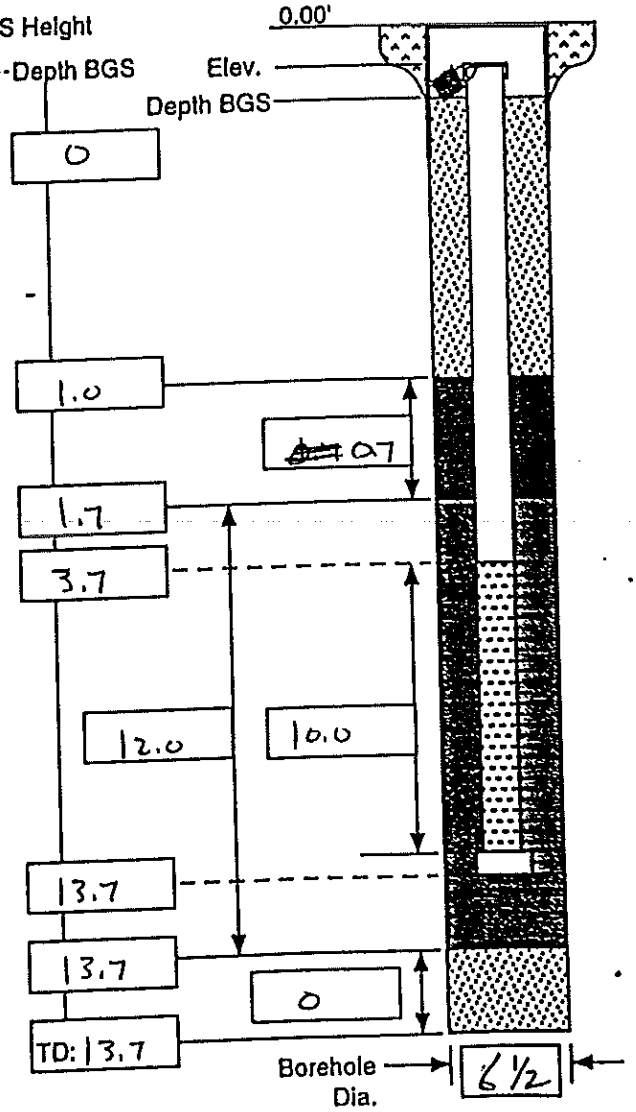
Earth Tech Wells

N: 739781.12

E: 973562.05

GS Elev. ____

Geologic | GS Height | Depth BGS | Elev. | Depth BGS



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II Cement w/ 5% Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS.

CENTRALIZERS
Depth(s) N/A

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

BACKFILL PLUG
Material:
Setup / Hydration Time:
Tremied (Y / N)

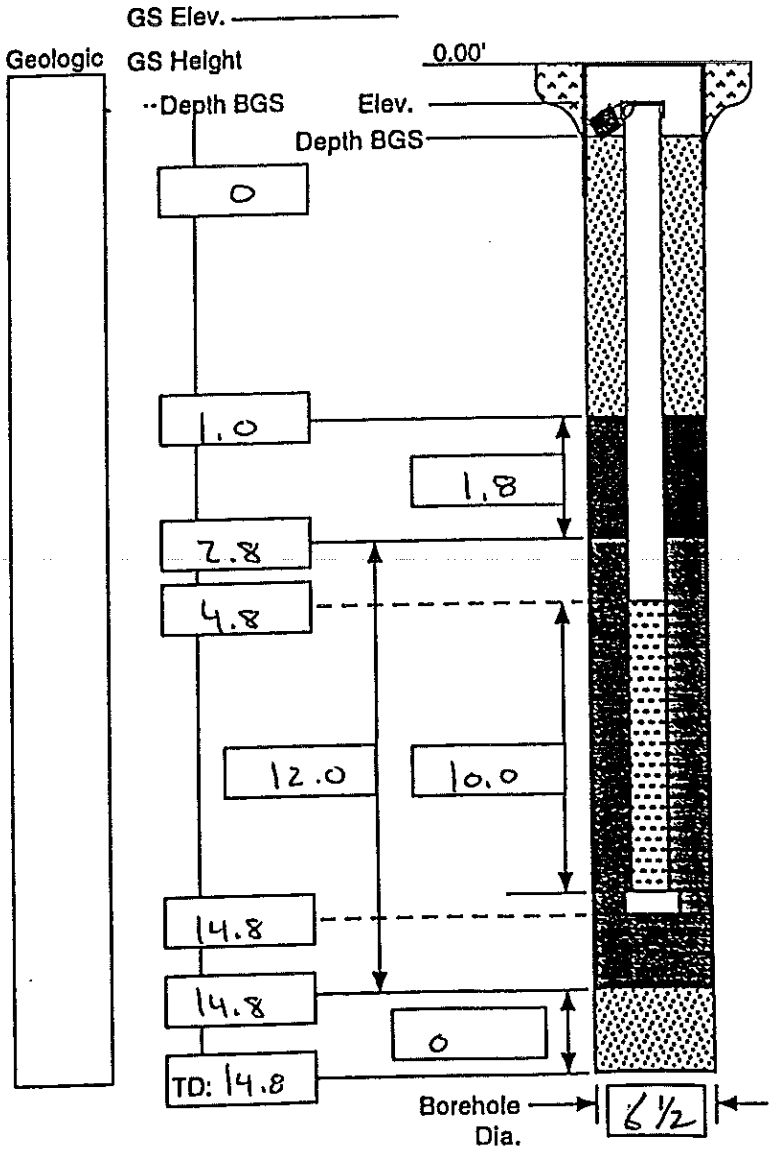
Form F 7/

EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF BULK FUEL	Project Number: 34872-95.22	Date: 1/11/00
Well Location: BULK FUEL	Well ID: MW-05 E	Sheet 1 of 1
Driller: RICHARD MOONEY	Borehole Diameter (in): 6½"	Total Depth (ft): 14.8
Drilling Agency: ALLIANCE ENVIRONMENTAL	Date Started: 1/11/00	Depth to Water (ft): 2.2
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and Datum: TOC 14.0 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

Earth Tech Wells
N: 739717.12
E: 973575.28



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II Cement w/ Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS

CENTRALIZERS
Depth(s) N/A

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

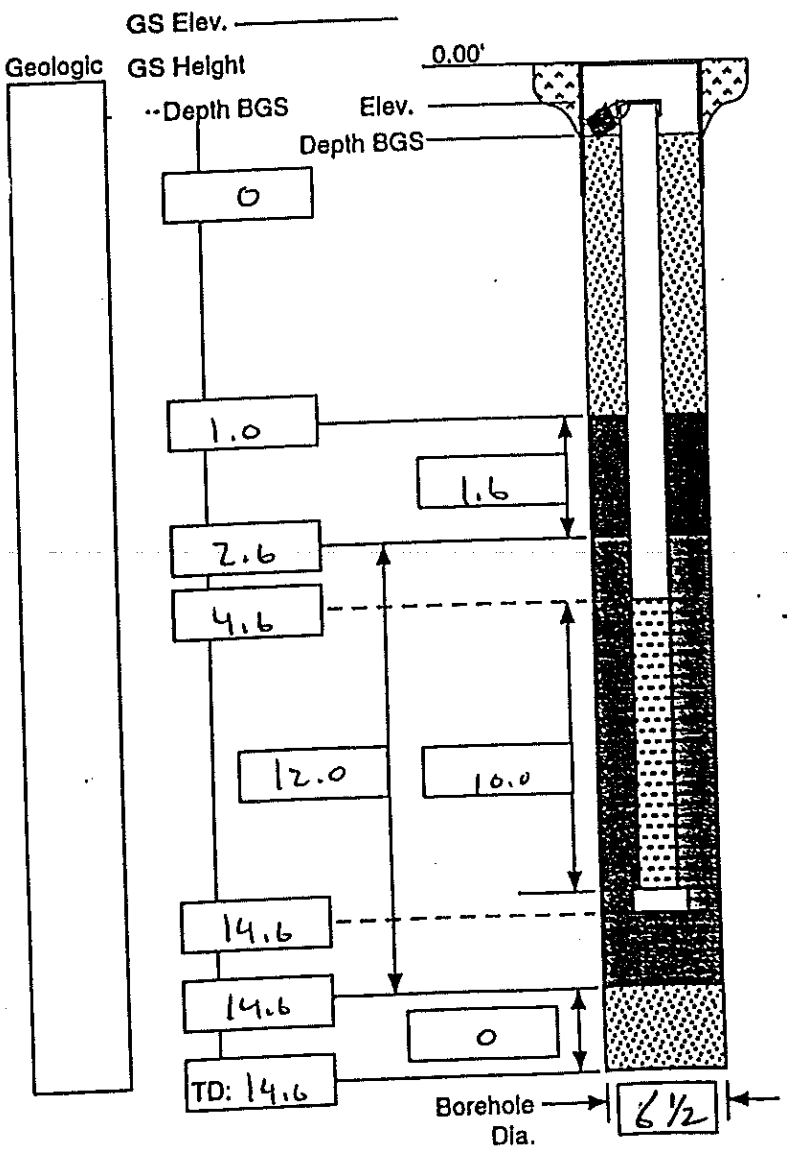
BACKFILL PLUG
Material:
Setup / Hydration Time: Form
Tremied (Y / N)

EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF BULK FUEL	Project Number: 34872-95.22	Date: 1/11/00
Well Location: BULK FUEL	Well ID: MW-~~Φ~~E4	Sheet 1 of 1
Driller: RICHARD MOONEY	Borehole Diameter (in): 6 1/2"	Total Depth (ft): 14.6
Drilling Agency: ALLIANCE ENVIRONMENTAL	Date Started: 1/11/00	Depth to Water (ft): 3.41
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and TOC Datum: 13.88 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

EarthTech Wells
N: 739712.68
E: 973602.71



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II Cement w/ 5% Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS

CENTRALIZERS
Depth(s) N/A

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

BACKFILL PLUG
Material:
Setup / Hydration Time:
Tremied (Y / N)

Form F
7/

EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF Bulk Fuel	Project Number: 34872-95.22	Date: 1/11/00
Well Location: Bulk Fuel	Well ID: MW-E-03	Sheet 1 of 1
Driller: Richard Mooney	Borehole Diameter (in): 6½"	Total Depth (ft): 14.4
Drilling Agency: Alliance Environmental	Date Started: 1/11/00	Depth to Water (ft): 3.4
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and Datum: TOC 13.99 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

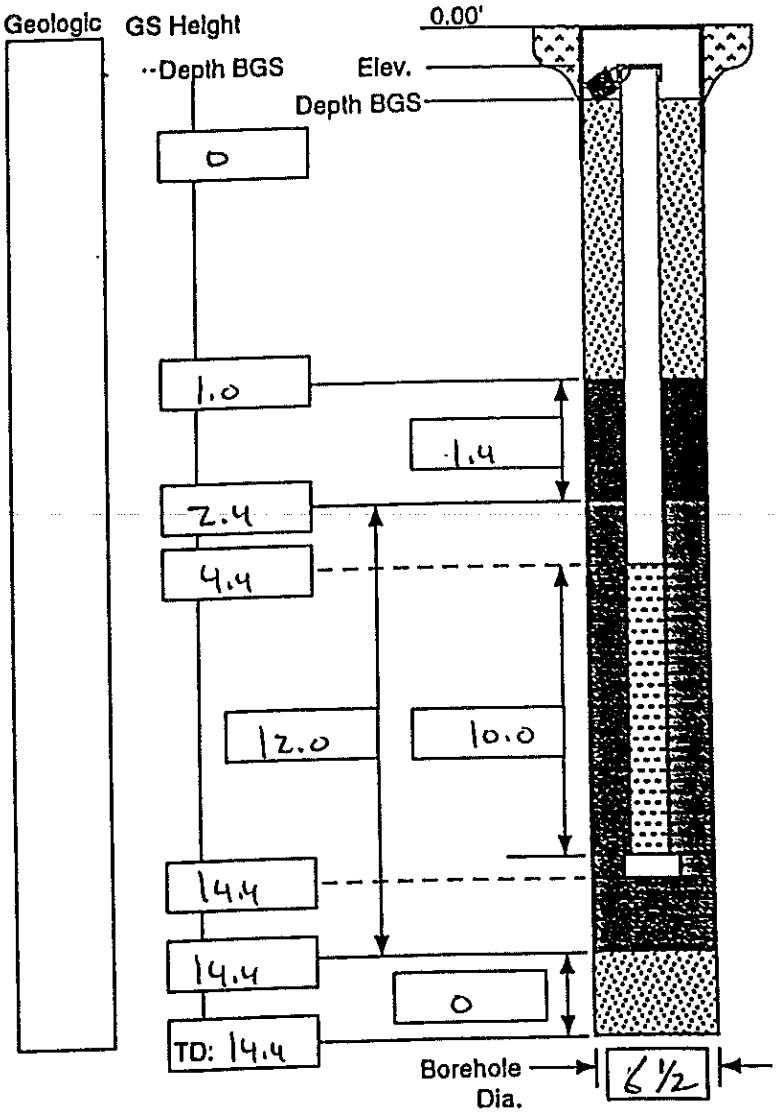
Earth Tech Wells

N: 739687.55

E: 973573.12

GS Elev. ____

Geologic | GS Height | Depth BGS | Elev. | Depth BGS



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II Cement w/ 5% Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS

CENTRALIZERS N/A
Depth(s)

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

BACKFILL PLUG
Material:
Setup / Hydration Time:
Tremied (Y / N)

Form F 7i

EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF BULK FUEL	Project Number: 34872-95.22	Date: 1/11/00
Well Location: BULK FUEL	Well ID: MW-92E	Sheet 1 of 1
Driller: RICHARD MOONEY	Borehole Diameter (in): 6 1/2"	Total Depth (ft): 13.94
Drilling Agency: ALLIANCE ENVIRONMENTAL	Date Started: 1/11/00	Depth to Water (ft): 7.94
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and Datum: TOC 13.76 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

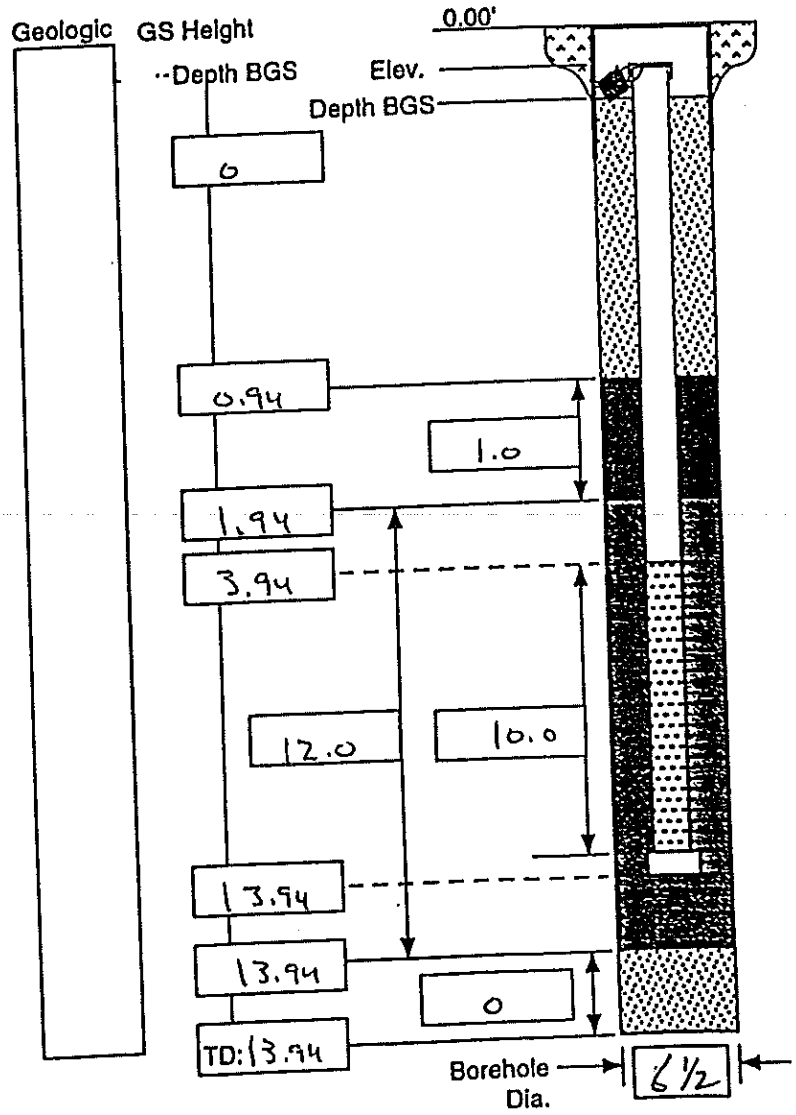
Earth Tech Wells

N: 739689.49

E: 973546.55

GS Elev. _____

Geologic | GS Height | Depth BGS | Elev. | Depth BGS



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II Cement w/ 5% Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS

CENTRALIZERS N/A
Depth(s)

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

BACKFILL PLUG
Material:
Setup / Hydration Time:
Tremied (Y / N)

Form

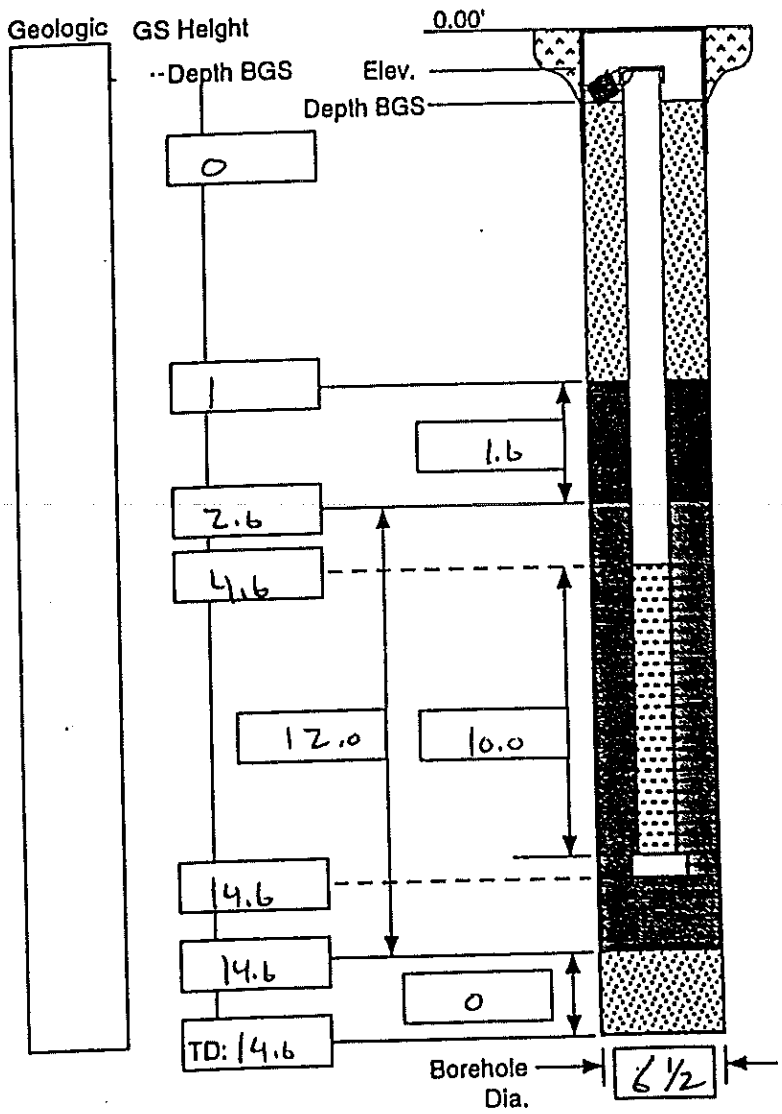
EARTH TECH

Monitoring Well Construction Log - Flush Mount

Project Name: HAAF BULK FUEL	Project Number: 34872-95.22	Date: 1/11/00
Well Location: BULK FUEL	Well ID: MW-~~01~~ E	Sheet 1 of 1
Driller: RICHARD MOONEY	Borehole Diameter (in): 6½"	Total Depth (ft): 14.6
Drilling Agency: ALLIANCE ENVIRONMENTAL	Date Started: 1/11/00	Depth to Water (ft): 3.4
Drilling Equipment: Mobile B-59	Date Finished: 1/12/00	Elevation and Datum: TOC 14.0 NGVD88
Drilling Method: SS/HSA	Logged by: K.E. Owens	Checked by:
Drilling Fluid: N/A	Number of Samples: 2	Date:

Earth Tech Wells

N: 739743.08
E: 973518.90



PROTECTIVE CSG
Material / Type:
Diameter:
Depth BGS: Weep Hole (Y / N)

GUARD POSTS (Y / N)
No.: Type:

SURFACE PAD
Composition and Size:

RISER PIPE
Type: PVC
Diameter: 2"
Total Length (TOC to TOS):
Ventilated Cap (Y / N)

GROUT
Composition and Proportions: Type II cement w/ 5% Bentonite powder
Tremied (Y / N)
Interval BGS: 0.0-1.0' BGS

CENTRALIZERS
Depth(s) N/A

SEAL
Type: Bentonite Pellets
Source: BAROID
Setup / Hydration Time: 24 hrs Vol. Fluid Added
Tremied (Y / N)

FILTER PACK
Type: #10 SAND
Amt. Used: 5 bags
Tremied (Y / N)
Source:
Gr. Size Dist.:

SCREEN
Type: PVC
Diameter: 2"
Slot Size and Type: 0.010
Interval BGS:

SILT TRAP (Y / N)
Interval BGS: Length
Bottom Cap (Y / N)

BACKFILL PLUG
Material:
Setup / Hydration Time:
Tremied (Y / N)

Form F
7

APPENDIX VIII

GROUNDWATER LABORATORY RESULTS

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This appendix includes summary tables for the Corrective Action Plan (CAP)-Part A groundwater and surface water analytical data and the CAP-Part B groundwater analytical data. Surface water samples were not collected as part of the CAP-Part B investigation.

The analytical data sheets for the CAP-Part B investigation are included in this appendix. The groundwater and surface water analytical data sheets associated with the CAP-Part A investigation were provided in the *Corrective Action Plan-Part A Report for Former Underground Storage Tank 117, Building 7002, Facility Investigation Number: 9-025113*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, published by Science Applications International Corporation in June 2000.

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-01 BF0112 12/01/99 6.7 to 11.7	MW-02 BF0212 12/01/99 8.0 to 13.0	MW-03 BF0312 12/01/99 8.0 to 13.0	MW-04 BF0412 12/03/99 8.5 to 12.5	MW-05 BF0512 12/03/99 8.0 to 12.0	MW-06 BF0612 12/02/99 8.0 to 12.0	MW-07 BF0712 12/02/99 6.5to 10.5
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	0.33 J	0.51 J	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.4 =
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	2.1 J
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	10.0 U	9.90 UJ	9.80 U	9.80 U	9.8 U	10.9 UJ	11.1 U
Acenaphthene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Acenaphthylene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Anthracene	NRC	110,000	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Chrysene	NRC	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Dibenzo(a,h)anthracen	NRC	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Fluoranthene	NRC	370	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Fluorene	NRC	14,000	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Naphthalene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	5.8 =
Phenanthrene	NRC	NRC	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U
Pyrene	NRC	11,000	1.0 U	0.99 UJ	0.98 U	0.98 U	0.98 U	1.1 UJ	1.1 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-08 BF0812 12/03/99 6.5 to 11.5	MW-09 BF0912 12/03/99 8.5 to 12.5	MW-10 BF1012 12/02/99 6.0 to 10.0	MW-10 BF1014[3] 12/02/99 6.0 to 10.0	MW-11 BF1112 12/02/99 6.0 to 10.0	MW-12 BF1212 12/04/99 8.0 to 12.0	MW-13 BF1312 11/30/99 12.5 to 16.5	MW-14 BF1412 12/01/99 7.2 to 12.2
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 UJ	1.0 UJ	4.8 =	4.7 =	1.0 U	1.0 UJ	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 UJ	0.42 J	0.53 J	0.60 J	1.0 U	0.36 J	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 UJ	1.4 =	9.5 =	8.9 =	1.0 U	1.0 UJ	1.0 U	1.0 U
Xylenes	10,000	NRC	3.0 UJ	3.0 U	3.8 =	3.6 =	3.0 U	3.0 UJ	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 UJ	9.8 U	10.0 U	9.7 U	10.0 U	10.5 U	9.52 U	10.0 U
Acenaphthene	NRC	NRC	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Acenaphthylene	NRC	NRC	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Anthracene	NRC	110,000	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Chrysene	NRC	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Fluoranthene	NRC	370	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Fluorene	NRC	14,000	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Naphthalene	NRC	NRC	1.0 UJ	0.98 U	41.2 =	38.8 =	1.0 U	1.0 U	0.95 U	1.0 U
Phenanthrene	NRC	NRC	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U
Pyrene	NRC	11,000	1.0 UJ	0.98 U	1.0 U	0.97 U	1.0 U	1.0 U	0.95 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-15 BF1512 12/02/99 6.0 to 10	MW-16 BF1612 12/02/99 6.3 to 11.3	MW-17 BF1712 12/ 8/99 3.0 to 12.5	MW-18 BF1812 12/01/99 6.1 to 11.1	MW-19 BF1912 11/30/99 8.0 to 13.0	MW-20 BF2012 12/ 7/99 2.2 to 11.7	MW-20 BF2014[3] 12/7/99 2.2 to 11.7	MW-21 BF2112 12/07/99 3.4 to 12.9
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	0.44 J	1.0 U	1.0 U	0.60 J	0.59 J	***130*** =
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.8 =
Ethylbenzene	700	28,718	1.0 U	1.0 U	2.0 =	1.0 U	1.0 U	3.1 =	3.0 =	14.7 =
Xylenes	10,000	NRC	1.3 J	3.0 U	14.2 =	3.0 U	3.0 U	21.0 =	20.4 =	710 =
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	10.0 U	9.9 U	0.95 U	10.0 U	9.90 UJ	1.1 U	0.95 U	0.95 U
Acenaphthene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Acenaphthylene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Anthracene	NRC	110,000	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Chrysene	NRC	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Fluoranthene	NRC	370	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Fluorene	NRC	14,000	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Naphthalene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	2.0 =	2.6 =	18.3 =
Phenanthrene	NRC	NRC	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U
Pyrene	NRC	11,000	1.0 U	0.99 U	0.95 U	1.0 U	0.99 UJ	1.1 U	0.95 U	0.95 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-22 BF2212 12/07/99 2.4 to 11.9	MW-23 BF2312 12/07/99 2.7 to 12.2	MW-24 BF2412 12/ 02/99 7.5 to 12.5	MW-25 BF2512 12/02/99 7.6 to 12.6	MW-26 BF2612 12/02/99 7.2 to 12.2	MW-27 BF2712 01/11/99 7.0 to 12.0	MW-28 BF2812 01/11/99 7.5 to 12.5
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	*553* =	1.1 =	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Toluene	1,000	200,000	0.86 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethylbenzene	700	28,718	86.7 =	0.48 J	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Xylenes	10,000	NRC	352 =	1.4 J	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	1.0 U	9.9 UJ	9.8 UJ	10.0 U	1.1 U	1.0 UJ
Acenaphthene	NRC	NRC	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Acenaphthylene	NRC	NRC	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Anthracene	NRC	110,000	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Chrysene	NRC	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Fluoranthene	NRC	370	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Fluorene	NRC	14,000	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Naphthalene	NRC	NRC	101 =	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Phenanthrene	NRC	NRC	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ
Pyrene	NRC	11,000	1.0 U	1.0 U	0.99 UJ	0.98 UJ	1.0 U	1.1 U	1.0 UJ

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level. (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-29 BF2912 01/11/99 5.7 to 10.7	MW-30 BF3012 01/11/99 5.9 to10.9	MW-30 BF3014[3] 01/11/99 5.9 to 10.9	MW-31 BF3112 01/ 10/99 5.7 to 10.7
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 UJ	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	0.40 J	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 UJ	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	376 J	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Acenaphthene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Acenaphthylene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Anthracene	NRC	110,000	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Benzo(a)anthracene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Benzo(a)pyrene	0.2	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Benzo(b)fluoranthene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Benzo(g,h,i)perylene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Benzo(k)fluoranthene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Chrysene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Fluoranthene	NRC	370	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Fluorene	NRC	14,000	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Naphthalene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Phenanthrene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ
Pyrene	NRC	11,000	1.0 UJ	1.0 U	1.0 UJ	1.1 UJ

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-2 BFV212 12/04/99 12.0 to 17.0	VP-2 BFV222 12/04/99 17.0 to 22.0	VP-2 BFV232 12/ 04/99 22.0 to 27.0	VP-2 BFV242 12/04/99 27.0 to 32.0	VP-2 BFV244[3] 12/04/99 27.0 to 32.0	VP-2 BFV252 12/04/99 32.0 to 37.0	VP-2 BFV262 12/ 04/99 31.0 to 42.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 U	0.22 J	0.24 J	1.0 U	1.0 U
Toluene	1,000	200,000	0.42 J	1.0 U	0.30 J	0.40 J	0.27 J	0.36 J	0.35 J
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Anthracene	NRC	110,000	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Fluoranthene	NRC	370	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Fluorene	NRC	14,000	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Phenanthrene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U
Pyrene	NRC	11,000	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

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J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-3 BFV312 12/05/99 12.0 to 17.0	VP-3 BFV322 12/05/99 17.0 to 22.0	VP-3 BFV332 12/ 05/99 22.0 to 27.0	VP-3 BFV342 12/05/99 27.0 to 32.0	VP-3 BFV352 12/05/99 32.0 to 37.0	VP-3 BFV362 12/05/99 37.0 to 42.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Toluene	1,000	200,000	0.33 J	0.80 J	0.31J	0.37 J	0.28 J	0.28 J
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 UJ	3.0 UJ
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Anthracene	NRC	110,000	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	NRC	370	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluorene	NRC	14,000	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Phenanthrene	NRC	NRC	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	NRC	11,000	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-4 BFV412 12/04/99 13.0 to 18.0	VP-4 BFV422 12/04/99 18.0 to 23.0	VP-4 BFV424[3] 12/04/99 18.0 to 23.0	VP-4 BFV432 12/ 04/99 23.0 to 28.0	VP-4 BFV442 12/04/99 28.0 to 33.0	VP-4 BFV452 12/04/99 33.0 to 38.0	VP-4 BFV462 12/ 04/99 38.0 to 43.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	***81.8*** =	1.4 =	2.6 =	0.60 J	0.29 J	0.24 J	0.21 J
Toluene	1,000	200,000	0.42 J	0.44 J	0.54 J	0.70 J	0.42 J	1.0 U	0.79 J
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	0.22 J	0.16 J	1.0 U	1.0 U
Xylenes	10,000	NRC	31.5 =	0.36 J	0.35 U	3.0 U	3.0 UJ	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Acenaphthene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Acenaphthylene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Anthracene	NRC	110,000	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Chrysene	NRC	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Fluoranthene	NRC	370	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Fluorene	NRC	14,000	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Naphthalene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Phenanthrene	NRC	NRC	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ
Pyrene	NRC	11,000	1.0 U	1.0 U	1.0 UJ	0.98 U	1.0 U	0.99 U	1.0 UJ

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-5 BFV512 12/02/99 12.5 to 17.5	VP-5 BFV522 12/02/99 17.5 to 22.5	VP-5 BFV532 12/ 02/99 22.5 to 27.5	VP-5 BFV542 12/02/99 27.5 to 32.5	VP-5 BFV552 12/02/99 32.5 to 37.5	VP-5 BFV562 12/02/99 37.5 to 42.5	VP-5 BFV564[3] 12/02/99 37.5 to 42.5
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ
Toluene	1,000	200,000	1.0 U	1.0 U	0.51 J	1.0 UJ	0.58 J	1.0 UJ	0.58 J
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	0.17 J
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 UJ	3.0 UJ	3.0 U	3.0 UJ	3.0 UJ
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	9.9 U	9.8 U
Acenaphthene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Acenaphthylene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Anthracene	NRC	110,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Chrysene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Fluoranthene	NRC	370	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Fluorene	NRC	14,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Naphthalene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Phenanthrene	NRC	NRC	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U
Pyrene	NRC	11,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	0.98 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-6 BFV612 12/03/99 13.0 to 18.0	VP-6 BFV622 12/03/99 18.0 to 23.0	VP-6 BFV632 12/ 03/99 23.0 to 28.0	VP-6 BFV642 12/03/99 28.0 to 33.0	VP-6 BFV652 12/03/99 33.0 to 38.0	VP-6 BFV662 12/ 03/99 38.0 to 43.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	4.4 J	0.26 J	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Toluene	1,000	200,000	0.56 J	0.46 J	0.43 J	0.45 J	0.47 J	0.44 J
Ethylbenzene	700	28,718	0.44J	0.11 J	1.0 UJ	1.0 UJ	0.16 J	0.15 J
Xylenes	10,000	NRC	2.7 J	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 UJ	10.0 U	1.0 UJ	10.0 U	10.0 U	10.0 U
Acenaphthene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Anthracene	NRC	110,000	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Fluoranthene	NRC	370	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Fluorene	NRC	14,000	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Phenanthrene	NRC	NRC	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Pyrene	NRC	11,000	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART A GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	VP-7 BFV712 12/04/99 12.0 to 17.0	VP-7 BFV722 12/04/99 17.0 to 22.0	VP-7 BFV732 12/ 04/99 22.0 to 27.0	VP-7 BFV742 12/04/99 27.0 to 32.0	VP-7 BFV744[3] 12/04/99 32.0 to 37.0	VP-7 BFV752 12/04/99 32.0 to 37.0	VP-7 BFV762 12/04/99 37.0 to 42.0
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 UJ	1.0 UJ	0.23 J	0.31 J	0.28 J	0.25 J	1.0 U
Toluene	1,000	200,000	0.60J	0.35 J	0.70 J	0.58 J	0.70 J	0.74 J	0.56 J
Ethylbenzene	700	28,718	0.10 J	1.0 UJ	0.12 J	1.0 UJ	1.0 UJ	0.12 J	0.15 J
Xylenes	10,000	NRC	0.33 J	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	9.9 U	9.8 U	9.9 U	10.5 U	10.0 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Anthracene	NRC	110,000	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	NRC	370	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluorene	NRC	14,000	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Phenanthrene	NRC	NRC	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	NRC	11,000	0.99 U	0.98 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWC) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE VIII-B. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-01 BF0122 12/02/00 3.5 to 12.5	MW-02 BF0222 12/02/00 3.5 to 13.0	MW-03 BF0322 12/02/00 3.6 to 13.1	MW-04 BF0422 12/02/00 2.8 to 12.3	MW-05 BF0522 12/02/00 2.9 to 12.4	MW-06 BF0622 12/02/00 2.7 to 12.2	MW-07 BF0722 12/02/00 2.9 to 12.4
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0U	1.0U	1.0U	1.0U	1.0 U
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Anthracene	NRC	110,000	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracen	NRC	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Fluoranthene	NRC	370	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Fluorene	NRC	14,000	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	4.8 =
Phenanthrene	NRC	NRC	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U
Pyrene	NRC	11,000	1.2 U	1.0 U	1.1 U	0.99 U	1.0 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-B. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-08 BF0822 12/02/00 2.3 to 11.8	MW-09 BF0922 12/02/00 2.9 to 12.4	MW-10 BF1022 12/02/00 2.3 to 11.8	MW-10 BF1024[3] 12/02/00 2.3 to 11.8	MW-11 BF1122 12/02/00 2.3 to 11.8	MW-12 BF1222 12/02/00 3.0 to 12.5	MW-13 BF1322 12/02/00 2.3 to 11.8	MW-14 BF1422 12/02/00 2.8 to 12.3
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	3.8 =	2.4 =	2.2 =	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 U	0.29 J	0.4 J	0.63 J	0.4 J	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	6.9 =	10.1 =	9.9 =	0.18 J	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	3.0 U	3.0 U	2.9 J	3 =	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Acenaphthene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Acenaphthylene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Anthracene	NRC	110,000	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Chrysene	NRC	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Fluoranthene	NRC	370	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Fluorene	NRC	14,000	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Naphthalene	NRC	NRC	1.0 U	7.1 =	23.4 =	22.2 =	0.64 J	1.0 U	1.0 U	0.96 U
Phenanthrene	NRC	NRC	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U
Pyrene	NRC	11,000	1.0 U	0.98 U	0.95 U	0.98 U	0.98 U	1.0 U	1.0 U	0.96 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-B. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-16 BF1622 12/02/00 2.7 to 12.2	MW-17 BF1722 12/02/00 3.0 to 12.5	MW-18 BF1822 12/02/00 3.4 to 12.9	MW-19 BF1922 12/02/00 2.0 to 11.5	MW-20 BF2022 12/03/00 2.2 to 11.7	MW-20 BF2024[3] 12/03/00 2.2 to 11.7	MW-21 BF2122 12/02/00 3.4 to 12.9	MW-22 BF2222 12/02/00 2.4 to 11.9
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 U	1.0 U	3.1 =	2.7 =	***251*** =	***174*** =
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 =	5.7 =
Ethylbenzene	700	28,718	0.15 J	0.25 J	1.0 U	1.0 U	2.1 =	2.3 =	17.4 =	128 =
Xylenes	10,000	NRC	0.64 J	1.6 J	3.0 U	3.0 U	7.3 =	7.7 =	734 =	662 =
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Acenaphthene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Acenaphthylene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Anthracene	NRC	110,000	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Chrysene	NRC	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Fluoranthene	NRC	370	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Fluorene	NRC	14,000	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Naphthalene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	7.8 =	7.4 =	22 =	528 =
Phenanthrene	NRC	NRC	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U
Pyrene	NRC	11,000	1.0 U	1.0 U	1.0 U	0.98 U	0.99 U	1.0 U	1.0 U	19.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-B. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-23 BF2322 12/02/00 2.7 to 12.2	MW-24 BF2422 12/02/00 7.5 to 12.5	MW-25 BF2522 12/02/00 3.6 to 13.1	MW-26 BF2622 12/02/00 2.4 to 11.9	MW-27 BF2722 12/03/00 2.5 to 12.0	MW-28 BF2822 12/03/00 2.0 to 11.5	MW-29 BF2922 12/03/00 2.0 to 11.5	MW-30 BF3022 12/03/00 1.9 to 11.4
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.35 J	1.0 U
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.88 J	1.0 U
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	106 =	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Anthracene	NRC	110,000	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene	NRC	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	0.2	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene	NRC	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene	NRC	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NRC	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluoranthene	NRC	370	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluorene	NRC	14,000	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	0.65 J
Phenanthrene	NRC	NRC	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene	NRC	11,000	0.95 U	0.96 U	0.98 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS – In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-B. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-31 BF3122 12/03/00 1.5 to 11.0	MW-32 BF3222 12/01/00 1.4 to 11.0	MW33 BF3322 12/01/00 1.6 to 11.2	MW-33 BF3324[3] 12/01/00 1.6 to 11.2	MW-34 BF3422 12/01/00 3.1 to 13.3	MW-E1 BFE122 12/01/00 4.6 to 14.6	MW-E2 BFE222 12/02/00 3.94 to 13.94
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	***109 J***	1.0 =	0.94 J	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 U	0.65 J	1.0 U	1.0 U	1.0 U	1.0 U	0.3 J
Ethylbenzene	700	28,718	1.0 U	1.1 =	1.0 U	1.0 U	1.0 U	0.99 J	1.0 U
Xylenes	10,000	NRC	3.0 U	115 =	3.0 U	3.0 U	0.36 J	0.45 J	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Acenaphthene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	2.2 =	0.98 U
Acenaphthylene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Anthracene	NRC	110,000	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Benzo(a)anthracene	NRC	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Benzo(a)pyrene	0.2	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Benzo(b)fluoranthene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Benzo(g,h,i)perylene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Benzo(k)fluoranthene	NRC	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Chrysene	NRC	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Dibenzo(a,h)anthracene	NRC	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Fluoranthene	NRC	370	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Fluorene	NRC	14,000	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	4 =	0.98 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Naphthalene	NRC	NRC	0.58 J	2.0 =	1.0 U	1.0 U	0.97 U	9.1 =	0.98 U
Phenanthrene	NRC	NRC	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U
Pyrene	NRC	11,000	1.0 U	1.1 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers
U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

TABLE VIII-A. SUMMARY OF CAP-PART B GROUNDWATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	MW-E3 BFE322 12/02/00 4.4 to 14.4	MW-E3 BFE324 12/02/00 4.4 to 14.4	MW-E4 BFE422 12/02/00 4.6 to 14.6	MW-E5 BFE522 12/02/00 4.8 to 14.8	MW-E6 BFE622 12/02/00 3.7 to 13.7
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U	0.29 J	3.6 =	1.0 U
Toluene	1,000	200,000	0.48 J	0.29 J	0.27 J	1.0 =	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U	0.28 J	17.2 =	1.0 U
Xylenes	10,000	NRC	0.3 J	3.0 U	0.36 J	19 =	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Acenaphthene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.55 J	0.97 U
Acenaphthylene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Anthracene	NRC	110,000	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(a)anthracene	NRC	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(a)pyrene	0.2	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(b)fluoranthene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(g,h,i)perylene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Benzo(k)fluoranthene	NRC	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Chrysene	NRC	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Dibenzo(a,h)anthracene	NRC	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Fluoranthene	NRC	370	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Fluorene	NRC	14,000	0.96 U	0.98 U	0.98 U	1 =	0.97 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U
Naphthalene	NRC	NRC	0.96 U	0.98 U	0.98 U	16.6 =	0.97 U
Phenanthrene	NRC	NRC	0.96 U	0.98 U	0.98 U	0.73 J	0.97 U
Pyrene	NRC	11,000	0.96 U	0.98 U	0.98 U	0.96 U	0.97 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act (SDWA) maximum contaminant level (MCL).
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MW - Monitoring well.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
VOCs - Volatile organic compounds.
VP - Vertical profile.
Bold values exceed the applicable SDWA MCL.
Italicized values exceed the applicable IWQS.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration and the concentration was estimated.
= - Indicates the compound was detected at the concentration reported.

SUMMARY TABLE
OF
SURFACE WATER ANALYTICAL RESULTS

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Former UST 117, Building 7002
Hunter Army Airfield
Chatham County, Facility ID: 9-025113*1

TABLE VIII-C. SUMMARY OF CAP-PART A SURFACE WATER ANALYTICAL RESULTS

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCLs[1]	IWQS[2]	SD-01 BF0117 12/06/99	SD-02 BF0217 12/06/99	SD-03 BF0317 12/06/99	SD-04 BF0417 12/06/99	SD-06 BF0617 12/07/99	SD-07 BF0717 12/07/99	SD-08 BF0817 12/07/99
VOCs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	0.17 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	10,000	NRC	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Acenaphthene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Acenaphthylene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Anthracene	NRC	110,000	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Benzo(a)anthracene	NRC	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Benzo(a)pyrene	0.2	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Benzo(b)fluoranthene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Benzo(g,h,i)perylene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Benzo(k)fluoranthene	NRC	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Chrysene	NRC	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Dibenzo(a,h)anthracene	NRC	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Fluoranthene	NRC	370	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Fluorene	NRC	14,000	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Naphthalene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Phenanthrene	NRC	NRC	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U
Pyrene	NRC	11,000	0.98 U	0.98 U	0.98 U	0.98 U	1.0 U	1.0 U	0.98 U

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MCL - Maximum contaminant level.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
SDWA - Safe Drinking Water Act.
VOCs - Volatile organic compounds.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration, and the concentration was estimated.

TABLE VIII-C. SUMMARY OF CAP-PART A SURFACE WATER ANALYTICAL RESULTS (continued)

Location Sample ID Date Collected Depth (ft BGS)	Federal SDWA MCL[1]	IWQS[2]	SD-09 BF0917 12/07/99	SD-09 BF1019[3] 12/07/99
VOCs	µg/L	µg/L	µg/L	µg/L
Benzene	5	71.28	1.0 U	1.0 U
Toluene	1,000	200,000	1.0 U	1.0 U
Ethylbenzene	700	28,718	1.0 U	1.0 U
Xylenes	10,000	NRC	3.0 U	3.0 U
PAHs	µg/L	µg/L	µg/L	µg/L
2-Chloronaphthalene	NRC	NRC	0.98 UJ	0.98 U
Acenaphthene	NRC	NRC	0.98 UJ	0.98 UJ
Acenaphthylene	NRC	NRC	0.98 UJ	0.98 UJ
Anthracene	NRC	110,000	0.98 UJ	0.98 UJ
Benzo(a)anthracene	NRC	0.0311	0.98 UJ	0.98 UJ
Benzo(a)pyrene	0.2	0.0311	0.98 UJ	0.98 UJ
Benzo(b)fluoranthene	NRC	NRC	0.98 UJ	0.98 UJ
Benzo(g,h,i)perylene	NRC	NRC	0.98 UJ	0.98 UJ
Benzo(k)fluoranthene	NRC	0.0311	0.98 UJ	0.98 UJ
Chrysene	NRC	0.0311	0.98 UJ	0.98 UJ
Dibenzo(a,h)anthracene	NRC	0.0311	0.98 UJ	0.98 UJ
Fluoranthene	NRC	370	0.98 UJ	0.98 UJ
Fluorene	NRC	14,000	0.98 UJ	0.98 UJ
Indeno(1,2,3-cd)pyrene	NRC	0.0311	0.98 UJ	0.98 UJ
Naphthalene	NRC	NRC	0.98 UJ	0.98 UJ
Phenanthrene	NRC	NRC	0.98 UJ	0.98 UJ
Pyrene	NRC	11,000	0.98 UJ	0.98 UJ

NOTE: [1]U.S. Environmental Protection Agency Safe Drinking Water Act maximum contaminant level.
[2]Georgia Environmental Protection Division (GA EPD) In-stream Water Quality Standards (Chapter 391-3-6.03).
[3]Duplicate sample.

BGS - Below ground surface.
IWQS - In-stream Water Quality Standard.
MCL - Maximum contaminant level.
NRC - No regulatory criteria.
PAHs - Polynuclear aromatic hydrocarbons.
SDWA - Safe Drinking Water Act.
VOCs - Volatile organic compounds.

Laboratory Qualifiers

U - Indicates the compound was not detected at the concentration reported.
J - Indicates the value for the compound is an estimated value.
UJ - Indicates the compound was not detected at the reported concentration, and the concentration was estimated.

CHAIN-OF-CUSTODY RECORDS

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1064

An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF010

PROJECT NAME: Hunter BFF

PROJECT NUMBER: 01-1624-04-1121-~~110~~ 210

PROJECT MANAGER: Allison Bailey

Sampler (Signature) Laura Lumley (Printed Name) Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF2122	12/3/00	0950	water	2	2			4		34872 01317
BF2822	12/3/00	1235		2	2			4		01418
BF3022	12/3/00	1145		2	2			4		01519
BF3122	12/3/00	1150		2				2		34873 001
BF2922	12/3/00	1225		2				2		002
BF1722	12/3/00	1045		2				2		003
BF0922	12/2/00	1055		2				2		004
BF0222	12/2/00	1255		2				2		005
BF2722	12/3/00	1435		2				2		006
BF2322	12/2/00	1755		2				2		007
BF2222	12/2/00	1800		2				2		008
BF1622	12/2/00	1435		2				2		009
BF2024	12/3/00	0945		2				2		010

.2 3000210 714

.3

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/4/00 1515	Patricia Power	12/4/00 12:00
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RECEIVED BY: Bob Hoche	Date/Time 12-4-00 1515	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	
RELINQUISHED BY: Bob Hoche	Date/Time 12-4-00 1815	RECEIVED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: # 808

Cooler Temperature: 3°

FEDEX NUMBER:

SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

2 of 4

CHAIN OF CUSTODY RECORD

COC NO.: BFF010

PROJECT NAME: HAAF ~~LTM~~ BFF

PROJECT NUMBER: 01-1624-04 ~~1764-220~~ - 1121-210

PROJECT MANAGER: ~~Patty Stoll~~ Allison Bailey

Sampler (Signature): Laura Lumley (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (803) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF1322	12/2/00	1355	water	2		2		34873 011
BF1922	12/2/00	1700		2		2		012
BF2626	12/2/00	1505		2		2		013
BF1422	12/2/00	1400		2		2		014
BF2022	12/3/00	0945		2		2		015
BF0522	12/2/00	1010		2		2		016
BF1022	12/2/00	1600		2		2		017
BF1822	12/2/00	1650		2		2		018
BF2422	12/2/00	1615		2		2		019
BF2622	12/2/00	1500		2		2		020
BF0122	12/2/00	1305		2		2		34874 001
BF2522	12/2/00	1530		2		2		002
BF0822	12/2/00	1200		2		2		003

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/4/00	Patricia Dawes	12/4/00
COMPANY NAME: SAIC	1515	COMPANY NAME: GEL	19:00
RECEIVED BY: [illegible]	Date/Time 12-4-00	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	1515	COMPANY NAME:	
RELINQUISHED BY: [illegible]	Date/Time 12-4-00	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	1815	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: #806

Cooler Temperature: 30

FEDEX NUMBER:

Site 012-000 3

VIII-30

SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

3 of 4

CHAIN OF CUSTODY RECORD

COC NO.: BFF010

PROJECT NAME: HAAF ~~LTM~~ BFF

PROJECT NUMBER: 01-1624-04 ~~1764-220~~ -1121-210

PROJECT MANAGER: ~~Patty Stoll~~ Allison Bailey

Sampler (Signature) (Printed Name) Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (803) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF0422	12/2/00	0950	water	2		2		34874 004
BF0722	12/2/00	1040		2		2		005
BF0622	12/2/00	1025		2		2		006
BF0322	12/2/00	1210		2		2		007
BF1222	12/2/00	1125		2		2		008
BF1024	12/2/00	1600		2		2		009
BF1122	12/2/00	1720		2		2		010
BFE222	12/2/00	1410		2		2		011
BFE322	12/2/00	1240		2		2		012
BFE324	12/2/00	1240		2		2		013
BFE526	12/2/00	1030		2		2		014
BFE522	12/2/00	1005		2		2		015
BFE422	12/2/00	1125		2		2		016

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/4/00 1515	Patricia Dauer	12/4/00 19:00
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RECEIVED BY: Bob Kochsher	12-4-00 1515	RELINQUISHED BY:	
COMPANY NAME: GEL		COMPANY NAME:	
RELINQUISHED BY: Bob Kochsher	12-4-00 1815	RECEIVED BY:	
COMPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: #808

Cooler Temperature: 3°

FEDEX NUMBER:

4-8000121075

VIII-31

11

SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF002

PROJECT NAME: Hunter BFF

PROJECT NUMBER: 01-1624-04-1121-~~110~~ -210

PROJECT MANAGER: Allison Bailey

Sampler (Signature) (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
08	BFE1ZZ	12/1/00	1630	water		Z			2		
09	BFE6ZZ	12/1/00	1515			Z			2		
10	BF3ZZZ	12/1/00	1435			Z			2		
11	BF33ZZ	12/1/00	1255			Z			2		
12	BF3324	12/1/00	1255			Z			2		
13	BF34ZZ	12/1/00	1137			Z			2		

348159

2000121067

.2

SJ 12/2/00

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/2/00	Mike Kinslow	12-2-00
COMPANY NAME: SAIC	1040	COMPANY NAME: GEL	1340
RECEIVED BY: Ron P Hanson	12/2/00	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	1040	COMPANY NAME:	
RELINQUISHED BY: Ron P Hanson	12/2/00	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	1340	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 12

Cooler ID: #56

Cooler Temperature: 3°

FEDEX NUMBER:

SAIC An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BF-ØØ3

PROJECT NAME: Hunter BFF

PROJECT NUMBER: 01-1624-04-1121-110

PROJECT MANAGER: Allison Bailey

Sampler (Signature) (Printed Name)
Laura Lumley Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

	Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
1	BF321B	12/1/00	1342	soil	1		1	1	3		
2	BF331B	12/1/00	1220	↓	1		1	1	3		
3	BF341B	12/1/00	1019	↓	1		1	1	3		
4	BF1Ø18	12/1/00	0959	Sediment	1		1	1	3		
5	BF1118	12/1/00	1031	↓	1		1	1	3		
1	BF3222	12/1/00	1435	water	2				2		
2	BF3422	12/1/00	1137	↓	2				2		
3	BF3324	12/1/00	1255	↓	2				2		
4	BF3322	12/1/00	1235	↓	2				2		
5	BFE122	12/1/00	1630	↓	2				2		
6	BFE622	12/1/00	1515	↓	2				2		
7	BFTB1Ø	12/1/00	0630	↓	2				2		

12/2/00

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/2/00	Mike Kinslow	12-2-00
COMPANY NAME: SAIC	1040	COMPANY NAME: GEL	1340
RECEIVED BY: Ron P Hanson	12/2/00	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	1040	COMPANY NAME:	
RELINQUISHED BY: Ron P Hanson	12-2-00	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	1340	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 29

Cooler ID: #544

Cooler Temperature: 70

FEDEX NUMBER:

3000210673(BTEX)-34812%

VIII-33

SAIC An Employee-Owned Company
Science Applications International Corporation
Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFFØØ4

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ -210

OJECT MANAGER: Allison Bailey

pler (Signature) [Printed Name] Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
B·FE322	12/2/00	1240	water		N			2		348T2001
B·FE526	12/2/00	1030			N			2		002
B·FE422	12/2/00	1125			N			2		003
B·FØ222	12/2/00	1255			N			2		004
B·F1Ø24	12/2/00	1600			N			2		005
B·FE522	12/2/00	1005			N			2		006

INQUISHED BY: Laura Lumley	Date/Time 12/4/00 1515	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS: 12	Cooler Temperature: 5°
MPANY NAME: SAIC		COMPANY NAME:		Cooler ID: #829	FEDEX NUMBER:
EIVED BY:	Date/Time 12-4-00 1510	RELINQUISHED BY:	Date/Time		
MPANY NAME:		COMPANY NAME:			
INQUISHED BY:	Date/Time 12-4-00 1810	RECEIVED BY:	Date/Time 12-4-00 1900		
MPANY NAME: GEL		COMPANY NAME: GEL			

SAIC An Employee-Owned Company
Science Applications International Corporation
Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF005

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ -210

OJECT MANAGER: Allison Bailey

mpler (Signature) (Printed Name)
Laura Lumley Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF2322	12/2/00	1755	water		2			2		34876 001
BF2522	12/2/00	1530			2			2		002
BF1022	12/2/00	1600			2			2		003
BF2222	12/2/00	1600			2			2		004
BF2622	12/2/00	1500			2			2		005
BF2626	12/2/00	1505			2			2		006

12/4/00

INQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/4/00 1515	Patricia Dover	12/4/00 17:00 ~~09:00~~
MPANY NAME: SAIC		COMPANY NAME: GEL	
EIVED BY: Bob Koch	Date/Time 12-4-00 1515	RELINQUISHED BY:	Date/Time
MPANY NAME: GEL		COMPANY NAME:	
NQUISHED BY: Bob Koch	Date/Time 12-4-00 1815	RECEIVED BY:	Date/Time
MPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 12

Cooler ID: #004

Cooler Temperature: 3.0°

FEDEX NUMBER:

SAIC An Employee-Owned Company
Science Applications International Corporation
Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF006

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ 210

OJECT MANAGER: Allison Bailey

pler (Signature) Laura Lumley (Printed Name) Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BFE324	12/2/00	1240	water		2			2		34876007
BFE222	12/2/00	1410			2			2		008
BF1122	12/2/00	1720			2			2		009
BF1922	12/2/00	1700			2			2		010
BF0122	12/2/00	1305			2			2		011
BF1322	12/2/00	1355			2			2		012

12/4/00

INQUISHED BY: Laura Lumley	Date/Time 12/4/00 1515	RECEIVED BY: Patricia Dover	Date/Time 12/4/00 17:00 ~~09:00~~
MPANY NAME: SAIC		COMPANY NAME: GEL	
EIVED BY: [signature]	Date/Time 12-4-00 1515	RELINQUISHED BY:	Date/Time
IPANY NAME: GEL		COMPANY NAME:	
NQUISHED BY: [signature]	Date/Time 12-4-00 1815	RECEIVED BY:	Date/Time
IPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 12

Cooler ID: #005

Cooler Temperature: 3.2°

FEDEX NUMBER:

An Employee-Owned Company
Science Applications International Corporation
1 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF007

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ -210

OJECT MANAGER: Allison Bailey

apler (Signature): Laura Lumley (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF1622	12/2/00	1650	water		X		X	2		34876013
BF2422	12/2/00	1615			X		X	2		014
BF1222	12/2/00	1125			X		X	2		015
BF1622	12/2/00	1435			X		X	2		016
BF1422	12/2/00	1400			X		X	2		017
BF0322	12/2/00	1210			X		X	2		018

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	12/4/00 1515	Patricia Dover	12/5/00 17:00
COMPANY NAME: SAIC		COMPANY NAME: GEL	
RECEIVED BY:	Date/Time 12-4-00 1510	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	
RELINQUISHED BY:	Date/Time 12-4-00 1810	RECEIVED BY:	Date/Time
COMPANY NAME: GEL		COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 12

Cooler ID: #949

Cooler Temperature: 3.40

FEDEX NUMBER:

10

SAIC An Employee-Owned Company
Science Applications International Corporation
Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFFØØ8

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ -210

OJECT MANAGER: Allison Bailey

npler (Signature) (Printed Name)
Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-DRO	TPH-GRO	No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BFØ622	12/2/00	1025	water		2					34872 007
BFØ822	12/2/00	1200			2					008
BFØ722	12/2/00	1040			2					009
BFØ522	12/2/00	1010			2					010
BFØ422	12/2/00	0950			2					011
BF2Ø24	12/3/00	0945			2					012

12/4/00

INQUISHED BY: Laura Lumley	Date/Time 12/4/00	RECEIVED BY:	Date/Time	TOTAL NUMBER OF CONTAINERS:	Cooler Temperature: 4°
MPANY NAME: SAIC	1515	COMPANY NAME:		Cooler ID: # 461	FEDEX NUMBER:
EIVED BY: [signature]	Date/Time 12-4-00	RELINQUISHED BY:	Date/Time		
MPANY NAME: GEL	1515	COMPANY NAME:			
INQUISHED BY: [signature]	Date/Time 12-4-00	RECEIVED BY: Mike Kinsdon	Date/Time 12-4-00		
MPANY NAME: GEL	1815	COMPANY NAME: GEL	1900		

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Science Applications International Corporation
9 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: BFF ØØ9

OJECT NAME: Hunter BFF

OJECT NUMBER: 01-1624-04-1121-~~110~~ -210

OJECT MANAGER: Allison Bailey

npler (Signature): Laura Lumley (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417

PHONE NO: (843) 556-8171

REQUESTED PARAMETERS

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	PAH, TPH-ORO	TPH-GRO	No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BFØ92Z	12/2/00	1055	water		N			2		34876019
BF3122	12/3/00	1150	↓		N			2		✓ 020
BF2922	12/3/00	1225			N			2		34872013
BF1722	12/3/00	1045			N			2		014
BFZØ22	12/3/00	0945			N			2		015
BF2722	12/3/00	1435	↓		N			2		✓ Ø16

12/4/00

NQUISHED BY: Laura Lumley	Date/Time 12/4/00 1515	RECEIVED BY: Patricia Dowdy	Date/Time 12/4/00 17:00 ~~09:30~~	TOTAL NUMBER OF CONTAINERS: 12	Cooler Temperature: 3.4°
MPANY NAME: SAIC		COMPANY NAME: GEL		Cooler ID: #94	FEDEX NUMBER:
EIVED BY:	Date/Time 12-4-00 1515	RELINQUISHED BY:	Date/Time		
MPANY NAME: GEL		COMPANY NAME:			
NQUISHED BY:	Date/Time 12-4-00 1815	RECEIVED BY:	Date/Time		
MPANY NAME: GEL		COMPANY NAME:			

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GROUNDWATER ANALYTICAL DATA SHEETS

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N124

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876011

Sample wt/vol: 800.0 (g/mL) ML Lab File ID: 2Y320

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.2	U
91-58-7	2-Chloronaphthalene	1.2	U
208-96-8	Acenaphthylene	1.2	U
83-32-9	Acenaphthene	1.2	U
86-73-7	Fluorene	1.2	U
85-01-8	Phenanthrene	1.2	U
120-12-7	Anthracene	1.2	U
206-44-0	Fluoranthene	1.2	U
129-00-0	Pyrene	1.2	U
56-55-3	Benzo(a)anthracene	1.2	U
218-01-9	Chrysene	1.2	U
205-99-2	Benzo(b)fluoranthene	1.2	U
207-08-9	Benzo(k)fluoranthene	1.2	U
50-32-8	Benzo(a)pyrene	1.2	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.2	U
53-70-3	Dibenz(a,h)anthracene	1.2	U
191-24-2	Benzo(g,h,i)perylene	1.2	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873005

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M537

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872004

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X414

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874007

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N130

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876018

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: 2Y408

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.1	U
91-58-7	2-Chloronaphthalene	1.1	U
208-96-8	Acenaphthylene	1.1	U
83-32-9	Acenaphthene	1.1	U
86-73-7	Fluorene	1.1	U
85-01-8	Phenanthrene	1.1	U
120-12-7	Anthracene	1.1	U
206-44-0	Fluoranthene	1.1	U
129-00-0	Pyrene	1.1	U
56-55-3	Benzo(a)anthracene	1.1	U
218-01-9	Chrysene	1.1	U
205-99-2	Benzo(b)fluoranthene	1.1	U
207-08-9	Benzo(k)fluoranthene	1.1	U
50-32-8	Benzo(a)pyrene	1.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	U
53-70-3	Dibenz(a,h)anthracene	1.1	U
191-24-2	Benzo(g,h,i)perylene	1.1	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874004

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N127

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872011

Sample wt/vol: 1010 (g/mL) ML Lab File ID: 8X421

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.99	U
91-58-7	2-Chloronaphthalene	0.99	U
208-96-8	Acenaphthylene	0.99	U
83-32-9	Acenaphthene	0.99	U
86-73-7	Fluorene	0.99	U
85-01-8	Phenanthrene	0.99	U
120-12-7	Anthracene	0.99	U
206-44-0	Fluoranthene	0.99	U
129-00-0	Pyrene	0.99	U
56-55-3	Benzo(a)anthracene	0.99	U
218-01-9	Chrysene	0.99	U
205-99-2	Benzo(b)fluoranthene	0.99	U
207-08-9	Benzo(k)fluoranthene	0.99	U
50-32-8	Benzo(a)pyrene	0.99	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.99	U
53-70-3	Dibenz(a,h)anthracene	0.99	U
191-24-2	Benzo(g,h,i)perylene	0.99	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873016

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M548

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872010

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X420

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874006

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N129

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872007

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X417

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874005

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N128

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	0.21	J	J
1330-20-7	Xylenes (total)	3.0	U	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872009

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X419

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	4.8	
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874003

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N126

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872008

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X418

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873004

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M536

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	3.8	
108-88-3	Toluene	0.29	J
100-41-4	Ethylbenzene	6.9	
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876019

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y409

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	7.1	
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873017

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M549

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	2.4	
108-88-3	Toluene	0.40	J
100-41-4	Ethylbenzene	10.1	
1330-20-7	Xylenes (total)	2.9	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876003

Sample wt/vol: 1050 (g/mL) ML Lab File ID: 2Y312

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	23.4	
91-58-7	2-Chloronaphthalene	0.95	U
208-96-8	Acenaphthylene	0.95	U
83-32-9	Acenaphthene	0.95	U
86-73-7	Fluorene	0.95	U
85-01-8	Phenanthrene	0.95	U
120-12-7	Anthracene	0.95	U
206-44-0	Fluoranthene	0.95	U
129-00-0	Pyrene	0.95	U
56-55-3	Benzo(a)anthracene	0.95	U
218-01-9	Chrysene	0.95	U
205-99-2	Benzo(b)fluoranthene	0.95	U
207-08-9	Benzo(k)fluoranthene	0.95	U
50-32-8	Benzo(a)pyrene	0.95	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.95	U
53-70-3	Dibenz(a,h)anthracene	0.95	U
191-24-2	Benzo(g,h,i)perylene	0.95	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1024
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874009

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N132

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	2.2		U
108-88-3	Toluene	0.63	J	
100-41-4	Ethylbenzene	9.9		U
1330-20-7	Xylenes (total)	3.0		U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1024
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872005

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 8X415

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	22.2	
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874010

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N133

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	0.40	J	J
100-41-4	Ethylbenzene	0.18	J	J
1330-20-7	Xylenes (total)	3.0	U	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876009

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y318

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted:12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.64	J
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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1A
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EPA SAMPLE NO.

BF1222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874008

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N131

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876015

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2Y324

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873011

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: SM543

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876012

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2Y321

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873014

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M546

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876017

Sample wt/vol: 1040 (g/mL) ML Lab File ID: 2Y407

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.96	U
91-58-7	2-Chloronaphthalene	0.96	U
208-96-8	Acenaphthylene	0.96	U
83-32-9	Acenaphthene	0.96	U
86-73-7	Fluorene	0.96	U
85-01-8	Phenanthrene	0.96	U
120-12-7	Anthracene	0.96	U
206-44-0	Fluoranthene	0.96	U
129-00-0	Pyrene	0.96	U
56-55-3	Benzo(a)anthracene	0.96	U
218-01-9	Chrysene	0.96	U
205-99-2	Benzo(b)fluoranthene	0.96	U
207-08-9	Benzo(k)fluoranthene	0.96	U
50-32-8	Benzo(a)pyrene	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.96	U
53-70-3	Dibenz(a,h)anthracene	0.96	U
191-24-2	Benzo(g,h,i)perylene	0.96	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873009

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M541

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	0.15	J	J
1330-20-7	Xylenes (total)	0.64	J	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876016

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2Y406

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/14/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873003

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M535

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	0.25	J	J
1330-20-7	Xylenes (total)	1.6	J	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872014

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: 8X424

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/07/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873018

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M550

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876013

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2Y322

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873012

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M544

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF1922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876010

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y319

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted:12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.98	U
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873015

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M547

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	3.1	
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	2.1	
1330-20-7	Xylenes (total)	7.3	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872015

Sample wt/vol: 1010 (g/mL) ML Lab File ID: 8X505

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/08/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	7.8	
91-58-7	2-Chloronaphthalene	0.99	U
208-96-8	Acenaphthylene	0.99	U
83-32-9	Acenaphthene	0.99	U
86-73-7	Fluorene	0.99	U
85-01-8	Phenanthrene	0.99	U
120-12-7	Anthracene	0.99	U
206-44-0	Fluoranthene	0.99	U
129-00-0	Pyrene	0.99	U
56-55-3	Benzo(a)anthracene	0.99	U
218-01-9	Chrysene	0.99	U
205-99-2	Benzo(b)fluoranthene	0.99	U
207-08-9	Benzo(k)fluoranthene	0.99	U
50-32-8	Benzo(a)pyrene	0.99	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.99	U
53-70-3	Dibenz(a,h)anthracene	0.99	U
191-24-2	Benzo(g,h,i)perylene	0.99	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2024
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873010

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M542

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	2.7	
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	2.3	
1330-20-7	Xylenes (total)	7.7	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2024 Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872012

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: 8X422

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/07/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	7.4	
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF2122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872017

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2N139

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
71-43-2	Benzene	251	~~.253~~	~~E~~ D	=
108-88-3	Toluene		1.3		=
100-41-4	Ethylbenzene		17.4		=
1330-20-7	Xylenes (total)	734	~~805~~	~~E~~ D	=

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872017

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X507

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/08/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	22.0	
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873008

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N205

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2	Benzene		174	
108-88-3	Toluene		5.7	
100-41-4	Ethylbenzene		128	
1330-20-7	Xylenes (total)	662	~~688~~	E D

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876004

Sample wt/vol: 1050 (g/mL) ML Lab File ID: 2Y405

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	528	
91-58-7	2-Chloronaphthalene	19.0	U
208-96-8	Acenaphthylene	19.0	U
83-32-9	Acenaphthene	19.0	U
86-73-7	Fluorene	19.0	U
85-01-8	Phenanthrene	19.0	U
120-12-7	Anthracene	19.0	U
206-44-0	Fluoranthene	19.0	U
129-00-0	Pyrene	19.0	U
56-55-3	Benzo(a)anthracene	19.0	U
218-01-9	Chrysene	19.0	U
205-99-2	Benzo(b)fluoranthene	19.0	U
207-08-9	Benzo(k)fluoranthene	19.0	U
50-32-8	Benzo(a)pyrene	19.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	19.0	U
53-70-3	Dibenz(a,h)anthracene	19.0	U
191-24-2	Benzo(g,h,i)perylene	19.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873007

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M539

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876001

Sample wt/vol: 1050 (g/mL) ML Lab File ID: 2Y310

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted:12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.95	U
91-58-7	2-Chloronaphthalene	0.95	U
208-96-8	Acenaphthylene	0.95	U
83-32-9	Acenaphthene	0.95	U
86-73-7	Fluorene	0.95	U
85-01-8	Phenanthrene	0.95	U
120-12-7	Anthracene	0.95	U
206-44-0	Fluoranthene	0.95	U
129-00-0	Pyrene	0.95	U
56-55-3	Benzo(a)anthracene	0.95	U
218-01-9	Chrysene	0.95	U
205-99-2	Benzo(b)fluoranthene	0.95	U
207-08-9	Benzo(k)fluoranthene	0.95	U
50-32-8	Benzo(a)pyrene	0.95	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.95	U
53-70-3	Dibenz(a,h)anthracene	0.95	U
191-24-2	Benzo(g,h,i)perylene	0.95	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873019

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M551

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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EPA SAMPLE NO.

BF2422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876014

Sample wt/vol: 1040 (g/mL) ML Lab File ID: 2Y323

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/14/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.96	U
91-58-7	2-Chloronaphthalene	0.96	U
208-96-8	Acenaphthylene	0.96	U
83-32-9	Acenaphthene	0.96	U
86-73-7	Fluorene	0.96	U
85-01-8	Phenanthrene	0.96	U
120-12-7	Anthracene	0.96	U
206-44-0	Fluoranthene	0.96	U
129-00-0	Pyrene	0.96	U
56-55-3	Benzo(a)anthracene	0.96	U
218-01-9	Chrysene	0.96	U
205-99-2	Benzo(b)fluoranthene	0.96	U
207-08-9	Benzo(k)fluoranthene	0.96	U
50-32-8	Benzo(a)pyrene	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.96	U
53-70-3	Dibenz(a,h)anthracene	0.96	U
191-24-2	Benzo(g,h,i)perylene	0.96	U

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EPA SAMPLE NO.

BF2522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874002

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N125

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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EPA SAMPLE NO.

BF2522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876002

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y311

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.98	U
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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EPA SAMPLE NO.

BF2622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873020

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M552

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/09/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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EPA SAMPLE NO.

BF2622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876005

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: 2Y314

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted:12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.1	U
91-58-7	2-Chloronaphthalene	1.1	U
208-96-8	Acenaphthylene	1.1	U
83-32-9	Acenaphthene	1.1	U
86-73-7	Fluorene	1.1	U
85-01-8	Phenanthrene	1.1	U
120-12-7	Anthracene	1.1	U
206-44-0	Fluoranthene	1.1	U
129-00-0	Pyrene	1.1	U
56-55-3	Benzo(a)anthracene	1.1	U
218-01-9	Chrysene	1.1	U
205-99-2	Benzo(b)fluoranthene	1.1	U
207-08-9	Benzo(k)fluoranthene	1.1	U
50-32-8	Benzo(a)pyrene	1.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	U
53-70-3	Dibenz(a,h)anthracene	1.1	U
191-24-2	Benzo(g,h,i)perylene	1.1	U

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EPA SAMPLE NO.

BF2722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873006

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M538

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2722

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872016

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X506

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/08/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF2822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872018

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2N145

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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EPA SAMPLE NO.

BF2822

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872018

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X508

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/08/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF2922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873002

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M534

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	0.35	J	J
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	0.88	J	J
1330-20-7	Xylenes (total)	106		

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EPA SAMPLE NO.

BF2922

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872013

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X423

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF3022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872019

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2N146

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3022

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872019

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8X509

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/08/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.65	J
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF3122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34873

Matrix: (soil/water) WATER Lab Sample ID: 34873001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5M533

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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EPA SAMPLE NO.

BF3122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876020

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 2Y410

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/14/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.58	J
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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EPA SAMPLE NO.

BF3222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8N112

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	109	E	J ND3
108-88-3	Toluene	0.65	J	J
100-41-4	Ethylbenzene	1.1		J
1330-20-7	Xylenes (total)	115		J

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EPA SAMPLE NO.

BF3222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815010

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 4X428

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/05/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	2.0	
91-58-7	2-Chloronaphthalene	1.1	U
208-96-8	Acenaphthylene	1.1	U
83-32-9	Acenaphthene	1.1	U
86-73-7	Fluorene	1.1	U
85-01-8	Phenanthrene	1.1	U
120-12-7	Anthracene	1.1	U
206-44-0	Fluoranthene	1.1	U
129-00-0	Pyrene	1.1	U
56-55-3	Benzo(a)anthracene	1.1	U
218-01-9	Chrysene	1.1	U
205-99-2	Benzo(b)fluoranthene	1.1	U
207-08-9	Benzo(k)fluoranthene	1.1	U
50-32-8	Benzo(a)pyrene	1.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	U
53-70-3	Dibenz(a,h)anthracene	1.1	U
191-24-2	Benzo(g,h,i)perylene	1.1	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815004

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8M448

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815011

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4X429

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted:12/05/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3324
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815003

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8M447

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.94	J
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3324
Duplicate

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815012

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4X430

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/05/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/07/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3422A

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815002

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8N113

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/11/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	0.36	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815013

Sample wt/vol: 1030 (g/mL) ML Lab File ID: 4X431

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/05/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/08/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.97	U
91-58-7	2-Chloronaphthalene	0.97	U
208-96-8	Acenaphthylene	0.97	U
83-32-9	Acenaphthene	0.97	U
86-73-7	Fluorene	0.97	U
85-01-8	Phenanthrene	0.97	U
120-12-7	Anthracene	0.97	U
206-44-0	Fluoranthene	0.97	U
129-00-0	Pyrene	0.97	U
56-55-3	Benzo(a)anthracene	0.97	U
218-01-9	Chrysene	0.97	U
205-99-2	Benzo(b)fluoranthene	0.97	U
207-08-9	Benzo(k)fluoranthene	0.97	U
50-32-8	Benzo(a)pyrene	0.97	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.97	U
53-70-3	Dibenz(a,h)anthracene	0.97	U
191-24-2	Benzo(g,h,i)perylene	0.97	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815005

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8M449

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	1.0	U	U
100-41-4	Ethylbenzene	0.99	J	J
1330-20-7	Xylenes (total)	0.45	J	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE122

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815008

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4X422

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/05/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	9.1	
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	2.2	
86-73-7	Fluorene	4.0	
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
218-01-9	Chrysene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenz(a,h)anthracene	1.0	U
191-24-2	Benzo(g,h,i)perylene	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874011

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N134

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	0.30	J	J
100-41-4	Ethylbenzene	1.0	U	U
1330-20-7	Xylenes (total)	3.0	U	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE222

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876008

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y317

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.98	U
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874012

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N135

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	0.48	J	J
100-41-4	Ethylbenzene	1.0	U	U
1330-20-7	Xylenes (total)	0.30	J	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE322

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872001

Sample wt/vol: 1040 (g/mL) ML Lab File ID: 8X411

Level: (low/med) LOW Date Received: 12/08/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.96	U
91-58-7	2-Chloronaphthalene	0.96	U
208-96-8	Acenaphthylene	0.96	U
83-32-9	Acenaphthene	0.96	U
86-73-7	Fluorene	0.96	U
85-01-8	Phenanthrene	0.96	U
120-12-7	Anthracene	0.96	U
206-44-0	Fluoranthene	0.96	U
129-00-0	Pyrene	0.96	U
56-55-3	Benzo(a)anthracene	0.96	U
218-01-9	Chrysene	0.96	U
205-99-2	Benzo(b)fluoranthene	0.96	U
207-08-9	Benzo(k)fluoranthene	0.96	U
50-32-8	Benzo(a)pyrene	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.96	U
53-70-3	Dibenz(a,h)anthracene	0.96	U
191-24-2	Benzo(g,h,i)perylene	0.96	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE324

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874013

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N136

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2	Benzene	1.0	U	U
108-88-3	Toluene	0.29	J	J
100-41-4	Ethylbenzene	1.0	U	U
1330-20-7	Xylenes (total)	3.0	U	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE324

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34876

Matrix: (soil/water) WATER Lab Sample ID: 34876007

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 2Y316

Level: (low/med) LOW Date Received: 12/05/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/07/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/13/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.98	U
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874016

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N139

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.29	J
108-88-3	Toluene	0.27	J
100-41-4	Ethylbenzene	0.28	J
1330-20-7	Xylenes (total)	0.36	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE422

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872003

Sample wt/vol: 1020 (g/mL) ML Lab File ID: 8X413

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/06/00

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 12/07/00

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.98	U
91-58-7	2-Chloronaphthalene	0.98	U
208-96-8	Acenaphthylene	0.98	U
83-32-9	Acenaphthene	0.98	U
86-73-7	Fluorene	0.98	U
85-01-8	Phenanthrene	0.98	U
120-12-7	Anthracene	0.98	U
206-44-0	Fluoranthene	0.98	U
129-00-0	Pyrene	0.98	U
56-55-3	Benzo(a)anthracene	0.98	U
218-01-9	Chrysene	0.98	U
205-99-2	Benzo(b)fluoranthene	0.98	U
207-08-9	Benzo(k)fluoranthene	0.98	U
50-32-8	Benzo(a)pyrene	0.98	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.98	U
53-70-3	Dibenz(a,h)anthracene	0.98	U
191-24-2	Benzo(g,h,i)perylene	0.98	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34874

Matrix: (soil/water) WATER Lab Sample ID: 34874015

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 5N138

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: not dec. _____ Date Analyzed: 12/12/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	3.6	
108-88-3	Toluene	1.0	
100-41-4	Ethylbenzene	17.2	
1330-20-7	Xylenes (total)	19.0	

DATA VALIDATION COPY

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE522

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34872

Matrix: (soil/water) WATER Lab Sample ID: 34872006

Sample wt/vol: 1040 (g/mL) ML Lab File ID: 8Y114

Level: (low/med) LOW Date Received: 12/04/00

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/09/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/11/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	16.6	
91-58-7	2-Chloronaphthalene	0.96	U
208-96-8	Acenaphthylene	0.96	U
83-32-9	Acenaphthene	0.55	J
86-73-7	Fluorene	1.0	
85-01-8	Phenanthrene	0.73	J
120-12-7	Anthracene	0.96	U
206-44-0	Fluoranthene	0.96	U
129-00-0	Pyrene	0.96	U
56-55-3	Benzo(a)anthracene	0.96	U
218-01-9	Chrysene	0.96	U
205-99-2	Benzo(b)fluoranthene	0.96	U
207-08-9	Benzo(k)fluoranthene	0.96	U
50-32-8	Benzo(a)pyrene	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.96	U
53-70-3	Dibenz(a,h)anthracene	0.96	U
191-24-2	Benzo(g,h,i)perylene	0.96	U

FORM I SV-1

DATA VALIDATION COPY

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815006

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 8M450

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: not dec. _____ Date Analyzed: 12/08/00

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-88-3	Toluene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylenes (total)	3.0	U

u

DATA VALIDATION COPY

FORM I VOA OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE622

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 34815

Matrix: (soil/water) WATER Lab Sample ID: 34815009

Sample wt/vol: 1030 (g/mL) ML Lab File ID: 4X423

Level: (low/med) LOW Date Received: 12/02/00

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 12/05/00

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 12/07/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.97	U
91-58-7	2-Chloronaphthalene	0.97	U
208-96-8	Acenaphthylene	0.97	U
83-32-9	Acenaphthene	0.97	U
86-73-7	Fluorene	0.97	U
85-01-8	Phenanthrene	0.97	U
120-12-7	Anthracene	0.97	U
206-44-0	Fluoranthene	0.97	U
129-00-0	Pyrene	0.97	U
56-55-3	Benzo(a)anthracene	0.97	U
218-01-9	Chrysene	0.97	U
205-99-2	Benzo(b)fluoranthene	0.97	U
207-08-9	Benzo(k)fluoranthene	0.97	U
50-32-8	Benzo(a)pyrene	0.97	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.97	U
53-70-3	Dibenz(a,h)anthracene	0.97	U
191-24-2	Benzo(g,h,i)perylene	0.97	U

u

FORM I SV-1 DATA VALIDATION COPY OLM03.0

APPENDIX IX

CONTAMINATED SOIL DISPOSAL

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All soil removed during the underground storage tank (UST) removal effort for this site was returned to the UST excavation by Anderson Columbia Environmental, Inc. Therefore, soil disposal manifests do not exist for the Former UST 117, Facility ID:9-025113*1 site.

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APPENDIX X

SITE RANKING FORM

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SITE RANKING FORM

Facility Name: Former UST 117, Building 7002 **Ranked by:** C. Allison Bailey

County: Chatham **Facility ID #:** 9-025113*1 **Date Ranked:** 06/01/01

SOIL CONTAMINATION (based on soil closure and CAP-Part A data)

A. Total PAHs –
Maximum Concentration found on the site
(Assume <0.660 mg/kg if only gasoline was stored on site)

- ☐ ≤0.660 mg/kg = 0
- ☐ >0.66 - 1 mg/kg = 10
- ☐ >1 - 10 mg/kg = 25
- ☒ >10 mg/kg = 50

CAP-Part A sample BF 2211, boring SB-22
Total PAH = 14.354 mg/kg

B. Total Benzene -
Maximum Concentration found on the site

- ☐ ≤0.005 mg/kg = 0
- ☐ >0.005 - .05 mg/kg = 1
- ☐ >0.05 - 1 mg/kg = 10
- ☒ >1 - 10 mg/kg = 25
- ☐ >10 - 50 mg/kg = 40
- ☐ >50 mg/kg = 50

CAP-Part A sample BF 2211, boring SB-22
Total Benzene = 1.130 mg/kg

C. Depth to Groundwater
(bls = below land surface)

- ☐ >50' bls = 1
- ☐ >25' - 50' bls = 2
- ☐ >10' - 25' bls = 5
- ☒ ≤10' bls = 10

Fill in the blanks: (A. 50) + (B. 25) = (75) x (C. 10) = (D. 750)

GROUNDWATER CONTAMINATION (based on CAP-Part B groundwater data)

E. Free Product (Nonaqueous-phase liquid hydrocarbons; See Guidelines For definition of "sheen").

- ☒ No free product = 0
- ☐ Sheen - 1/8" = 250
- ☐ >1/8" - 6" = 500
- ☐ >6" - 1 ft. = 1,000
- ☐ For every additional inch, add another 100 points = 1,000 + _____

F. Dissolved Benzene -
Maximum Concentration at the site
(One well must be located at the source of the release.)

- ☐ ≤5 µg/L = 0
- ☐ >5 - 100 µg/L = 5
- ☒ >100 - 1,000 µg/L = 50
- ☐ >1,000 - 10,000 µg/L = 500
- ☐ >10,000 µg/L = 1,500

CAP-Part B sample MW-21, Benzene = 251 µg/L
CAP-Part A sample, MW-22, Benzene = 553 µg/L

Fill in the blanks: (E. 0) + (F. 50) = (G. 50)

POTENTIAL RECEPTORS (MUST BE FIELD-VERIFIED)

Distance from nearest contaminant plume boundary to the nearest downgradient and hydraulically connected Point of Withdrawal for water supply. **If the point of withdrawal is not hydraulically connected, evidence as outlined in the CAP-A guidance document MUST be presented to substantiate this claim.**

H. Public Water Supply

- ☐ Impacted = 2,000
- ☐ ≤500' = 500
- ☐ >500' - ¼ mi = 25
- ☐ ¼ mi - 1 mi = 10
- ☐ >1 mi - 2 mi = 2
- ☒✳ > 2 mi = 0

For lower susceptibility areas only:

- ☐ >1 mi = 0

I. Non-Public Water Supply

- ☐ Impacted = 1,000
- ☐ ≤100' = 500
- ☐ >100' - 500' = 25
- ☐ >500' - ¼ mi = 5
- ☐ >¼ - ½ mi = 2
- ☒ >½ mi = 0

For lower susceptibility areas only:

- ☐ >¼ mi = 0

Note: If site is in lower susceptibility area, do not use the shaded areas.

✳ Note: For justification that withdrawal point is not hydraulically connected, see attached text.

J. Distance from nearest Contaminant Plume boundary to downgradient Surface Waters **OR UTILITY TRENCHES & VAULTS** (a utility trench may be omitted from ranking if its invert elevation is more than 5 feet above the water table)

- ☐ Impacted = 500
- ☒ ≤500' = 50
- ☐ >500' - 1,000' = 5
- ☐ >1,000' = 2

K. Distance from any Free Product to basements and crawl spaces

- ☐ Impacted = 500
- ☐ <500' = 50
- ☐ >500' - 1,000' = 5
- ☒ >1,000' or no free product. = 0

Fill in the blanks: (H. 0) + (I. 0) + (J. 50) + (K. 0) = L. 50

(G. 50) x (L. 50) = M. 2500

(M. 2500) + (D. 750) = N. 3250

P. **SUSCEPTIBILITY AREA MULTIPLIER**

- ☐ If site is located in a Low Ground-Water Pollution Susceptibility Area = 0.5
- ☒ All other sites = 1

Q. **EXPLOSION HAZARD**

Have any explosive petroleum vapors, possibly originating from this release, been detected in any subsurface structure (e.g., utility trenches, basements, vaults, crawl spaces, etc.)?

- ☐ Yes = 200,000
- ☒ No = 0

Fill in the blanks: (N. 3250) x (P. 1) = (3250) + (Q. 0)

= 3250

ENVIRONMENTAL SENSITIVITY SCORE

ADDITIONAL GEOLOGIC AND HYDROGEOLOGIC DATA

The following information is presented to provide supplemental information to Item H of the Site Ranking Form and provides detailed information relating to the geologic and hydrogeologic conditions at Hunter Army Airfield (HAAF) to support the Installation's determination that the water withdrawal point(s) located at HAAF is(are) not hydraulically connected to the Surficial Aquifer.

1.0 REGIONAL GEOLOGY

Southeast Georgia is located within the Coastal Plain Physiographic Province of the Southeast United States (Clark and Zisa 1976). In this region, the thickness of southeastward dipping, subsurface strata ranges from 0 feet at the fall line, located approximately 350 miles inland from the Atlantic coast, to approximately 4,200 feet below land surface (BLS) at the coast. Herrick (1961) provides detailed lithologic descriptions of the stratigraphic units encountered during the installation of water and petroleum exploration wells in Chatham County. The well log of GGS Well 125, located on White Bluff Road, 700 feet west and 0.3 miles north of Buckhalter Road, Savannah, provides one of the more complete lithologic descriptions of upper Eocene, Miocene, and Pliocene to Recent sedimentary strata in Chatham County.

The upper Eocene (Ocala Limestone) section of GGS Well 125 is approximately 225 feet thick and dominated by light-gray to white, fossiliferous limestone. The Miocene section is approximately 250 feet thick and consists of limestone with a 160-feet-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known to occupy the Coosawatchie Formation of the Hawthorn Group (Furlow 1969; Arora 1984; Huddlestun 1988). The interval from approximately 80 feet to the surface is Pliocene to Recent in age and composed primarily of sand interbedded with clay and silt. This section is occupied by the Satilla and Cypresshead Formations (Huddlestun 1988).

2.0 LOCAL GEOLOGY

HAAF is located within the Barrier Island Sequence District of the Coastal Plain Physiographic Province of the Southeast United States (Clark and Zisa 1976). The Barrier Island Sequence District in Chatham and Bryan Counties is characterized by the existence of several marine terraces (step-like topographic surfaces that decrease in elevation toward the coast). These marine terraces, and their associated deposits, are the results of sea level fluctuations that occurred during the Pleistocene Epoch. The surficial (Quaternary) deposits in Chatham and Bryan Counties, in decreasing elevation and age, are part of the Okefenokee, Wicomico, Penholoway, Pamlico, and Silver Bluff terrace complexes (Wilkes et al. 1974; GA DNR 1976; Huddlestun 1988).

HAAF, as well as most of Chatham County, is underlain by the Pleistocene Pamlico Terrace. The Pleistocene Satilla Formation (formerly known as the Pamlico Formation) consists of deposits of the Pamlico Terrace complex and other terrace complexes in the region (Huddlestun 1988). The Satilla Formation is a lithologically heterogeneous unit that consists of variably bedded to non-bedded sand and variably bedded silty to sandy clay. During the Pleistocene, these sand and clay deposits were formed in offshore and inner continental shelf, barrier island, and marsh/lagoonal-type environments (Huddlestun 1988). According to the Geologic Map of Georgia (GA DNR 1976), clay beds of marsh origin, which were deposited on the northwest side of the former Pamlico Barrier Island complex, exist in the western

quarter of HAAF. Very fine- to coarse-grained sand deposits of barrier island origin are more common throughout the remaining areas of HAAF.

Based on the coring and sampling of unconsolidated strata at HAAF during CAP-Part A investigations, it is concluded that all former underground storage tanks (USTs) were buried within the Satilla Formation, which is overlain by various soil types. Soil groups at HAAF include the Chipley, Leon, Ellabelle, Kershaw, Pelham, Albany, Wahee, and Ogeechee (Wilkes et al. 1974).

3.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of HAAF is mostly influenced by two aquifer systems. These are referred to as the Principal (Floridan) Aquifer and the Surficial Aquifer (Miller 1990). The Principal Aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer, approximately 800 feet 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). According to Miller (1990), one of the largest cones of depression produced in the Floridan Aquifer exists directly beneath Savannah, Georgia. Net water-level decline in the Floridan system, between the predevelopment period and 1980, exceeded 80 feet beneath Savannah. In addition, according to 1980 estimates, more than 500 million gallons of water per day were withdrawn from the Floridan for public and industrial use in southeast Georgia, more than any other region.

The confining layer for the Principal Aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 feet to 90 feet. The vertical hydraulic conductivity of this confining unit is on the order of 10^{-8} cm/sec. 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 feet in thickness, and is composed primarily of the Satilla and Cypresshead Formations in the Savannah vicinity (Arora 1984). This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 to 10 feet below ground level (Miller 1990). Groundwater in the Surficial Aquifer system is under unconfined, or water table, conditions. However, locally, thin clay beds create confined or semiconfined conditions, as is the case at HAAF where thin, surficial clay beds are present in the west quadrant (GA DNR 1976).

Groundwater encountered at all the UST investigation sites is part of the Surficial Aquifer system. Based on the fact that all public and non-public water supply wells draw water from the Principal (Floridan) Aquifer, and that the Hawthorn confining unit separates the Principal Aquifer from the Surficial Aquifer, it is concluded that there is no hydraulic interconnection between the Surficial Aquifer (and associated groundwater plumes, if applicable) located beneath former UST sites and identified water supply withdrawal points at Fort Stewart (Figure X-A).

4.0 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS AT THE FORMER UST 117, BUILDING 7002, SITE

According to Wilkes et al. (1974), the soil common at the Bulk Fuel Facility consists of the Chipley-Urban land complex (Cuc). This complex contains 40 to 70 percent Chipley soils and 20 to

40 percent Urban Land soils. The surface layer of this complex is very dark grayish brown to gray, with the underlying layer being olive brown to light yellowish brown mottled with gray.

A seasonal high water table is 15 to 36 inches below the surface. In places, the soil profile has been altered due to the cutting, filing, and grading activities resulting from urban development (Wilkes et al. 1974).

During direct-push sampling events at the Former UST 117 site, three major unconsolidated sediment types were encountered (Figures 4b and 4c, Appendix I). These include: (1) poorly graded sand with silt; (2) clay with silt and sand; and (3) moderately to well graded, clean quartz sand.

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FIGURE

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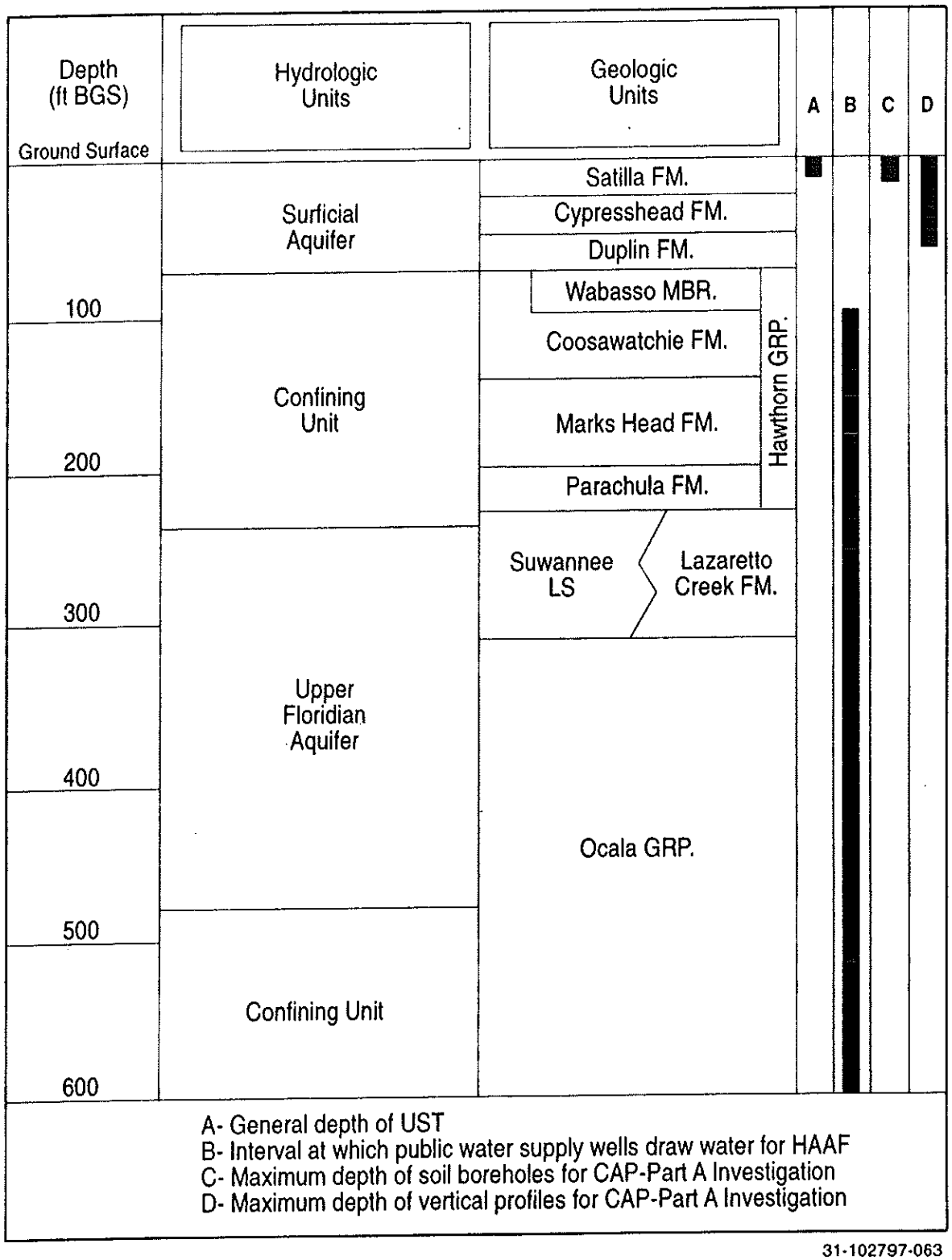

Figure X-A. Generalized Stratigraphy of Chatham County, Georgia

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APPENDIX XI

COPY OF PUBLIC NOTIFICATION LETTER AND CERTIFIED RECEIPT OR NEWSPAPER NOTICE

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AFFIDAVIT OF PUBLICATION
SAVANNAH MORNING NEWS

STATE OF GEORGIA
COUNTY OF CHATHAM

Personally appeared before me, LYNNETTE TUCK, to me known, who being sworn, deposes and says:

That she/he is the CLASSIFIED INSIDE SALES MANAGER of Southeastern Newspaper Corporation, a Georgia corporation, doing business in Chatham County, Ga., under the trade name of Savannah Morning News, a daily newspaper published in said county;

That she/he is authorized to make affidavits of publication on behalf of said published corporation;

That said newspaper is of general circulation in said county and in the area adjacent thereto;

That she/he has reviewed the regular editions of the Savannah Morning News, published on:

4-1, 2001, 4-8, 2001,

_____, 2001, _____, 2001,

and finds that the following advertisement, to-wit:

Don't forget to pick up your copy today!

015 Miscellaneous Notices

PUBLIC NOTICE
Notification of Corrective Action Plan Underground Storage, Tank Releases
Fort Stewart, Ga. and Hunter Army Airfield, Ga.

The Georgia EPD, (GEPD) has required Fort Stewart Directorate of Public Works to prepare Corrective Action Plans Part A or Part B to investigate and/or clean up contamination at the underground storage tank sites at Fort Stewart or Hunter Army Airfield as listed at the end of this notification.

This plans will be submitted to the GEPD on or before September 30, 2001.

If you want to examine a copy of one or more of the plans, please contact: Environmental Branch (Attn: T. Rutland), HQS 3D IN DIV (MECH), Directorate of Public Works, Bldg. 1137, 1550 Frank Cochran Dr., Fort Stewart, Ga. 31314-4927.

A copy will be mailed at a nominal fee.

Comments to the plan(s) will be accepted until October 30, 2001, and should be directed to GEPD at 404-362-2687.

Following is the mailing address: GEPD USTMP, 4244 International Parkway, Suite 104, Atlanta, Ga. 30354.

Hunter Army Airfield Part B Underground Storage Tank Sites:

Site; Facility ID#; Building
117, 9-025113*, 7002
25 and 26, 9-025008, 1342
Former Pumphouse #1, 9-025085, 8060

Fort Stewart Part B Underground Storage Tank Sites:

Site; Facility ID#; Building
276-279, 0-089156, Victory Shoppette

Appeared in each of said editions.
Sworn to and subscribed before me

This 8 day of April, 2001

Lynnette Tuck
(Deponent)

Lillie D. Lang
Notary Public, Chatham County, Ga.
LILLIE D. LANG
Notary Public, Chatham County, Ga.
My Commission Expires Apr. 8, 2001

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APPENDIX XII

GUST TRUST FUND REIMBURSEMENT APPLICATION AND CLAIM FOR REIMBURSEMENT

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The Hunter Army Airfield is a federally owned facility and has funded the investigation for the Former Underground Storage Tank 117, Building 7002 site, Facility ID: 9-025113*1, using Environmental Restoration Account funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

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ATTACHMENT A

FATE AND TRANSPORT MODELING RESULTS

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Table A-1. CAP–Part A Natural Attenuation Modeling Results (Benzene Concentration vs. Distance) for the Former UST 117 Site

Distance to Receptor (ft)	Distance to Receptor (m)	Predicted Maximum Benzene Concentration in Groundwater (µg/L)
0.0	0.0	553
32.8	10.0	435
39.4	12.0	365
49.2	15.0	273
59.1	18.0	209
65.6	20.0	178
78.7	24.0	130
98.4	30.0	90.8
120.1	36.6	62.1
131.2	40.0	51.8
164.0	50.0	31.4
196.9	60.0	20
229.7	70.0	13.1
262.5	80.0	8.74
295.3	90.0	5.95
341.2	104.0	3.6
393.7	120.0	2
492.1	150.0	0.8
656.2	200.0	0.2

Table A-2. CAP–Part B Natural Attenuation Modeling Results (Naphthalene Concentration vs. Distance) for the Former UST 117 Site

Distance to Receptor (ft)	Distance to Receptor (m)	Predicted Maximum Naphthalene Concentration in Groundwater (µg/L)
0.0	0.0	529
6.6	2.0	536
9.8	3.0	533
13.1	4.0	526
16.4	5.0	512
23.0	7.0	458
29.5	9.0	366
32.8	10.0	312
39.4	12.0	214
49.2	15.0	120
59.1	18.0	71
65.6	20.0	51
78.7	24.0	25.3
98.4	30.0	10.9
120.1	36.6	4.19
196.9	60.0	0.174
341.2	104.0	6.70 E-04
393.7	120.0	0
492.1	150.0	0
656.2	200.0	0

Table A-3. CAP–Part B Natural Attenuation Modeling Results (Benzene Concentration vs. Time) for the Former UST 117 Site

Time (year)	Predicted Maximum Benzene Concentration in Groundwater (µg/L)	
	MW-22	MW-32
0.0 (12/00)	174.0	109.0
0.5 (06/01)	114.0	89.1
1.0 (12/01)	75.9	84.3
1.5 (06/02)	51.6	74.2
2.0 (12/02)	31.6	62.3

Note: Time 0.0 is equal to December 2000, which was the last groundwater sampling event conducted at the site. Monitoring wells MW-22 and MW-32 will be sampled semiannually for 1 year as part of the monitoring only program to validate the fate and transport modeling results. As predicted by the model, benzene concentrations in both wells should be below the In-stream Water Quality Standard (IWQS) of 71.28 µg/L by the end of year 2 (i.e., December 2002).

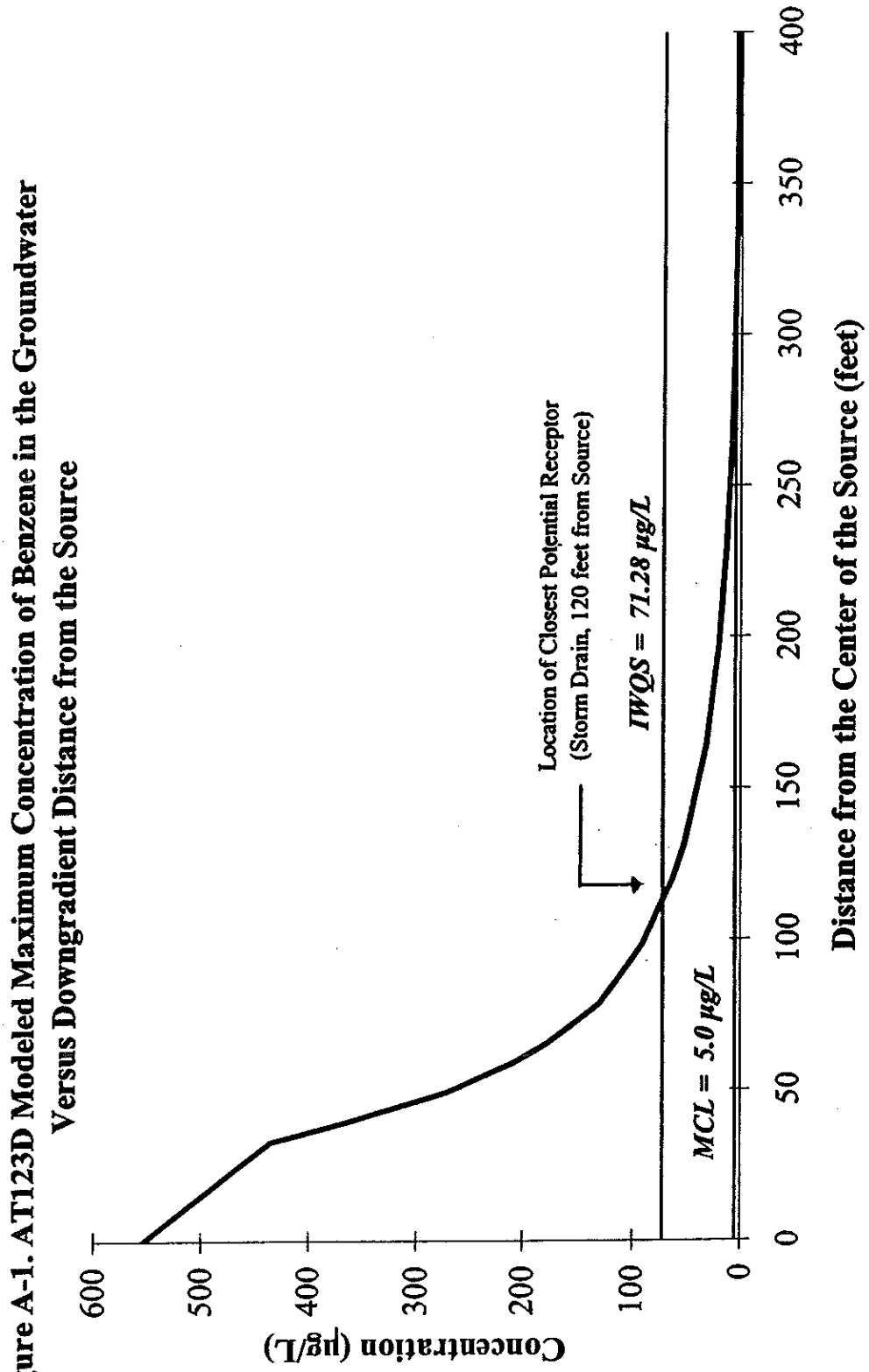


Figure A-1. AT123D Modeled Maximum Concentration of Benzene in the Groundwater Versus Downgradient Distance from the Source

Figure A-2. AT123D Modeled Maximum Concentration of Naphthalene in the Groundwater Versus Downgradient Distance from the Source

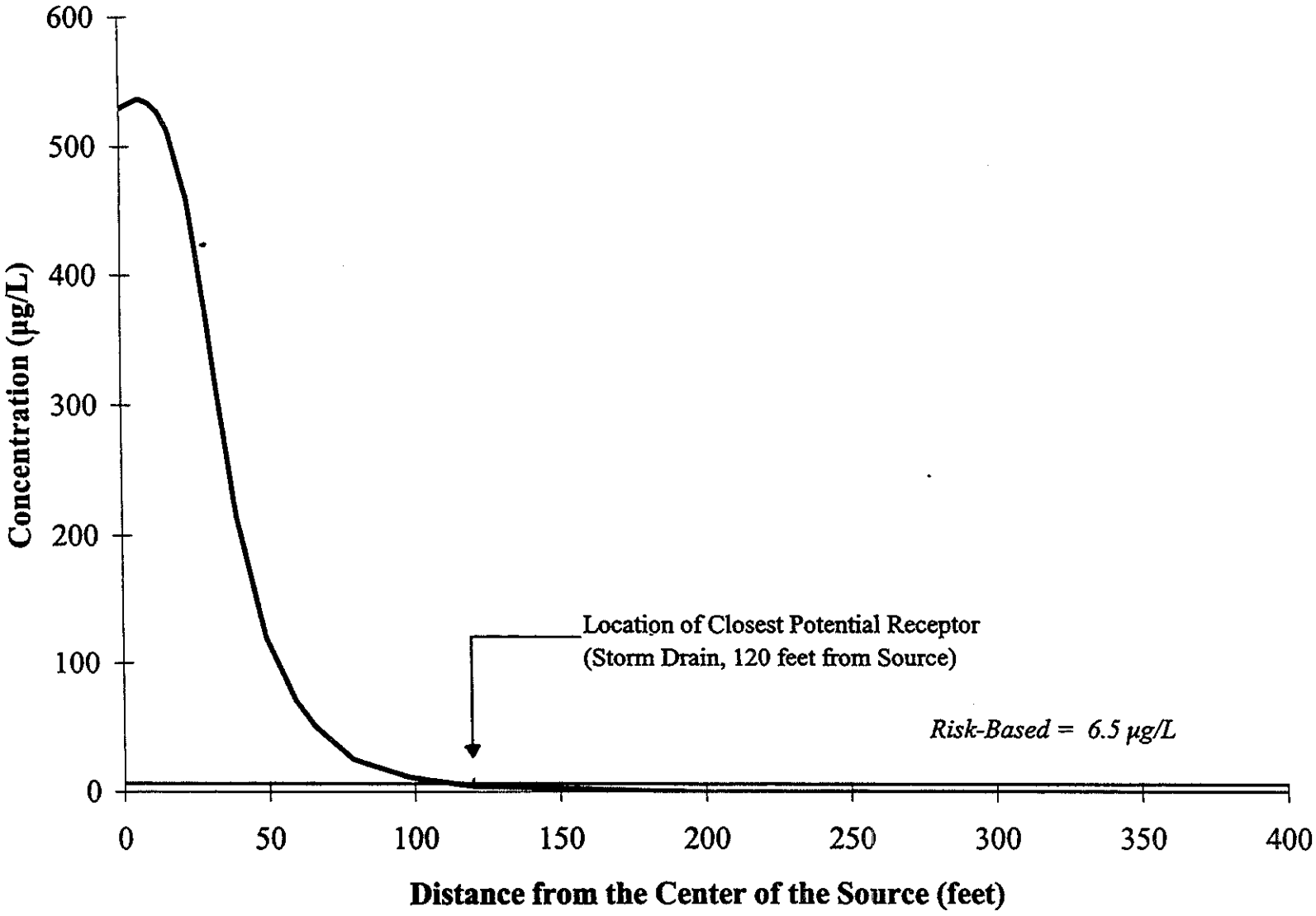
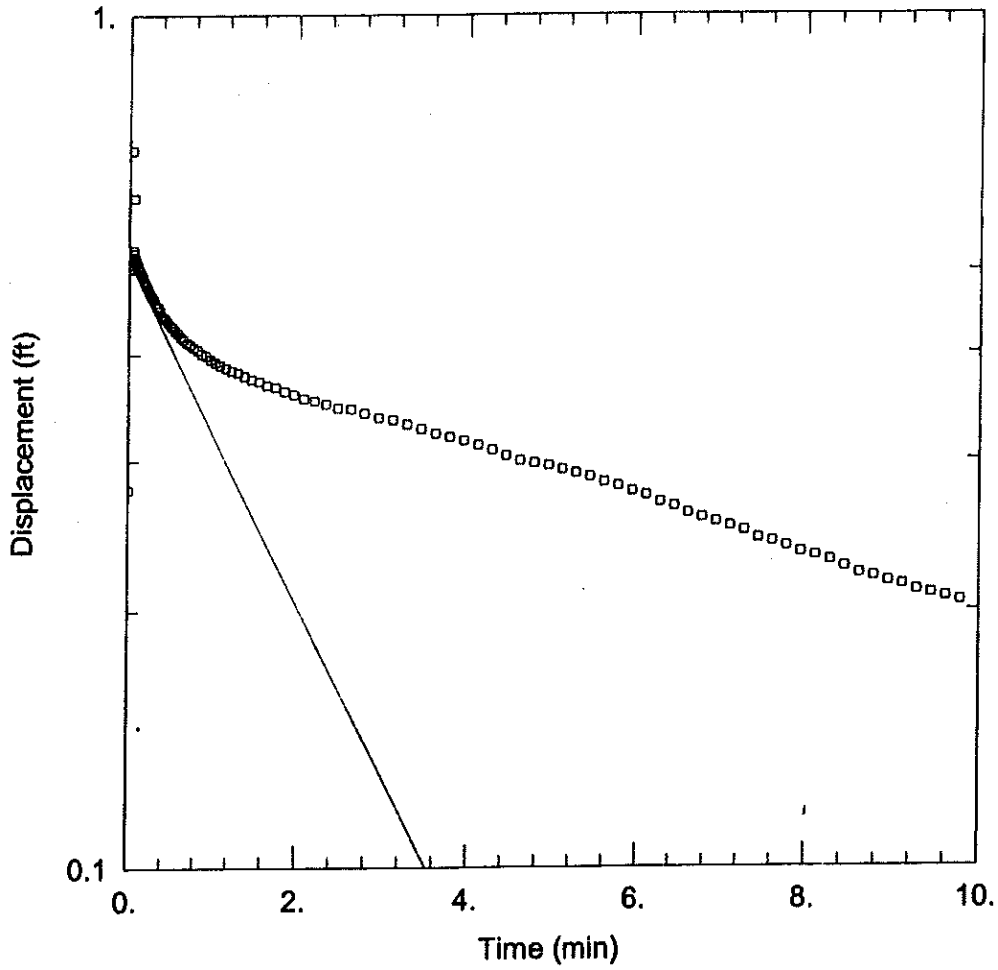


Figure A-2. AT123D Modeled Maximum Concentration of Naphthalene in the Groundwater Versus Downgradient Distance from the Source



WELL TEST ANALYSIS

Data Set: C:\WINDOWS\DESKTOP\BF-MW-E4.AQT
Date: 01/22/01 Time: 10:09:30

PROJECT INFORMATION

Company: SAIC
Client: USACE-Savannah
Test Location: Hunter Army Airfield
Test Date: 12-04-00

AQUIFER DATA

Saturated Thickness: 10.72 ft
Anisotropy Ratio (Kz/Kr): 1.

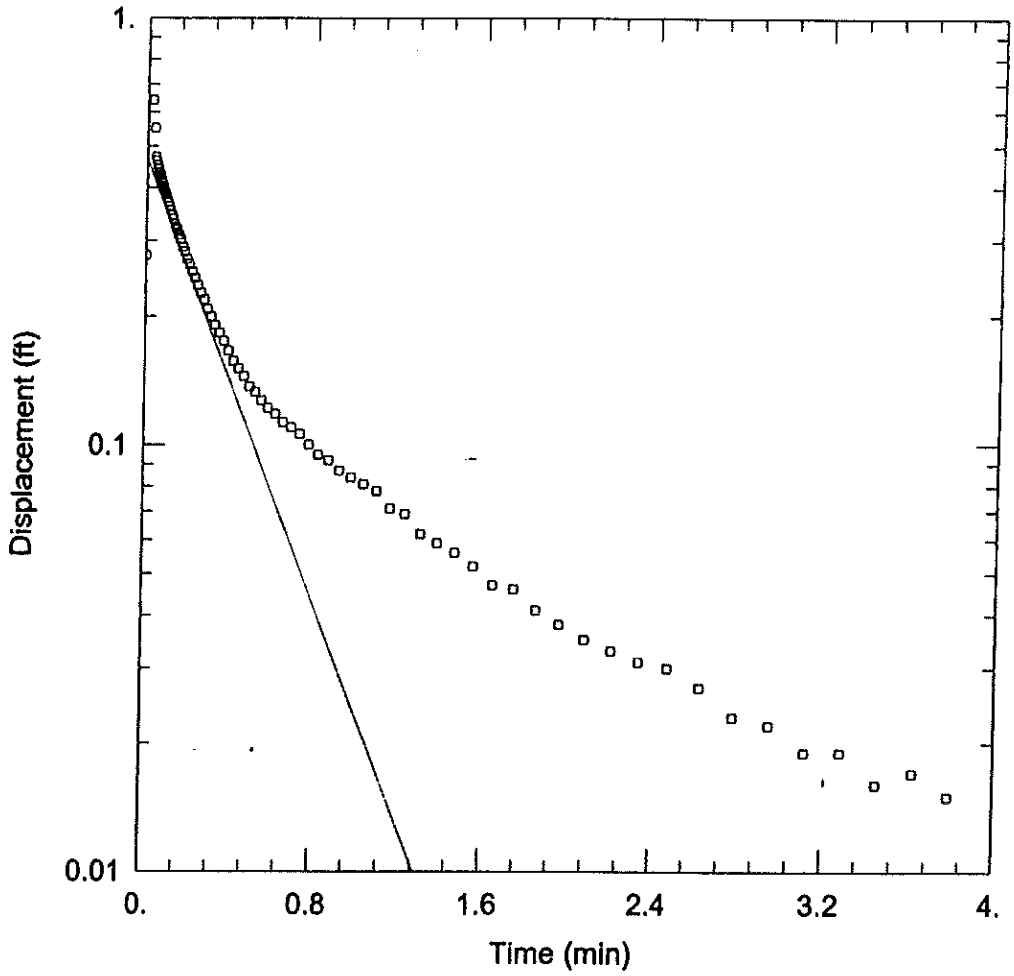
WELL DATA

Initial Displacement: 0.278 ft
Casing Radius: 0.008 ft
Screen Length: 10. ft
Water Column Height: 10.72 ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.001994 ft/min
y0 = 0.5165 ft

Figure A-3. Slug Test Analysis for MW-E4 at the Former UST 117, Building 7002 Site



WELL TEST ANALYSIS

Data Set: C:\WINDOWS\DESKTOP\BF-MW-E5.AQT
Date: 01/22/01 Time: 10:10:44

PROJECT INFORMATION

Company: SAIC
Client: USACE-Savannah
Test Location: Hunter Army Airfield
Test Date: 12-04-00

AQUIFER DATA

Saturated Thickness: 10.7 ft
Anisotropy Ratio (Kz/Kr): 1.

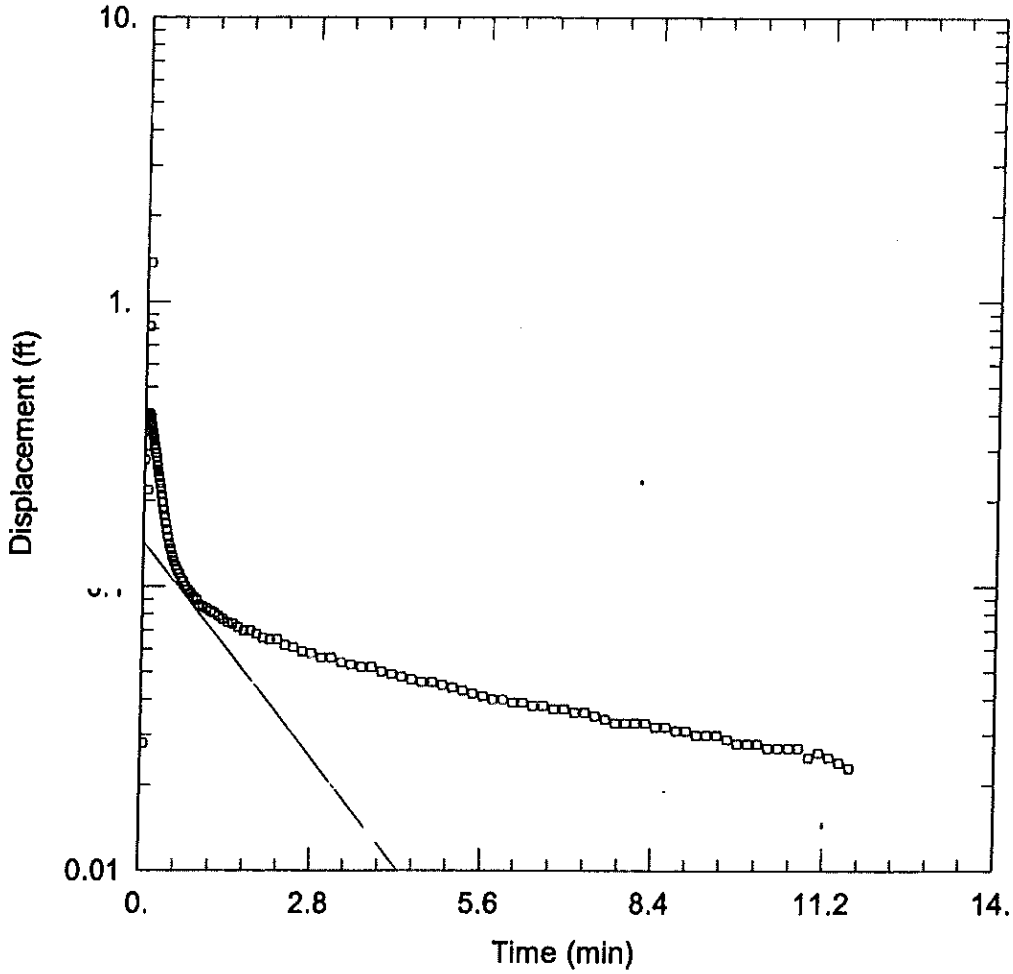
WELL DATA

Initial Displacement: 0.278 ft
Casing Radius: 0.008 ft
Screen Length: 10. ft
Water Column Height: 10.7 ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.01269 ft/min
y0 = 0.4673 ft

Figure A-4. Slug Test Analysis for MW-E5 at the Former UST 117, Building 7002 Site



WELL TEST ANALYSIS

Data Set: C:\WINDOWS\DESKTOP\BF-MW-E6.AQT
Date: 01/22/01 Time: 10:10:07

PROJECT INFORMATION

Company: SAIC
Client: USACE-Savannah
Test Location: Hunter Army Airfield
Test Date: 12-04-00

AQUIFER DATA

Saturated Thickness: 9.76 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Initial Displacement: 0.278 ft
Casing Radius: 0.008 ft
Screen Length: 10. ft
Water Column Height: 9.76 ft
Wellbore Radius: 0.33 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002624 ft/min
y0 = 0.1433 ft

Figure A-5. Slug Test Analysis for MW-E6 at the Former UST 117, Building 7002 Site

TABLE A-4. AT123D FATE AND TRANSPORT MODEL INPUT AND OUTPUT VALUES FOR BENZENE AT THE FORMER UST 117, BUILDING 7002 SITE

NO. OF POINTS IN X-DIRECTION	14
NO. OF POINTS IN Y-DIRECTION	2
NO. OF POINTS IN Z-DIRECTION	1
NO. OF ROOTS: NO. OF SERIES TERMS	400
NO. OF BEGINNING TIME STEP	13
NO. OF ENDING TIME STEP	241
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION	12
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE	1
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE	0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT	1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD	2
AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ...	0.1524E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ...	0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS)	-0.9100E+01
END POINT OF X-SOURCE LOCATION (METERS)	0.9100E+01
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.6100E+01
END POINT OF Y-SOURCE LOCATION (METERS)	0.6100E+01
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
POROSITY	0.1800E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.9000E-01
HYDRAULIC GRADIENT	0.3500E-02
LONGITUDINAL DISPERSIVITY (METER)	0.1000E+02
LATERAL DISPERSIVITY (METER)	0.3000E+01
VERTICAL DISPERSIVITY (METER)	0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.7900E-04
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)..	0.0000E+00
MOLECULAR DIFFUSION MULTIPLY BY POROSITY (M**2/HR)	0.3530E-05
DECAY CONSTANT (PER HOUR)	0.4000E-04
BULK DENSITY OF THE SOIL (KG/M**3)	0.1320E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE	0.1000E-02
DENSITY OF WATER (KG/M**3)	0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) ..	0.7300E+03
DISCHARGE TIME (HR)	0.8760E+06
WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR) .	0.2210E-04
RETARDATION FACTOR	0.1579E+01
RETARDED DARCY VELOCITY (M/HR)	0.1108E-02
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) ..	0.1109E-01
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR) .	0.3337E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR).	0.1120E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-24.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-24.	0.000E+00	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.159E-02	0.296E-02	0.494E+00	0.489E+00	0.354E+00	0.282E+00	0.188E+00	0.124E+00	0.947E-01	0.516E-01
-24.	0.902E-05	0.149E-04	0.415E-03	0.477E-03	0.479E-03	0.462E-03	0.422E-03	0.367E-03	0.326E-03	0.234E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.225E-01	0.758E-02	0.451E-04	0.000E+00
-24.	0.133E-03	0.567E-04	0.518E-06	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1752E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.376E-02	0.608E-02	0.537E+00	0.540E+00	0.410E+00	0.339E+00	0.245E+00	0.179E+00	0.147E+00	0.977E-01
-24.	0.125E-03	0.178E-03	0.241E-02	0.289E-02	0.316E-02	0.320E-02	0.319E-02	0.308E-02	0.297E-02	0.262E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.582E-01	0.310E-01	0.216E-02	0.948E-06
-24.	0.207E-02	0.141E-02	0.154E-03	0.881E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2628E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.476E-02	0.738E-02	0.548E+00	0.553E+00	0.425E+00	0.355E+00	0.262E+00	0.197E+00	0.166E+00	0.116E+00
-24.	0.280E-03	0.379E-03	0.406E-02	0.492E-02	0.556E-02	0.572E-02	0.586E-02	0.588E-02	0.581E-02	0.551E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.761E-01	0.467E-01	0.719E-02	0.485E-04
-24.	0.485E-02	0.387E-02	0.984E-03	0.888E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3504E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.519E-02	0.792E-02	0.552E+00	0.558E+00	0.431E+00	0.361E+00	0.269E+00	0.204E+00	0.173E+00	0.124E+00
-24.	0.390E-03	0.518E-03	0.500E-02	0.609E-02	0.696E-02	0.722E-02	0.749E-02	0.763E-02	0.764E-02	0.746E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.840E-01	0.546E-01	0.120E-01	0.306E-03
-24.	0.690E-02	0.593E-02	0.225E-02	0.792E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.538E-02	0.815E-02	0.553E+00	0.560E+00	0.433E+00	0.363E+00	0.271E+00	0.207E+00	0.176E+00	0.127E+00
-24.	0.455E-03	0.597E-03	0.548E-02	0.669E-02	0.769E-02	0.801E-02	0.836E-02	0.858E-02	0.865E-02	0.858E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.876E-01	0.585E-01	0.153E-01	0.825E-03
-24.	0.814E-02	0.725E-02	0.341E-02	0.263E-03

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5256E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.546E-02	0.825E-02	0.554E+00	0.560E+00	0.434E+00	0.364E+00	0.272E+00	0.208E+00	0.177E+00	0.129E+00
-24.	0.491E-03	0.640E-03	0.572E-02	0.700E-02	0.807E-02	0.841E-02	0.882E-02	0.908E-02	0.918E-02	0.918E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.893E-01	0.603E-01	0.174E-01	0.147E-02
-24.	0.882E-02	0.803E-02	0.426E-02	0.535E-03

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6132E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.550E-02	0.830E-02	0.554E+00	0.561E+00	0.434E+00	0.364E+00	0.273E+00	0.209E+00	0.178E+00	0.129E+00
-24.	0.510E-03	0.663E-03	0.584E-02	0.715E-02	0.826E-02	0.862E-02	0.905E-02	0.934E-02	0.945E-02	0.950E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.900E-01	0.612E-01	0.185E-01	0.208E-02
-24.	0.919E-02	0.846E-02	0.482E-02	0.828E-03

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7008E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.552E-02	0.832E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.520E-03	0.675E-03	0.590E-02	0.723E-02	0.836E-02	0.872E-02	0.917E-02	0.947E-02	0.960E-02	0.966E-02

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.904E-01	0.617E-01	0.192E-01	0.258E-02
-24.	0.939E-02	0.869E-02	0.516E-02	0.109E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7884E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.553E-02	0.833E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.525E-03	0.681E-03	0.593E-02	0.727E-02	0.841E-02	0.878E-02	0.923E-02	0.954E-02	0.967E-02	0.975E-02

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.906E-01	0.619E-01	0.195E-01	0.294E-02
-24.	0.950E-02	0.882E-02	0.537E-02	0.129E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.528E-03	0.685E-03	0.595E-02	0.729E-02	0.843E-02	0.881E-02	0.926E-02	0.958E-02	0.971E-02	0.980E-02

CONTINUE

Y	X 30.	37.	60.	104.
0.	0.907E-01	0.620E-01	0.197E-01	0.319E-02
-24.	0.955E-02	0.889E-02	0.549E-02	0.144E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.9636E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.530E-03	0.686E-03	0.596E-02	0.730E-02	0.845E-02	0.882E-02	0.928E-02	0.960E-02	0.973E-02	0.982E-02

CONTINUE

Y	X 30.	37.	60.	104.
0.	0.907E-01	0.621E-01	0.199E-01	0.335E-02
-24.	0.958E-02	0.893E-02	0.555E-02	0.155E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1051E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.530E-03	0.687E-03	0.596E-02	0.730E-02	0.845E-02	0.883E-02	0.929E-02	0.961E-02	0.974E-02	0.984E-02

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.199E-01	0.345E-02
-24.	0.960E-02	0.894E-02	0.559E-02	0.161E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1139E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.596E-02	0.731E-02	0.846E-02	0.883E-02	0.929E-02	0.961E-02	0.975E-02	0.984E-02

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.199E-01	0.352E-02
-24.	0.961E-02	0.896E-02	0.561E-02	0.166E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1226E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.929E-02	0.961E-02	0.975E-02	0.985E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.356E-02
-24.	0.961E-02	0.896E-02	0.563E-02	0.168E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1314E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.929E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.358E-02
-24.	0.961E-02	0.896E-02	0.563E-02	0.170E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1402E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.930E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y	X 30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.359E-02
-24.	0.961E-02	0.897E-02	0.564E-02	0.171E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1489E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.930E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y	X 30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.360E-02
-24.	0.962E-02	0.897E-02	0.564E-02	0.172E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1577E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.930E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.360E-02
-24.	0.962E-02	0.897E-02	0.564E-02	0.172E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1664E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.930E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.908E-01	0.621E-01	0.200E-01	0.361E-02
-24.	0.962E-02	0.897E-02	0.564E-02	0.172E-02

STEADY STATE SOLUTION HAS BEEN OBTAINED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1752E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	175200.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
					X					
0.	0.554E-02	0.834E-02	0.554E+00	0.561E+00	0.435E+00	0.365E+00	0.273E+00	0.209E+00	0.178E+00	0.130E+00
-24.	0.531E-03	0.688E-03	0.597E-02	0.731E-02	0.846E-02	0.884E-02	0.930E-02	0.962E-02	0.975E-02	0.985E-02

CONTINUE

Y	30.	37.	60.	104.
				X
0.	0.908E-01	0.621E-01	0.200E-01	0.361E-02
-24.	0.962E-02	0.897E-02	0.564E-02	0.172E-02

TABLE A-5. AT123D FATE AND TRANSPORT MODEL INPUT AND OUTPUT VALUES FOR NAPHTHALENE AT THE FORMER UST 117, BUILDING 7002 SITE

NO. OF POINTS IN X-DIRECTION 14
NO. OF POINTS IN Y-DIRECTION 2
NO. OF POINTS IN Z-DIRECTION 1
NO. OF ROOTS: NO. OF SERIES TERMS 400
NO. OF BEGINNING TIME STEP 13
NO. OF ENDING TIME STEP 241
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION 12
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE 1
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE 0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT 1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD 2

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ... 0.1524E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ... 0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS) ..... -0.9100E+01
END POINT OF X-SOURCE LOCATION (METERS) ..... 0.9100E+01
BEGIN POINT OF Y-SOURCE LOCATION (METERS) ..... -0.6100E+01
END POINT OF Y-SOURCE LOCATION (METERS) ..... 0.6100E+01
BEGIN POINT OF Z-SOURCE LOCATION (METERS) ..... 0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS) ..... 0.0000E+00

POROSITY ..... 0.1800E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR) 0.9000E-01
HYDRAULIC GRADIENT 0.8900E-02
LONGITUDINAL DISPERSIVITY (METER) ..... 0.1000E+02
LATERAL DISPERSIVITY (METER) ..... 0.3000E+01
VERTICAL DISPERSIVITY (METER) ..... 0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG) 0.1190E-02
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C).. 0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY POROSITY (M**2/HR) 0.2700E-05
DECAY CONSTANT (PER HOUR) 0.1110E-03
BULK DENSITY OF THE SOIL (KG/M**3) ..... 0.1350E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE 0.1000E-02
DENSITY OF WATER (KG/M**3) ..... 0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) .. 0.7300E+03
DISCHARGE TIME (HR) ..... 0.8760E+06
WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR) . 0.7677E-04

RETARDATION FACTOR ..... 0.9925E+01
RETARDED DARCY VELOCITY (M/HR) 0.4484E-03
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) .. 0.4485E-02
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR) . 0.1347E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR). 0.4499E-03

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-24.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-24.	0.000E+00	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.891E-04	0.257E-03	0.480E+00	0.458E+00	0.261E+00	0.166E+00	0.784E-01	0.372E-01	0.223E-01	0.660E-02
-24.	0.410E-08	0.102E-07	0.183E-05	0.192E-05	0.158E-05	0.137E-05	0.102E-05	0.690E-06	0.504E-06	0.215E-06

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.114E-02	0.102E-03	0.119E-09	0.000E+00
-24.	0.528E-07	0.629E-08	0.172E-13	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1752E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.443E-03	0.935E-03	0.520E+00	0.502E+00	0.302E+00	0.203E+00	0.110E+00	0.616E-01	0.422E-01	0.183E-01
-24.	0.859E-06	0.154E-05	0.631E-04	0.710E-04	0.681E-04	0.640E-04	0.558E-04	0.459E-04	0.391E-04	0.252E-04

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.602E-02	0.146E-02	0.225E-05	0.000E+00
-24.	0.122E-04	0.407E-05	0.110E-07	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2628E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.643E-03	0.125E-02	0.527E+00	0.510E+00	0.310E+00	0.212E+00	0.117E+00	0.685E-01	0.485E-01	0.231E-01
-24.	0.408E-05	0.653E-05	0.163E-03	0.188E-03	0.191E-03	0.186E-03	0.171E-03	0.151E-03	0.136E-03	0.101E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.908E-02	0.295E-02	0.280E-04	0.662E-11
-24.	0.618E-04	0.292E-04	0.540E-06	0.206E-12

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3504E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.716E-03	0.136E-02	0.528E+00	0.511E+00	0.312E+00	0.213E+00	0.119E+00	0.703E-01	0.503E-01	0.247E-01
-24.	0.739E-05	0.113E-04	0.226E-03	0.264E-03	0.275E-03	0.271E-03	0.257E-03	0.234E-03	0.216E-03	0.172E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.103E-01	0.371E-02	0.782E-04	0.327E-08
-24.	0.116E-03	0.646E-04	0.300E-05	0.187E-09

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.740E-03	0.139E-02	0.528E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.708E-01	0.508E-01	0.251E-01
-24.	0.940E-05	0.140E-04	0.255E-03	0.299E-03	0.315E-03	0.312E-03	0.299E-03	0.277E-03	0.258E-03	0.212E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.107E-01	0.402E-02	0.123E-03	0.327E-07
-24.	0.151E-03	0.907E-04	0.691E-05	0.296E-08

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5256E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.747E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.509E-01	0.253E-01
-24.	0.104E-04	0.153E-04	0.266E-03	0.313E-03	0.331E-03	0.329E-03	0.317E-03	0.295E-03	0.277E-03	0.230E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.108E-01	0.413E-02	0.150E-03	0.120E-06
-24.	0.168E-03	0.105E-03	0.105E-04	0.148E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6132E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.749E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.107E-04	0.158E-04	0.270E-03	0.318E-03	0.337E-03	0.335E-03	0.323E-03	0.302E-03	0.284E-03	0.237E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.417E-02	0.164E-03	0.257E-06
-24.	0.175E-03	0.111E-03	0.128E-04	0.390E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7008E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.109E-04	0.160E-04	0.271E-03	0.319E-03	0.339E-03	0.337E-03	0.326E-03	0.305E-03	0.286E-03	0.240E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.418E-02	0.170E-03	0.399E-06
-24.	0.178E-03	0.114E-03	0.141E-04	0.700E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7884E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.339E-03	0.338E-03	0.326E-03	0.305E-03	0.287E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.172E-03	0.512E-06
-24.	0.179E-03	0.115E-03	0.147E-04	0.990E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.173E-03	0.586E-06
-24.	0.179E-03	0.116E-03	0.150E-04	0.121E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.9636E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01.* DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.629E-06
-24.	0.179E-03	0.116E-03	0.151E-04	0.135E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1051E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.651E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.143E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1139E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.662E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.147E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1226E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: -31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y	X: 30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.667E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.149E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1314E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.669E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.150E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1402E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.670E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.151E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1489E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.670E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.151E-06

STEADY STATE SOLUTION HAS BEEN OBTAINED BEFORE FINAL SIMULATING TIME.

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1577E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.1190E+01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	-31.	-28.	0.	5.	10.	12.	15.	18.	20.	24.
0.	0.750E-03	0.140E-02	0.529E+00	0.512E+00	0.312E+00	0.214E+00	0.120E+00	0.710E-01	0.510E-01	0.253E-01
-24.	0.110E-04	0.161E-04	0.272E-03	0.320E-03	0.340E-03	0.338E-03	0.327E-03	0.306E-03	0.288E-03	0.241E-03

CONTINUE

Y \ X	30.	37.	60.	104.
0.	0.109E-01	0.419E-02	0.174E-03	0.670E-06
-24.	0.179E-03	0.116E-03	0.152E-04	0.151E-06

Table A-6. AT123D Fate and Transport Model Input and Output Values for Benzene (Concentration vs. Time) at the Former UST 117, Building 7002 Site

NO. OF POINTS IN X-DIRECTION 2
NO. OF POINTS IN Y-DIRECTION 1
NO. OF POINTS IN Z-DIRECTION 1
NO. OF ROOTS: NO. OF SERIES TERMS 400
NO. OF BEGINNING TIME STEP 61
NO. OF ENDING TIME STEP 175
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION 6
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE 1
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE 0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT 1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD 2

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ... 0.1524E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ... 0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS) ..... -0.9100E+01
END POINT OF X-SOURCE LOCATION (METERS) ..... 0.9100E+01
BEGIN POINT OF Y-SOURCE LOCATION (METERS) ..... -0.6100E+01
END POINT OF Y-SOURCE LOCATION (METERS) ..... 0.6100E+01
BEGIN POINT OF Z-SOURCE LOCATION (METERS) ..... 0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS) ..... 0.0000E+00

POROSITY ..... 0.1800E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR) 0.9000E-01
HYDRAULIC GRADIENT 0.3500E-02
LONGITUDINAL DISPERSIVITY (METER) ..... 0.1000E+02
LATERAL DISPERSIVITY (METER) ..... 0.3000E+01
VERTICAL DISPERSIVITY (METER) ..... 0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG) 0.7900E-04
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C).. 0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY POROSITY (M**2/HR) 0.3530E-05
DECAY CONSTANT (PER HOUR) 0.4000E-04
BULK DENSITY OF THE SOIL (KG/M**3) ..... 0.1320E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE 0.1000E-02
DENSITY OF WATER (KG/M**3) ..... 0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) .. 0.7300E+03
DISCHARGE TIME (HR) ..... 0.4380E+05
WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR) . 0.2210E-04

RETARDATION FACTOR ..... 0.1579E+01
RETARDED DARCY VELOCITY (M/HR) 0.1108E-02
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) .. 0.1109E-01
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR) . 0.3337E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR). 0.1120E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

			X
Y	0.	46.	
0.	0.000E+00	0.000E+00	

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

			X
Y	0.	46.	
0.	0.553E+00	0.345E-01	

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4818E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

			X
Y	0.	46.	
0.	0.289E+00	0.468E-01	

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5256E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

			X
Y	0.	46.	
0.	0.176E+00	0.672E-01	

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5694E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

			X
Y	0.	46.	
0.	0.114E+00	0.840E-01	

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6132E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46. (X)
0.	0.759E-01	0.891E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6570E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46. (X)
0.	0.516E-01	0.843E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7008E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46. (X)
0.	0.356E-01	0.742E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7446E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46. (X)
0.	0.248E-01	0.623E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7884E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46. (X)
0.	0.174E-01	0.506E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8322E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46.
0.	0.123E-01	0.402E-01

X

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46.
0.	0.875E-02	0.315E-01

X

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.9198E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46.
0.	0.624E-02	0.243E-01

X

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.9636E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46.
0.	0.446E-02	0.187E-01

X

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1007E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	0.	46.
0.	0.320E-02	0.142E-01

X

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1051E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: 0.	46.
0.	0.230E-02	0.108E-01

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1095E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: 0.	46.
0.	0.166E-02	0.811E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1139E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: 0.	46.
0.	0.120E-02	0.609E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1183E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: 0.	46.
0.	0.864E-03	0.456E-02

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1226E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y	X: 0.	46.
0.	0.626E-03	0.341E-02

STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAL SIMULATING TIME.

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1270E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7900E-01 * DISSOLVED CHEMICAL CONC.)

Z = 0.00

Y \ X	0.	46.
0.	0.454E-03	0.255E-02

Former UST 117, Building 7002
Hunter Army Airfield

TABLE A-7. GEOTECHNICAL PARAMETERS FOR THE FORMER UST 117, BUILDING 7002 SITE

Building ID	Tank ID	Facility ID	Sample ID	Sample Depth	Classifi-cation	Moisture Content (%)	Total Organic Carbon (%)	Specific Gravity	Porosity, n	Per-meability (cm/s)
7002	117	9-025113*1	BFGT11	2.0 to 4.0	CH	28.9	0.1	2.65	0.49	1.42E-08

NOTE: CH = Sandy, fat clay.
UST = Underground storage tank.

Tue 10/2/01

Georgia Department of Natural Resources

Environmental Protection Division
Underground Storage Tank Management Program
4244 International Parkway, Suite 104, Atlanta, Georgia 30354
Lonice Barrett, Commissioner
Harold F. Reheis, Director
(404)362-2687

September 28, 2001

Colonel Gregory V. Stanley
U.S. Army/HQ 3rd Inf. Div. (Mech) and Ft. Stewart
Directorate of Public Works
1550 Frank Cochran Drive, Building 1137
Fort Stewart, GA 31314-4927

SUBJECT: **Review Information Leading to a Deficiency Determination of Corrective Action Plan (CAP)-Part B:**
Hunter AAF, Former UST #117
Building 7002, Bulk Fuel Facility (HAA-09)
Savannah, Chatham County, GA
Facility ID: 9025113*1

Dear Colonel Stanley:

The Georgia Underground Storage Tank Management Program (USTMP) has received your letter, dated August 6, 2000, that forwarded a properly certified CAP-Part B. The report was prepared by Science Applications International Corporation (SAIC).

We have conducted a technical review of the CAP-Part B. The basis for this review is the Georgia Rules for Underground Storage Tank Management (GUST Rules, revised 1996). Our comments are outlined in the enclosure. Please amend the CAP-Part B to address these by **November 9, 2001.**

Unless one of the outlined EPD Comments requests otherwise, you are required to submit only your responses to these comments. Resubmittal of a complete CAP-Part B is not necessary.

If you have any questions, please contact me at (404) 362-2687.

Sincerely,

William E. Logan
Senior Geologist
Corrective Action Unit II

WEL:
s:/land/landdocs/williaml/pending01/9025113.15
Enclosure
cc with EPD comments: C. Allison Bailey, SAIC
Lisa L. Lewis, GA EPD
Mr. Larry Rogers, GA EPD Coastal District
File (CA): Chatham, 9025113

EPD Review Comments

Corrective Action Plan (CAP)-Part B:
Hunter AAF, Former UST #117
Building 7002, Bulk Fuel Facility (HAA-09)
Savannah, Chatham County, GA
Facility ID: 9025113*1

September 28, 2001

a. ATL calculations do not yield a meaningful result and are not appropriate for the site. The contaminated soils are already below the water table and are in contact with groundwater (TPH 163 mg/kg at 5 feet deep. During tank closure contaminated soils were returned to the excavation). Depth to water table is < 5 feet. Request for monitoring only cannot therefore be based on the ATL calculation.
b. Laboratory reports for soils are not originals. Please submit original lab reports with original signature of certification.
c. Method 8270B is not a valid EPD approved testing Method for BTEX. Please resample by Method 8021G or 8260B and resubmit results. All future samples should be tested by 8021G and 8260B.
d. Lab reports for groundwater are not originals and a signed certification of results has not been included. Please submit original lab reports together with signed laboratory certification. Please identify method used for groundwater analyses.
e. The fate and transport model does not indicate the concentration at the source used for modeling purposes. Please indicate concentration values used at the source.
f. The model does not indicate the assumed time of the release. Please indicate the date of release on which the model is based.
g. It appears the maximum benzene concentration of the latest sampling event was used as the initial concentration prior to calibration. This should not be used as an initial concentration at the source. It is preferred that the current contaminant distribution not be used as the initial concentration prior to calibration.
h. Please indicate which wells were used to calibrate and outline the details of the calibration process.
Please designate 2 validation wells with values predicted by the model over the next 2 years, so that the model may be validated through the monitoring of the specified wells.

DEPARTMENT OF THE ARMY
HEADQUARTERS, 3D INFANTRY DIVISION (MECHANIZED) AND FORT STEWART
DIRECTORATE OF PUBLIC WORKS
1550 FRANK COCHRAN DRIVE
FORT STEWART, GEORGIA 31314-4927

REPLY TO
ATTENTION OF

NOV 0 5 2001

Office of the Directorate

CERTIFIED MAIL
7099 3400 0010 5449 5248

Georgia Department of Natural Resources
Underground Storage Tank Management Program
Attention: Mr. William Logan
4244 International Parkway, Suite 104
Atlanta, Georgia 30354

Dear Mr. Logan:

Fort Stewart is pleased to receive the Georgia Environmental Protection Division's (GA EPD) correspondence dated September 28, 2001 providing review comments on the Corrective Action Plan (CAP)-Part B submitted for former underground storage tank #117, Building 7002, Facility Identification Number 9-025113*1, Hunter Army Airfield (HAAF), Georgia. The enclosed table provides responses to each of GA EPD's comments (a through h). In addition, some of the responses to comments required revisions to the CAP-Part B text. Therefore, replacement pages are also provided as Enclosure 2.

Based on the information contained in the enclosed table and the previously submitted CAP-Part B report, Fort Stewart/HAAF continues to recommend that semi-annual monitoring be conducted at the site for one year to confirm that the benzene and naphthalene concentrations (groundwater) remain below their respective alternate concentration levels (refer to Section III.D.5 of the CAP-Part B Report). If you have any questions or comments, please contact Ms. Tressa Rutland, Directorate of Public Works, Environmental Branch at (912) 767-2010.

Sincerely,

for Thomas C. Fry
Gregory V. Stanley
Colonel, U.S. Army
Director, Public Works

Enclosures

Fort Stewart Comment Responses
to
GA EPD Review Comments on the
Corrective Action Plan–Part B: Hunter AAF, Former UST #117
Building 7002, Bulk Fuel Facility (HAA-09), Facility ID: 9-025113*1
Savannah, Chatham County, GA

GA EPD Review Comment	Fort Stewart Comment Response
a. ATL calculations do not yield a meaningful result and are not appropriate for the site. The contaminated soils are already below the water table and are in contact with groundwater (TPH 163 mg/kg at 5 feet deep. During tank closure contaminated soils were returned to the excavation). Depth to water table is <5 feet. Request for monitoring only cannot therefore be based on the ATL calculation.	At boring location SB/MW-22, the maximum benzene concentration in soil was 1.13 mg/kg at 0.0 to 2.0 ft bgs which is above the GEPD STLs and is above the water table; therefore, it was appropriate to calculate ATLs for BTEX constituents. However, as discussed in Section III B, Fate and Transport Model, the recommendation for natural attenuation/monitoring only was based on the nature and extent of contamination, the results of the fate and transport modeling of the contaminants, and the ACL calculations for groundwater not the ATLs for soil.
b. Laboratory reports for soils are not originals. Please submit original lab reports with original signature of certification.	As agreed during a phone conference held on 10-24-01 between representatives from Fort Stewart, SAIC, and William Logan of the GEPD, ***all future*** UST reports submitted to the GEPD will contain original lab reports with original signature of certification and original validation codes.
c. Method 8270B is not a valid EPD approved testing Method for BTEX. Please resample by Method 8021G or 8260B and resubmit results. All future samples should be tested by 8021G and 8260B.	The soil sampling activities conducted at boring locations E-1 through E-6 was conducted by the subcontractor responsible for the AST upgrade. Apparently, the analytical method listed on the laboratory report provided by their subcontractor (Method 8270B) is a typographical error. According to SAIC project chemist, Nile Luedtke, the analytical method used for the analysis could only have been 8260B because there is no physical way the laboratory could have tested for BTEX compounds using the method cited (8270B). Fort Stewart apologizes for this confusion.
d. Lab reports for groundwater are not originals and a signed certification of results has not been included. Please submit original lab reports together with signed laboratory certification. Please identify method used for groundwater analyses.	As agreed during a phone conference held on 10-24-01 between representatives from Fort Stewart, SAIC, and William Logan of the GEPD, ***all future*** UST reports submitted to the GEPD will contain original lab reports with original signature of certification and original validation codes. The analytical methods used for groundwater analyses were as follows: BTEX - 8260B PAH - 8270 TPHDRO/GRO- 8015-Mod
e. The fate and transport model does not indicate the concentration at the source used for modeling purposes. Please indicate concentration values used at the source.	The maximum observed groundwater concentration (i.e., 553 ug/L) was conservatively used as the source concentration because the groundwater concentration based on leaching from soil was predicted to be less than the observed groundwater concentration.
f. The model does not indicate the assumed time of the release. Please indicate the date of release on which the model is based.	The model is not based on a specific date for the time of release. Instead, steady-state conditions are conservatively assumed based on the maximum observed benzene concentration of 553 ug/L; and is consistent with the approach requested by GA EPD, USTMP in a meeting in January 1999.
g. It appears the maximum benzene concentration of the latest sampling event was used as the initial concentration prior to calibration. This should not be used as an initial concentration at the source. It is preferred that the current contaminant distribution not be used as the initial concentration prior to calibration.	The model was calibrated assuming steady-state conditions based on the maximum benzene concentration 553 ug/L observed in the groundwater during the CAP-Part A investigation conducted in December 1999. The latest sampling, conducted in December 2000, revealed a maximum observed benzene concentration of 251 ug/L. As a result, the CAP-Part A concentration of 553 ug/L was used as the initial concentration (see also response to comment e, above).
h. Please indicate which wells were used to calibrate and outline the details of the calibration process. Please designate 2 validation wells with values predicted by the model over the next 2 years, so that the model may be validated through the monitoring of the specified wells.	Monitoring wells MW-21 and MW-22 were used for model calibration. The details of the calibration are provided in the revised text (see enclosure to this correspondence). Also, the predicted concentrations over the next two years for monitoring wells MW-22 and MW-32 are provided in the revised text for monitoring purposes as requested.