

FINAL



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CORRECTIVE ACTION PLAN Part B



3d Inf Div (Mech)

**for
Underground Storage Tanks 257-261
Facility ID# 9-089118
Building 430
Fort Stewart, Georgia**

Prepared for



**U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT**

Contract No. DACA21-95-D-0022
Delivery Order 0035

January 2000



DOCUMENT 3

FINAL

**CORRECTIVE ACTION PLAN - PART B
UNDERGROUND STORAGE TANKS 257-261
FACILITY ID# 9-089118
BUILDING 430
FORT STEWART, GEORGIA**

Prepared for:
U.S. Army Corps of Engineers
Savannah District
Under Contract Number DACA21-95-D-022
Delivery Order No. 0035

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January 2000

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LIST OF ACRONYMS

ACE	Anderson Columbia Environmental, Inc.
ACL	alternate concentration limit
ARAR	applicable, relevant, and appropriate requirement
ASTM	American Society for Testing and Materials
ATL	alternate threshold level
BGS	below ground surface
BTEX	benzene, ethylbenzene, toluene, and total xylenes
CAP	Corrective Action Plan
COPC	chemical of potential concern
DAF	dilution attenuation factor
DPW	Directorate of Public Works
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
FID	flame ionization detector
GA EPD	Georgia Environmental Protection Division
GRO	gasoline range organics
GUST	Georgia Underground Storage Tank Management Program
ISC	Initial Site Characterization
IWQS	In-stream Water Quality Standard
MCL	Maximum Contaminant Level
NGVD	National Geodetic Vertical Datum
PAH	polynuclear aromatic hydrocarbon
PID	photoionization detector
PVC	polyvinyl chloride
SAIC	Science Applications International Corporation
SI	Site Investigation
STL	soil threshold level
SVE	soil vapor extraction
TPH	total petroleum hydrocarbons
USACE	U.S. Army Corps of Engineers
USCS	Unified Soil Classification System
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, Georgia 30354
Phone (404) 362-2687
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CORRECTIVE ACTION PLAN
PART B

Facility Name: Building 430, USTs 257-261 Site
Street Address: Hero Road between Bundy Ave. and W. 15th Street
City: Fort Stewart **County:** Liberty
Facility ID #: 9-089118

Submitted by UST Owner/Operator:

Name: Thomas C. Fry/Environmental Branch
Company: US Army/HQ 3d Inf. Div (Mech)
Address: DPW ENRD ENV. Br (Fry)
1557 Frank Cochran
City: Fort Stewart **State:** GA
Zip Code: 31314-4928

Prepared by:

Name: Patricia Stoll
Company: Science Applications International Corp.
Address: P.O. Box 2502
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: _____

Date: _____

B. Professional Engineer or Professional Geologist

Name: Patricia Stoll

Signature: *Patricia Stoll*

Date: 1/21/00



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

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 17 and 18)
☒ Flow Net Superimposed on a Base Map (Figure 19)

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) Not Applicable

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 tanks (USTs) 257-261 (Facility ID# 9-089118), located near Building 430 at Fort Stewart, Georgia. 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 have been set up to mirror 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 USTs 257-261 site is located at the AAFES Car Care Center on Hero Road, as illustrated in Figure 1. The USTs 257-261 site is located within an average or higher groundwater pollution susceptibility area, is greater than 500 feet from a withdrawal point, and greater than 500 feet from a surface water body. Since public water supply wells exist within 2 miles of the site as defined in Georgia Underground Storage Tank Management (GUST) Rule 391-5-15-.09, the appropriate soil threshold levels (STLs) are those presented in Table A, Column 2 of Georgia UST Rules 391-5-15. According to operational information maintained by the Fort Stewart Directorate of Public Works (DPW), USTs 257-260 each had a capacity of 10,000 gallons and were used for storing gasoline. The tanks were constructed of asphalt coated or bare steel and the associated piping was galvanized steel. The tanks and piping were installed on or about January 1, 1982. The tanks were excavated and removed in March 1993. The piping was closed in-place due to the overlying 10 to 12 inches of high strength concrete. UST 261 had a capacity of 500 gallons and was used for storing used oil. The tank was constructed of asphalt coated or bare steel and the associated piping was galvanized steel. The tank and piping were installed on or about January 1, 1982. The tank was excavated and removed in June 1996. The piping was removed to the building where the piping was grouted and capped.

Anderson Columbia Environmental, Inc. (ACE) performed the Initial Site Characterization (ISC) in March 1993 for USTs 257-260 and June 1996 for UST 261. The ISC consisted of removing the tank and collecting three groundwater samples from the USTs 257-260 tank pit, which were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and one soil sample from the UST 261 tank pit, which was analyzed for BTEX, polyaromatic hydrocarbons (PAHs), and TPH. During USTs 257-260 removal and excavation activities in 1993, BTEX was present in groundwater samples at concentrations above their respective Georgia In-Stream Water Quality Standards (IWQS) (Tables 1c and 1d). During UST 261 removal and excavation activities in 1996, toluene, ethylbenzene, and xylenes were present in the soil sample at concentrations below the applicable GUST STLs (Tables 1a and 1b). However, elevated concentrations of total petroleum hydrocarbons (TPH) and 2-methyl-naphthalene were observed in the soil from the tank pit and the detection limit for benzene exceeded the applicable STL (i.e., Table A, Column 2) (Tables 1a and 1b).

Following the ISC, the CAP-Part A SIs for USTs 257-260 and UST 261 were conducted in 1998 by Science Applications International Corporation (SAIC). The CAP-Part A SI at USTs 257-260 consisted of drilling 10 soil borings; collecting soil samples for BTEX, PAHs, TPH-diesel range organics (DRO), TPH-gasoline range organics (GRO), and volatile organic compound (VOC) headspace analysis; installing piezometers for groundwater sampling, water level measurements, and detection of free product; and collecting groundwater samples for BTEX and PAH analysis. The CAP-Part A SI at UST 261 consisted of drilling five soil borings; collecting soil samples for BTEX, PAHs, TPH and VOC headspace analysis; installing piezometers for groundwater sampling, water level measurements, and detection of free product; and collecting groundwater samples for BTEX and PAH analysis. A survey of public and non-public drinking water supplies within a 2.0- and 0.5-mile radius of the site was also conducted. The CAP-Part A Reports (SAIC 1999a, SAIC 1999b) for each site were submitted to GA EPD, Underground Storage Tank Management Program (USTMP) in March 1999 describing the results of the ISC and the CAP-Part A SI. A CAP-Part B SI was determined to be necessary to define the extent of identified groundwater contamination and to collect additional hydrologic and geologic information.

Prior to the CAP-Part A investigation, USTs 257-260 (Facility ID# 0-890037) and UST 261 (Facility ID# 9-089118) were registered with GA EPD under separate facility identification numbers, although they were located within 60 feet of each other at the closest point. However, due to the close proximity of the two sites and the fact that the groundwater contamination plume encompasses both sites, Fort Stewart proposed to combine the sites under one existing facility identification number (9-089118) and GA EPD concurred. Therefore, the GA EPD data base was updated to include all five tanks under Facility ID# 9-089118 and in concurrence with the respective CAP-Part A recommendations, the CAP-Part B investigation was conducted for the USTs 257-261 site. The SI plan provided in both CAP-Part A Reports described the technical approach for the CAP-Part B SI and was approved by GA EPD in correspondence dated June 11, 1999 (Wallace 1999).

SAIC conducted the CAP-Part B SI in 1999. The CAP-Part B SI was performed in accordance with the technical approach described in the SI Plan and the requirements of 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 1996). The CAP-Part B SI field activities included drilling 34 borings, monitoring well installation, water level measurement, and slug testing; collecting soil samples from monitoring wells for BTEX, PAH, TPH-DRO, TPH-GRO, VOC headspace, and geotechnical analysis; collecting groundwater samples for BTEX and PAH analysis; performing a rising head slug test; and collecting a comprehensive round of site water level measurements. The CAP-Part B SI soil and groundwater analytical laboratory results are included as Appendices V and VIII, respectively, of this document. This SI Report presents the findings of the CAP-Part B investigation.

The CAP-Part B for USTs 257-261 was performed for Fort Stewart, DPW, Environmental Branch, through the U.S. Army Corps of Engineers (USACE), Savannah District, by SAIC, in February and September 1999, under contract DACA21-95-D-022, delivery order 0035.

II.A. HORIZONTAL AND VERTICAL EXTENT OF CONTAMINATION

II.A.1. Delineation of Soil Contamination

Petroleum-related contaminants detected in soil at the USTs 257-261 site during the ISC, CAP-Part A SIs, and CAP-Part B SI included BTEX, 2-methylnaphthalene, anthracene, acenaphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene. These constituents were present in the one soil sample collected during the ISC and 43 of the 88 soil samples collected during the CAP-Part A and CAP-Part B investigations.

The BTEX constituents were present in several samples in excess of the applicable GUST STLs (i.e., Table A, Column 2). Concentrations of BTEX constituents and benzo(a)pyrene exceeded the risk-based screening criteria. Alternate threshold levels (ATLs) were developed for the BTEX constituents and benzo(a)pyrene based on fate and transport modeling results.

II.A.1.a. Contaminant concentrations

II.A.1.a.1. Initial Site Characterization (March 1993 and June 1996)

During the ISC, one soil sample was collected from the bottom of the UST 261 tank pit excavation in 1996. No soil samples were collected from the USTs 257-260 tank pit excavation in 1993. Soil analytical data from the tank removal sampling indicated that the soil from the UST 261 tank pit contained concentrations of BTEX and 2-methyl-naphthalene constituents (Table 1). The benzene detection limit exceeded the applicable STL

(i.e., Table A, Column 2) in the soil sample. GUST Rule 391-3-15-.09(3) (i.e., Table A, Column 2) does not provide any STLs for the PAH compounds.

II.A.1.a.2. CAP-Part A Site Investigation (May 1998)

During the CAP-Part A SI, 42 soil samples were collected for geochemical analysis from 13 shallow soil borings and 2 vertical profile borings, as presented in Figure 2. Analytical results are presented in Table 2 and sample locations are presented in Figure 3a. In May 1998, 13 shallow soil borings were drilled around the former tank pits and dispenser islands to depths of 12.0 to 16.0 feet below ground surface (BGS). The vertical profile borings 73-05 and 76-05 were drilled to 34.0 and 59.0 feet BGS, respectively, to determine the vertical extent of groundwater contamination through soil sampling. Field screening methods were used during drilling to select soil samples for geochemical analysis.

Analytical results for soil sampling are summarized in Table 2 and presented in the plan view in Figure 4a. The results exceeding applicable Georgia UST STLs are presented in the cross-sections in Figure 4b. The results of soil samples collected during the CAP-Part A investigations are summarized below:

USTs 257–260 CAP-Part A SI

- Benzene was detected in 14 of the 26 soil samples at concentrations ranging from 0.0017J mg/kg to 15.7J mg/kg.
- Toluene was detected in 22 of the 26 soil samples at concentrations ranging from 0.0025 mg/kg to 325J mg/kg.
- Ethylbenzene was detected in 19 of the 26 soil samples at concentrations ranging from 0.0044J mg/kg to 117J mg/kg.
- Xylenes were detected in 20 of the 26 soil samples at concentrations ranging from 0.0065J mg/kg to 594J mg/kg.
- Thirteen PAH compounds were detected in 13 of the 26 soil samples.
- TPH-DRO was detected in 9 of the 26 soil samples at concentrations ranging from 4.3 mg/kg to 1550 mg/kg.
- TPH-GRO was detected in 21 of the 26 soil samples at concentrations ranging from 0.0915J mg/kg to 2820J mg/kg.

UST 261 CAP-Part A SI

- Benzene was detected in 8 of the 16 soil samples at concentrations ranging from 0.00097 mg/kg to 1.02 mg/kg.
- Toluene was detected in 10 of the 16 soil samples at concentrations ranging from 0.0024 mg/kg to 0.313 mg/kg.
- Ethylbenzene was detected in 10 of the 16 soil samples at concentrations ranging from 0.0055J mg/kg to 1.33J mg/kg.
- Xylenes were detected in 12 of the 16 soil samples at concentrations ranging from 0.0057 mg/kg to 4.05 mg/kg.
- Eight PAH compounds were detected in 5 of the 16 soil samples.
- TPH was detected in 10 of the 16 soil samples at concentrations ranging from 12.4J mg/kg to 616 mg/kg.

Concentrations of benzene, toluene, and ethylbenzene exceeded the applicable GUST STLs (i.e., Table A, Column 2) during the CAP-Part A SI. In addition, concentrations of the BTEX constituents and benzo(a)pyrene exceeded the risk-based screening levels during the CAP-Part A SI.

The detection limits for soil sample analyses during the CAP-Part A SI were 0.0011 to 0.0057 mg/kg for BTEX constituents, and 0.346 to 0.446 mg/kg for PAH constituents, except for two samples.

II.A.1.a.3. CAP-Part B Site Investigation (February/March and September/October 1999)

During the CAP-Part B SI, 47 soil samples were collected for geochemical analysis from 31 shallow borings, as presented in Figure 2. Analytical results are presented in Table 2 and sample locations are presented in Figure 3b. These samples were collected in accordance with the technical approach presented in the SI Plan of the CAP-Part A Report, which was approved by GA EPD in correspondence dated June 11, 1999 (Wallace 1999). The CAP-Part B SI soil borings were drilled to 12.0 to 30.0 feet BGS. All 31 of the shallow soil borings and one vertical profile boring were converted to shallow monitoring wells to delineate the extent of contamination. Field screening methods were used during drilling to select soil samples for geochemical analysis.

Analytical results for soil sampling are summarized in Table 2 and presented in the plan view in Figure 5a. The results exceeding applicable GUST STLs are presented in the cross-sections in Figure 5b. The results of soil samples collected during the CAP-Part B investigation are summarized below.

USTs 257–261 CAP-Part B SI

- Benzene was detected in 17 of the 46 soil samples at concentrations ranging from 0.0031 mg/kg to 267 mg/kg.
- Toluene was detected in 21 of the 46 soil samples at concentrations ranging from 0.00089J mg/kg to 1700 mg/kg.
- Ethylbenzene was detected in 19 of the 46 soil samples at concentrations ranging from 0.00073J mg/kg to 333 mg/kg.
- Xylenes were detected in 21 of the 46 soil samples at concentrations ranging from 0.00077J mg/kg to 1740 mg/kg.
- Fourteen PAH compounds were detected in 19 of the 46 soil samples.
- TPH-DRO was detected in 14 of the 46 soil samples at concentrations ranging from 2.7J mg/kg to 7800 mg/kg.
- TPH-GRO was detected in 26 of the 46 soil samples at concentrations ranging from 0.0373J mg/kg to 14,200 mg/kg.

Concentrations of the BTEX constituents exceeded the applicable GUST STLs (i.e., Table A, Column 2) during the CAP-Part B SI. In addition, concentrations of the BTEX constituents and benzo(a)pyrene exceeded the risk-based screening levels during the CAP-Part B SI.

The detection limits for soil samples during the CAP-Part B SI ranged from 0.0018 to 0.026 mg/kg for BTEX constituents and 0.362 to 3.66 mg/kg for PAH constituents.

II.A.1.b. Field screening results

Field screening through VOC headspace was performed during drilling for soil collected during the CAP-Part A SI and CAP-Part B SI. For each 4- or 5-foot interval drilled, two 2.0- or 2.5-foot soil grab samples were collected in glass jars and covered with aluminum foil. This sample corresponded to potential analytical sample aliquots collected from the same interval. After allowing at least 15 minutes for volatilization and temperature equilibration, headspace VOC concentration was measured with a photoionization detector to quantify the VOCs present. Table 3 presents the field screening results for the CAP-Part A SI and CAP-Part B SI.

For boreholes where two soil samples were sent to the analytical laboratory for analysis, sample selection was based on field headspace readings and was as follows:

- In cases where 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 where 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 where only one sample was sent to the analytical laboratory and were as follows:

- In cases where 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 where 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 USTs 257-261 site during the ISC, CAP-Part A SI, and CAP-Part B SI included BTEX, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene. These constituents were present in 39 of the 52 groundwater samples collected during the CAP-Part A and CAP-Part B investigations.

Thirty samples collected during the CAP-Part A and CAP-Part B SIs exceeded the IWQS of 71.28 µg/L for benzene. Other constituents detected were all below applicable regulatory threshold values. Concentrations of BTEX, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and naphthalene in groundwater exceeded their respective risk-based screening criteria. Alternate concentration limits (ACL) based on fate and transport modeling were developed for these compounds in the USTs 257-261 site Remedial Action Plan (Section III of this document).

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

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

During the ISC, two groundwater samples were collected in 1992/1993, which contained elevated concentrations of BTEX constituents (Table 1c). Most of the concentrations exceeded their respective IWQS. The detection limit for benzene in one sample was elevated at 10,000 µg/L.

II.A.2.a.2. CAP-Part A Site Investigation (May 1998)

During the CAP-Part A SI, 15 groundwater samples were collected for geochemical analysis from 14 temporary piezometers as presented in Table 4. The temporary piezometers 73-01 through 73-04 were located around the perimeter of the former UST 261 tank pit and temporary piezometers 76-01 through 76-10 were located around the perimeter of the former USTs 257-260 tank pit and dispenser islands. All temporary piezometers were screened from ground surface to the total depth of the borehole.

Benzene was identified above analytical reporting limits in 14 groundwater samples during the CAP-Part A SI. Benzene concentrations ranged from 2400 µg/L to 12,000 µg/L at the former UST 261 site and ranged from 138J µg/L to 32,700 µg/L at the former USTs 257-260 site, as illustrated in plan view and cross-section on Figure 6. The concentrations were above the Georgia IWQS of 71.28 µg/L, the federal maximum contaminant level (MCL) of 5µg/L, and the risk-based screening level of 0.36 µg/L. The concentrations in nine of the

samples are above the site ACL for benzene of 713 µg/L (Appendix VI). The analytical detection limit for benzene was 2 µg/L in all samples.

Toluene was identified above analytical detection limits in 13 groundwater samples during the CAP-Part A SI. Toluene concentrations ranged from 72.5 µg/L to 11,000 µg/L at the former UST 261 site and ranged from 15.3J µg/L to 97,800 µg/L at the former USTs 257-260 site, as illustrated in plan view and cross-section on Figure 7. The concentrations do not exceed the Georgia IWQS of 200,000 µg/L. The concentrations in six of the samples exceed the federal MCL of 1,000 µg/L and the risk-based screening level of 750 µg/L. The concentrations are below the site ACL for toluene of 2,000,000 µg/L (Appendix VI). The analytical detection limit for toluene was 2 µg/L in all samples except for 760712, where the detection limit was 100 µg/L.

Ethylbenzene was identified above the analytical reporting limit in 14 groundwater samples during the CAP-Part A SI. Ethylbenzene concentrations ranged from 105 µg/L to 983 µg/L at the former UST 261 site and ranged from 180 µg/L to 5210 µg/L at the former USTs 257-260 site, as illustrated in plan view and cross-section on Figure 8. The concentrations do not exceed the Georgia IWQS of 28,718 µg/L. The concentration in eight of the samples exceeds the federal MCL of 700 µg/L and the concentrations in four wells exceeds the risk-based screening level of 1,300 µg/L. The concentrations are below the site ACL for ethylbenzene of 287,180 µg/L (Appendix VI). The analytical detection limit for ethylbenzene was 2 µg/L in all samples.

Total xylenes were identified above analytical reporting limits in 14 groundwater samples during the CAP-Part A SI. Total xylene concentrations ranged from 954 µg/L to 5630 µg/L at the former UST 261 site and ranged from 439J µg/L to 28,400 µg/L at the former USTs 257-260 site, as illustrated in plan view and cross-section on Figure 9. There is no Georgia IWQS for xylene. The concentration in two wells exceeds the federal MCL of 10,000 µg/L and the risk-based screening level of 12,000 µg/L. The concentrations are below the site ACL for xylenes of 120,000 µg/L (Appendix VI). The analytical detection limit for xylenes was 6 µg/L in all samples.

Two PAH compounds were estimated at concentrations at or below the analytical reporting limit of 11.4 µg/L. These compounds were fluoranthene and phenanthrene.

Naphthalene was identified in 13 groundwater samples during the CAP-Part A SI. Naphthalene concentrations ranged from 9.7J µg/L to 49 µg/L at the former UST 261 site and ranged from 17.9 µg/L to 991 µg/L at the former USTs 257-260 site, as illustrated in plan view and cross-section on Figure 10. This compound does not have a federal MCL or Georgia IWQS; however, the concentrations are above the risk-based screening level of 6.5 µg/L. The concentrations are below the site ACL for naphthalene of 10,315,500 µg/L (Appendix VI).

II.A.2.a.3. CAP-Part B Site Investigation (February/March 1999 and September/October 1999)

Due to the close proximity of the two sites, USTs 257-260 and UST 261 were combined under Facility ID# 9-089118 and one CAP-Part B investigation was conducted for the site. During the CAP-Part B SI, 37 groundwater samples were collected for geochemical analysis from 33 groundwater monitoring wells as presented in Table 4. The groundwater monitoring wells (76-11 through 76-28) were installed in March 1999 and drilled between 15.0 and 36.0 feet BGS. Monitoring well and soil boring locations are presented in Figure 2. Upon review of the analytical data collected in March 1999, wells 76-29 through 76-43 were installed in September/October 1999 to determine the vertical and horizontal extent of groundwater contamination.

Benzene was identified in 25 groundwater samples during the CAP-Part B SI. Benzene concentrations ranged from 1.0J µg/L to 21,100 µg/L at the former USTs 257-261 site, as illustrated in plan view and cross-section on Figure 11. The concentrations in 16 samples exceed the Georgia IWQS of 71.28 µg/L, the concentrations in 21 samples exceed the federal MCL of 5µg/L, and the concentrations in 25 samples exceed the risk-based

screening level of 0.36 µg/L. The concentrations in 12 samples are above the site ACL for benzene of 713 µg/L (Appendix VI). The analytical detection limit for benzene was 2 µg/L in all samples.

Toluene was identified in 26 groundwater samples during the CAP-Part B SI. Toluene concentrations ranged from 0.6J µg/L to 28,200 µg/L at the former USTs 257-261 site, as illustrated in plan view and cross-section on Figure 12. The concentrations do not exceed the Georgia IWQS of 200,000 µg/L. The concentrations in 11 samples exceed the federal MCL of 1,000 µg/L and the risk-based screening level of 750 µg/L. The concentrations are below the site ACL for toluene of 2,000,000 µg/L (Appendix VI). The analytical detection limit for toluene was 2 µg/L.

Ethylbenzene was identified in 23 groundwater samples during the CAP-Part B SI. Ethylbenzene concentrations ranged from 0.51J µg/L to 3110 µg/L at the former USTs 257-261 site, as illustrated in plan view and cross-section on Figure 13. The concentrations do not exceed the Georgia IWQS of 28,718 µg/L. The concentrations in 11 samples exceed the federal MCL of 700 µg/L and the concentrations in 8 samples exceed the risk-based screening level of 1,300 µg/L. The concentrations are below the site ACL for ethylbenzene of 287,180 µg/L (Appendix G). The analytical detection limit for ethylbenzene was 2 µg/L.

Total xylenes were identified in 24 groundwater samples during the CAP-Part B SI. Total xylene concentrations ranged from 0.51J µg/L to 15,400 µg/L at the former USTs 257-261 site, as illustrated in plan view and cross-section on Figure 14. There is no Georgia IWQS for total xylenes. The concentrations in six samples exceeded the federal MCL of 10,000 µg/L and the concentrations in four samples exceeded the risk-based screening level of 12,000 µg/L. The concentrations are below the site ACL for total xylenes of 120,000 µg/L (Appendix VI). The analytical detection limits for total xylenes were below 6 µg/L.

Several PAH compounds were estimated at concentrations below the analytical reporting limit of 10 µg/L in several groundwater samples. The compounds include acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. ACLs were calculated for six of these compounds (Appendix VI).

Naphthalene was identified in 21 groundwater samples during the CAP-Part B SI. Naphthalene concentrations ranged from 0.56J µg/L to 393 µg/L at the former USTs 257-261 site, as illustrated in plan view and cross-section on Figure 15. This compound does not have a Georgia IWQS or federal MCL; however, the concentrations in 15 samples are above the risk-based screening level of 6.5 µg/L. The concentrations are below the site ACL for naphthalene of 10,315,500 µg/L (Appendix VI).

II.A.2.a.4. Conclusions of the Horizontal Extent of Site Groundwater Contamination

Figures 6 through 15 demonstrate that the majority of the horizontal extent of contamination has been delineated, however, an additional downgradient monitoring well is required to complete the delineation on the east side of Hero Road.

Petroleum contaminants identified in groundwater at the USTs 257-261 site include BTEX constituents normally associated with gasoline or waste oil/solvents releases as well as PAH constituents, which likely represent less soluble biodegradation products of the release. The USTs 257-261 site could be a candidate for natural attenuation because the source of the contamination has been removed, and the size of the plume has not expanded to the outer perimeter of monitoring wells installed at the site. However, due to the high BTEX concentrations at the site, natural attenuation will take approximately 15 years to complete. Site groundwater

flow and the geology are conducive to aerobic biodegradation, which is known to produce the most rapid biodegradation rates for hydrocarbons.

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 soil sampling below the water table per GUST technical direction. Soil borings 73-05 and 76-05 were advanced below the water table and soil samples were collected from 2.0-foot sample intervals until several samples contained headspace readings of zero. During the CAP-Part B SI, the vertical extent of groundwater contamination was delineated through groundwater sampling below the water table in borings 76-21 and 76-22. Groundwater samples were collected from 5-foot intervals. The Hawthorn Formation was encountered during drilling of boring 76-05 at approximately 55 feet BGS. Since the sample intervals indicated the presence of BTEX or PAH constituents, the groundwater contamination is present at the base of the surficial aquifer in the vicinity of the area of highest contamination (i.e., <55 ft BGS). However, the presence of the Hawthorn Formation at 55 feet BGS is limiting further vertical migration of the contaminants. Deep monitoring wells downgradient of the site do not contain the presence of BTEX or PAH compounds.

II.A.3. Delineation of Free Product Plume

A sheen was observed on the groundwater in the tank pit during the ISC, however, no free product was identified in any of the wells at the USTs 257-261 site during the CAP-Part A SI. On March 9, 1999, 2/8-inch (i.e., 0.02 feet) of free product was observed in well 76-19. GA EPD was notified by Fort Stewart personnel on March 10, 1999. An absorbent sock was placed in the well in March 1999 and removed in September 1999 in order to allow the well to equilibrate. During water levels in October 1999, 0.01 feet of free product was observed in wells 76-19 and 76-33. The absorbent sock has not been replaced so that Fort Stewart can evaluate whether a free product recovery system is necessary as part of the corrective action.

II.A.4. Delineation of Surface Water Contamination

No surface water contamination has been identified or reported in association with the USTs 257-261 site. The nearest surface water body, which is a potential groundwater discharge receptor, is a tributary to Taylors Creek located approximately 1,000 feet east of the site (Figure 16). Due to the distance to the surface water body, the absence of any known impact, and the potential for other sources of petroleum contamination within the watershed, no surface water sampling has been conducted.

II.B. LOCAL AND SITE HYDROGEOLOGY

Discussion of the local and site hydrogeology is based on field observations and investigative activities performed during the ISC, CAP-Part A SI, and CAP-Part B SI of the USTs 257-261 site.

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), USTs 257-261 (Facility ID #9-089118) are located within an average or higher groundwater pollution susceptibility area. A total of seven groundwater supply wells are located within a 2-mile radius of the Fort Stewart garrison area. Six of these wells are located within the confines of the garrison area. The other well is located at Wright Army Airfield, approximately 1.2 miles northeast of the garrison area. All of the groundwater supply wells are

classified as public wells that supply water to Fort Stewart for drinking and nondrinking purposes. These wells are approximately 450 feet deep and draw groundwater from the Principal Artesian (also known as the Floridan) aquifer. Chlorine and fluoride are added into the groundwater at the well heads prior to being pumped into storage tanks and/or water towers, according to Fort Stewart DPW personnel. The location of these wells, along with a 500-foot radius drawn around each well, is shown in Figure 16. Based on the location of Facility ID# 9-089118 relative to the identified groundwater supply wells, this site is classified as being located greater than 500 feet to a withdrawal point.

II.B.1.b. Aquifer description

The hydrogeology in the vicinity of Fort Stewart is dominated by two aquifers referred to as the Principal Artesian and the surficial aquifers. 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 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 to 10 feet BGS. 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 40 to 50 feet BGS; thus, the effective aquifer thickness would be approximately 35 to 45 feet. Soil surveys for Liberty and Long Counties describe the occurrence of a perched water table within the Stilson loamy sands present within Fort Stewart (Looper 1980).

The confining layer for the Principal Artesian aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 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 the 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, argillaceous 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.

II.B.1.c. Surface water

The water resources survey conducted during the CAP-Part A SI is presented in Appendix III. Several surface water bodies are located within a 1-mile radius of the Fort Stewart garrison area and are shown in Figure 16. In the direction of groundwater flow, an unnamed tributary that flows into Taylors Creek is located approximately 1000 feet east of the site. Based on the surface water features discussed in Appendix III, the USTs 257-261 site (Facility ID #9-089118) are classified as being located greater than 500 feet to a surface water body.

Run-off from the USTs 257-261 site moves over the existing land surface (i.e., concrete and asphalt over most of the site and grass over most of the USTs 257-260 former tank pit) to the Fort Stewart storm drainage system. Since petroleum contamination at the site primarily impacts groundwater, the surface water run-off pathway is not a viable contaminant transport mechanism because of the concrete acting as a barrier and the location of the nearest surface water body 1000 feet from the site.

There are underground utilities at the site that could act as potential preferential pathways for contaminant migration. A sanitary sewer is located approximately 180 feet east (i.e., downgradient) of the area of highest contamination. The invert elevation of this line is 74.10 feet above mean sea level, which is below the water table. In addition to the sanitary sewer line, there are numerous communication, electrical, and water utilities, however, the depth of these utilities is estimated to be 2 to 3 feet BGS, which is above the water table.

II.B.2. Stratigraphic Boring Logs

The local stratigraphy of Fort Stewart 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

Fort Stewart is located within the coastal plain physiographic province. This province is typified by nine southeastward dipping strata that increase in thickness from zero feet at the fall line, located approximately 150 miles inland from the Atlantic coast, to approximately 4,200 feet at the coast. State geologic records describe a probable petroleum exploration well (the No. 1 Jelks-Rogers) located in the region as encountering crystalline basement rocks at a depth of 4,254 feet BGS. This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata in the region.

The Cretaceous section was found to be approximately 1,970 feet thick and dominated by clastics. The Tertiary section was found to be approximately 2,170 feet thick and dominated by limestone with a 175-foot thick cap of dark green phosphatic clay. This clay is regionally extensive and is known as the Hawthorn Group. The interval from approximately 110 feet to the surface is Quaternary in age and composed primarily of sand with interbeds of clay or silt. This section is undifferentiated into separate formations (Herrick and Vochis 1963).

State geologic records contain information regarding a well drilled in October 1942, 1.8 miles north of Flemington at Liberty Field of Camp Stewart (now known as Fort Stewart). This well is believed to be an artesian well located approximately one-quarter mile north of the runway at Wright Army Airfield within the Fort Stewart Military Reservation. The log for this well describes a 410-foot section, the lowermost 110 feet of which consisted predominantly of limestone sediments, above which 245 feet of dark green phosphatic clay typical of the Hawthorn Group was encountered. The uppermost portion of the section was found to be Quaternary age interbedded sands and clays. The top 15 feet of these sediments were described as sandy clay (Herrick and Vochis 1963).

The surface soil located throughout the Fort Stewart garrison area consists of Stilson loamy sand. The surface layer of this soil is typically dark grayish-brown loamy sand measuring approximately 6 inches in depth. The surface layer is underlain by material consisting of pale yellow loamy sand and extends to a depth of approximately 29 inches. The subsoil is dominantly sandy clay loam and extends to a depth of 72 inches or more (Herrick and Vochis 1963).

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 USTs 257-261 site appear to correlate with the regional stratigraphic section. CAP-Part B SI soil boring logs are located in Appendix IV. The lithology underlying the study area consists of interbedded layers of sand with varying amounts of silt and clay.

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. Figures 3b and 5b present several cross sections for CAP-Part A and CAP-Part B soil borings, respectively, that run parallel and perpendicular to groundwater flow. These cross sections illustrate the geology described in Section II.B.2.

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 geotechnical analysis and groundwater slug testing.

II.B.4.a. Geotechnical analysis

Disturbed soil samples were collected from soil borings 76-11 through 76-28, 76-41, and 76-42 in order to determine selected engineering properties of the saturated zone underlying the USTs 257-261 site. In addition, undisturbed soil samples were collected from soil borings 73-03 and 76-03. The engineering properties measured included Unified Soil Classification System (USCS) classification, grain size, moisture content, Atterberg limits, porosity, specific gravity, and permeability, as presented in Table 5 and Attachment A.1. The methods used for performing the geotechnical analyses were American Society for Testing and Materials (ASTM) D 422 (grain size distribution), ASTM D 2216 (moisture content), ASTM D 4318 (Atterberg Limits), ASTM D 5084 (permeability), and EM 1110-2-1906 (specific gravity and porosity).

II.B.4.b. Slug testing

A rising head slug test was conducted in monitoring well 76-20 to obtain a value for the hydraulic conductivity of the water bearing zone (Attachment A.2). A Well Sentinel data logger was used to obtain accurate results during the slug tests, and the results were analyzed using the Bouwer and Rice Method (Bouwer and Rice 1976).

Due to the high conductivity of the formation, the water level recovered to static within approximately one minute after removal of the slug. As a result, the initial portion of the drawdown-time curve was used to estimate the conductivity value. The calculated value for hydraulic conductivity obtained from the slug test was 2.5×10^{-3} cm/sec (Attachment A.2).

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 5.0 feet of well screen below the water table, in accordance with the work plan. Due to the shallow depth

of the water table, less than 4.0 feet BGS, the screen length, filter pack height above the screen, and thickness of the bentonite seal were modified in the field.

Monitoring well casing consisted of ¾- or 2-inch inside diameter schedule 40 flush-thread polyvinyl chloride (PVC) risers and screens in 5- and 10-foot sections. The well screen slot size was 0.010 inches. Table 6 summarizes construction details for CAP-Part A SI temporary piezometers and CAP-Part B SI monitoring wells. Well construction diagrams are presented in Appendix VII. Following installation of the well casing, filter pack sand was poured while the augers were gradually removed to ensure a complete and even distribution of the filter pack. The filter pack extended to a measured level at least 0.5 feet above the top of the well screen.

Well seals were composed of 3/8-inch bentonite pellets and allowed to hydrate before filling 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 feet above the top of the filter pack.

Above the well seal, the remaining annular space was completed with a 1.0-foot-long flush mount sheet steel protective casing that was grouted in place with a 14-inch diameter × 4-inch thick, high-strength concrete pad. 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 24 hours after piezometer installation in May 1998 and during CAP-Part B SI groundwater sampling activities in March 1999 and October 1999. Data obtained from these measurements are presented in Table 7. During the CAP-Part A SI in 1998, groundwater flowed to the southeast with a gradient of 0.0103 ft/ft. Wells 76-11 through 79-43 were located in and around the areas of highest CAP-Part A contamination. CAP-Part B SI data were used to construct groundwater potentiometric surface maps for March 1999 and October 1999 (Figures 17 and 18). During the CAP-Part B SI in 1999, groundwater flowed to the southeast with a gradient of 0.015 ft/ft.

II.B.5.c. Equipotential flow net

An equipotential flow net based on the October 1999 water level measurements and the contoured potentiometric surface is presented in Figure 19.

III. REMEDIAL ACTION PLAN

III.A. CORRECTIVE ACTION COMPLETED OR IN PROGRESS

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

In March 1999, 2/8-inch (i.e., 0.02 feet) of free product was measured in well 76-19. An absorbent sock was placed in the well in March and subsequently removed in September 1999 to allow the well to equilibrate. In October 1999, 0.01 feet of product was measured in wells 76-19 and 76-33. Due the small quantity of free product, absorbent socks were not installed in the wells, so that Fort Stewart could continue to allow the site to equilibrate to determine whether a free product recovery system is warranted during the corrective action.

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

During UST removal and excavation activities in 1993 and 1996, all contaminated soil removed during the entire project (i.e., all USTs removed under contract with ACE, to include clean and nonclean closures) was tested in accordance with disposal facility requirements and transported to Kedesh, Inc., Highway 84, Ludowici, GA 31316.

The Closure Report for USTs 257-260 was not submitted to GA EPD in 1993 because review of the closure analytical data indicated that a CAP-Part A would be required (i.e., per requirements of GUST-9, Item 15, page 12, dated August 1995). However, the analytical data presented in the closure report is summarized in Table 1 of this CAP-Part B Report. The records regarding the excavation of contaminated soil at the site are insufficient to determine the quantity of soil removed. All soil excavated under Fort Stewart's 1993 UST removal contract (USTs 54 & 55, USTs 63 & 64, USTs 248 & 249, USTs 255 & 256, USTs 257-260) was stockpiled at a central location and transported to Kedesh, Inc., at the end of the project. Disposal manifests under this project have been archived and can be made available upon request.

The Closure Report for UST 261 was not submitted to GA EPD in 1996 because the review of closure analytical data indicated that a CAP-Part A would be required (i.e., per requirements of GUST-9, Item 15, page 12, dated August 1995). However, the analytical data presented in the closure report is summarized in Table 1 of this CAP-Part B Report. Disposal manifests for the UST 261 site were submitted to GA EPD USTMP in September 1998 with the UST 207A (Facility ID#9-089039) Closure Report response to comment correspondence (Perez 1998). Approximately 17.3 tons of contaminated soil were excavated from the site.

No further excavation of potentially contaminated backfill or native soils has occurred at the USTs 257-261 site.

III.B. OBJECTIVES OF CORRECTIVE ACTION

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

As of October 1999, free product levels at the USTs 257-261 site are 0.01 feet thick. Free product levels will continue to be measured during the corrective action. If free product exceeds a thickness of 1/8-inch, then free product will be removed using sorbent socks or a free product recovery system, if necessary.

III.B.2. Remediate Groundwater Contamination

The CAP-Part A and CAP-Part B investigations documented groundwater contamination that exceeded IWQS. The maximum observed benzene concentration at the site was 32,700 µg/L. The groundwater plume is

impacting a sanitary sewer line, which is located below the water table and 180 feet downgradient of the area of highest contamination. This is evidenced by the benzene concentrations in wells 76-28 and 76-38 that are located on both sides of the sanitary sewer line.

Groundwater is flowing toward the east-southeast, and conservative fate and transport modeling using the AT123D model (Attachment B) suggests that benzene (the most conservative representative compound) will not exceed its MCL at the tributary to Taylors Creek located 1,000 feet east of the site. Concentrations of benzene and several PAH compounds exceed their respective ACLs (Appendix VI). Therefore, active remediation of groundwater is recommended for this site.

III.B.3. Remediate Soil Contamination

The ISC, CAP-Part A, and CAP-Part B investigations documented soil contamination above applicable GUST STLs (i.e., Table A, column 2) in several locations. The contaminants that exceeded STLs were BTEX constituents. The concentrations of the BTEX constituents and benzo(a)pyrene are above risk-based screening levels that are protective of soil exposure during industrial land use. The site is located beneath a combination of 6 to 12 inches of concrete, asphalt, or grass, which prevents incidental contact with the soil. The potential exists for excavation activities in the future at this site. Therefore, active remediation of soil is recommended.

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

A risk-based approach was used to aid in the decision making process to determine the need for further action at the USTs 257-261 site. Due to the nature of the contamination (petroleum hydrocarbon contamination of groundwater), the risk-based approach was limited to human health concerns. Ecological risk concerns are negligible because of the lack of habitat available for ecological receptors as a result of the groundcover overlying the majority of the site and the high amount of traffic flow at the site.

The methods for assessing human health concerns for the site were derived from 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 approach is performed in two steps:

1. Results were screened against readily available regulatory levels and risk-based screening levels to identify chemicals of potential concern (COPCs).
2. Site-specific ACLs were 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 the routes of exposure through which the receptors might be exposed. Figure 20 presents potentially complete and incomplete pathways for contaminant sources at the site.

The USTs 257-261 site is located within an active military installation. The land use at the site is currently civilian industrial (i.e., operation of an automobile service station). An Installation housing area is located approximately 5,000 feet to the north. A tributary to Taylors Creek is located approximately 1,000 feet east of the site. A sanitary sewer line is located below the water table and approximately 180 feet east of the area of highest contamination.

No connection between site contamination and current off-site receptors has been identified. Site contamination has migrated to the surficial aquifer; however, the Hawthorn Group separates the surficial aquifer from the deep drinking water aquifer, the Floridan aquifer, which is approximately 90 feet of clay. There appears to be no vertical migration from the surficial aquifer to the Floridan aquifer. However, the Hawthorn Group, a thick and highly effective confining unit, separates the water supply wells from the surficial aquifer.

No current on-site receptors have 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 drainage swale, which is highly unlikely because the bottom of the swale is at least 5 feet above the water table.

III.B.4.b. Screening for COPCs

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

The purpose of a risk evaluation screen 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 ASTM (ASTM 1995) Tier 1-type risk evaluation process will be applied to the data collected for the USTs 257-261 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 potential COPCs exist at the site.
- Compare detection limits to screening levels to identify potential false negative screening results.

The screening levels for the USTs 257-261 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 2),
- soil screening levels developed by the U.S. Environmental Protection Agency (EPA) (EPA 1996), and
- soil and groundwater risk-based concentrations developed by EPA Region 3 (EPA 1996).

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 (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 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 USTs 257–261 site.

If applicable, 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. Screening Results

The risk screening process is a systematic screening of sample results to determine site-related COPCs. Chemical concentrations below risk- or ARAR-based screening levels are not considered COPCs and are not evaluated further. Tables 8 and 9 present the results of the risk-based screening for the CAP-Part A SI soil data and the CAP-Part B SI soil data, respectively. Tables 10 and 11 present the results of the risk-based screening for the CAP-Part A SI groundwater data and the CAP-Part B SI groundwater data, respectively.

Forty-two soil samples were collected during the CAP-Part A SIs for USTs 257–260 and UST 261. Benzene, ethylbenzene, and toluene were detected above STLs in 18, 3, and 3 samples, respectively. Benzene, ethylbenzene, toluene, xylenes, and benzo(a)pyrene were detected above risk-based screening levels in 12, 3, 3, 1, and 2 samples, respectively. Forty-six soil samples were collected during the CAP-Part B SI for USTs 257–261. Benzene, ethylbenzene, toluene, and xylenes were detected above STLs in 13, 3, 6, and 3 samples, respectively. Benzene, toluene, ethylbenzene, xylenes, and benzo(a)pyrene were detected above risk-based screening levels in 11, 3, 6, 3, and 1 sample, respectively. Benzene, ethylbenzene, toluene, xylenes, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, lead, and TPH were detected below screening levels. Benzene, ethylbenzene, toluene, xylenes, and benzo(a)pyrene were identified as a COPCs for the USTs 257–261 site soils.

Detection limits for benzene, benzo(a)pyrene, and dibenzo(a,h)anthracene were above screening levels in a few of the samples collected during the CAP-Part A and CAP-Part B. The benzene and ethylbenzene results in sample 763511 were rejected (R qualified) due to extremely low area counts or a major drop off in performance of the laboratory controls. No COPCs for soils were selected for the site based on the detection limit screening or qualifier screening.

Fifteen groundwater samples were collected during the CAP-Part A SI for USTs 257-260 and UST 261. Benzene was detected above IWQS in 14 samples. Benzene, ethylbenzene, toluene, xylenes, and naphthalene were detected above risk-based screening levels in 14, 3, 4, 2, and 13 samples, respectively. Thirty-seven samples were collected during the CAP-Part B SI. Benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected above water quality standards in 16, 3, 3, 1, 3, and 3 samples, respectively. Benzene, ethylbenzene, toluene, xylenes, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and naphthalene were above risk-based screening levels in 25, 8, 11, 4, 3, 3, 4, 1, 3, and 15 locations. Ethylbenzene, toluene, xylenes, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, and dissolved iron were detected below screening levels. Benzene, ethylbenzene, toluene, xylenes, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and naphthalene were identified as COPCs for USTs 257-261 site groundwater.

The detection limit for benzene of 2 µg/L exceeds the risk-based screening level. Detection limits achieved during both the CAP-Part A and CAP-Part B for several PAHs exceeded their irrespective IWQS and/or risk-based screening levels for the groundwater data. For these chemicals, 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 COPCs. ATLs and ACLs were developed, when appropriate, for the COPCs using site-specific information from the fate and transport modeling. The ATL and ACL calculations are presented in Appendix VI and summarized in the following sections.

III.B.4.c.1. Alternate Threshold Levels

Benzene, ethylbenzene, toluene, xylenes, and benzo(a)pyrene were identified as COPCs for soil at the site. ATL calculations for these constituents are presented in Appendix VI and are based on the migration of leachate to the water table using the results of the SESOIL modeling. The ATLs are calculated to be 0.073 mg/kg for benzene, 24 mg/kg for toluene, 22 mg/kg for ethylbenzene, 1153 mg/kg for xylenes, and 10 mg/kg for benzo(a)pyrene. As shown in Figure 21, concentrations of the BTEX constituents exceed their respective ATLs.

III.B.4.c.2. Alternative Concentration Limits

Benzene, toluene, ethylbenzene, xylenes, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and naphthalene were identified as a COPCs for groundwater at the site. Benzene was modeled to two potential downgradient locations where a receptor may come in contact with migrating site contamination. These locations included a sanitary sewer line 180 feet downgradient, and a tributary to Taylors Creek 1000 feet downgradient from the area of highest contamination. Fate and transport modeling was used to develop site-specific DAFs between the source and the receptor locations (see III.B.4.c.3 below). Benzene is the indicator compound for VOCs, and naphthalene is the indicator compound for PAHs. The modeling results estimated DAFs for benzene of 10 for the sanitary sewer line and 73,400 for the tributary to Taylors Creek. The DAF for naphthalene to the sanitary sewer line is

1,587,000. 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 sanitary sewer line receptor were determined to be as follows:

- 713 µg/L for benzene (i.e. 10×71.28 µg/L),
- 2,000,000 µg/L for toluene (i.e. $10 \times 200,000$ µg/L),
- 287,180 µg/L for ethylbenzene (i.e. $10 \times 28,718$ µg/L),
- 120,000 µg/L for toluene (i.e. $10 \times 12,000$ µg/L),
- 49,356 µg/L for benzo(a)anthracene (i.e. $1,587,000 \times 0.0311$ µg/L),
- 49,356 µg/L for benzo(a)pyrene (i.e. $1,587,000 \times 0.0311$ µg/L),
- 146,000 µg/L for benzo(b)fluoranthene (i.e. $1,587,000 \times 0.092$ µg/L),
- 49,356 µg/L for benzo(k)fluoranthene (i.e. $1,587,000 \times 0.0311$ µg/L),
- 49,356 µg/L for chrysene (i.e. $1,587,000 \times 0.0311$ µg/L),
- 49,356 µg/L for indeno(1,2,3-cd)pyrene (i.e. $1,587,000 \times 0.0311$ µg/L), and
- 10,315,500 µg/L for naphthalene (i.e. $1,587,000 \times 6.5$ µg/L).

As indicated in Figure 22, benzene is the only constituent that exceeds its ACL.

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 Analytical Transient 1-, 2-, 3-Dimensional Model (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).

SESOL is used to simulate the vertical transport of contaminants from the source areas down through the vadose zone to the shallow groundwater (water table). SESOL 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 SESOL defines the "soil compartment" as a soil column extending from the ground surface through the unsaturated zone to the water table. Processes simulated in SESOL include both the hydrologic cycle and pollutant cycle, each of which are separate sub-modules in the SESOL 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 SESOL can partition in up to four phases (liquid, adsorbed, air, and pure).

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

- SESOL 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 (Bonazountas, Wagner, and Goodwin 1984; Wagner et al. 1986; Hetrick 1984; Watson and Brown 1985; Hetrick et al. 1986; Melancol, Pollard, and Hern 1986; Hetrick and Travis 1988; Hetrick et al. 1989; Hetrick, Luxmoore, and Tharp 1993).
- SESOL 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 is below the water table (i.e., 267 mg/kg in 76-41 at 10-12 ft). Therefore, this concentration was used to develop the maximum groundwater concentration at the source (i.e., 36,700 µg/L). The AT123D model was calibrated to match this concentration. The maximum benzene concentration in vadose zone (i.e., unsaturated soil) is 104 mg/kg in boring 76-19 and this value was used to model leaching to groundwater. The modeling of leaching to groundwater by percolating rain water was performed with SESOL in order to determine the soil ATLs. Thus, a steady-state model was developed by calibrating the model against the maximum estimated concentration (i.e., 36,700 µg/L) beneath the site. Potential receptors are a sanitary sewer located 180 feet east and a tributary to Taylors Creek located approximately 1,000 feet east of the area of highest contamination site. The invert elevation of the sanitary sewer is located below the water table, therefore, the utility is considered a potential receptor and/or preferential pathway.

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 feet/feet 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 provided in Attachment B. Two potential downgradient locations, a sanitary sewer and a tributary to Taylors Creek, at which a receptor might encounter migrating groundwater contamination were modeled. These are the nearest possible locations at which a receptor might encounter migrating groundwater contamination due to a possible hydraulic connection between the groundwater and the surface water in the ditch and the creek. Contaminant fate and transport simulations were performed to predict the maximum concentrations at these receptor locations over a simulation period of 100 years, assuming a continuous source based on the maximum estimated benzene concentration (i.e., 36,700 µg/L) in groundwater. The modeling results indicate that the maximum benzene concentrations are predicted to be 3,740 µg/L at the sanitary sewer and 0.5 µg/L at the tributary to Taylors Creek. Therefore, modeling results predict that the sanitary sewer is being impacted by concentrations above the IWQS and this has been confirmed by groundwater samples collected from 76-28 and 76-38. However, the modeling results predict that the surface water located outside the plume will not be impacted at concentrations above IWQS by the current site conditions at the USTs 257-261 site, Facility ID# 9-089118.

Based on modeling results the estimated DAF for benzene at the sanitary sewer is 10 and the DAF for benzene at the tributary to Mill Creek is 73,400. The estimated DAF for naphthalene at the sanitary sewer is 1,587,000. Simulations were also performed to predict the maximum concentrations of benzene over a simulation period of two years in the monitoring wells at the site. The predicted two-year maximum concentrations are presented in Table 12.

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 assuming a continuous source of contamination of infinite duration at the site based on the SESOIL maximum predicted benzene concentration (i.e., 36,700 µg/L) in groundwater.

- Free product at the site was observed in two wells at a thickness of 0.01 feet.
- The SESOIL maximum predicted benzene concentration was 36,700 µg/L, which is based on the maximum observed benzene concentration in soil of 267 mg/kg leaching to the groundwater.
- The vertical extent of soil and groundwater contamination was determined during the CAP-Part A and CAP-Part B investigations. Three additional downgradient wells are required to determine the horizontal extent of groundwater contamination.
- Risk-based screening results show that BTEX and benzo(a)pyrene, concentrations in soil exceed the initial screening levels.
- Risk-based screening results show that BTEX, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and naphthalene concentrations in groundwater exceed the initial screening levels.
- The modeling of benzene estimated a DAF of 10 for the sanitary sewer resulting in an ACL for benzene of 713 µg/L. Benzene concentrations at the site during the CAP-Part A and CAP-Part B investigations were above the ACL.
- ACLs were calculated for toluene, ethylbenzene, and xylenes in groundwater based on the benzene DAF for the sanitary sewer. ACLs were calculated for the PAH COPCs in groundwater based on the naphthalene

DAF for the sanitary sewer. All COPC concentrations except for benzene during the CAP-Part A and CAP-Part B investigations were below the respective ACLs for each compound.

- The modeling of benzene estimated a DAF of 73,400 for the tributary to Taylors Creek indicating that contamination may reach this location at very small concentrations, thus no ACLs were developed for this location.
- Fate and transport modeling of benzene indicates that contamination exceeds the Georgia IWQS at the conservatively defined downgradient receptor, a sanitary sewer line; however, at the tributary to Taylors Creek the Georgia IWQS is not exceeded.
- Based on the CAP-Part B data, the environmental site ranking score is 251,000 (Appendix X).

Considering the site characteristics, active remediation of the soil and groundwater at the site is required.

III.C. DESIGN AND OPERATION OF CORRECTIVE ACTION SYSTEMS

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

The presumed remedies evaluated for aromatic hydrocarbons in soil and groundwater at this site are included in Table 13. A three-step screening process was used to select the preferred remedy for the USTs 257-261 site. This alternative selection process is illustrated in Figure 23. The selected corrective action consisting of a combination of soil vapor extraction, air sparging, and groundwater extraction was chosen following evaluation of numerous established and innovative active and passive remediation alternatives. The following conceptual corrective action system design is provided to remediate soil and groundwater in accordance with the objectives outlined in Section III.B of this report. The remedial system employs proven technologies that should achieve the remediation objectives in a reasonable timeframe. It is estimated that gross removal of the contaminant mass will occur within 12 months, and that another 6 to 12 months will be required for polishing to reach the required ACLs.

III.C.1.a. Theory and feasibility

Data indicate that residual saturation of hydrocarbons exist in soils near points of release (e.g., distribution pipelines) at the site. The seasonal water table fluctuations of approximately 2 feet have further transported and smeared free-phase petroleum product onto soils. The aromatic gasoline constituents of concern (BTEX) are volatile and can be readily evaporated by passing air through the impacted soils. This remediation technique commonly called soil vapor extraction (SVE) is a proven and cost effective technology. The impacted soils that are seasonally below the water table, in saturated conditions, will not be remediated by SVE alone. However, when groundwater extraction is used in conjunction with SVE, the water table is lowered and the impacted soils are exposed to the SVE system. This situation will allow the volatile compounds to be extracted to the surface where they can be sorbed onto activated carbon or incinerated by a catalytic oxidizer.

Dissolved phase hydrocarbons exist in the groundwater beneath the site. The BTEX compounds are both volatile and aerobically degradable by bacteria, which already exist in the subsurface. Air sparging is a remediation technology proven to remove BTEX compounds from groundwater by both physically volatilizing and aerobically degrading by adding dissolved oxygen to the groundwater. Atmospheric air is injected into the groundwater at the base of the dissolved phase plume using a series of well points. As the air bubbles pass through the contaminant plume, the volatile BTEX compounds will partition from the dissolved phase to the vapor phase. Once the bubbles rise to the vadose zone, they will release the VOC laden air into the soil pores where it will be collected by the SVE system.

In addition to physically removing volatile organic compounds (VOCs), the sparging process will increase the dissolved oxygen in the groundwater to near saturation values (6 to 8 mg/l). Since existing dissolved oxygen levels in the groundwater are below saturation values, oxygen in the sparge bubbles will partition into the dissolved phase. This additional oxygen will stimulate the native aerobic bacteria population. The bacteria will consume both BTEX as well as any longer chain, less volatile hydrocarbons present within the treatment zone.

Extraction of groundwater concurrent with SVE and air sparging serves several functions. As previously mentioned, it will locally depress the water table to expose more soils to SVE. Secondly, it will control and remove fugitive sparge bubbles that may be traveling laterally due to encountering lower conductivity units such as silt or clay lenses which inhibit vertical movement. Groundwater extraction will also expedite cleanup by removing dissolved phase contamination and by flushing clean water through contaminated zones. The groundwater can be easily treated by simple aeration and discharged to a drainage swale via a NPDES permit or sanitary sewer. The combination of the three technologies will provide rapid restoration to both soil and groundwater in the treatment zone.

Groundwater extraction will also limit downgradient migration of impacted water. It is anticipated that upon initially turning on the system, the VOC concentration in the off gas will be very high. As the contaminant mass is removed from the soil and groundwater, the concentration of VOCs in the off gas will diminish to an asymptotic level, but will not reach zero. Once the off gas concentrations reach an asymptotic level, the groundwater extraction and SVE units can be shut off. At that time, the sparge system can be operated in a low flow capacity to increase dissolved oxygen in groundwater flowing downgradient east of Hero road. This will enhance the natural attenuation process downgradient of the site.

III.C.1.b. Remediation system

The USTs 257-261 site is an active automobile service station. The proposed remediation system consisting of soil vapor extraction and treatment, air sparging distribution, and groundwater extraction can be installed in such a manner that will allow continued operation of the service station while the remediation system is operational.

The distribution piping to the dispenser islands that was closed in-place will be excavated and removed. Removal of the distribution piping will eliminate a small possible source product. In addition, contaminated soil along the piping will be excavated and removed. This trench, 2 to 3 feet wide by 2 to 3 feet deep, can be reused for piping associated with the remediation system. All of the piping and wellhead will be installed below ground surface and the asphalt recoated.

In order to install the proposed remediation system, several permits may be required by GA EPD. These permits include an air emissions permit, an underground injection permit, and a NPDES permit if the effluent is discharged to the drainage swale.

Prior to installation of the remediation system or in conjunction with the system installation, specific information will be necessary to design an optimal system. The following information is required to design the system:

- groundwater flow rate from the groundwater extraction well,
- specific capacity (i.e., air flow rate) from the SVE wells,
- initial VOC concentration of the vapor to determine the influent concentration for the remediation system and to determine if off gas treatment is necessary, and
- determine the radius of influence by measuring the change in pressure between SVE wells.

A plan view of the proposed well locations for the remediation system is presented in Figure 24. The process flow diagram for the system is presented in Figure 25. Any changes to the remediation system proposed in this document due to the design information will be submitted to GA EPD.

III.C.1.b.1. Soil Vapor Extraction

The soil vapor extraction system will consist of approximately 16 subsurface collection points constructed with 2-in. diameter PVC casing similar to a groundwater monitoring well. A bentonite and/or cement grout will extend along the riser pipe to approximately 3 feet below grade. At that point the casing will be slotted and have a sand pack. The SVE wells will extend approximately 2 feet below the existing water table. The estimated radius of influence in silty sands is approximately 20 feet, resulting in a SVE well network on approximately 40 foot centers. The estimated flow rate per well is 10 cubic feet per minute (cfm). Actual flow rates, corresponding vacuums, and radii of influence will be measured during a pre-design field test. The estimated total SVE system flow rate is 160 cfm.

This subsurface flow would be induced by a vacuum pump/blower. Soil vapor would go through a soil vapor extraction condensate tank, which will knock out any moisture in the vapor phase before the vapor reaches the blower. Once on the positive pressure side of the pump, the vapor will be pushed through a catalytic oxidizer or activated carbon prior to discharge to the atmosphere. Each SVE well would have its own dedicated pipe leading to a header manifold near the treatment unit. Valves at the manifold can regulate flow rates from each well.

III.C.1.b.2. Air Sparging

Proposed air sparging injection points are based on estimated 25-foot radius of influence resulting in a layout based on 50-foot centers within the collection area of both the SVE and groundwater extraction systems. The 2-in. diameter PVC sparge wells will have a short 18-inch screened interval located near the estimated base of the dissolved phase plume. Depth of the dissolved phase plume exceeding ACLs varies from approximately 40 feet bgs near the northern piping to less than 15 feet bgs at the remainder of the site. An estimated flow rate of approximately 7 cfm per well resulting in total sparge system flowrate of 50 cfm is anticipated. Again, a more accurate estimate will be determined during pre-design field-testing. A liquid ring compressor will provide the airflow that will be regulated at a common manifold prior to flowing to each sparge point in individual subsurface lines.

III.C.1.b.3. Groundwater Extraction and Treatment

Four groundwater extraction wells (i.e., 6-in. diameter) will be installed to the base of the dissolved phase plume exceeding ACLs, which ranges from 15.0 to 40.0 feet BGS. Two wells will be located along the former petroleum distribution piping to depress the water table for the SVE process. Two additional wells will be installed at the down-gradient edge of the dissolved plume along the Hero road easement. Groundwater will be extracted with electric submersible pumps. The four discharge lines will manifold together near the treatment unit. Individual valves and flow meters will be included. A combined system flow rate of 10 gallons per minute is expected. Groundwater will be routed through a particulate filter and then into a shallow tray aeration system where the dissolved phase hydrocarbons will be removed and discharged directly to the atmosphere. No off-gas treatment from the stripper unit is anticipated. Based on current site information, an oil/water separator is not required. However, if recoverable free product is observed during installation of the recovery wells, one can be added to the system or start up of the groundwater extraction system can be delayed until the SVE system has volatilized the mobile free product. The treated groundwater will be discharged to the drainage swale along the western edge of the road in accordance with the NPDES permit or the sanitary sewer.

III.D. IMPLEMENTATION

III.D.1. Milestone Schedule

A remedial system implementation schedule has been prepared. A Gantt chart showing milestone activities and anticipated duration is provided in Figure 26. The actual time required to achieve the site remedial levels (i.e., ATLS and ACLs) may be greater, or less than that presented in Figure 24. Therefore, Fort Stewart will notify GA EPD USTMP of any significant changes to the proposed treatment schedule and will provide GA EPD USTMP an updated Gantt chart, as necessary.

III.D.2. Progress Reporting

Semiannual monitoring reports will be submitted to GA EPD that will summarize all the monthly monitoring events for that period. This will include copies of the monthly NPDES discharge form, if applicable, as well as any air discharge reporting requirements.

III.D.3. Certificate of Completion Report

Petition for permanent closure will be submitted with the final progress report (i.e., completion report). GA EPD will provide final approval for decommissioning the monitoring wells and treatment system extraction/sparge wells, which will be requested in the final progress/completion report. Decommissioning will be completed in accordance with the U.S. Army Corps of Engineers design manual for monitoring wells. Decommissioning will comply with all applicable state and federal standards.

The following certification will be submitted to GA EPD within 30 days of submitting the final progress/completion report:

I hereby certify that the Corrective Action Plan-Part B, dated _____, 20____, for Fort Stewart, USTs 257-261 site, Facility ID# 9-089118, 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

Preventative maintenance for the remediation system will be performed in accordance with the maintenance schedule provided in the Gantt chart. Initial startup tests and system calibrations will be conducted upon installation of the system. Site visits will be conducted weekly for the first month and biweekly for months 2 and 3 of operation. Depending on system performance, maintenance and sampling visits may be reduced to monthly for the remaining period of system operation. Selected personnel from Fort Stewart and Savannah District Corps of Engineers will also be trained on operation of the system and adjustment procedures so that more frequent visits can be conducted if required.

The systems will be operated in accordance with manufacture's specifications. Anticipated system adjustments/servicing include the following:

- Adjust pumping rates from groundwater extraction wells to achieve desired drawdown. Check flowrate and pressure for each sparge and SVE well.
- Check filters and treatment units for fouling.
- Sample treatment system influent and effluent water and vapor samples. Based on analytical results, adjust treatment units to ensure design removal efficiency is achieved.

Also, during each sampling event, wells and exposed piping and instrumentation will be visually inspected for changes or damage. Any notable observations will be recorded in the subsequent progress report.

III.D.5. Periodic Monitoring

Groundwater samples from 76-14, 76-15, 76-16, 76-18, 76-19, 76-21, 76-28, and 76-41 will be collected monthly and analyzed for BTEX. Several PAH compounds were selected as COPCs for groundwater at the site; however, the individual PAH concentrations are below their respective ACLs. Thus, it is recommended that PAH analysis not be performed during monthly sampling. Sampling will be scheduled to represent any impact due to seasonal fluctuation (wet/dry seasons). Sampling will occur during the groundwater remediation activities. System operation and monitoring will continue at the site until two consecutive months of sampling in the monitoring wells indicate that benzene concentrations at all site wells are below the ACL of 713 $\mu\text{g/L}$. During the last round of confirmatory sampling, the groundwater samples will be analyzed for BTEX and PAHs.

During each sampling event, water levels will be measured in all monitoring wells. Specific conductivity, pH, temperature, dissolved oxygen, and oxygen-reduction potential analysis will be completed on each sample from the monitoring wells where analytical samples are collected. The samples will be shipped to an approved laboratory for BTEX analysis using U.S. Environmental Protection Agency (EPA) Methods 8021B/8260B and PAH analysis using EPA Methods 8100/8270C/8310.

III.D.6. Effectiveness of Corrective Action

The remediation system will no longer be needed once the objectives of the corrective action have been achieved, that is to reduce the benzene concentrations in groundwater to below the ACL of 713 $\mu\text{g/L}$ and in soil to below the ATL of 0.073 mg/kg.

III.D.7. Confirmatory Soil Sampling Plan

Once VOC concentrations in the offgas of the SVE system have diminished to a constant or asymptotic level, up to five confirmatory soil samples near the source area will be collected for confirmation of remediation.

III.D.8. Stockpiled Bulk Soil Sampling

Soils generated during drilling and construction will be screened in the field with a flame ionization detector/photoionization detector. Soils will be properly contained and sampled for disposal/treatment purposes.

III.D.9. Termination Conditions

Concentrations of benzene in groundwater and soil must be at or below the respective ACL or ATL prior to terminating the operation of the remedial system.

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

After GA EPD approval for termination has been granted, equipment and debris related to the remediation activities and/or monitoring program will be removed from the site. Wells including monitoring, extraction, sparge, and SVE will be abandoned in accordance with COE and state guidelines.

III.E. PUBLIC NOTIFICATION

The USTs 257-261 site is located entirely within the confines of Fort Stewart Military Reservation, a federal facility. The U.S. Government owns all of the property contiguous to the site. The Fort Stewart DPW has complied with the public notice requirements defined by GA EPD guidance by publishing an announcement in the *Savannah Morning News* on November 20 & 27, 1999. A copy of the newspaper announcement used for public notification is presented in Appendix XI of this report.

IV. CLAIM FOR REIMBURSEMENT

Fort Stewart is a federally owned facility and has funded the investigation for the USTs 257-261 site, Facility ID# 9-089118 using Department of Defense Environmental Restoration Account Funds. Application for Georgia Underground Storage Tank Trust Fund reimbursement is not being pursued at this time.

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V. REFERENCES

- Abou-Rizk, J. A., M. E. Leavitt, and D. A. Graves 1995. "In Situ Aquifer Bioremediation of Organics Including Cyanide and Carbon Disulfide" in R. Hinchey, ed., *In Situ and On-Site Bioreclamation*. Battelle Press, Columbus, Ohio.
- 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.
- Bonazountas, M. and J. Wagner 1984. *SESOIL: A Seasonal Soil Compartment Model*, Arthur D. Little, Inc., Cambridge, MA, prepared for EPA, Office of Toxic Substances.
- Bouwer, H. and R. C. Rice 1976. "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells," in *Water Resources Research*, Vol. 12, No. 3, pp.423-428.
- EPA 1991. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors, Interim Final* (Interim Final), OSWER Directive 9285.6-03, EPA, Office of Emergency and Remedial Response, Washington, D.C.
- EPA 1996. *Soil Screening Guidance*, Office of Solid Waste and Emergency Response, EPA/540/R-94/101, available from U.S. Government Printing Office, Washington, D.C.
- 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 1995.
- GA EPD 1996. *Guidance for Selecting Media Remediation Levels at RCRA Solid Waste Management Units*, Georgia Environmental Division, Atlanta, Ga., November 1996.
- GA EPD 1998. *Rules of Georgia Department of Natural Resources, Environmental Protection Division, Chapter 391-3-6, Water Quality Control*, May.
- Herrick, S.M. and Vorchis, R.C. 1963. *Subsurface Geology of the Georgia Coastal Plain*, Georgia Geologic Survey Information Circular 25.
- Hetrick, D.M. 1984. *Simulation of Hydrologic Cycle for Watersheds*, paper presented at Ninth IASTED International Conference on Energy, Power and Environmental Systems, San Francisco, CA.
- Hetrick, D.M., C.C. Travis, P.S. Shirley, and E.L. Etnier 1986. *Model Predictions of Watershed Hydrologic Components: Comparison and Verification*, Water Resources Bulletin, pp. 803-810.
- Hetrick, D.M. and C.C. Travis 1988. *Model Predictions of Watershed Erosion Components*, Water Resources Bulletin, pp. 413-419.

- Hetrick, D.M., C.C. Travis, S.K. Leonard, and R.S. Kinerson. 1989. *Qualitative Validation of Pollutant Transport Components of an Unsaturated Soil Zone Model (SESOIL)*, ORNL/TM-10672, Oak Ridge National Laboratory, Oak Ridge, TN.
- Hetrick, D.M., R.J. Luxmoore, and M.L. Tharp. 1993. *Latin Hypercube Sampling with the SESOIL Model*, proceedings, Eighth Annual Conference on Contaminated Soils, University of Massachusetts at Amherst, September.
- Looper, Edward E. 1980. *Soil Survey of Liberty and Long Counties, Georgia*, U.S. Department of Agriculture, Soil Conservation Service.
- Melancol, S.M., J.E. Pollard, and S.C. Hern. 1986. "Evaluation of SESOIL, PRZM, and PESTAN in a Laboratory Column Leaching Experiment," *Environmental Toxicology and Chemistry* 5(10): 865-878.
- Miller, James A. 1990. *Groundwater Atlas of the United States*, U.S. Department of the Interior, U.S. Geological Survey, Hydrologic Inventory Atlas 730G.
- Mills, W. B., D. B. Porcella, M. J. Unga, S. A. Gherini, K. V. Summers, G. L. Rupp, and G. L. Buvoic 1985. *Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants: Parts 1, 2, and 3*, EPA/600/6-85/002, EPA Environmental Research Laboratory, Office of Research and Development, Athens, Ga.
- Perez, Ovidio E. 1998. Letter to William Logan (GA EPD, USTMP), September 15.
- SAIC (Science Applications International Corporation) 1996. *Work Plan for Preliminary Groundwater and Corrective Action Plan - Part A/Part B Investigations at Former Underground Storage Tank Sites, Fort Stewart, Georgia*, August.
- SAIC 1999a. *Corrective Action Plan - Part A for USTs 257-260, Facility ID 0-890037, Building 430, Fort Stewart, Georgia*.
- SAIC 1999b. *Corrective Action Plan - Part A for UST 261, Facility ID 9-089118, Building 430, Fort Stewart, Georgia*.
- Wagner, J., M. Bonazountas, and M. Alsterberg 1983. *Potential Fate of Buried Halogenated Solvents vis SESOIL*, Arthur D. Little, Inc. Cambridge, MA.
- Watson, D.B. and S. M. Brown 1985. *Testing and Evaluation of the SESOIL Model*, Anderson-Nichols and Co., Inc., Palo Alto, CA, p. 155.
- Wallace, Ronald J. 1999. Letter to Thomas C. Fry (Fort Stewart, DPW ENRD Environmental Branch), June 11.

APPENDIX I
REPORT FIGURES

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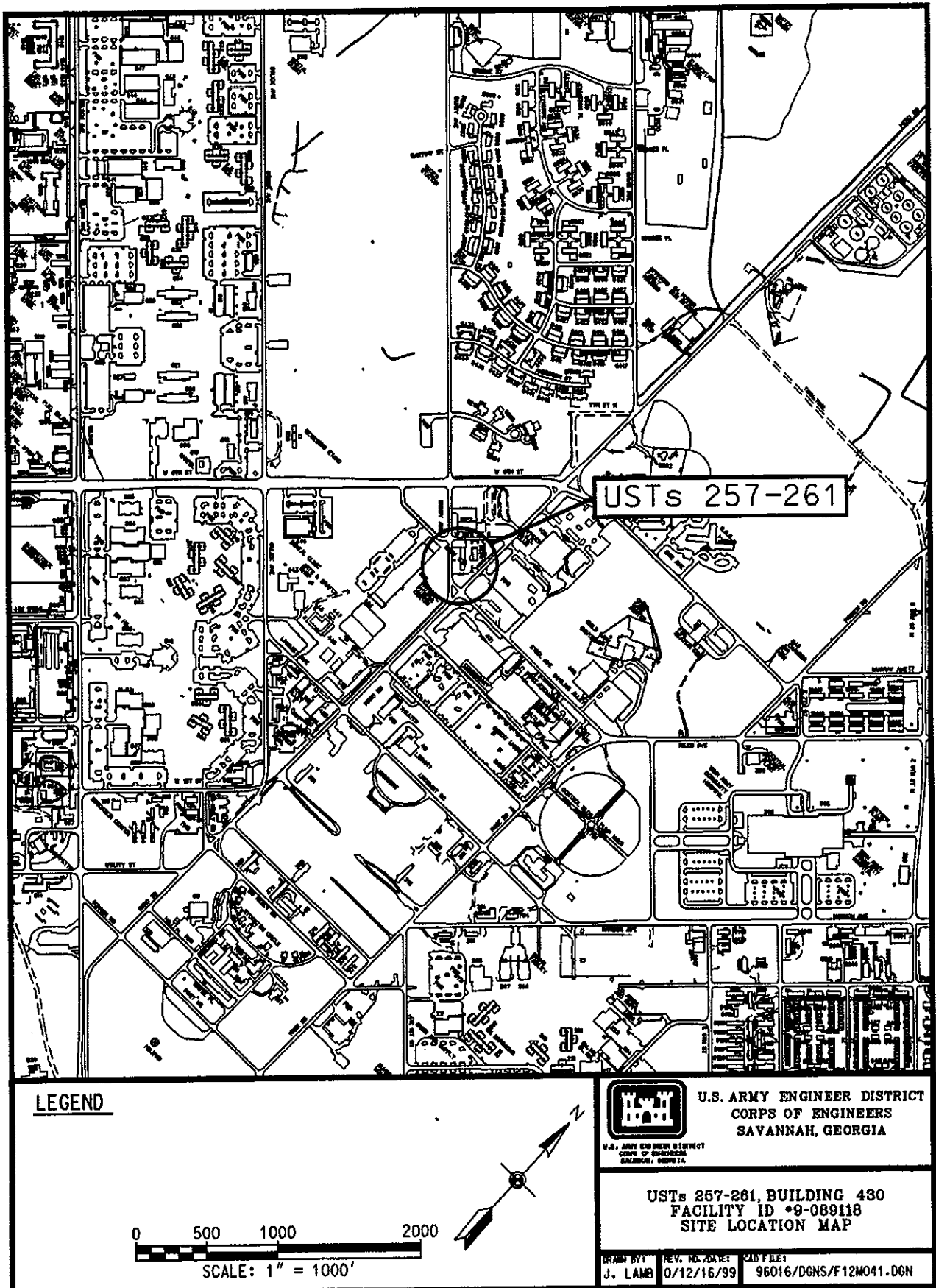


Figure 1. Location Map for the USTs 257-261 Site, Facility ID# 9-089118

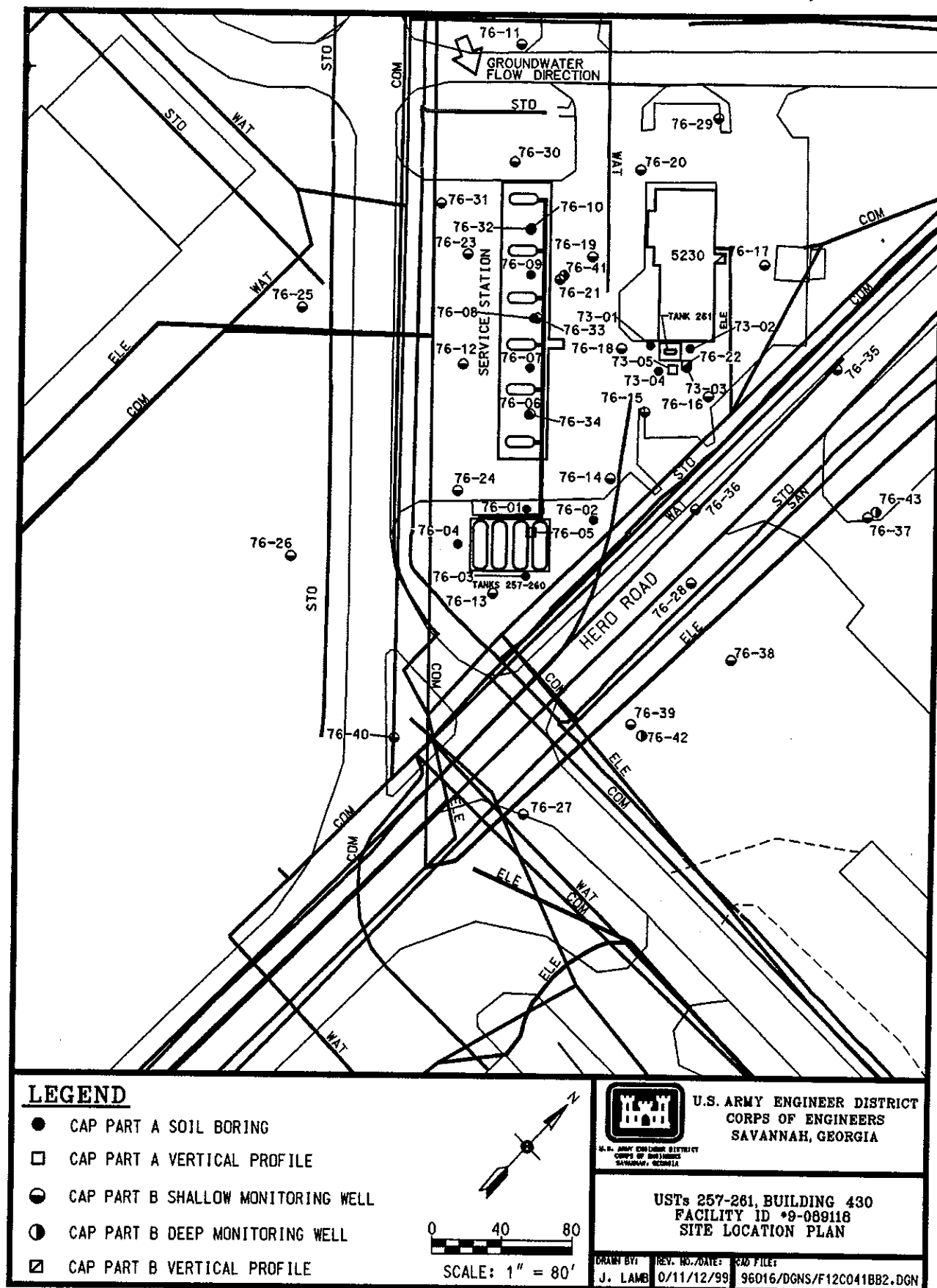


Figure 2. Site Map of the USTs 257–261 Site, Facility ID# 9-089118

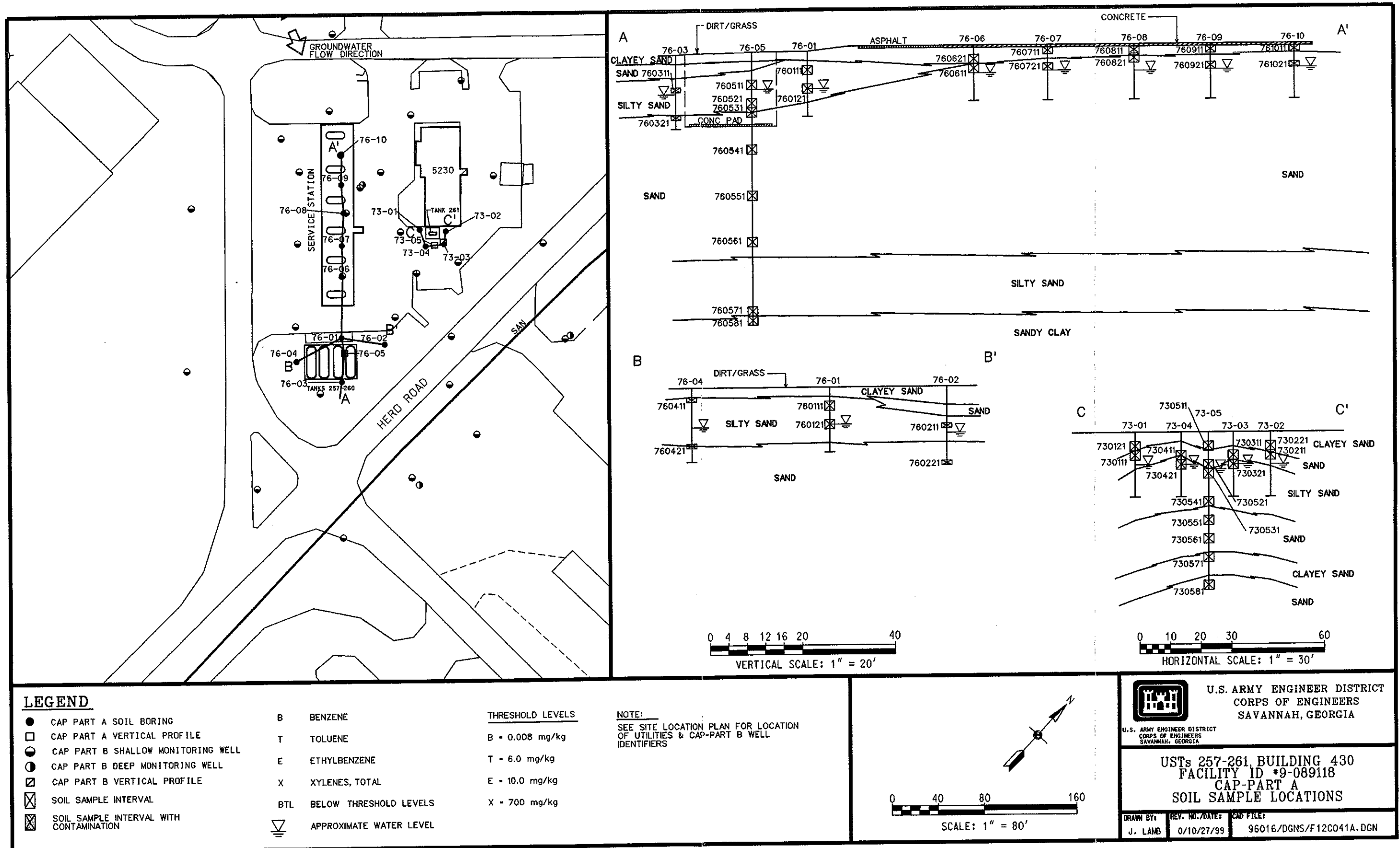


Figure 3a. CAP-Part A Soil Sampling Locations at the USTs 257-261 Site, Facility ID# 9-089118

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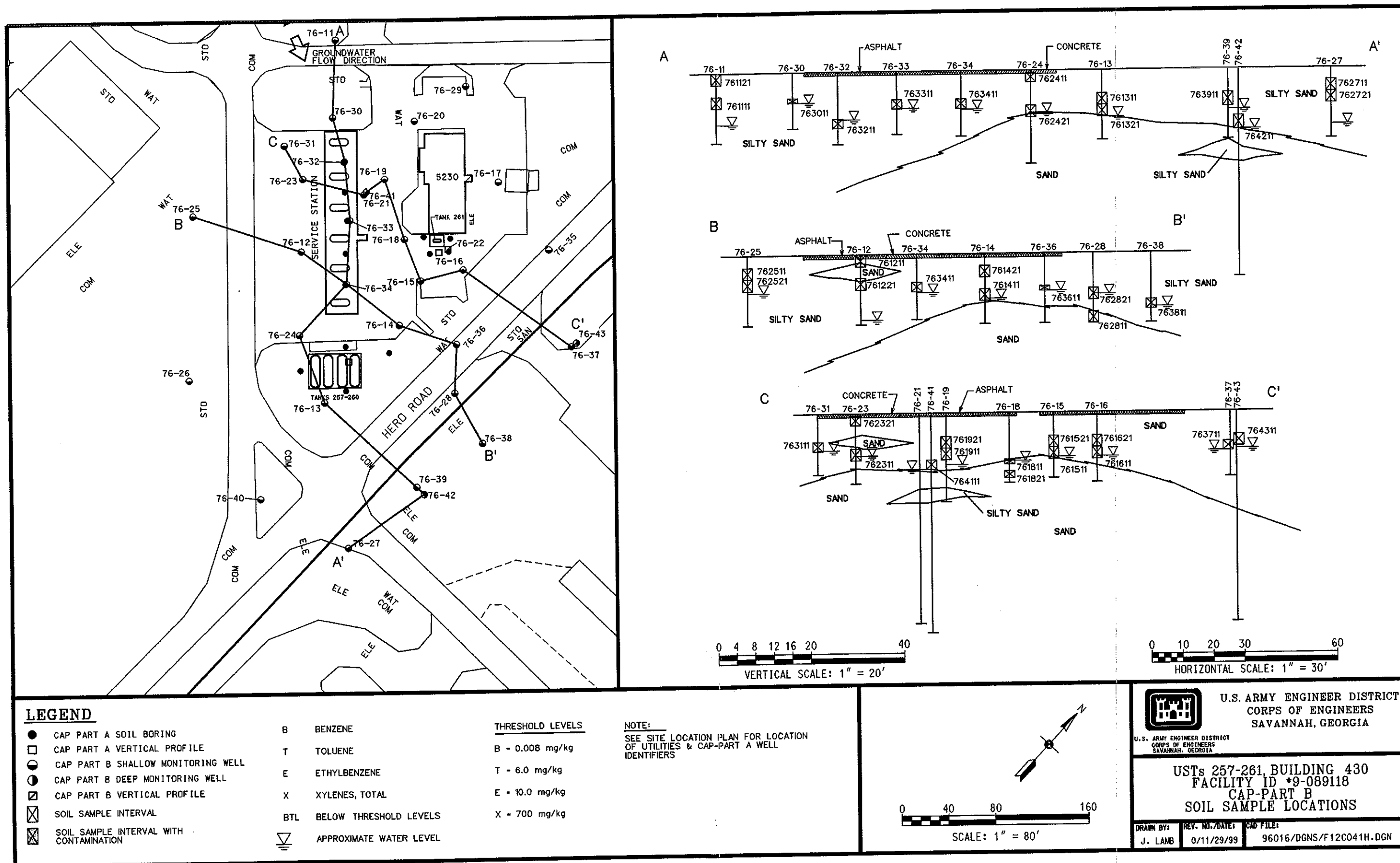


Figure 3b. CAP-Part B Soil Sampling Locations at the USTs 257-261 Site,
Facility ID# 9-089118

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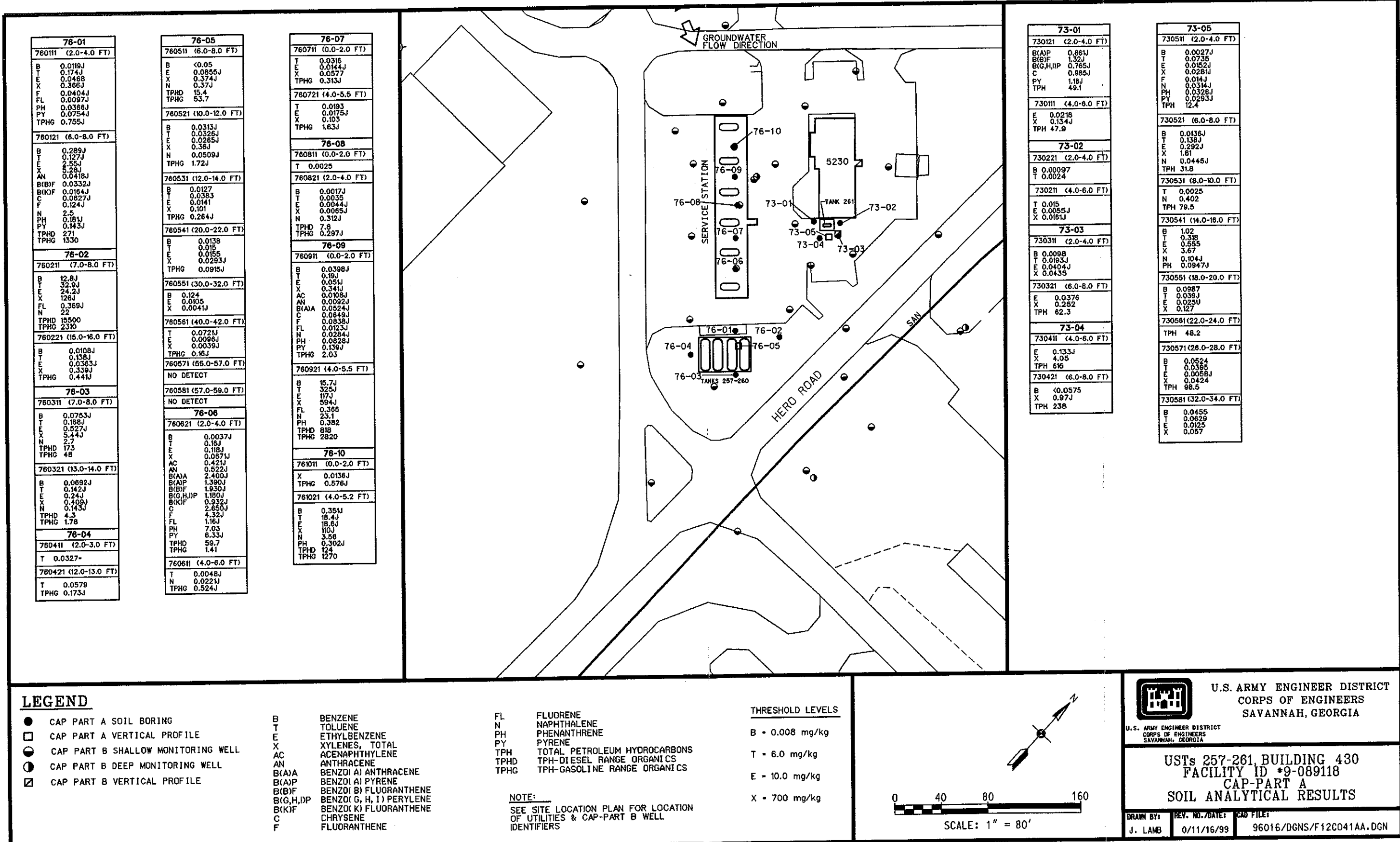


Figure 4a. CAP-Part A Soil Sampling Analytical Results at the USTs 257-261 Site,
Facility ID# 9-089118

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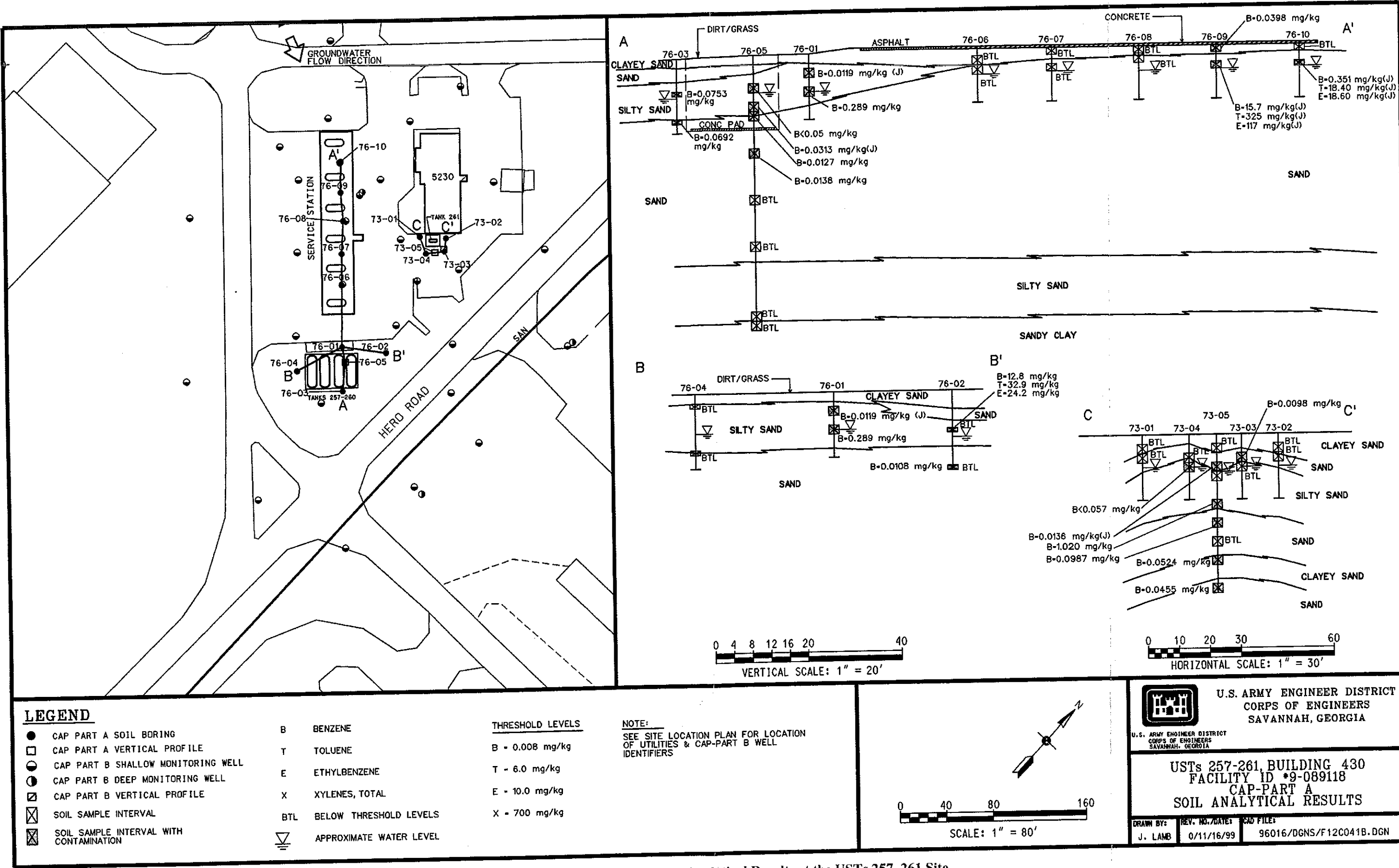


Figure 4b. CAP-Part A Soil Sampling Analytical Results at the USTs 257-261 Site, Facility ID# 9-089118

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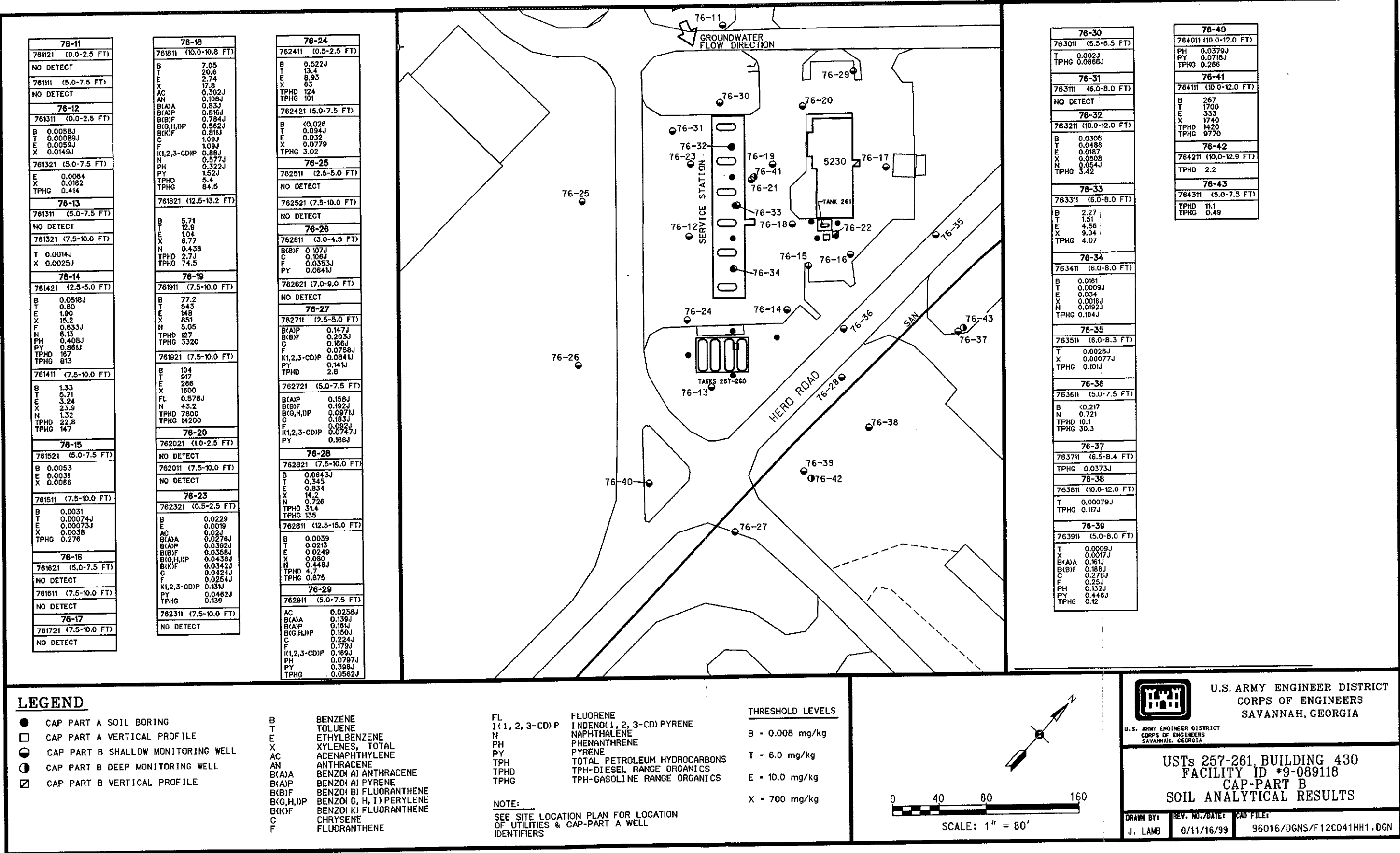


Figure 5a. CAP-Part B Soil Sampling Analytical Results at the USTs 257-261 Site, Facility ID# 9-089118

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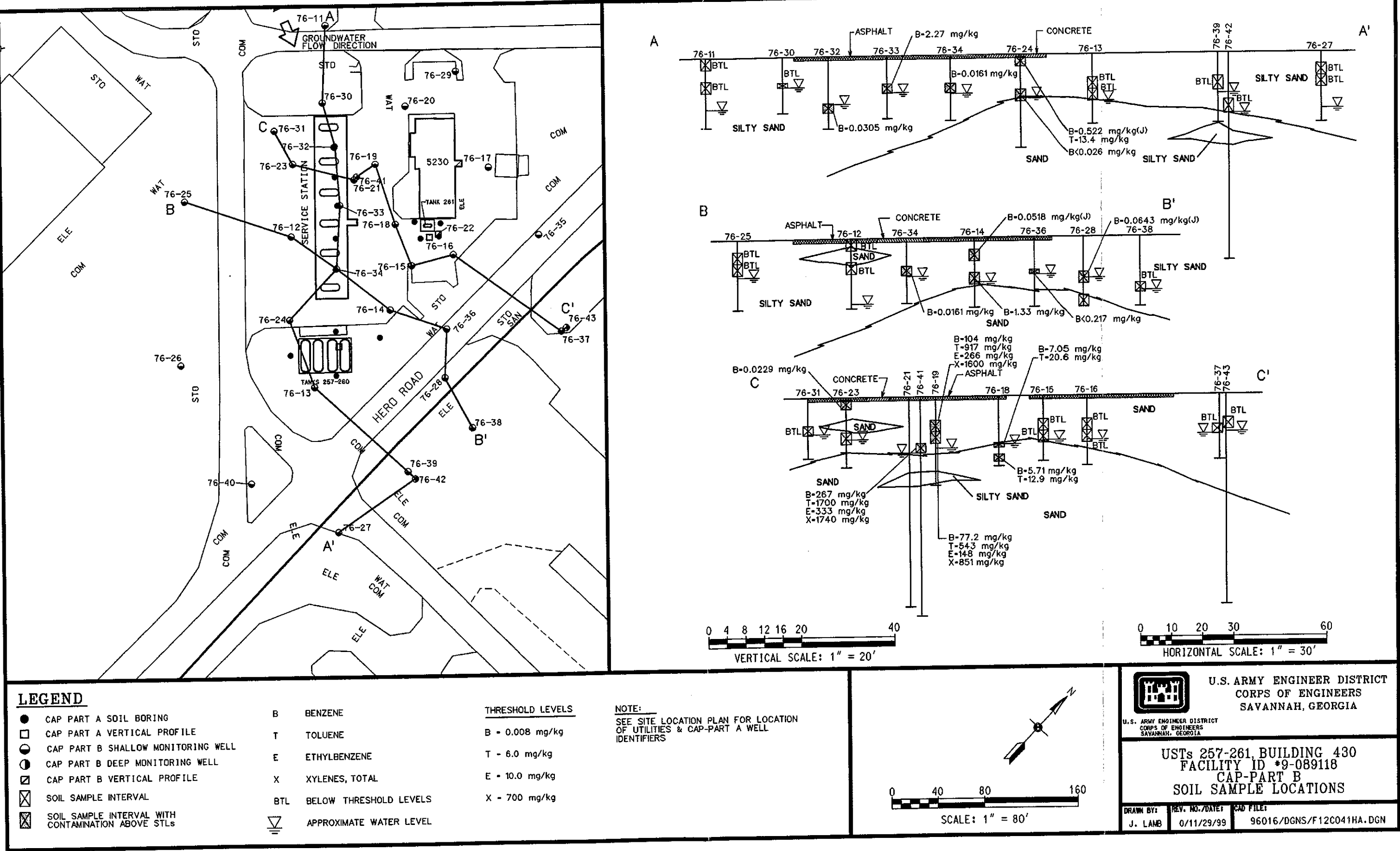


Figure 5b. CAP-Part B Soil Sampling Analytical Results at the USTs 257-261 Site,
Facility ID# 9-089118

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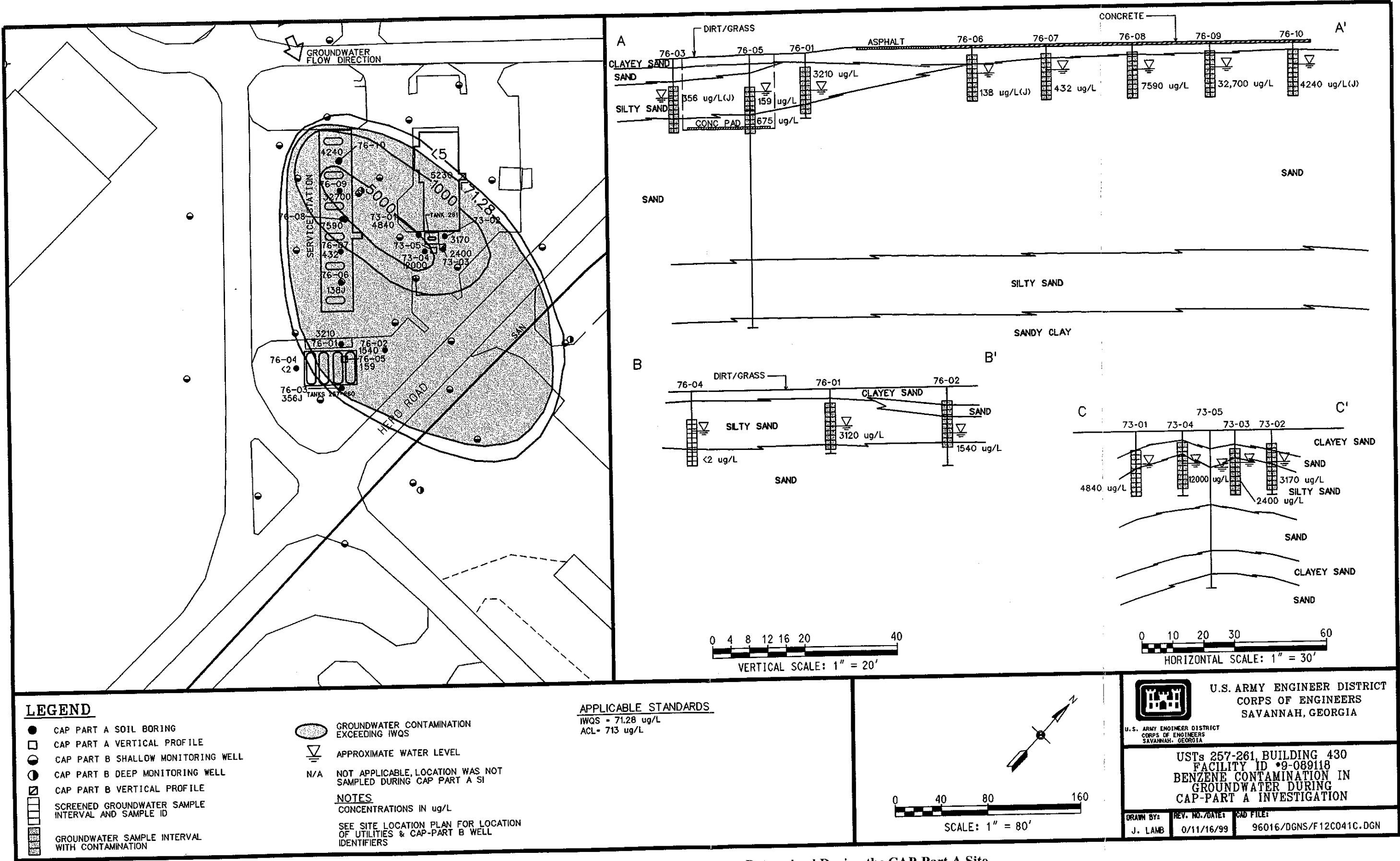


Figure 6. Benzene Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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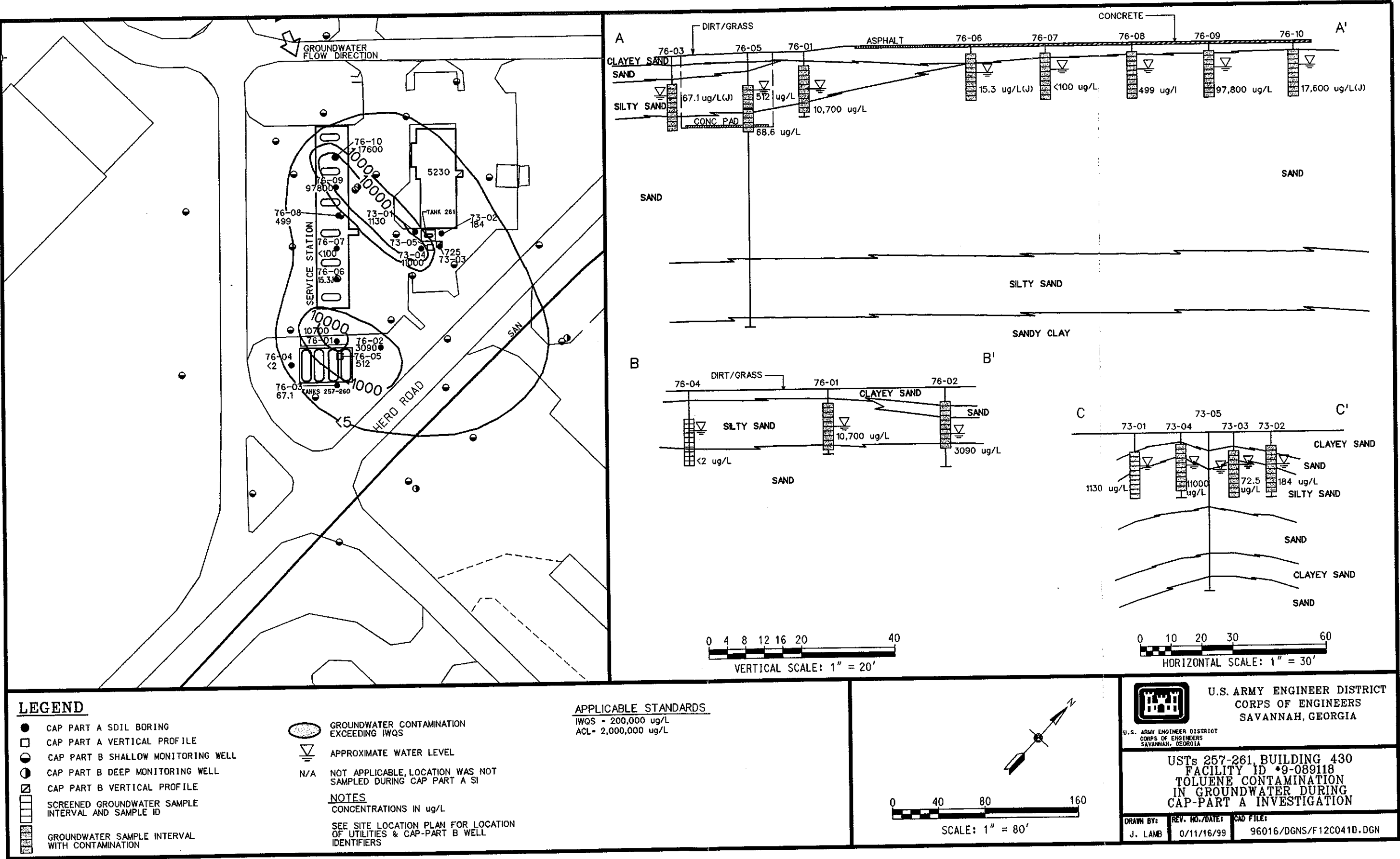


Figure 7. Toluene Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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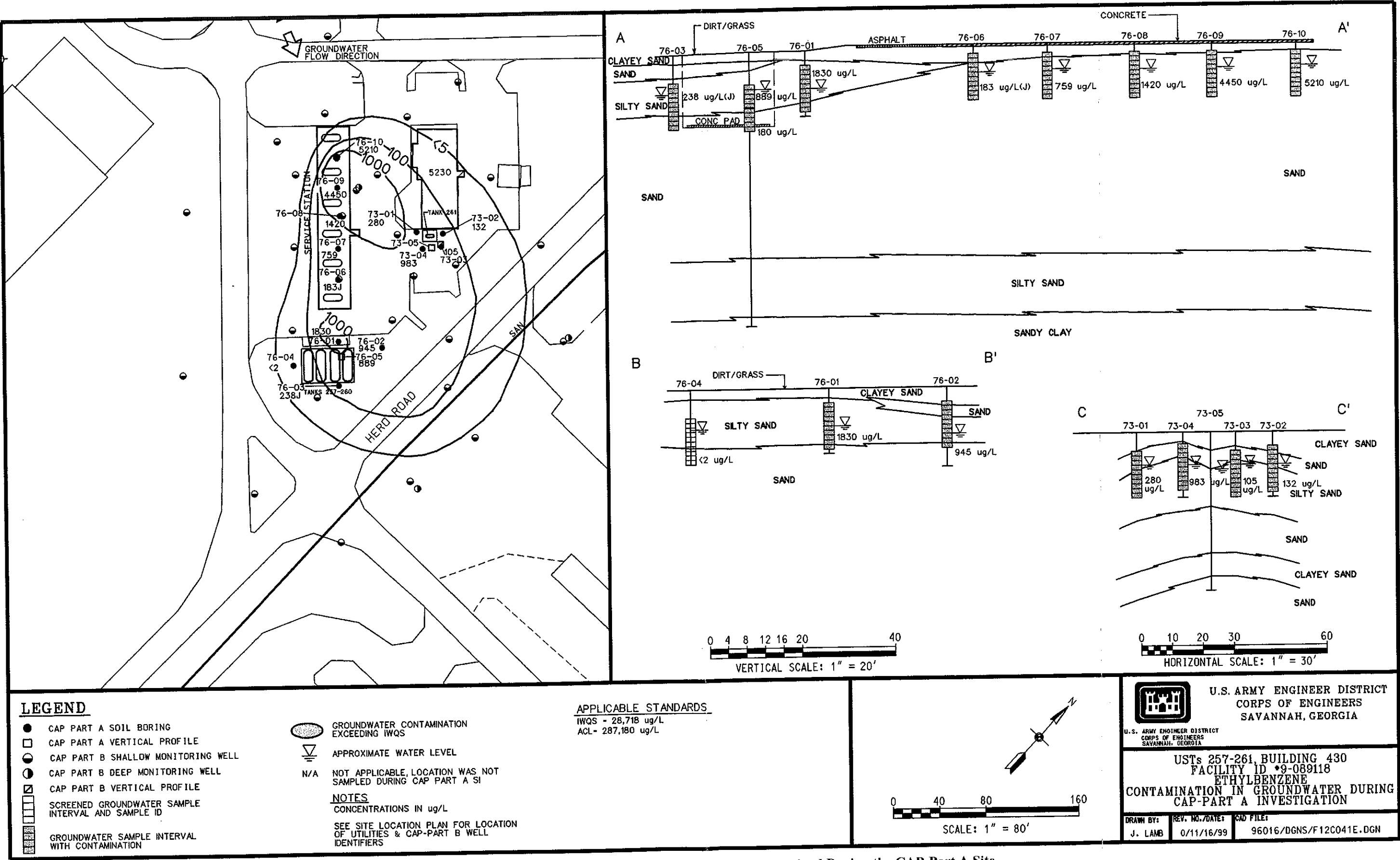


Figure 8. Ethylbenzene Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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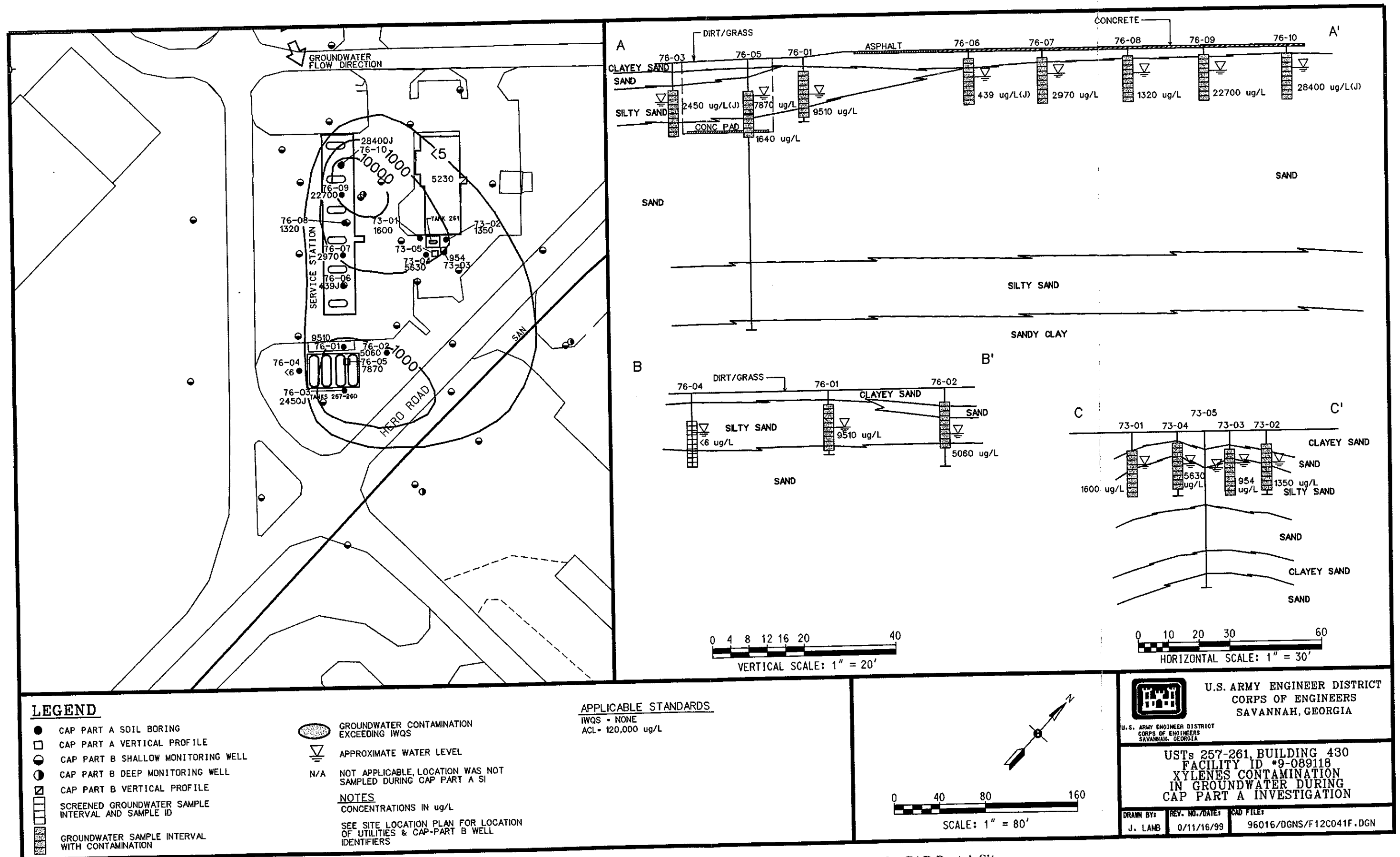


Figure 9. Total Xylenes Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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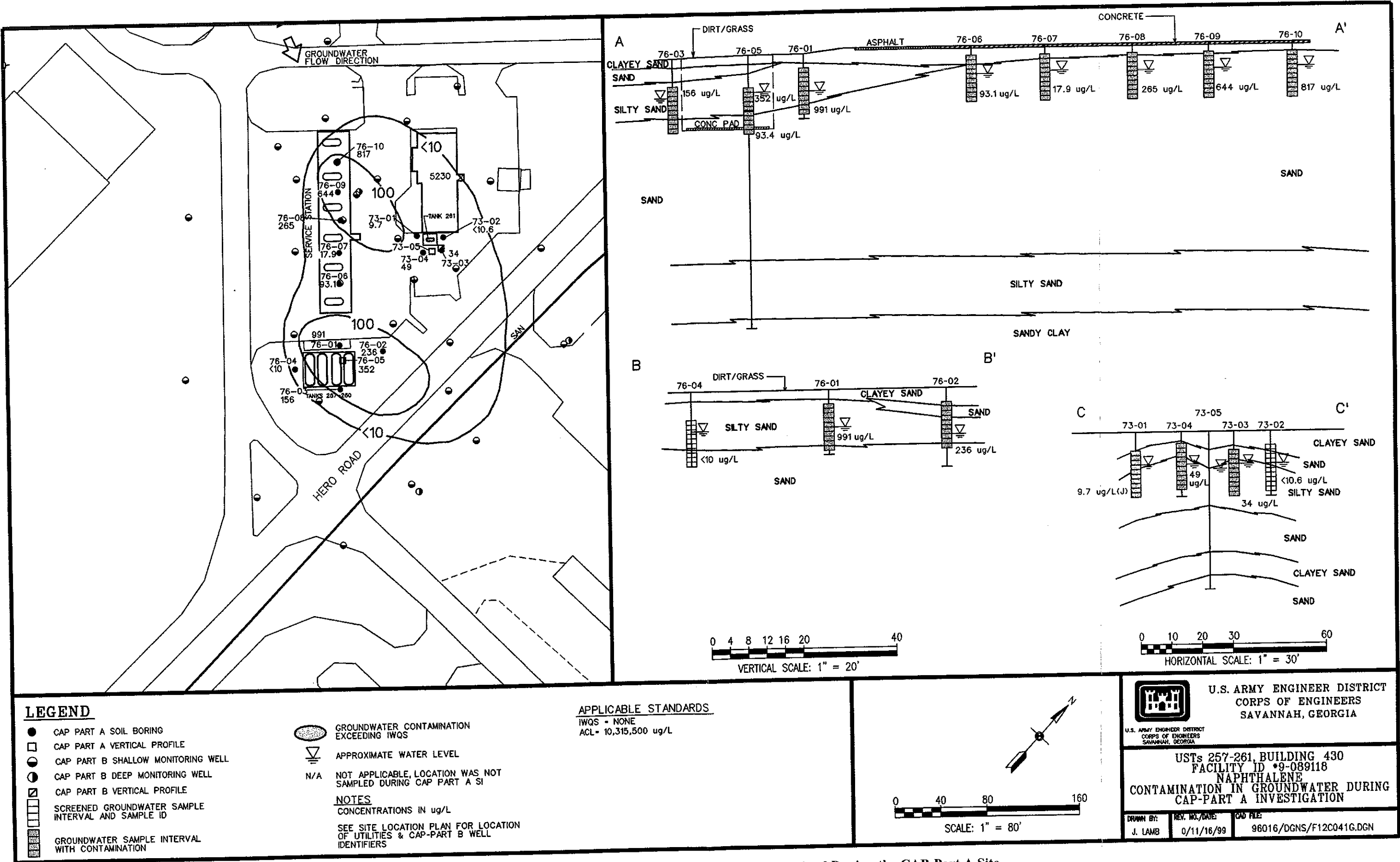


Figure 10. Naphthalene Contamination in Groundwater Determined During the CAP-Part A Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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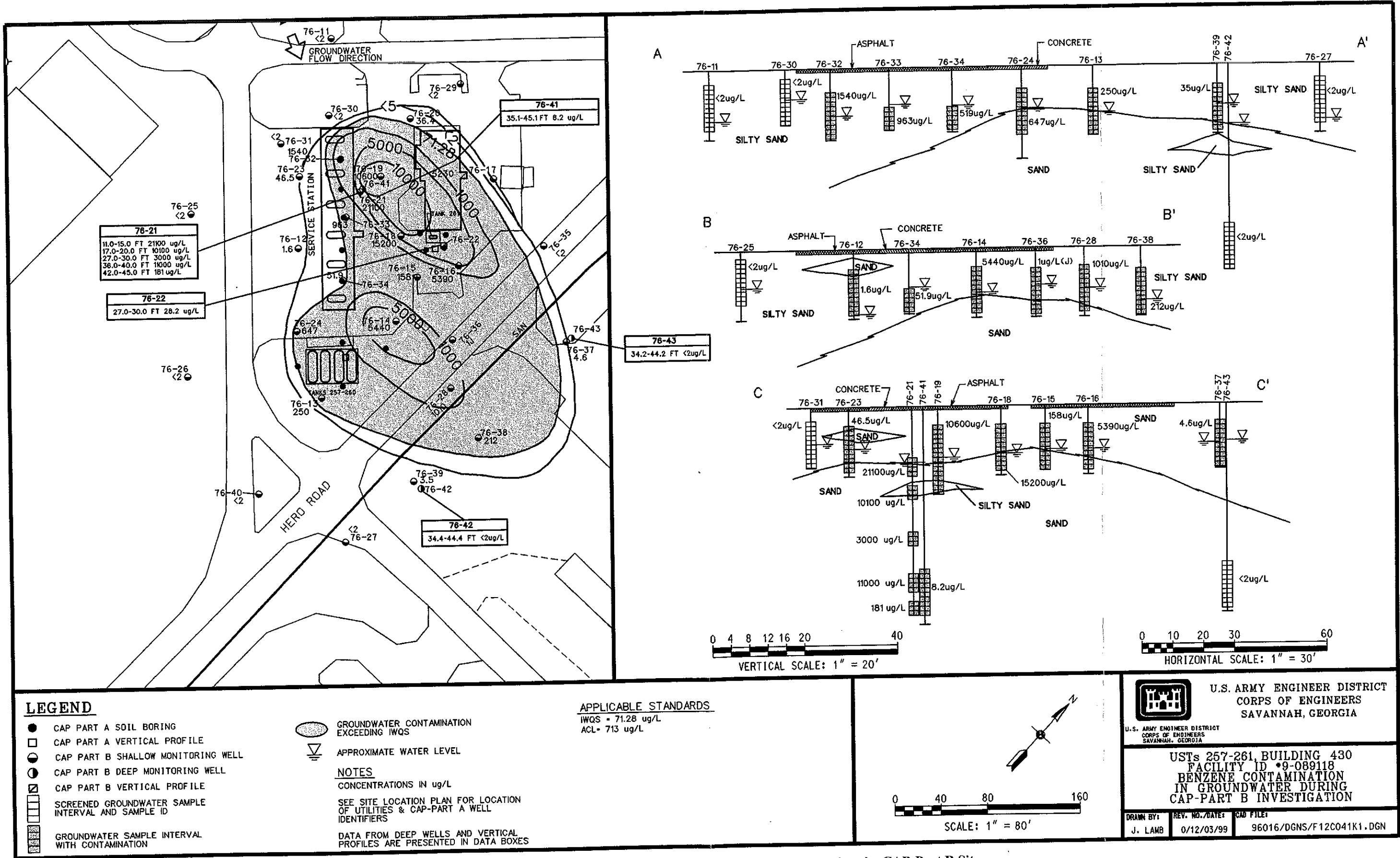


Figure 11. Benzene Contamination in Groundwater Determined During the CAP-Part B Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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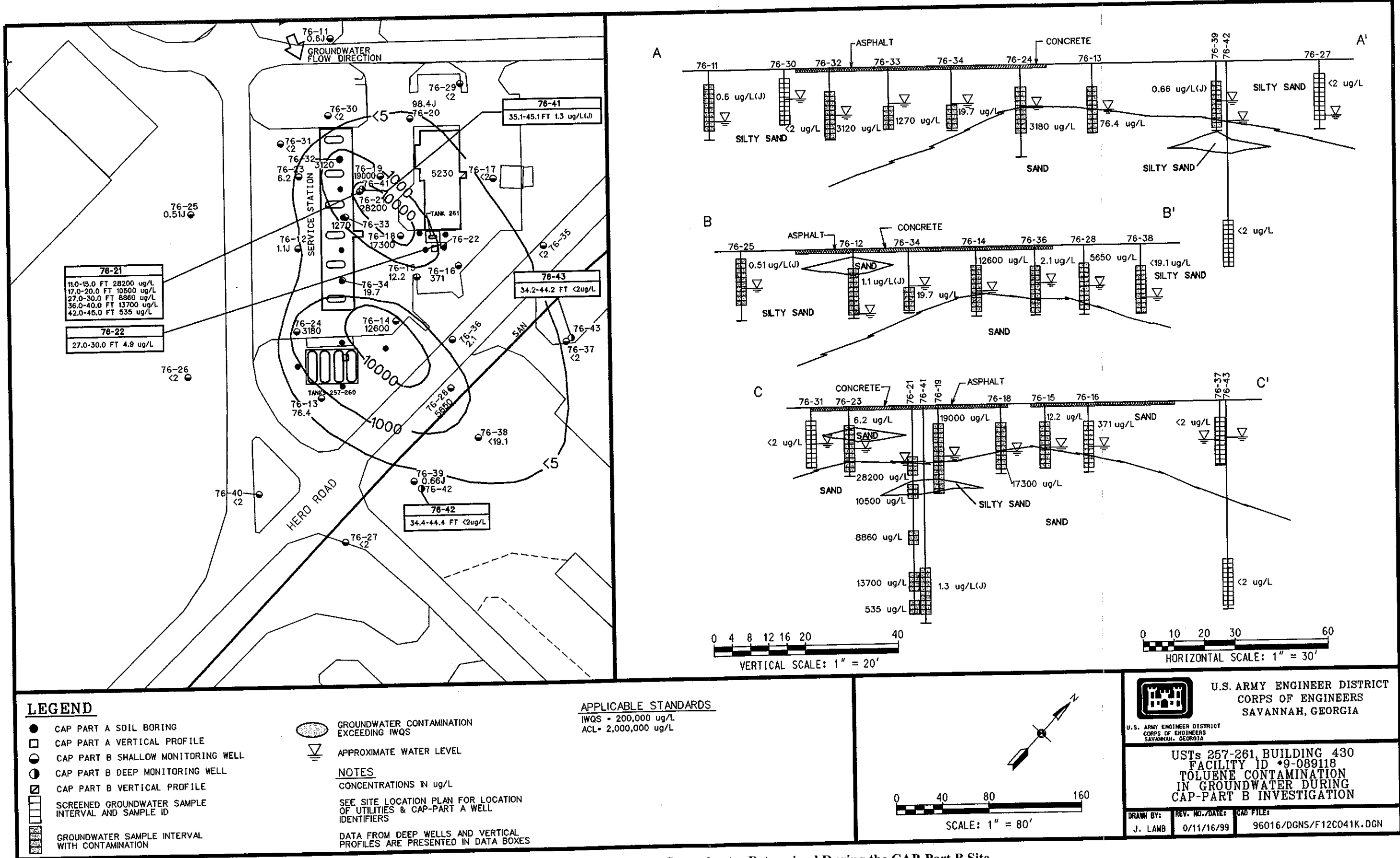


Figure 12. Toluene Contamination in Groundwater Determined During the CAP-Part B Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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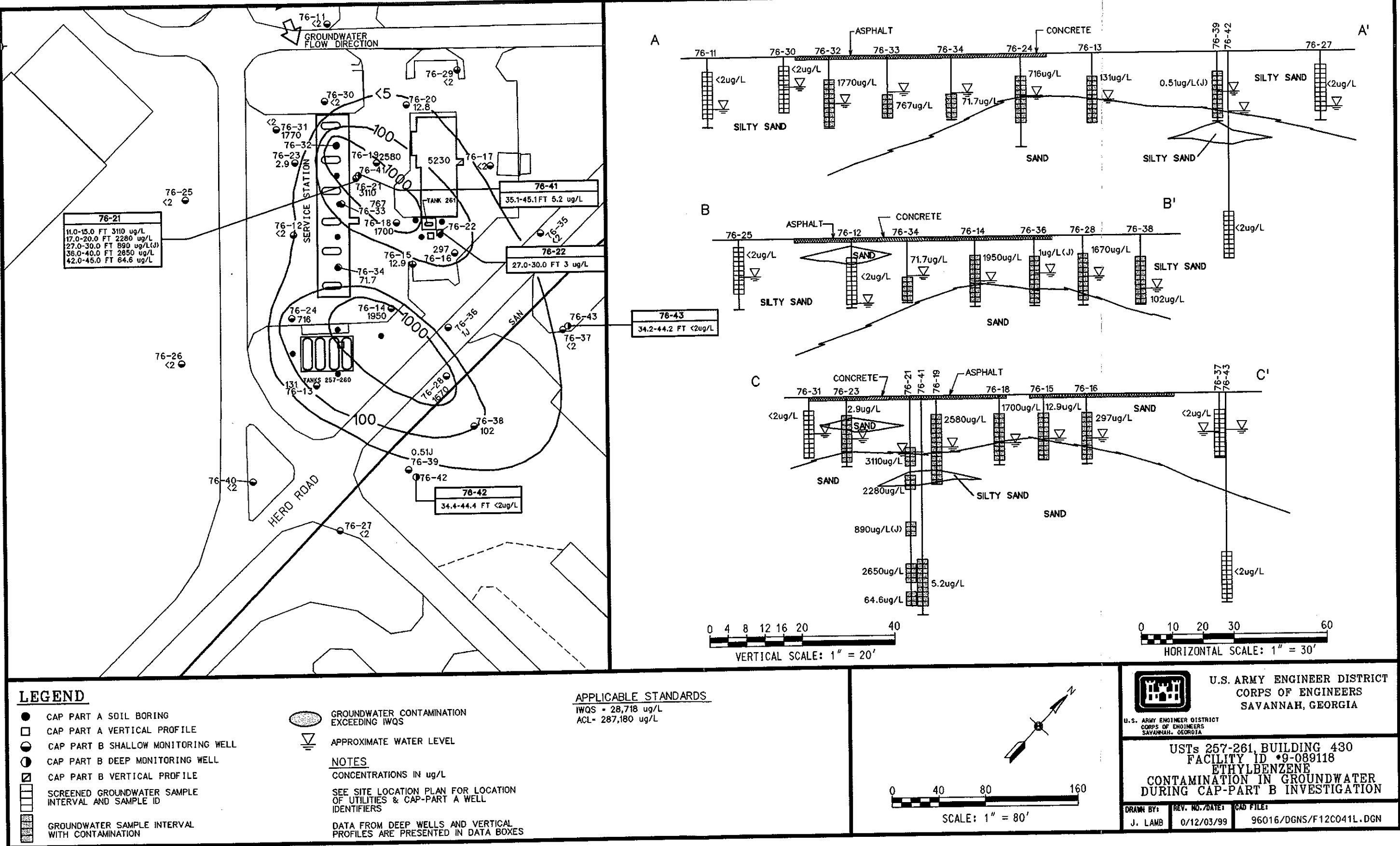


Figure 13. Ethylbenzene Contamination in Groundwater Determined During the CAP-Part B Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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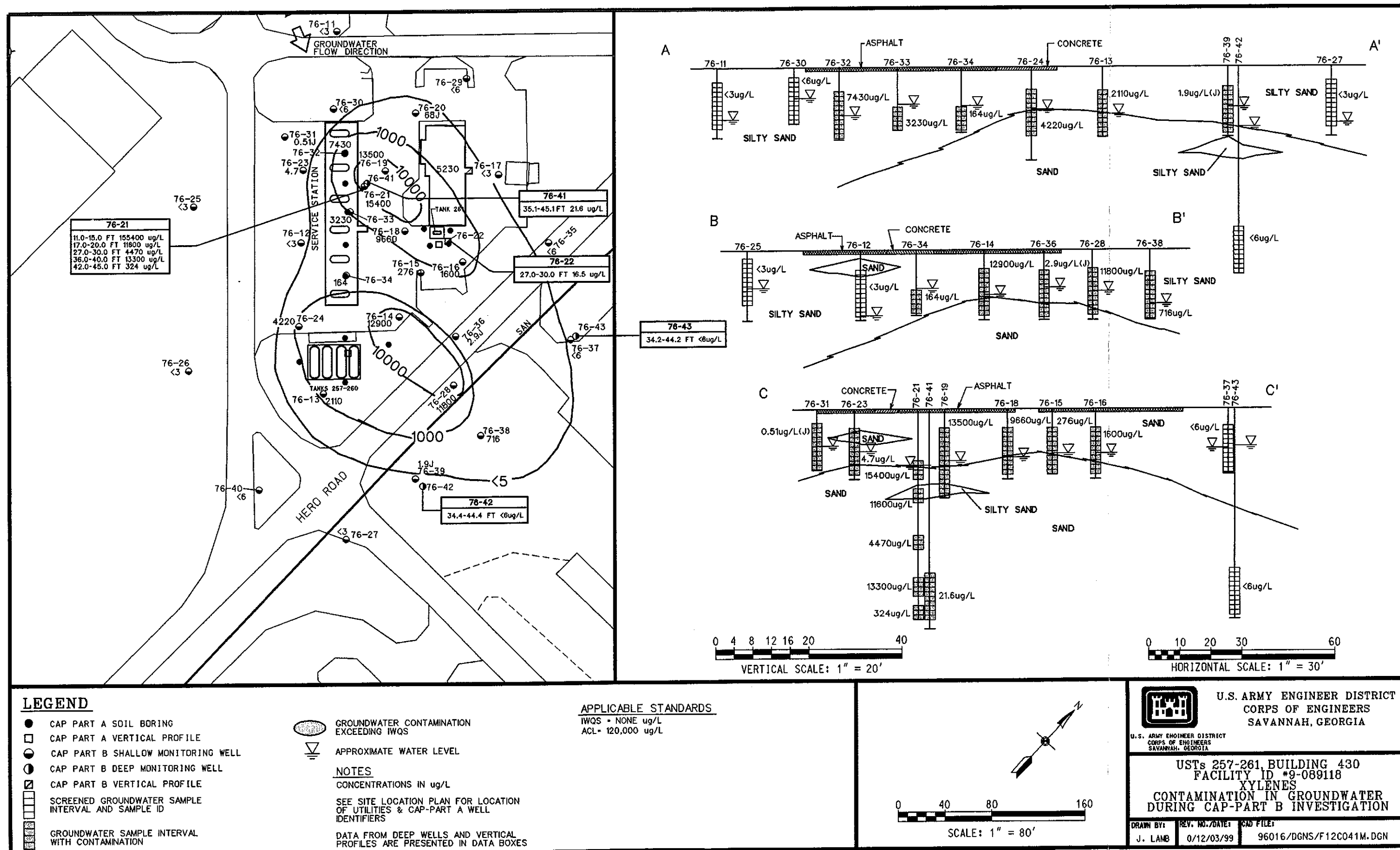


Figure 14. Total Xylenes Contamination in Groundwater Determined During the CAP-Part B Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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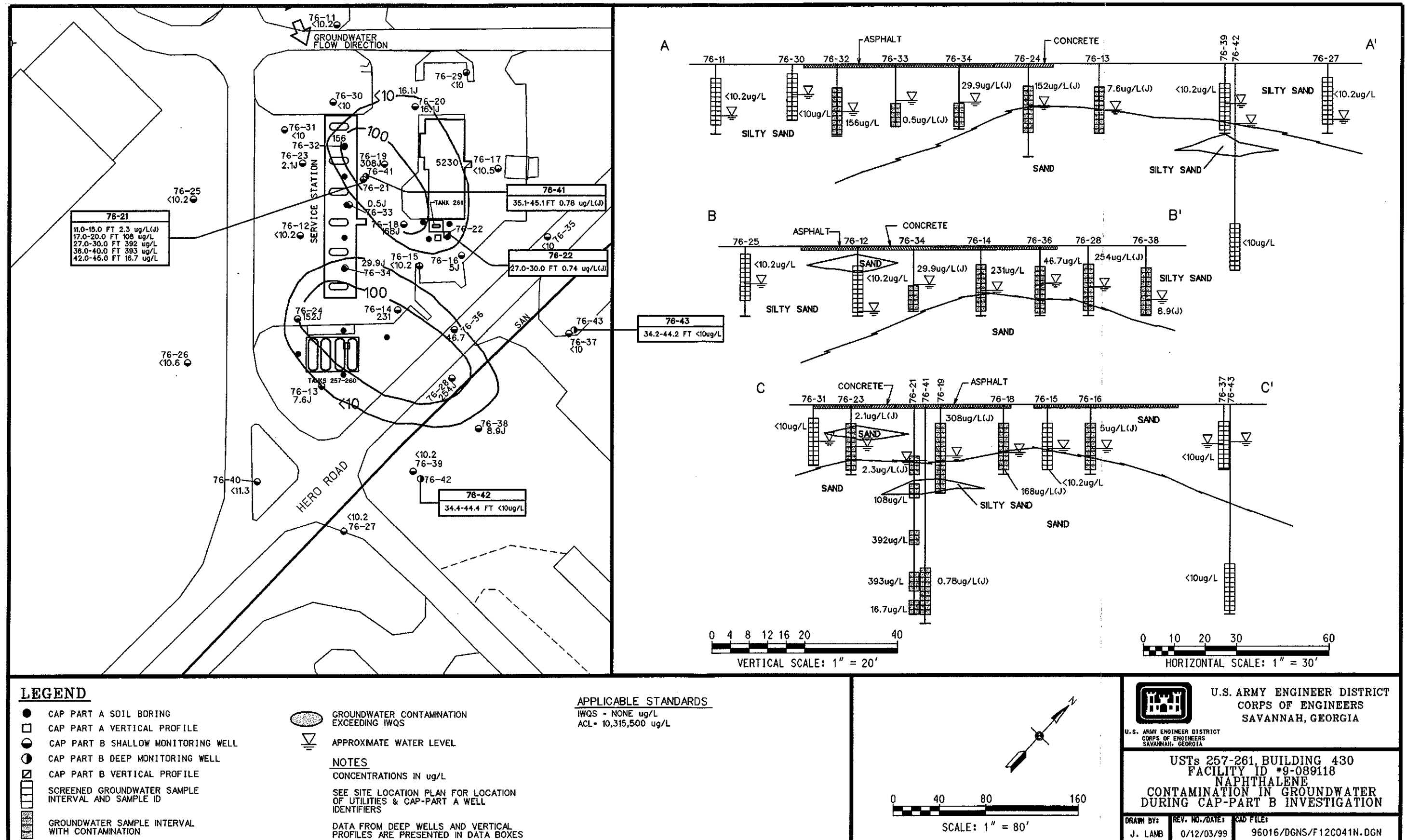
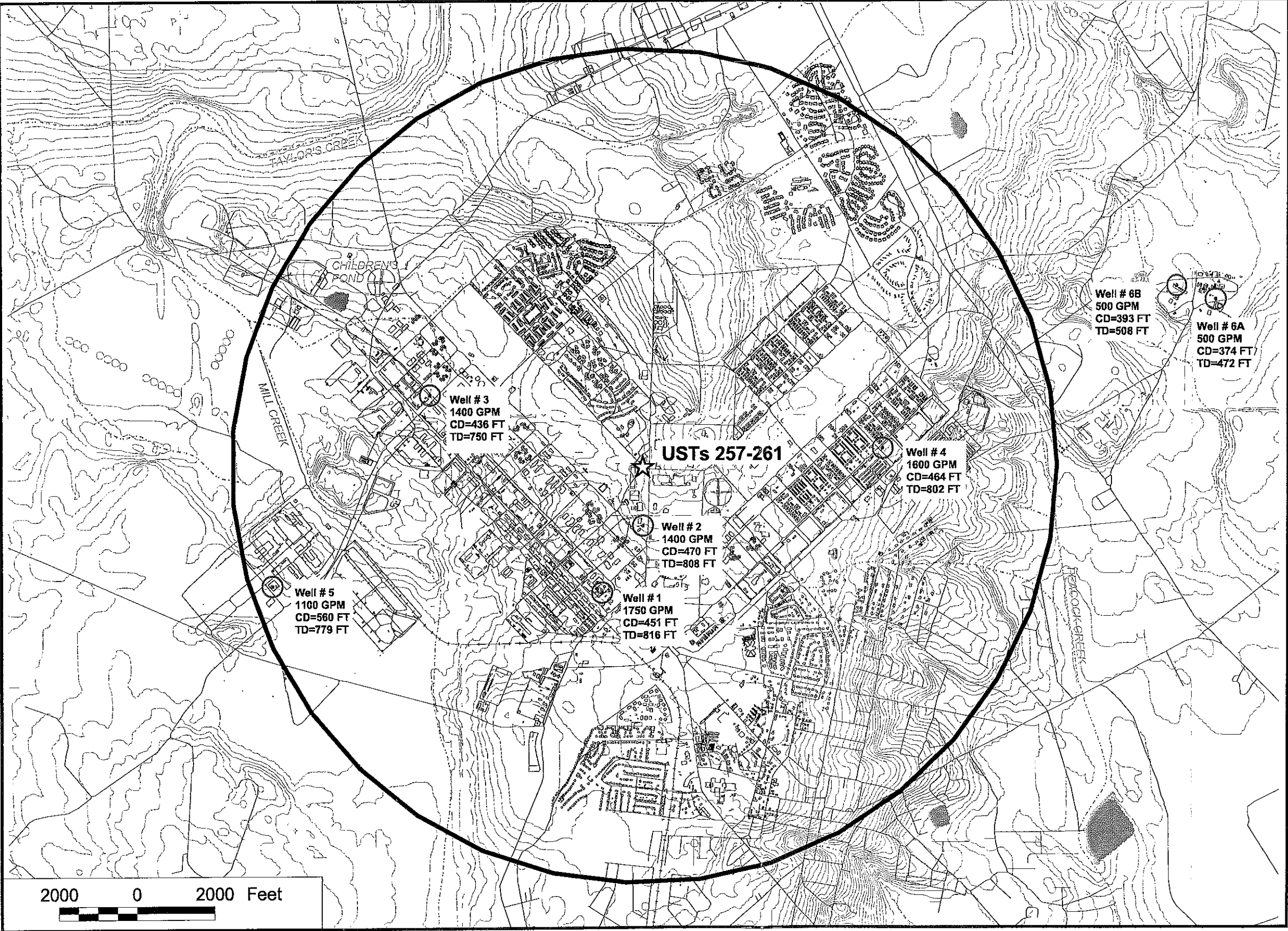


Figure 15. Naphthalene Contamination in Groundwater Determined During the CAP-Part B Site Investigation at the USTs 257-261 Site, Facility ID# 9-089118

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Legend:

- 2 Mile Radius
- Surface Water (stream/river/drain)
- Contour (2 FT intervals)
- Road (primary)
- ★ USTs 257-260
- Water Supply Well with 500 FT Radius
- CD Casing Depth
- TD Total Depth
- Pond/Lake
- Building

NOTE:
Contours were created by Science Applications International Corporation (SAIC) from Digital Elevation Models translated from <http://www.usgs.gov/>, which were obtained from the following U.S.G.S. 7.5 minute Topographic Quad sheets: Hinesville, Walthourville, Taylors Creek, Trinity. Roads, railroads, surface water, and county boundaries were translated from <http://www.esri.com/>. Buildings and water-supply wells were translated by SAIC as Microstation files from Fort Stewart.

N

GA State Plane NAD83 (feet)

SAIC
Science Applications International Corporation

USTs 257-261 Facility ID #9-089118
Building 430

REVISION	DRAWN BY:	CHKD BY:	DATE:
1	B. ALTOM	S. STOLLER	6/1/99
2	K. CUTSHAW	S. STOLLER	11/17/99
3	B. BAXTER	S. STOLLER	1/13/00

FILE REFERENCES

Liberty County Tiger Line Files
_cty _str
_lrb _inh _wat
USGS DEMS
_Hinesville _Taylors Creek
_Trinity _Walthourville

SHT 1 of 1
DRAWING # GIS09016/PROJECTS/STEW257.APR
ARCVIEW PROJECT NAME

Figure 16. Locations of Groundwater Supply Wells and Surface Water Bodies with Respect to the USTs 257-261 Site, Facility ID# 9-089118

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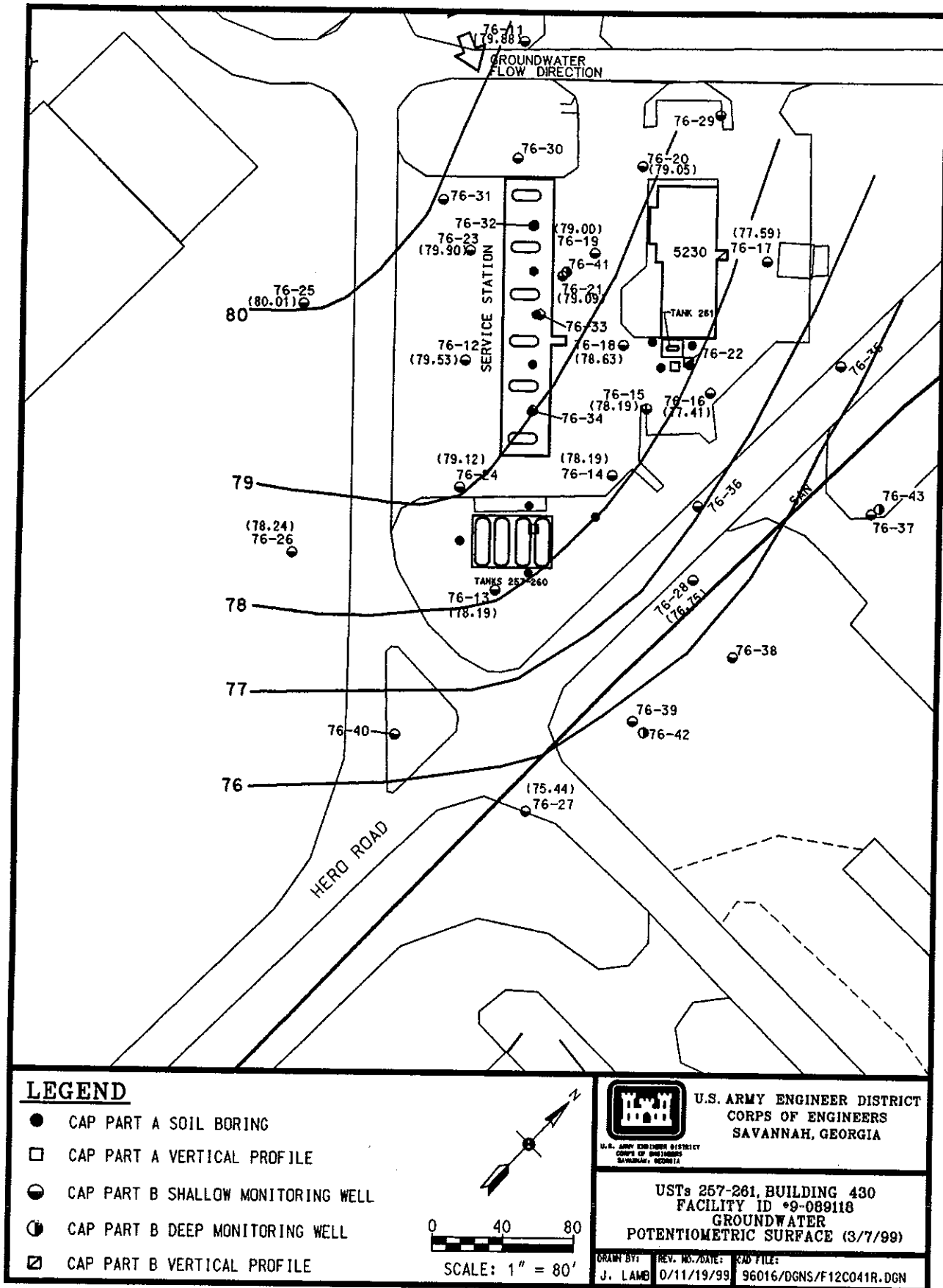


Figure 17. Groundwater Potentiometric Surface Map (March 1999) for the USTs 257-261 Site, Facility ID# 9-089118

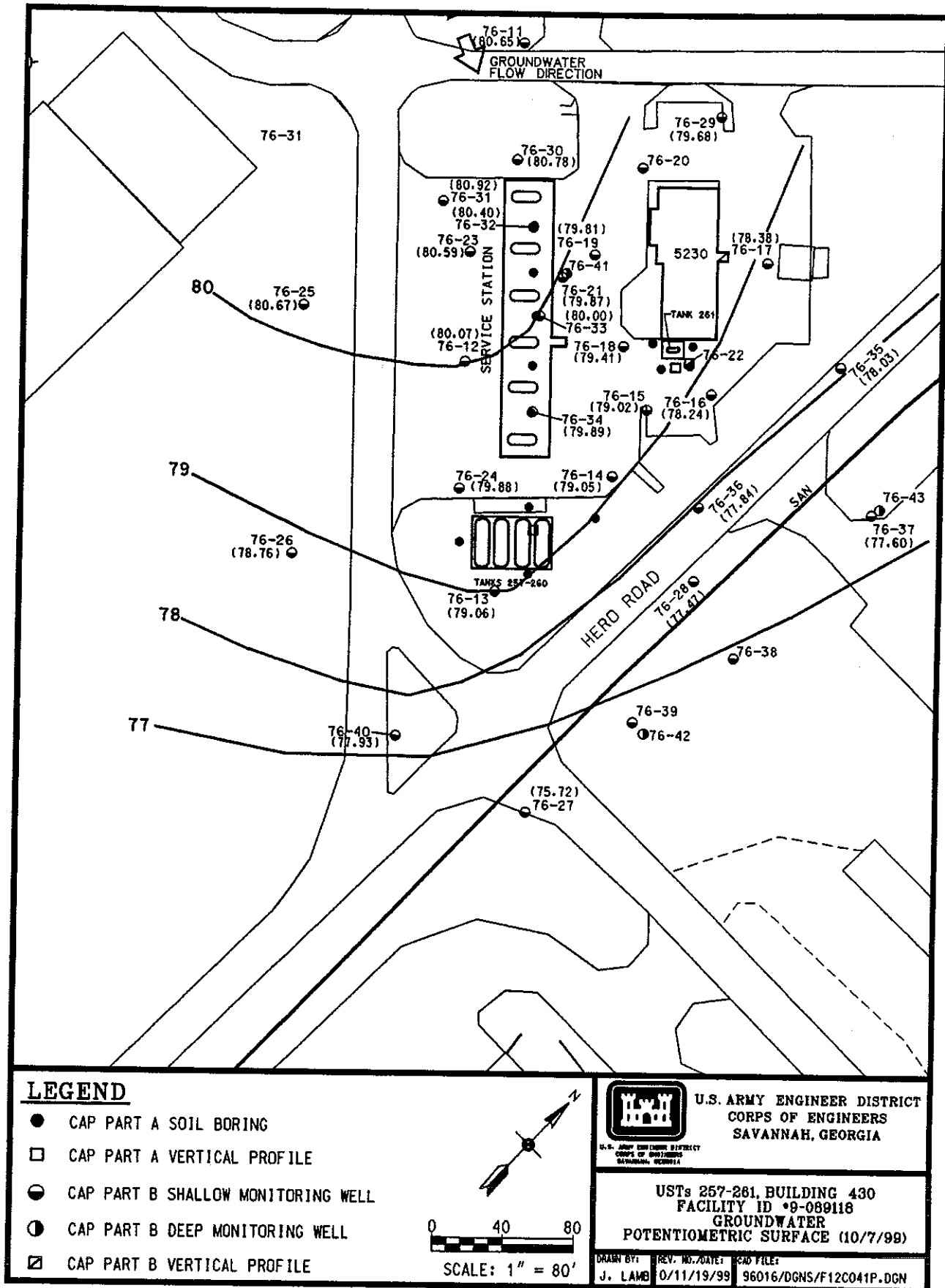


Figure 18. Groundwater Potentiometric Surface Map (October 1999) for the USTs 257-261 Site, Facility ID# 9-089118

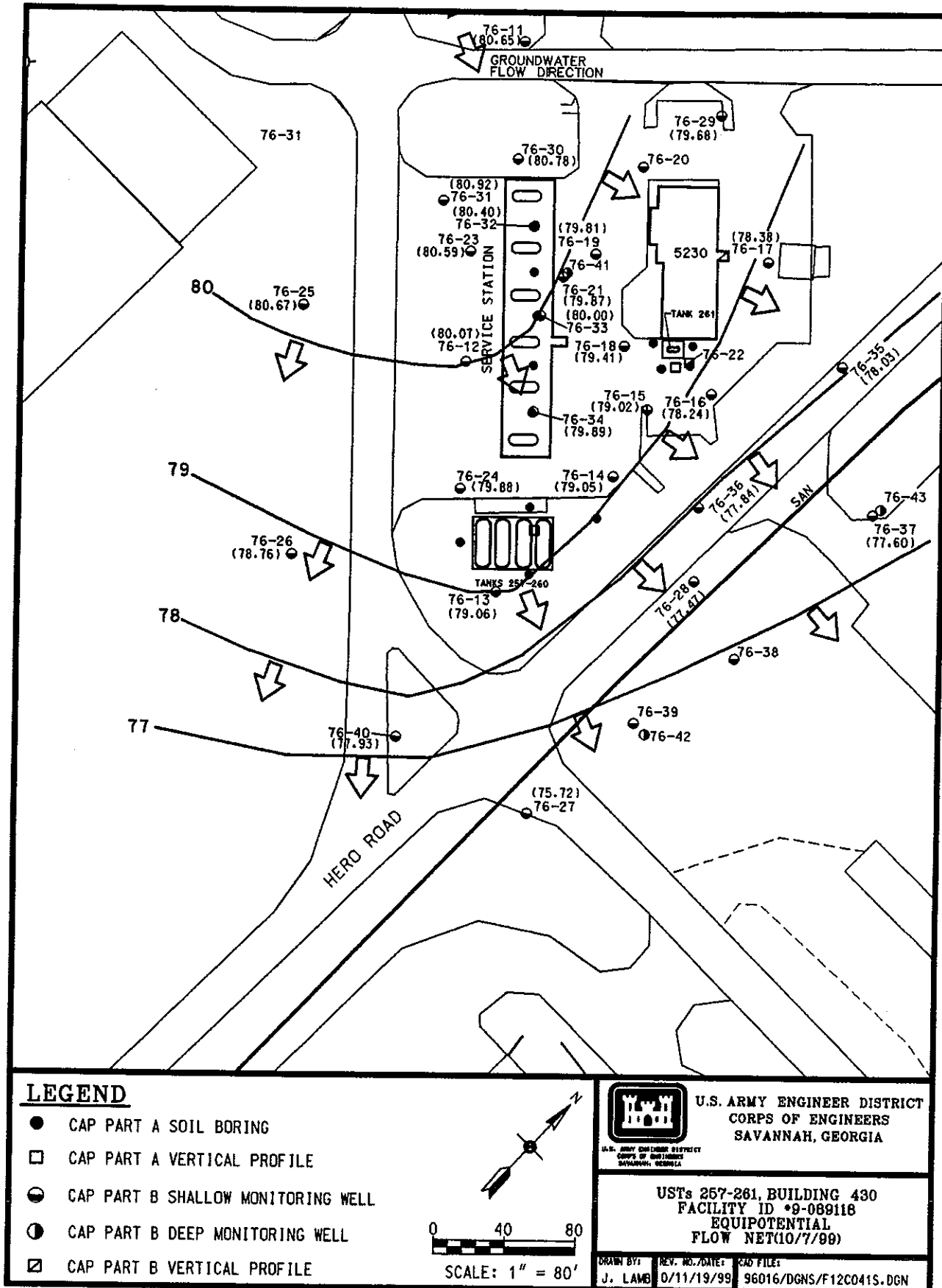


Figure 19. Equipotential Flow Net (October 1999) for the USTs 257-261 Site,
Facility ID# 9-089118

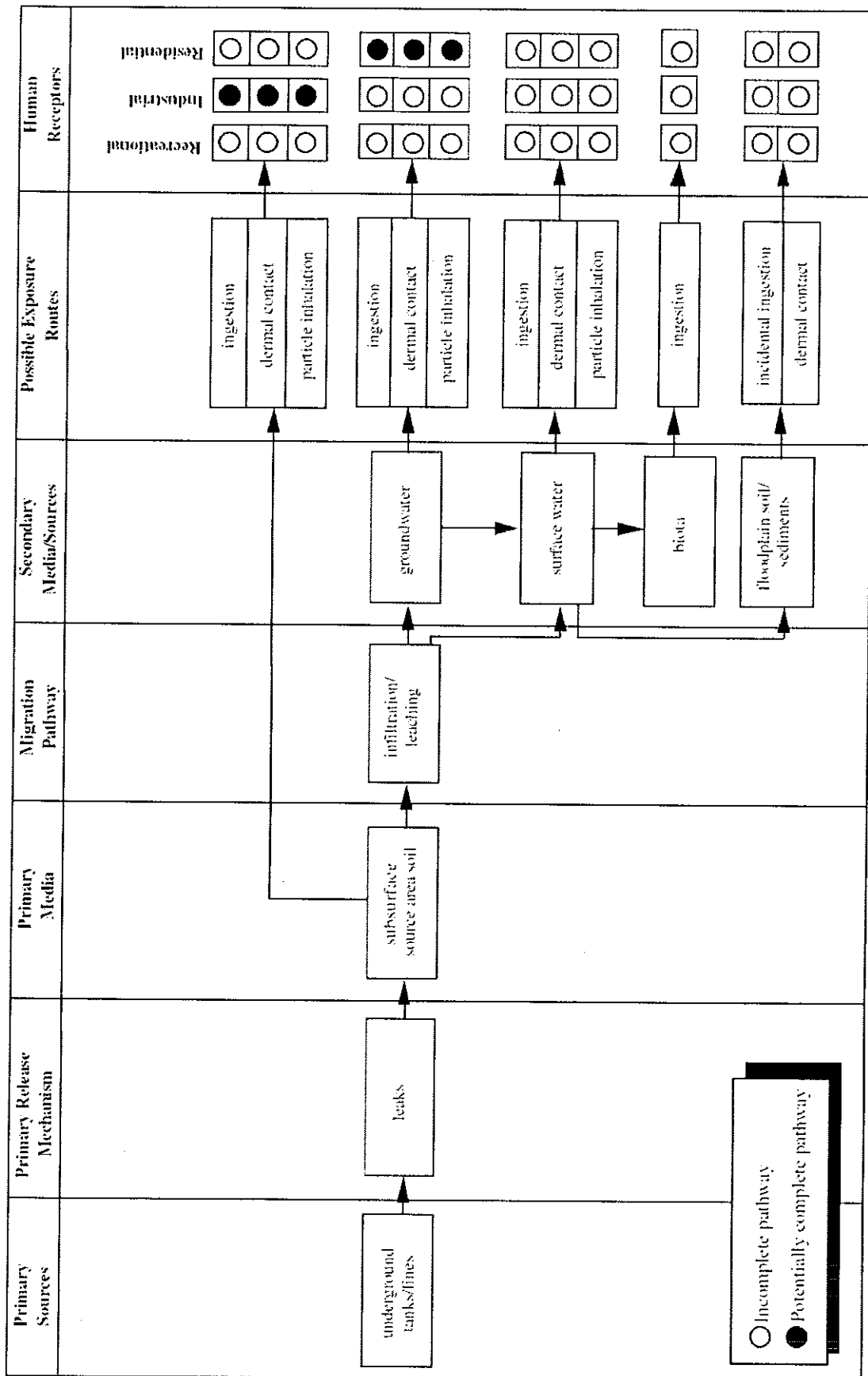


Figure 20. Conceptual Exposure Model for the USTs 257–261 Site, Facility ID# 9-089118

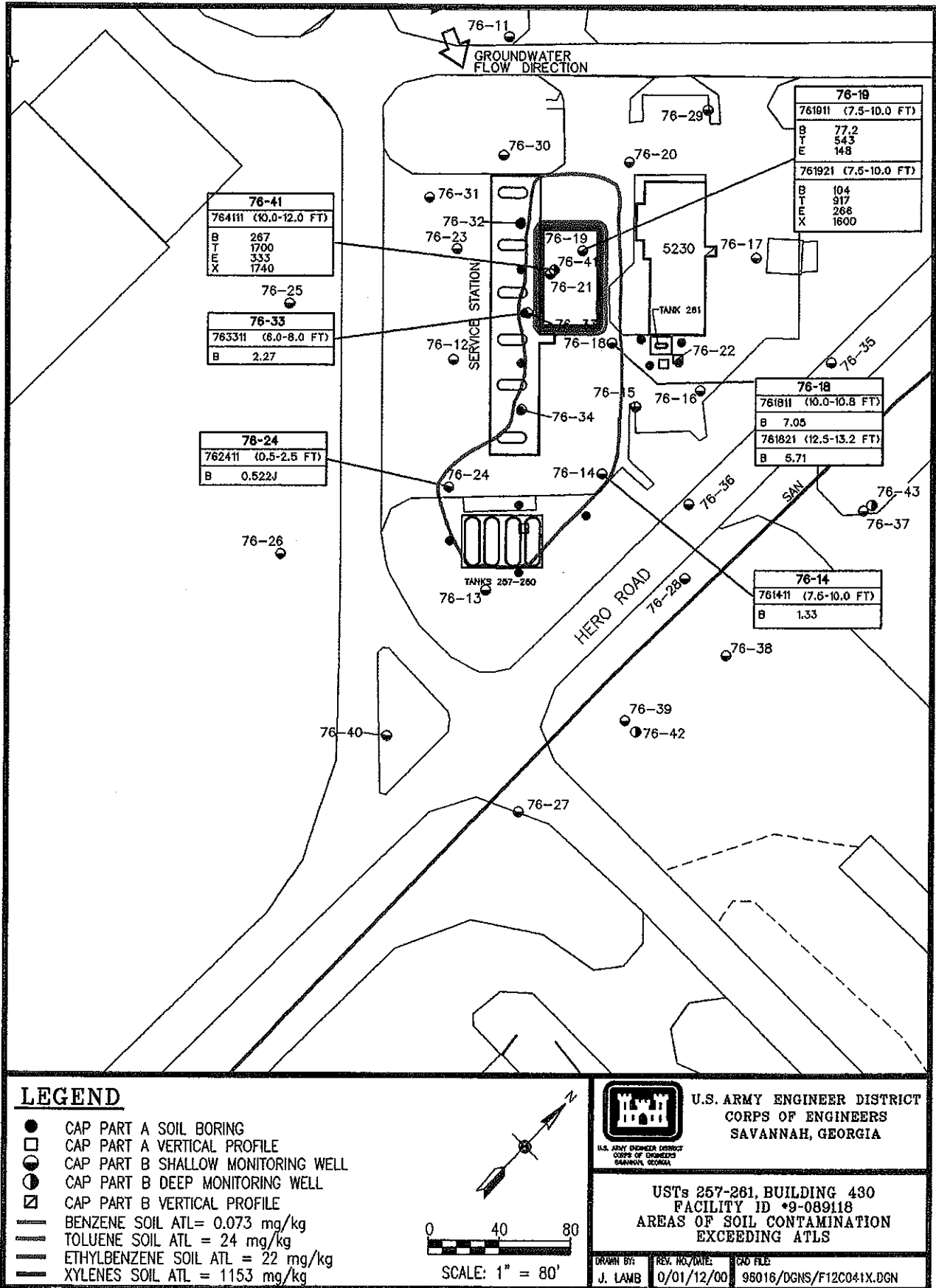


Figure 21. Areas of Soil Contamination Exceeding ATLs at the USTs 257–261 Site, Facility ID# 9-089118

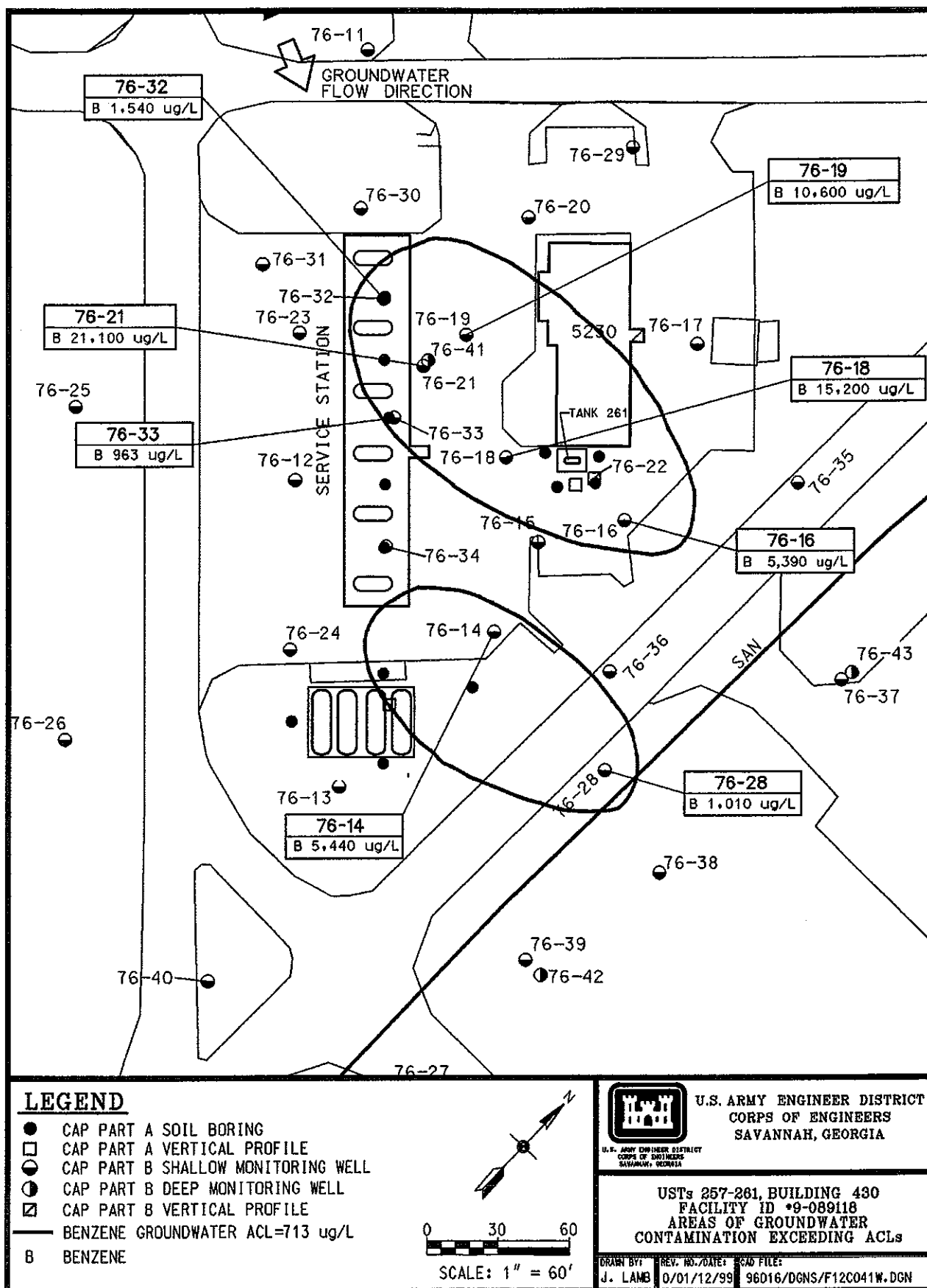


Figure 22. Areas of Groundwater Contamination Exceeding ACLs at the USTs 257-261 Site, Facility ID# 9-089118

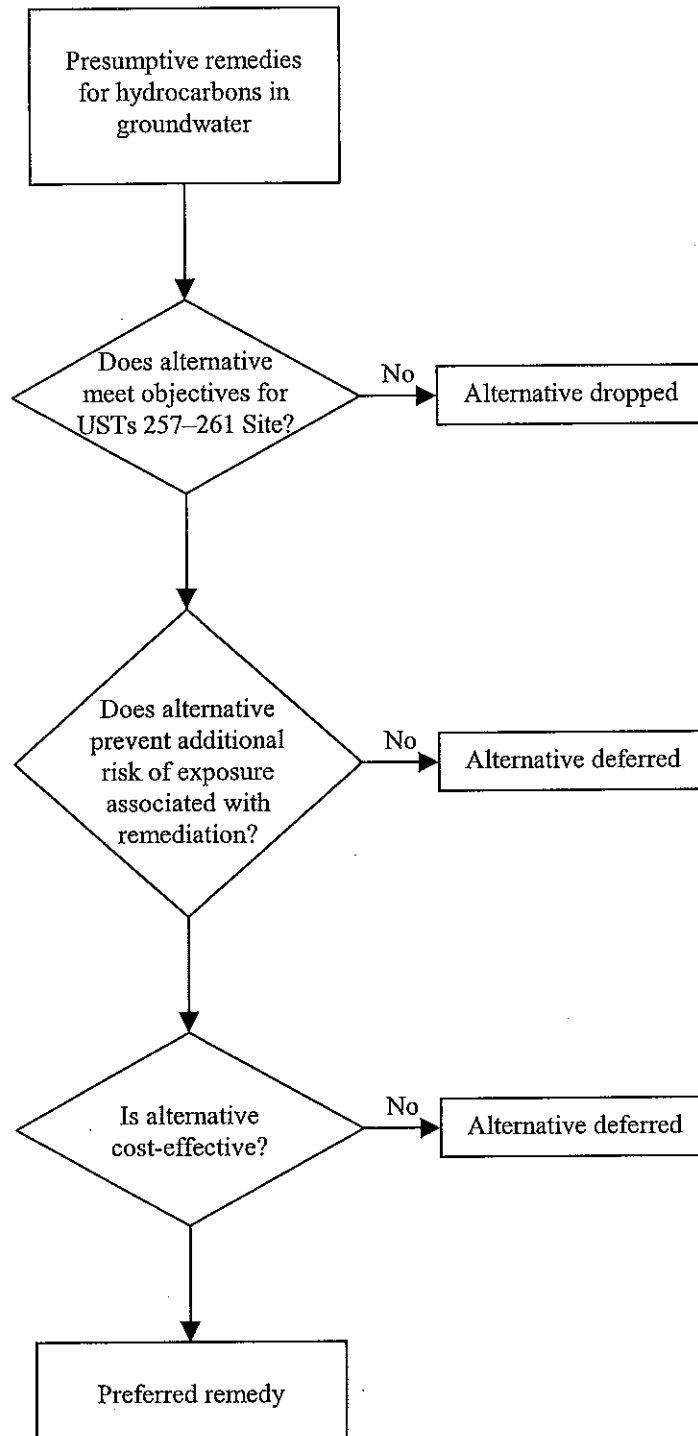


**Figure 23. Remedial Alternatives Selection Process for the USTs 257-261 Site,
Facility ID# 9-089118**

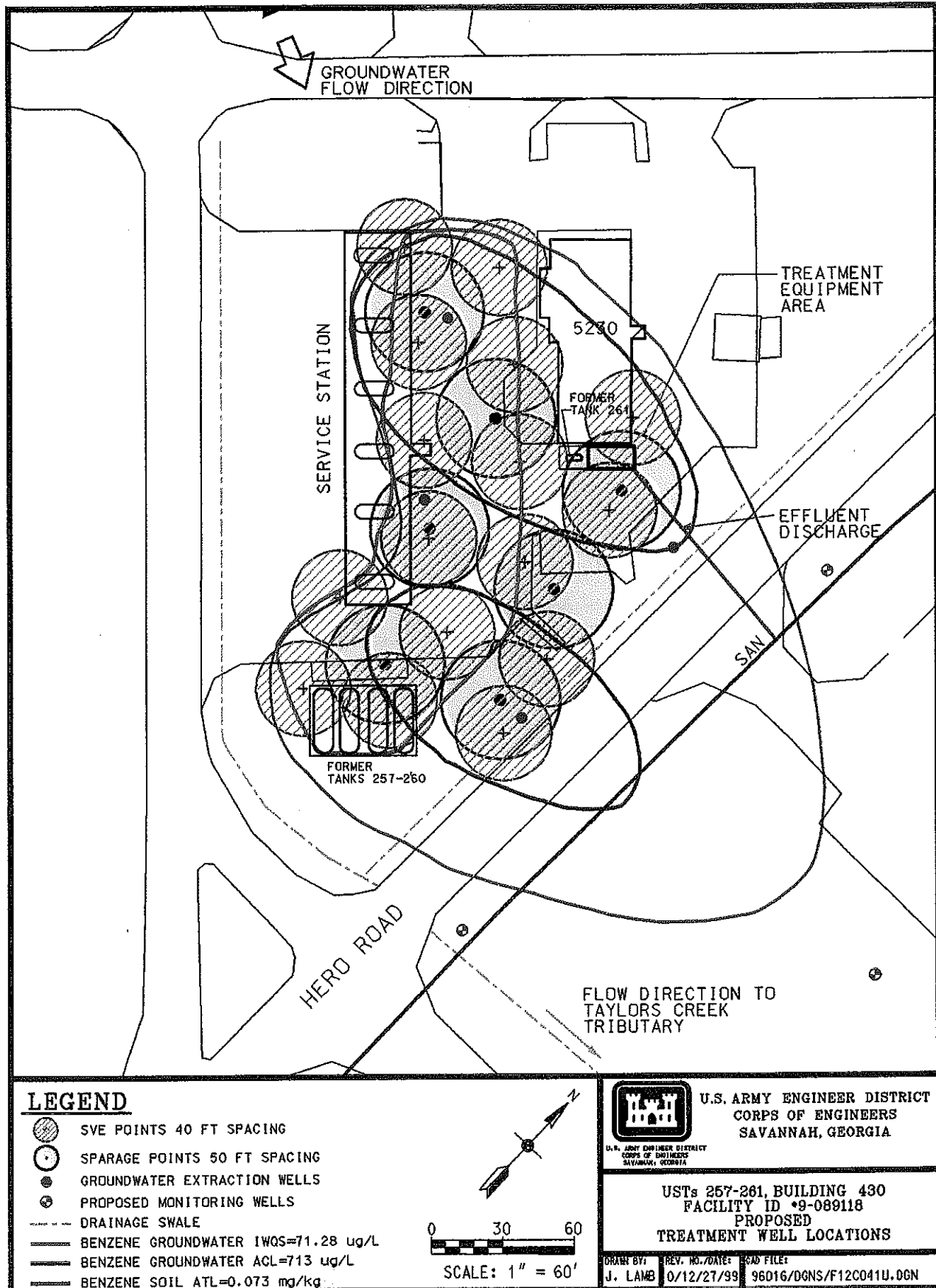
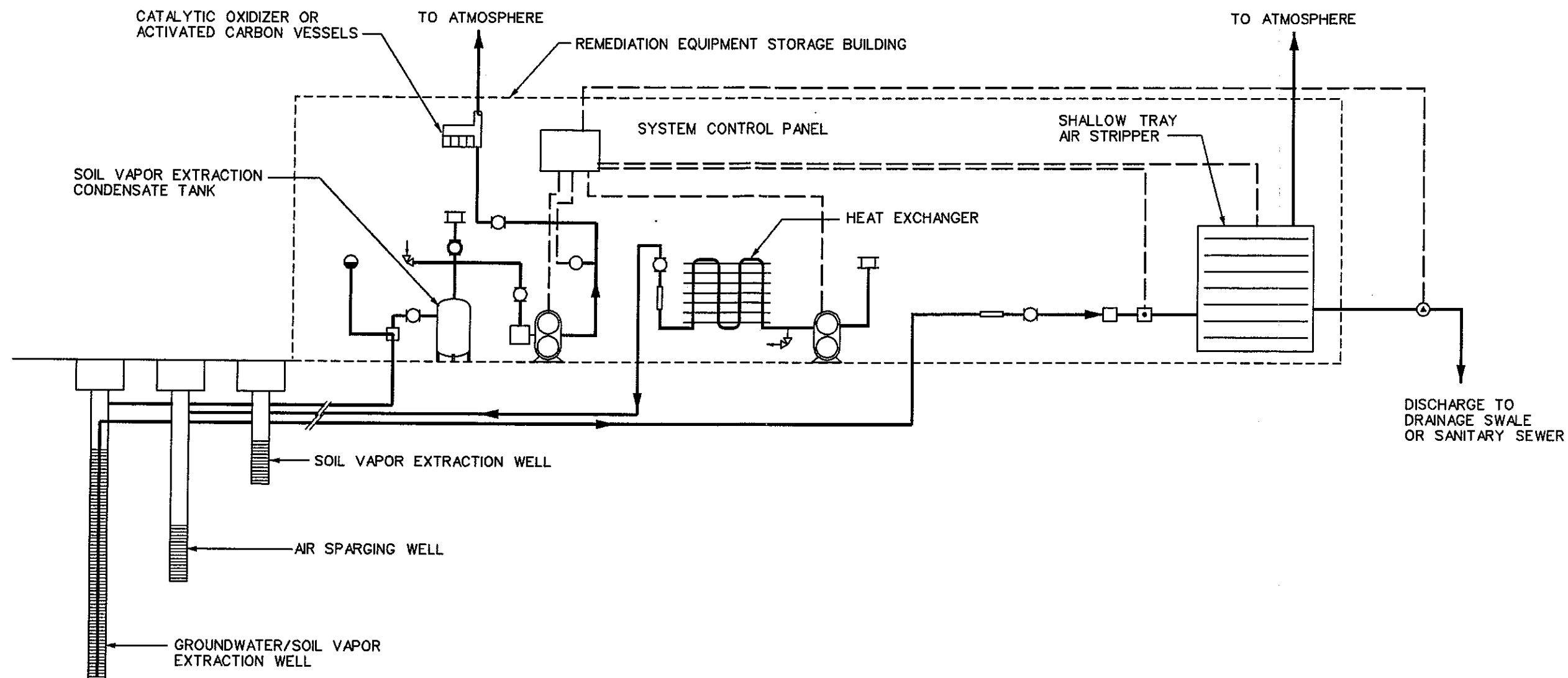


Figure 24. Proposed Treatment Locations for the USTs 257-261 Site,
Facility ID# 9-089118



NOT TO SCALE

LEGEND

BALL VALVE	RELIEF VALVE	ROTARY COMPRESSOR
PRESSURE SWITCH	ROTAMETER	FLOW TOTALIZER
DIFFERENTIAL PRESSURE SWITCH	AIR FILTER/SILENCER	IN-LINE pH METER
PILOT TUBE	IN-LINE AIR/WATER FILTER	



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

USTs 257-261, BUILDING 430
FACILITY ID #9-089118
PIPING AND INSTRUMENT DIAGRAM

DRAWN BY: J. LAMB	REV. NO./DATE: 0/12/28/99	CAD FILE: 96016/DGNS/F12C041V.DGN

Figure 25. Piping and Instrument Diagram for the USTs 257-261 Site, Facility ID# 9-089118

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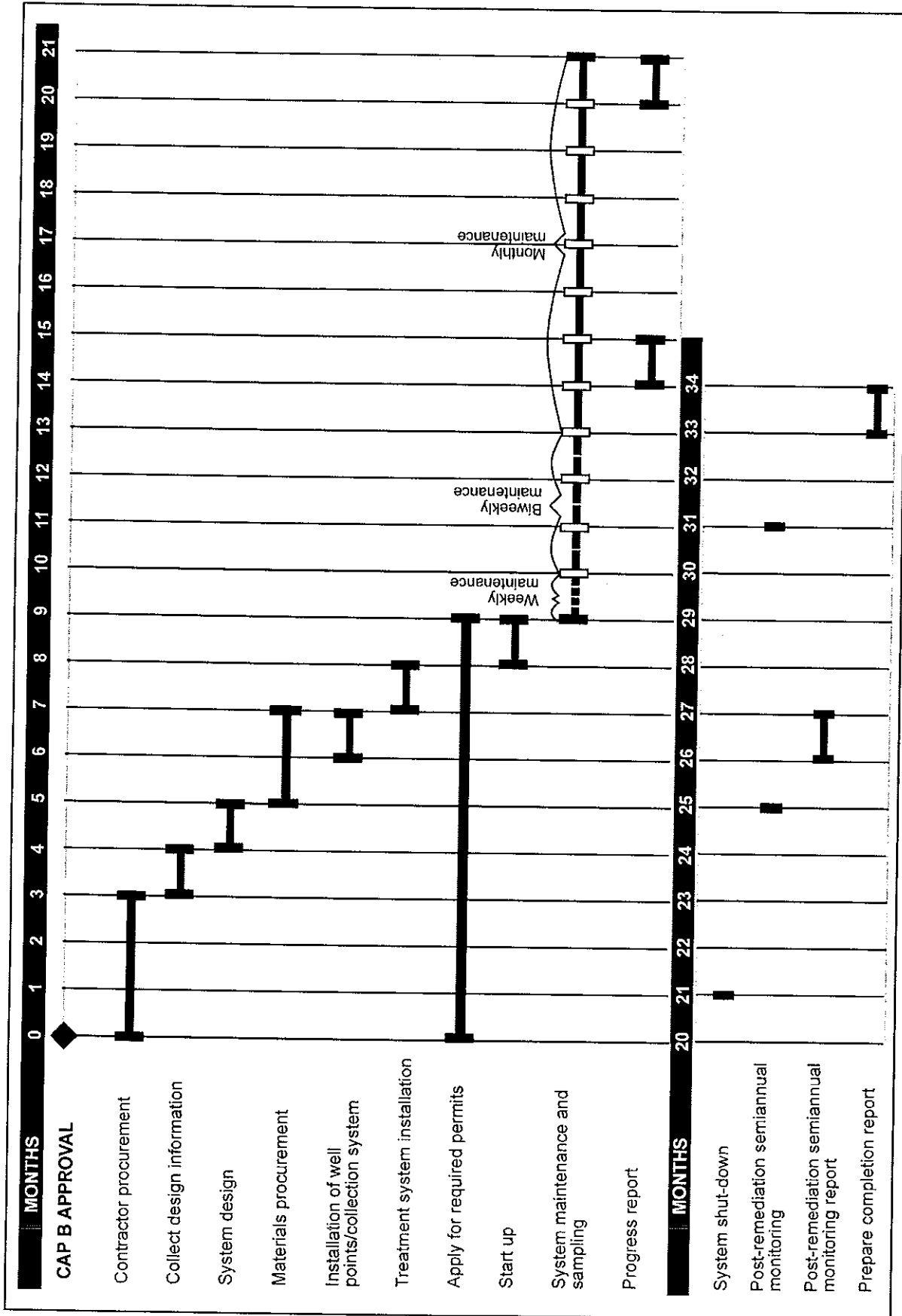


Figure 26. Remedial Action Milestone Schedule for the USTs 257-261 Site, Facility ID# 9-089118

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APPENDIX II

REPORT TABLES

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Table 1a. UST System Closure – Soil Analytical Results
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
Closure Data – UST 261										
261-T1-S1	N/A	06/25/96	0.0115 U	0.0069 =	0.0414 =	0.1667 =	0.227	282.0 =	NA	NA
Closure Data – USTs 257-260										
			No analytical data presented in closure report.							
GUST Soil Threshold Levels (Table A, Column 2)			0.008	6	10	700	NRC	NRC	NRC	NRC

Table 1b. UST System Closure – Soil Analytical Results
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Table 1
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)					Total PAHs (mg/kg)
			2-Methyl-Naphthalene					
Closure Data – UST 261								
261-T1-S1	N/A	06/25/96	0.0517 =					0.0517
Closure Data – USTs 257–260								
			No analytical data presented in closure report.					
GUST Soil Threshold Levels (Table A, Column 2)			NRC					NRC

NOTES:

NA Not analyzed
ND Not detected
NRC No regulatory criteria.

Laboratory Qualifiers

U Indicates the compound was not detected at the concentration reported.
UJ Indicates the compound was not detected above an approximated sample quantitation limit.
J Indicates the value for the compound is an estimated value.
= Indicates the compound was detected at the concentration reported.

Table 1c. UST System Closure – Groundwater Analytical Results
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Depth (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
Closure Data – UST 261							
			No groundwater samples were collected during closure activities				
Closure Data – USTs 257–260							
DO30430E	N/A	12/30/92	10000 U	286000 =	113000 =	662000 =	1,061,000
P-430 #1	N/A	3/22/93	Analytical results were not included in the closure report for this sample				
P-430 #2	N/A	3/22/93	12000 =	63600 =	39900 =	110000 =	225,500
In-Stream Water Quality Standards (Chapter 391-3-6)			71.28	200,000	28,718	NRC	NRC

Table 1d. UST System Closure – Groundwater Analytical Results
(POLYNUCLEAR ANALYTICAL RESULTS)

[FOIA(b)(7)(C) - EXEMPT FROM DISCLOSURE]							
Sample Location	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAHs (µg/L)
Closure Data – UST 261							
			No groundwater samples were collected during closure activities				
Closure Data – USTs 257-260							
			No analysis for PAH compounds during closure activities				
In-Stream Water Quality Standards (Chapter 391-3-6)							NRC

NOTES:

- N/A Not applicable
- ND Not detected
- NR Not required; PAH analysis was not requested for these samples.
- NRC No regulatory criteria.

Laboratory Qualifiers

- U Indicates the compound was not detected at the concentration reported.
- UJ Indicates the compound was not detected above an approximated sample quantitation limit.
- J Indicates the value for the compound is an estimated value.
- = Indicates the compound was detected at the concentration reported.

Table 2a. CAP-PART A/B – Soil Analytical Results
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
CAP-Part A Investigation – UST 261											
73-01	730121	2.0 – 4.0	05/10/98	0.0022 U	0.0022 U	0.0022 U	0.0064 U	ND	49.1 =		
73-01	730111	4.0 – 6.0	05/10/98	0.0026 U	0.0106 U	0.0218 =	0.134 J	0.155	47.9 =		
73-02	730221	2.0 – 4.0	05/10/98	0.00097 =	0.0024 =	0.0023 U	0.0068 U	0.0034	13.4 U		
73-02	730211	4.0 – 6.0	05/10/98	0.0021 U	0.015 =	0.0055 J	0.0161 J	0.0366	14.7 U		
73-03	730311	4.0 – 6.0	05/10/98	0.0098 =	0.0193 J	0.0404 J	0.0435 =	0.113	15.2 U		
73-03	730321	6.0 – 8.0	05/10/98	0.0057 U	0.023 U	0.0376 =	0.252 =	0.2896	62.3 =		
73-04	730411	4.0 – 6.0	05/10/98	0.0053 U	0.021 U	1.33 J	4.05 =	4.05	616 =		
73-04	730421	6.0 – 8.0	05/10/98	0.0575 UJ	0.23 UJ	0.23 UJ	0.97 J	0.97	238 =		
73-05	730511	2.0 – 4.0	05/09/98	0.0027 J	0.0735 =	0.0152 J	0.0281 J	0.1195	12.4 J		
73-05	730521	6.0 – 8.0	05/09/98	0.0136 J	0.138 J	0.292 J	1.81 =	2.2536	31.8 =		
73-05	730531	8.0 – 10.0	05/09/98	0.0024 U	0.0025 =	0.0024 U	0.0072 U	0.0025	79.5 =		
73-05	730541	14.0 – 16.0	05/09/98	1.02 =	0.318 =	0.555 =	3.67 =	5.563	12.8 U		
73-05	730551	18.0 – 20.0	05/09/98	0.0987 =	0.039 J	0.025 U	0.127 =		12.5 U		
73-05	730561	22.0 – 24.0	05/09/98	0.0026 U	0.0026 U	0.0026 U	0.0078 U	ND	48.2 =		
73-05	730571	26.0 – 28.0	05/09/98	0.0524 =	0.0395 =	0.0058 J	0.0424 =	0.1401	98.5 =		
73-05	730581	32.0 – 34.0	05/09/98	0.0455 =	0.0629 =	0.0125 =	0.057 =	0.1779	12.5 U		
CAP-Part A Investigation – UST 257 - 260											
76-01	760111	2.0-4.0	05/10/98	0.0119 =	0.174 J	0.0468 =	0.366 J	0.5987		3.4 U	0.755 J
76-01	760121	6.0 – 8.0	05/10/98	0.289 J	0.127 J	2.55 J	5.28 J	8.246		271 =	1330 =
76-02	760211	7.0 – 8.0	05/08/98	12.8 J	32.9 J	24.2 J	126 J	195.9		1550 =	2310 =
76-02	760221	15.0 – 16.0	05/08/98	0.0108 J	0.138 J	0.0363 J	0.339 J	0.5241		0.91 UJ	0.441 J
76-03	760311	7.0 – 8.0	05/08/98	0.0753 J	0.168 J	0.527 J	5.44 J	6.2103		173 =	48 =
76-03	760321	13.0 – 14.0	05/08/98	0.0692 J	0.142 J	0.24 J	0.409 J	0.8602		4.3 =	1.78 =
76-04	760411	2.0 – 3.0	05/08/98	0.0021 U	0.0327 =	0.0021 U	0.0063 U	0.0432		2.6 U	1.05 UJ
76-04	760421	12.0 – 13.0	05/08/98	0.0026 U	0.0579 =	0.0026 U	0.0077 U	0.0708		1.5 UJ	0.173 J
76-05	760511	6.0 – 8.0	05/09/98	0.05 U	0.05 U	0.0855 J	0.374 J	0.5595		15.4 =	53.7 =
76-05	760521	10.0 – 12.0	05/09/98	0.0313 J	0.0326 J	0.0265 J	0.36 J	0.4504		3.2 U	1.72 J
76-05	760531	12.0 – 14.0	05/09/98	0.0127 =	0.0383 =	0.0141 =	0.101 =	0.1661		3.4 U	0.264 J
76-05	760541	20.0 – 22.0	05/09/98	0.0138 =	0.015 =	0.0155 =	0.0293 J	0.0736		2.7 U	0.0915 J
76-05	760551	30.0 – 32.0	05/09/98	0.0051 U	0.124 =	0.0105 =	0.0041 J	0.1437		1.3 U	1.28 UJ
76-05	760561	40.0 – 42.0	05/12/98	0.0049 UJ	0.0721 J	0.0096 J	0.0039 J	0.0905		3.4 U	0.16 J
76-05	760571	55.0 – 57.0	05/09/98	0.0046 UJ	0.0046 UJ	0.0046 UJ	0.014 UJ	ND		1.1 U	1.16 U
76-05	760581	57.0 – 59.0	05/09/98	0.0027 UJ	0.0027 UJ	0.0027 UJ	0.0081 UJ	ND		1.6 UJ	1.35 UJ
76-06	760621	2.0 – 4.0	05/09/98	0.0037 J	0.16 J	0.118 J	0.0671 J	0.3488		59.7 =	1.41 =
76-06	760611	4.0 – 6.0	05/09/98	0.0043 U	0.0048 J	0.0043 U	0.013 U	0.0264		2.9 U	0.524 J
76-07	760711	0.0 – 2.0	05/09/98	0.0012 U	0.0316 =	0.0144 J	0.0577 =	0.1049		0.58 UJ	0.313 J
76-07	760721	4.0 – 5.5	05/09/98	0.0011 U	0.0193 =	0.0175 J	0.103 =	0.1409		1.2 UJ	1.63 J
76-08	760811	0.0 – 2.0	05/09/98	0.00055 U	0.0025 =	0.0022 U	0.0066 U	0.01185		1.6 UJ	1.1 U
76-08	760821	2.0 – 4.0	05/09/98	0.0017 J	0.0035 =	0.0044 J	0.0065 J	0.0161		7.8 =	0.297 J
76-09	760911	0.0 – 2.0	05/09/98	0.0398 J	0.19 J	0.051 J	0.341 J	0.6218		3.2 U	2.03 =
76-09	760921	4.0 – 5.5	05/09/98	15.7 J	325 J	117 J	594 J	1051.7		818 =	2820 J
76-10	761011	0.0 – 2.0	05/10/98	0.0011 U	0.0044 U	0.0044 U	0.0136 =	0.0235		1.1 U	0.576 J
76-10	761021	4.0 – 5.2	05/10/98	0.351 J	18.4 J	18.6 J	110 J	147.351		124 =	1270 =
GUST Soil Threshold Levels (Table A, Column 2)				0.008	6	10	700	NRC	NRC	NRC	NRC

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event.; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.
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J Indicates that the value for the compound was an estimated value.
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Table 2a. CAP-Part A/B – Soil Analytical Results (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 (mg/kg)	TPH (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
<i>CAP-Part B Investigation – UST 257-261</i>											
76-11	761111	5.0 – 7.5	02/18/99	0.0018 U	0.0018 U	0.0018 U	0.0027 U	ND		0.38 U	0.109 U
76-11	761121	0.0 – 2.5	02/18/99	0.0022 U	0.0022 U	0.0022 U	0.0033 U	ND		0.53 UJ	0.116 U
76-12	761211	0.0 – 2.5	02/17/99	0.0058 J	0.00089 J	0.0059 J	0.0149 J	0.0355		3.2 U	0.108 U
76-12	761221	5.0 – 7.5	02/17/99	0.0022 U	0.0022 U	0.0064 =	0.0182 =	0.0246		0.86 U	0.414 =
76-13	761311	5.0 – 7.5	02/17/99	0.0029 U	0.0029 U	0.0029 U	0.0043 U	ND		1.3 U	0.132 U
76-13	761321	7.5 – 10.0	02/17/99	0.0026 U	0.0014 J	0.0026 U	0.0025 J	0.0039		2.3 U	0.133 U
76-14	761411	7.5 – 10.0	02/18/99	1.33 =	5.71 =	3.24 =	23.9 =	34.18		22.8 =	147 =
76-14	761421	2.5 – 5.0	02/18/99	0.0518 J	0.80 =	1.90 =	15.2 =	17.9518		167 =	813 =
76-15	761511	7.5 – 10.0	02/18/99	0.0031 =	0.00074 J	0.00073 J	0.0038 =	0.00837		0.76 U	0.276 =
76-15	761521	5.0 – 7.5	02/18/99	0.0053 =	0.0024 U	0.0031 =	0.0066 =	0.015		0.32 U	0.114 U
76-16	761611	7.5 – 10.0	02/19/99	0.0025 U	0.0025 U	0.0025 U	0.0038 U	ND		0.36 U	0.125 U
76-16	761621	5.0 – 7.5	02/19/99	0.0026 U	0.0026 U	0.0026 U	0.0038 U	ND		0.49 U	0.12 U
76-17	761721	7.5 – 10.0	02/19/99	0.0028 U	0.0028 U	0.0028 U	0.0041 U	ND		0.58 U	0.132 U
76-18	761811	10.0 – 10.8	02/18/99	7.05 =	20.6 =	2.74 =	17.8 =	48.19		5.4 =	84.5 =
76-18	761821	12.5 – 13.2	02/18/99	5.71 =	12.9 =	1.04 =	6.77 =	26.42		2.7 J	74.5 =
76-19	761911	7.5 – 10.0	02/17/99	77.2 =	543 =	148 =	851 =	1619.2		127 =	3320 =
76-19	761921	5.0 – 7.5	02/17/99	104 =	917 =	266 =	1600 =	2887		7800 =	14200 =
76-20	762011	7.5 – 10.0	02/18/99	0.0024 U	0.0024 U	0.0024 U	0.0036 U	ND		0.39 U	0.128 U
76-20	762021	1.0 – 2.5	02/18/99	0.0021 U	0.0021 U	0.0021 U	0.0032 U	ND		0.19 U	0.111 U
76-23	762311	7.5 – 10.0	02/18/99	0.0025 U	0.0025 U	0.0025 U	0.0037 U	ND		0.28 U	0.125 U
76-23	762321	0.5 – 2.5	02/18/99	0.0229 =	0.0021 U	0.0019 =	0.0032 U	0.0248		0.36 U	0.139 =
76-24	762411	0.5 – 2.5	02/17/99	0.522 J	13.4 =	8.93 =	63 =	85.852		124 =	101 =
76-24	762421	7.5 – 10.0	02/17/99	0.026 U	0.0094 J	0.032 =	0.0779 =	0.2039		2 U	3.02 =
76-25	762511	2.5 – 5.0	02/19/99	0.002 U	0.002 U	0.002 U	0.003 U	ND		0.3 U	0.112 U
76-25	762521	5.0 – 7.5	02/19/99	0.0022 U	0.0022 U	0.0022 U	0.0033 U	ND		0.61 U	0.119 U
76-26	762611	3.0 – 4.5	02/19/99	0.0019 U	0.0019 U	0.0019 U	0.0033 U	ND		0.32 U	0.11 U
76-26	762621	7.0 – 9.0	02/19/99	0.0023 U	0.0023 U	0.0023 U	0.0034 U	ND		0.47 U	0.128 U
76-27	762711	2.5 – 5.0	02/19/99	0.002 U	0.002 U	0.002 U	0.003 U	ND		2.8 =	0.112 U
76-27	762721	5.0 – 7.5	02/19/99	0.002 U	0.002 U	0.002 U	0.0031 U	ND		1.2 U	0.112 U
76-28	762811	12.5 – 15.0	02/19/99	0.0039 =	0.0213 =	0.0249 =	0.080 =	0.1301		4.7 =	0.675 =
76-28	762821	7.5 – 10.0	02/19/99	0.0643 J	0.345 =	0.834 =	14.2 =	15.4433		31.4 =	135 =
76-29	762911	5.0 – 7.5	09/24/99	0.0019 U	0.0019 U	0.0019 U	0.0057 U	ND		0.54 U	0.0562 J
76-30	763011	5.5 – 6.5	09/29/99	0.002 U	0.002 J	0.002 U	0.0061 U	0.002		0.35 U	0.0866 J
76-31	763111	6.0 – 8.0	09/23/99	0.0021 U	0.0021 U	0.0021 U	0.0062 U	ND		0.89 U	0.11 U
76-32	763211	10.0 – 12.0	09/24/99	0.0305 =	0.0488 =	0.0187 =	0.0508 =	0.1488		8.8 U	3.42 =
76-33	763311	6.0 – 8.0	09/24/99	2.27 =	1.51 =	4.56 =	9.04 =	17.38		2.7 U	4.07 =
76-34	763411	6.0 – 8.0	09/24/99	0.0161 =	0.0009 J	0.034 =	0.0016 J	0.0526		0.98 U	0.104 J
76-35	763511	6.0 – 8.3	09/24/99	0.0022 R	0.0028 J	0.0022 R	0.00077 J	0.00357		0.66 U	0.101 J
76-36	763611	7.0 – 8.0	09/24/99	0.217 U	0.217 U	0.217 U	0.650 U	ND		10.1 =	30.3 =
76-37	763711	6.5 – 8.4	09/24/99	0.0026 U	0.0026 U	0.0026 U	0.0077 U	ND		0.87 U	0.0373 J
76-38	763811	10.0 – 12.0	09/23/99	0.0024 U	0.00079 J	0.0024 U	0.0074 U	0.00079		0.84 U	0.117 J
76-39	763911	5.0 – 8.0	09/23/99	0.0023 U	0.0009 J	0.0023 U	0.0017 J	0.0026		0.77 U	0.12 =
76-40	764011	10.0 – 12.0	09/24/99	0.0023 U	0.0023 U	0.0023 U	0.0069 U	ND		0.85 U	0.266 =
76-41	764111	10.0 – 12.0	10/06/99	267 =	1700 =	333 =	1740 =	4040		1420 =	9770 =
76-42	764211	10.0 – 12.9	10/06/99	0.0024 U	0.0024 U	0.0024 U	0.0072 U	ND		2.2 =	0.126 U
76-43	764311	5.0 – 7.5	10/06/99	0.0023 U	0.0023 U	0.0023 U	0.0068 U	ND		11.1 =	0.49 =
GUST Soil Threshold Levels (Table A, Column 2)				0.008	6	10	700	NRC	NRC	NRC	NRC

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event.; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- ** Indicates that the compound was detected at the concentration reported.

Table 2b. CAP-Part A/B - Soil Analytical Results
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Table 261 (POLYNUCLEAR AROMATIC HYDROCARBONS)												
Detected PAH Compounds (mg/kg)												
Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	CAP-Part A Investigation - UST 261								Total PAHs (mg/kg)
				benzo(a) pyrene	benzo(b) fluoranthene	benzo(g,h,i) perylene	chrysene	fluoranthene	naphthalene	phenanthrene	pyrene	
73-01	730121	2.0 - 4.0	05/10/98	0.861 J	1.32 J	0.765 J	0.985 J				1.18 J	5.111 J
73-01	730111	4.0 - 6.0	05/10/98									ND
73-02	730221	2.0 - 4.0	05/10/98									ND
73-02	730211	4.0 - 6.0	05/10/98									ND
73-03	730311	4.0 - 6.0	05/10/98									ND
73-03	730321	6.0 - 8.0	05/10/98									ND
73-04	730411	4.0 - 6.0	05/10/98									ND
73-04	730421	6.0 - 8.0	05/10/98					0.014 J	0.0314 J	0.0326 J	0.00293 J	0.107 J
73-05	730511	2.0 - 4.0	05/09/98						0.0445 J			0.0445 J
73-05	730521	6.0 - 8.0	05/09/98						0.402 =			0.402 =
73-05	730531	8.0 - 10.0	05/09/98						0.104 J	0.0947 J		0.199 J
73-05	730541	14.0 - 16.0	05/09/98									ND
73-05	730551	18.0 - 20.0	05/09/98									ND
73-05	730561	22.0 - 24.0	05/09/98									ND
73-05	730571	26.0 - 28.0	05/09/98									ND
73-05	730581	32.0 - 34.0	05/09/98									ND
				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Applicable Standards'												

NOTES: May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event.; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected; refer to Appendix V, Table V-A, for complete list of PAH results.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table 2b. CAP-Part A/B - Soil Analytical Results (continued)
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Table 2b. CAP-Part A/B - Soil Analytical Methods (POLYNUCLEAR AROMATIC HYDROCARBONS)																
Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)											Total PAHs (mg/kg)	
				acenaphthylene	anthracene	benzo(a)anthracene	benzo(a)pyrene	benzo(b)fluoranthene	benzo(g,h,i)perylene	benzo(k)fluoranthene	chrysene	fluoranthene	fluorene	indeno(1,2,3-cd)pyrene		naphthalene
CAP-Part B Investigation - USTs 257-261																
76-11	761111	5.0 - 7.5	02/18/99													ND
76-11	761121	0.0 - 2.5	02/18/99													ND
76-12	761211	0.0 - 2.5	02/17/99													ND
76-12	761221	5.0 - 7.5	02/17/99													ND
76-13	761311	5.0 - 7.5	02/17/99													1.32
76-13	761321	7.5 - 10.0	02/17/99													8.032
76-14	761411	7.5 - 10.0	02/18/99													ND
76-14	761421	2.5 - 5.0	02/18/99													ND
76-15	761511	7.5 - 10.0	02/18/99													ND
76-15	761521	5.0 - 7.5	02/18/99													ND
76-16	761611	7.5 - 10.0	02/19/99													9.69
76-16	761621	5.0 - 7.5	02/19/99													0.483
76-17	761721	7.5 - 10.0	02/19/99													5.05
76-18	761811	10.0 - 10.8	02/18/99													43.778
76-18	761821	12.5 - 13.2	02/18/99													ND
76-19	761911	7.5 - 10.0	02/17/99													ND
76-19	761921	5.0 - 7.5	02/17/99													ND
76-20	762011	7.5 - 10.0	02/18/99													ND
76-20	762021	1.0 - 2.5	02/18/99													0.7504
76-23	762311	7.5 - 10.0	02/18/99													1.26
76-23	762321	0.5 - 2.5	02/18/99													ND
76-24	762411	0.5 - 2.5	02/17/99													ND
76-24	762421	7.5 - 10.0	02/17/99													ND
76-25	762511	2.5 - 5.0	02/19/99													NRC
GUST Soil Threshold Levels (Table A, Column 2)				NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC

Thus, the new SW-846 analytical methods were not used during that sampling event.;

NOTES: May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event; however, the new SW-846 analytical methods were used on all samples collected in 1999.

Laboratory Qualifiers
 ND Not detected; refer to Appendix V, Table V-A, for complete list of PAH results.
 U Indicates that the compound was not detected above the reported sample quantitation limit.
 UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
 J Indicates that the value for the compound was an estimated value.
 = Indicates that the compound was detected at the concentration reported.

Table 2b. CAP-Part A/B - Soil Analytical Results (continued)
(POLYNUCLEAR AROMATIC HYDROCARBONS)

(POLYNUCLEAR AROMATIC HYDROCARBONS)																	
Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (mg/kg)											Total PAHs (mg/kg)		
				acenaphthylene	anthracene	benzo(a)anthracene	benzo(a)pyrene	benzo(b)fluoranthene	benzo(g,h,i)perylene	benzo(k)fluoranthene	chrysene	fluoranthene	indeno(1,2,3-cd)pyrene	naphthalene		phenanthrene	pyrene
CAP-Part B Investigation - USTs 257-261																	
76-25	762521	5.0 - 7.5	02/19/99														ND
76-26	762611	3.0 - 4.5	02/19/99					0.107J			0.106J	0.0353J				0.0641J	0.3124
76-26	762621	7.0 - 9.0	02/19/99														ND
76-27	762711	2.5 - 5.0	02/19/99								0.166J	0.0758J	0.0841J			0.141J	0.8169
76-27	762721	5.0 - 7.5	02/19/99				0.147J	0.203J			0.166J	0.0758J	0.0841J			0.141J	0.8169
76-28	762811	12.5 - 15.0	02/19/99				0.158J	0.192J	0.0971J		0.183J	0.092J	0.0747J			0.166J	0.9628
76-28	762821	7.5 - 10.0	02/19/99												0.449J		0.449
76-29	762911	5.0 - 7.5	09/24/99	0.0258J			0.139J	0.161J	0.299J	0.150J	0.224J	0.179J	0.169J		0.726J	0.0797J	0.726
76-30	763011	5.5 - 6.5	09/29/99														1.8245
76-31	763111	6.0 - 8.0	09/23/99														ND
76-32	763211	10.0 - 12.0	09/24/99														ND
76-33	763311	6.0 - 8.0	09/24/99														0.054
76-34	763411	6.0 - 8.0	09/24/99												0.054J		ND
76-35	763511	6.0 - 8.3	09/24/99												0.0192J		ND
76-36	763611	7.0 - 8.0	09/24/99														0.0192
76-37	763711	6.5 - 8.4	09/24/99												0.721=		ND
76-38	763811	10.0 - 12.0	09/23/99														0.721
76-39	763911	5.0 - 8.0	09/23/99														ND
76-40	764011	10.0 - 12.0	09/24/99				0.161J		0.188J		0.278J	0.25J			0.132J	0.446J	1.455
76-41	764111	10.0 - 12.0	10/06/99												0.0379J	0.0718J	0.1097
76-42	764211	10.0 - 12.9	10/06/99														ND
76-43	764311	5.0 - 7.5	10/06/99														ND
GUST Soil Threshold Levels (Table A, Column 2)				NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC	NRC
NOTES: May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998.																	

Table 3a. CAP-Part A – Soil Field Screening (Headspace¹) Data

Depth (ft BGS)	73-01 (ppm)	73-02 (ppm)	73-03 (ppm)	73-04 (ppm)	73-05 (ppm)	76-01 (ppm)	76-02 (ppm)	76-03 (ppm)	76-04 (ppm)	76-05 (ppm)	76-06 (ppm)
0.0 – 2.0	7.0	5.2	2.2	158	NC	158	8.1	9.7	3.8	3.5	13.9
2.0 – 4.0	4.4	25.4	33.4	245	599	8.2	>2500	17.2	19.8	347	157
4.0 – 6.0	270	97.3	228	>2500	124	>2500	>2500	93.6	17.5	613	88.9
6.0 – 8.0	77.5	13.6	23.2	371	291	>2500	>2500	>2500	17.3	712	NC
8.0 – 10.0	NC	NC	NC	NC	2270	NC	>2500	NC	5.1	20.6	NA
10.0 – 12.0	NA	NA	NA	NA	1360	NA	126	1125	6.0	25.0	NA
12.0 – 14.0	NA	NA	NA	NA	390	NA	176	85.6	0	61.5	NA
14.0 – 16.0	NA	NA	NA	NA	628	NA	134	542	1.4	20.3	NA
16.0 – 18.0	NA	NA	NA	NA	400	NA	NA	NA	NA	8.7	NA
18.0 – 20.0	NA	NA	NA	NA	785	NA	NA	NA	NA	11.3	NA
20.0 – 22.0	NA	NA	NA	NA	3	NA	NA	NA	NA	9.2	NA
22.0 – 24.0	NA	NA	NA	NA	75	NA	NA	NA	NA	8.7	NA
24.0 – 26.0	NA	NA	NA	NA	0	NA	NA	NA	NA	47.2	NA
26.0 – 28.0	NA	NA	NA	NA	113	NA	NA	NA	NA	50.5	NA
28.0 – 30.0	NA	NA	NA	NA	0	NA	NA	NA	NA	NC	NA
30.0 – 32.0	NA	NA	NA	NA	0	NA	NA	NA	NA	11.0	NA
32.0 – 34.0	NA	NA	NA	NA	0	NA	NA	NA	NA	9.3	NA
34.0 – 36.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.6	NA
36.0 – 38.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	17.5	NA
38.0 – 40.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NC	NA
40.0 – 42.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	40.2	NA
42.0 – 44.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	40.2	NA
44.0 – 46.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.9	NA
46.0 – 48.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.5	NA
48.0 – 50.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NC	NA
50.0 – 52.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.2	NA
52.0 – 54.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.7	NA
54.0 – 56.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.8	NA
56.0 – 58.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0	NA
58.0 – 60.0	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Depth (ft BGS)	76-07 (ppm)	76-08 (ppm)	76-09 (ppm)	76-10 (ppm)							
0.0 – 2.0	11.7	43.3	918	177							
2.0 – 4.0	157	210	>2500	>2500							
4.0 – 6.0	277	115	>2500	>2500							
6.0 – 8.0	NC	0	NC	NC							
8.0 – 10.0	NA	NA	NA	NA							

¹ Headspace measured using a photoionization detector.

NA Not applicable, interval is below the total depth of boring.

NC Not collected due to no sample recovery, sample interval below the water table, or headspace measurements were not recorded.

Table 3b. CAP-Part B – Soil Field Screening (Headspace¹) Data

Depth (ft BGS)	76-11 (ppm)	76-12 (ppm)	76-13 (ppm)	76-14 (ppm)	76-15 (ppm)	76-16 (ppm)	76-17 (ppm)	76-18 (ppm)	76-19 (ppm)	76-20 (ppm)	76-23 (ppm)
0.0 – 2.5	35	93	NC	>2500	0	71.6	NC	NC	NC	5.4	113
2.5 – 5.0	33	45	NC	>2500	24	43.1	NC	NC	43.8	3.1	59.5
5.0 – 7.5	23.5	24	3.3	>2500	28.6	79.4	89.1	NC	>2500	4.5	65.8
7.5 – 10.0	28	31	3.1	>2500	11.3	53.2	6.2	NC	>2500	2.9	3.2
10.0 – 12.5	NC	30	NC	NC	NC	NC	NC	100	NC	NC	NC
12.5 – 15.0	NC	NC	NC	NC	NC	NC	NC	900	NC	NC	NC

Depth (ft BGS)	76-24 (ppm)	76-25 (ppm)	76-26 (ppm)	76-27 (ppm)	76-28 (ppm)
0.0 – 2.5	621	0	2.1	0	3.2
2.5 – 5.0	563	0.2	1.7	0	160
5.0 – 7.5	545	0	1.6	0	1070
7.5 – 10.0	23.3	NC	2.0	NC	345
10.0 – 12.5	NC	NC	NC	NC	260
12.5 – 15.0	NC	NC	NC	NC	95

Depth (ft BGS)	76-29 (ppm)	76-30 (ppm)	76-31 (ppm)	76-32 (ppm)	76-33 (ppm)	76-34 (ppm)	76-35 (ppm)	76-36 (ppm)	76-37 (ppm)	76-38 (ppm)	76-39 (ppm)
0.0 – 2.0	1.1	NC	1.9	231	112	72.9	1.0	9.4	1.1	0.3	0.2
2.0 – 4.0	1.2	16.9	4.6	231	469	491	1.0	9.0	1.1	0.3	0.2
4.0 – 6.0	1.3	27.5	3.6	2275	536	86.5	0.5	11.8	1.8	0.4	0.1
6.0 – 8.0	2.3	0.0	3.6	2275	134	315	0.5	482	1.8	0.4	0.1
8.0 – 10.0	2.3	NA	3.0	1035	744	118	1.9	NC	1.8	0.6	0.0
10.0 – 12.0	NA	NA	NA	1035	NA	NA	0.8	NA	1.8	0.6	0.0
12.0 – 14.0	NA	NA	NA	1698	NA	NA	0.8	NA	1.6	0.6	NC
14.0 – 16.0	NA	NA	NA	1698	NA	NA	NA	NA	NA	NA	NA

Depth (ft BGS)	76-40 (ppm)	76-41 (ppm)	76-42 (ppm)	76-43 (ppm)
0.0 – 2.0	1.4	>2500	0.0	0.3
2.0 – 4.0	0.6	>2500	0.0	0.3
4.0 – 6.0	1.1	>2500	0.0	0.3
6.0 – 8.0	1.1	NC	0.0	0.6
8.0 – 10.0	0.7	NC	0.0	NC
10.0 – 12.0	0.7	NC	NC	NC

¹ Headspace measured using a photoionization detector.

NA Not applicable, interval is below the total depth of boring.

NC Not collected due to no sample recovery, sample interval below the water table, or headspace measurements were not recorded.

No soil headspace readings were collected from groundwater vertical profile borings 76-21 & 76-22.

**Table 4a. CAP-Part A/B – Groundwater Analytical Results
(VOLATILE ORGANIC COMPOUNDS)**

Sample Location	Sample ID	Screened Interval (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl – benzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
CAP-Part A Investigation – UST 261								
73-01	730112	4.0 – 14.0	05/10/98	4840 =	1130 =	280 =	1600 =	7850
73-02	730212	3.0 – 13.0	05/10/98	3170 =	184 =	132 =	1350 =	4836
73-03	730312	4.0 – 14.0	05/10/98	2400 =	72.5 =	105 =	954 =	3531.5
73-04	730412	4.0 – 14.0	05/10/98	12000 =	11000 =	983 =	5630 =	29613
CAP-Part A Investigation – USTs 257-260								
76-01	760112	3.0 – 13.0	05/10/98	3210 =	10700 =	1830 =	9510 =	25250
76-02	760212	6.0 – 16.0	05/08/98	1540 =	3090 =	945 =	5060 =	10635
76-03	760312	6.0 – 16.0	05/08/98	356 J	67.1 J	238 J	2450 J	3111.1
76-04	760412	6.0 – 16.0	05/08/98	2 U	2 U	2 U	6 U	ND
76-05	760522	7.0 – 12.0	05/08/98	159 =	512 =	889 =	7870 =	9430
76-05	760532	12.0 – 17.0	05/08/98	675 =	68.6 =	180 =	1640 =	2563.6
76-06	760612	2.0 – 12.0	05/09/98	138 J	15.3 J	183 J	439 J	775.3
76-07	760712	2.0 – 12.0	05/09/98	432 =	100 U	759 =	2970 =	4261
76-08	760812	2.0 – 12.0	05/09/98	7590 =	499 =	1420 =	1320 =	10829
76-09	760912	2.0 – 12.0	05/10/98	32700 =	97800 =	4450 =	22700 =	157650
76-10	761012	2.0 – 12.0	05/10/98	4240 J	17600 J	5210 J	28400 J	55450
In-Stream Water Quality Standards (GA Chapter 391-3-6)				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits				713	2,000,000	287,180	120,000	

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event.; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected.

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

TABLE 4a. CAP-Part A/B – Groundwater Analytical Results (continued)
(VOLATILE ORGANIC COMPOUNDS)

Sample Location	Sample ID	Screened Interval (ft BGS)	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
<i>CAP-Part B Investigation – USTs 257-261</i>								
76-11	761112	3.0 – 13.0	03/09/99	2 U	0.6 J	2 U	3 U	0.6
76-12	761212	4.2 – 14.2	03/09/99	1.6 J	1.1 J	2 U	3 U	2.7
76-13	761312	5.0 – 15.0	03/08/99	250 =	76.4 =	131 =	2110 =	2567.4
76-14	761412	4.0 – 14.0	03/08/99	5440 =	12600 =	1950 =	12900 =	32890
76-15	761512	4.0 – 14.0	03/08/99	158 =	12.2 =	12.9 =	276 =	459.1
76-16	761612	4.0 – 14.0	03/08/99	5390 =	371 =	297 =	1600 =	7658
76-17	761712	4.0 – 14.0	03/08/99	2 U	2 U	2 U	3 U	ND
76-18	761812	4.0 – 14.0	03/08/99	15200 =	17300 =	1700 =	9660 =	43860
76-19	761912	4.0 – 19.0	03/09/99	10600 =	19000 =	2580 =	13500 =	45680
76-20	762012	3.5 – 13.5	03/09/99	36.4 =	98.4 J	12.8 =	68 J	215.6
76-21	762112	11.0 – 15.0	02/18/99	21100 =	28200 =	3110 =	15400 =	67810
76-21	762122	17.0 – 20.0	02/18/99	10100 =	10500 =	2280 =	11600 =	34480
76-21	762132	27.0 – 30.0	02/18/99	3000 =	8860 =	890 J	4470 =	17220
76-21	762142	36.0 – 40.0	02/18/99	11000 =	13700 =	2650 =	13300 =	40650
76-21	762152	42.0 – 45.0	02/18/99	181 =	535 =	64.6 =	324 =	1104.6
76-22	762212	27.0 – 30.0	02/20/99	28.2 =	4.9 =	3 =	16.5 =	52.6
76-23	762312	4.0 – 14.0	03/08/99	46.5 =	6.2 =	2.9 =	4.7 =	60.3
76-24	762412	4.8 – 14.8	03/08/99	697 =	3180 =	716 =	4220 =	8813
76-25	762512	1.6 – 11.6	03/09/99	2 U	0.51 J	2 U	3 U	0.51
76-26	762612	4.9 – 14.9	03/09/99	2 U	2 U	2 U	3 U	ND
76-27	762712	3.0 – 13.0	03/09/99	2 U	2 U	2 U	3 U	ND
76-28	762812	3.9 – 13.9	03/09/99	1010 =	5650 =	1670 =	11800 =	20130
76-29	762912	6.4 – 11.2	09/24/99	2 U	2 U	2 U	6 U	ND
76-30	763012	2.0 – 12.0	09/23/99	2 U	2 U	2 U	6 U	ND
76-31	763112	2.9 – 12.9	09/23/99	2 U	2 U	2 U	0.51 J	0.51
76-32	763212	5.1 – 15.1	09/24/99	1540 =	3120 =	1770 =	7430 =	13860
76-33	763312	8.5 – 13.4	09/24/99	963 =	1270 =	767 =	3230 =	6230
76-34	763412	8.5 – 13.4	09/24/99	51.9 =	19.7 =	71.7 =	164 =	307.3
76-35	763512	2.9 – 12.9	09/24/99	2 U	2 U	2 U	6 U	ND
76-36	763612	4.4 – 14.4	09/24/99	1 J	2.1 =	1 J	2.9 J	7
76-37	763712	3.7 – 13.7	09/24/99	4.6 =	2 U	2 U	6 U	4.6
76-38	763812	4.7 – 14.7	09/24/99	212 =	19.1 U	102 =	716 =	1049.1
76-39	763912	4.3 – 14.3	09/23/99	3.5 =	0.66 J	0.51 J	1.9 J	6.57
76-40	764012	3.0 – 12.5	09/24/99	2 U	2 U	2 U	6 U	ND
76-41	764112	35.1 – 45.1	10/31/99	8.2 =	1.3 J	5.2 =	21.6 =	36.3
76-42	764212	34.4 – 44.4	10/31/99	2 U	2 U	2 U	6 U	ND
76-43	764312	34.2 – 44.2	10/31/99	2 U	2 U	2 U	6 U	ND
In-Stream Water Quality Standards (GA Chapter 391-3-6)				71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits				713	2,000,000	287,180	120,000	

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event.; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected.

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

**TABLE 4b. CAP-Part A/B – Groundwater Analytical Results
(POLYNUCLEAR AROMATIC HYDROCARBONS)**

Sample Location	Sample ID	Screened Interval (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)				Total PAH (µg/L)
				fluoranthene	naphthalene	phenanthrene		
CAP-Part A Investigation – UST 261								
73-01	730112	4.0 – 14.0	05/10/98		9.7 J			9.7
73-02	730212	3.0 – 13.0	05/10/98					ND
73-03	730312	4.0 – 14.0	05/10/98		34.0 =			34.0
73-04	730412	4.0 – 14.0	05/10/98		49.0 =			49.0
CAP-Part A Investigation – USTs 257–260								
76-01	760112	3.0 – 13.0	05/10/98		991 =	11.4 J		1002.4
76-02	760212	6.0 – 16.0	05/08/98	0.52 J	236 =			236.52
76-03	760312	6.0 – 16.0	05/08/98		156 =			156
76-04	760412	6.0 – 16.0	05/08/98					ND
76-05	760522	7.0 – 12.0	05/08/98		352 =			352
76-05	760532	12.0 – 17.0	05/08/98		93.4 =			93.4
76-06	760612	2.0 – 12.0	05/09/98		93.1 =			93.1
76-07	760712	2.0 – 12.0	05/09/98		17.9 =			17.9
76-08	760812	2.0 – 12.0	05/09/98		265 =			265
76-09	760912	2.0 – 12.0	05/10/98		644 =			644
76-10	761012	2.0 – 12.0	05/10/98		817 =			817
In-Stream Water Quality Standards (GA Chapter 391-3-6)				370	NRC	NRC		NRC
Alternate Concentration Limits				—	10,315,500	—		

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected; refer to Appendix VIII, Tables VIII-A through VIII-C, for complete list of PAH results.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table 4b. CAP-Part A/B – Groundwater Analytical Results (continued)
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Screened Interval (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)														Total PAH (µg/L)	
				Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene		Pyrene
CAP-Part B Investigation – USTs 257–261																			
76-11	761112	3.0 – 13.0	03/09/99																ND
76-12	761212	4.2 ~ 14.2	03/09/99																ND
76-13	761312	5.0 – 15.0	03/08/99																7.6
76-14	761412	4.0 – 14.0	03/08/99														7.6 J		231
76-15	761512	4.0 – 14.0	03/08/99														231 =		231
76-16	761612	4.0 – 14.0	03/08/99																ND
76-17	761712	4.0 – 14.0	03/08/99														5 J		5
76-18	761812	4.0 – 14.0	03/08/99																ND
76-19	761912	4.0 – 19.0	03/09/99														168 J		168
76-20	762012	3.5 – 13.5	03/09/99														308 J		308
76-21	762112	11.0 – 15.0	02/18/99														16.1 J		16.1
76-21	762122	17.0 – 20.0	02/18/99														2.3 J		2.3
76-21	762132	27.0 – 30.0	02/18/99														108 =		108
76-21	762142	36.0 – 40.0	02/18/99											3.1 J	2 J		392 =	4.6 J	3.7 J
76-21	762152	42.0 – 45.0	02/18/99											2.9 J	2 J		393 =	4.7 J	4.2 J
76-22	762212	27.0 – 30.0	02/20/99														16.7 =		16.7
76-23	762312	4.0 – 14.0	03/08/99														0.74 J		0.74
76-24	762412	4.8 – 14.8	03/08/99														2.1 J		2.1
																	152 J		152
In-Stream Water Quality Standards (GA Chapter 391-3-6)				NRC	NRC	110,000	0.0311	0.0311	NRC	NRC	0.0311	0.0311	370	14,000	0.0311	NRC	NRC	11,000	NRC
Alternate Concentration Limits				—	—	—	49353	49353	146,000	—	49353	49353	—	—	49353	10,315,500	—	—	—
NOTES:																			

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected; refer to Appendix VIII, Tables VIII-A through VIII-C, for complete list of PAH results.
Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.
UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
J Indicates that the value for the compound was an estimated value.
= Indicates that the compound was detected at the concentration reported.

Table 4b. CAP-Part A/B – Groundwater Analytical Results (continued)
(POLYNUCLEAR AROMATIC HYDROCARBONS)

Sample Location	Sample ID	Depth (ft BGS)	Date Sampled	Detected PAH Compounds (µg/L)													Total PAH (µg/L)		
				Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene			
76-25	762512	1.6 – 11.6	03/09/99															ND	
76-26	762612	4.9 – 14.9	03/09/99															ND	
76-27	762712	3.0 – 13.0	03/09/99														0.74 J	.074	
76-28	762812	3.9 – 13.9	03/09/99													254 J		254	
76-29	762912	6.4 – 11.2	09/24/99															ND	
76-30	763012	2.0 – 12.0	09/23/99															ND	
76-31	763112	2.9 – 12.9	09/23/99															ND	
76-32	763212	5.1 – 15.1	09/24/99	0.7 J	0.55 J	0.65 J	1.6 J	1.5 J	3.3 J	1.7 J	2 J	3.6 J	2.4 J	0.73 J	156 =	5 J	6 J		
76-33	763312	8.5 – 13.4	09/24/99											0.72 J	0.56 J				
76-34	763412	8.5 – 13.4	09/24/99			1.8 J	1.8 J	1.8 J	4 J	2.5 J	2.3 J	3.3 J		1.4 J	29.9 J	3.1 J	6.8 J		
76-35	763512	2.9 – 12.9	09/24/99																
76-36	763612	4.4 – 14.4	09/24/99						1.2 J	1.3 J					46.7 =			ND	
76-37	763712	3.7 – 13.7	09/24/99															ND	
76-38	763812	4.7 – 14.7	09/24/99												8.9 J			8.9	
76-39	763912	4.3 – 14.3	09/23/99			0.62 J	0.79 J	0.8 J		0.8 J	0.94 J	1.2 J	0.88 J				1.9 J		
76-40	764012	3.0 – 12.5	09/24/99						2.3 J	2.3 J				1.4 J			2.4 J		
76-41	764112	35.1 – 45.1	10/31/99															0.78	
76-42	764212	34.4 – 44.4	10/31/99												0.78 J			ND	
76-43	764312	34.2 – 44.2	10/31/99															ND	
In-Stream Water Quality Standards (GA Chapter 39J-3-6)				NRC	NRC	110,000	0.0311	0.0311	NRC	NRC	0.0311	0.0311	370	14,000	0.0311	NRC	NRC	11,000	NRC
Alternate Concentration Limits				—	—	—	49353	49353	146,000	—	49353	49353	—	—	49353	10,315,500	—	—	

NOTES:

May 1998 sampling was performed prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during that sampling event; however, the new SW-846 analytical methods were used on all samples collected in 1999.

ND Not detected; refer to Appendix VIII, Tables VIII-A through VIII-C, for complete list of PAH results.

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table 5. CAP-Part A/B – Geotechnical Results

Boring ID	Sample ID	Depth Interval (ft BGS)	Grain size analysis - % Fines	Grain size analysis - % Sand	Grain size analysis - % Gravel	Liquid Limit	Plastic Limit	Plasticity Index	Natural Moisture Content (%)	Porosity	Specific Gravity	Permeability (cm/sec)
73-03	730331	8.0 – 10.0	3	96	1	NP	NP	NP	20.2	0.13	2.61	1.25×10^{-4}
76-03	760331	8.0 – 10.0	5	95	0	NP	NP	NP	27.1	0.59	2.61	1.43×10^{-4}
76-11	761131	10.0 – 15.0	2	98	0	NP	NP	NP	27.5	—	—	—
76-12	761231	7.5 – 10.0	2	98	0	NP	NP	NP	24.1	—	—	—
76-13	761331	10.0 – 12.5	3	97	0	NP	NP	NP	14.5	—	—	—
76-14	761431	10.0 – 12.0	4	96	0	NP	NP	NP	29.8	—	—	—
76-15	761531	10.0 – 12.5	4	96	0	NP	NP	NP	33.2	—	—	—
76-16	761631	10.0 – 12.5	4	96	0	NP	NP	NP	31.1	—	—	—
76-17	761731	10.0 – 12.5	8	92	0	NP	NP	NP	40.1	—	—	—
76-18	761831	10.0 – 13.5	5	95	0	NP	NP	NP	31.5	—	—	—
76-19	761931	12.5 – 15.0	1	99	0	NP	NP	NP	25.4	—	—	—
76-20	762031	10.0 – 12.0	6	94	0	NP	NP	NP	26.9	—	—	—
76-23	762331	10.0 – 12.5	5	95	0	NP	NP	NP	24.1	—	—	—
76-24	762431	15.0 – 17.5	2	98	0	NP	NP	NP	24.0	—	—	—
76-25	762531	10.0 – 12.5	3	97	0	NP	NP	NP	23.5	—	—	—
76-26	762631	8.0 – 10.0	8	92	0	NP	NP	NP	25.1	—	—	—
76-27	762731	10.0 – 15.0	8	92	0	NP	NP	NP	16.2	—	—	—
76-28	762831	9.0 – 11.0	5	95	0	NP	NP	NP	25.6	—	—	—
76-41	764131	35.0 – 45.0	7	93	0	NP	NP	NP	31.2	—	—	—
76-42	764231	35.0 – 45.0	6	94	0	NP	NP	NP	23.6	—	—	—

NP Non-plastic

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 88)	Ground Surface Elevation (NGVD 29)	Top of Casing Elevation (NGVD 29)
73-01	05/10/98	14.0	4.0 – 14.0	Temporary Piezometer	N 681236.10 E 828980.53	87.49	92.54
73-02	05/10/98	13.0	3.0 – 13.0	Temporary Piezometer	N 681250.40 E 828998.08	87.49	92.43
73-03	05/10/98	14.0	4.0 – 14.0	Temporary Piezometer	N 681241.17 E 829004.66	87.10	91.08
73-04	05/10/98	14.0	4.0 – 14.0	Temporary Piezometer	N 681228.99 E 828994.05	87.14	89.71
73-05	05/09/98	34.0	NA	Vertical Profile	N 681235.05 E 828999.31	87.09	NA
76-01	05/10/98	13.0	3.0 – 13.0	Temporary Piezometer	N 681121.58 E 828994.85	87.28	89.72
76-02	05/08/98	16.0	6.0 – 16.0	Temporary Piezometer	N 681143.15 E 829026.23	86.26	90.61
76-03	05/08/98	16.0	6.0 – 16.0	Temporary Piezometer	N 681093.98 E 829020.91	85.71	89.94
76-04	05/08/98	16.0	6.0 – 16.0	Temporary Piezometer	N 681080.16 E 828980.40	85.63	89.97
76-05	05/09/98	59.0	NA	Vertical Profile	N 681113.80 E 829005.96	86.31	NA
76-06	05/09/98	12.0	2.0 – 12.0	Temporary Piezometer	N 681160.39 E 828958.68	87.98	91.96
76-07	05/09/98	12.0	2.0 – 12.0	Temporary Piezometer	N 681180.05 E 828940.63	88.00	91.59
76-08	05/09/98	12.0	2.0 – 12.0	Temporary Piezometer	N 681201.68 E 828922.54	87.92	92.26
76-09	05/09/98	12.0	2.0 – 12.0	Temporary Piezometer	N 681218.09 E 828904.30	87.91	92.71
79-10	05/10/98	12.0	2.0 – 12.0	Temporary Piezometer	N 681237.56 E 828886.21	87.85	90.67
76-11	2/18/99	15.0	3.0 – 13.0	Shallow Monitoring Well	N 681308.11 E 828809.55	86.33	85.82
76-12	2/17/99	15.0	4.2 – 14.2	Shallow Monitoring Well	N 681155.31 E 828911.64	86.93	86.64
76-13	2/17/99	16.0	5.0 – 15.0	Shallow Monitoring Well	N 681074.38 E 829014.25	85.18	84.81
76-14	2/18/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681166.42 E 829016.75	86.60	86.08
76-15	2/18/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681206.73 E 829004.38	86.92	86.56
76-16	2/19/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681238.27 E 829024.41	86.41	86.05

Table 6. CAP-Part A/B – Well Construction Details (continued)

Boring/Well Number	Date Installed	Boring Depth (ft BGS)	Screened Interval (ft BGS)	Type of Completion	Coordinates (NAD 88)	Ground Surface Elevation (NGVD 29)	Top of Casing Elevation (NGVD 29)
76-17	2/19/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681313.68 E 828995.88	86.75	86.43
76-18	2/18/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681223.40 E 828969.93	87.45	87.06
76-19	2/17/99	20.0	4.0 – 19.0	Shallow Monitoring Well	N 681249.53 E 828922.25	87.70	87.01
76-20	2/18/99	15.0	3.5 – 13.5	Shallow Monitoring Well	N 681303.48 E 828907.25	87.25	86.97
76-21	2/20/99	36.0	4.0 – 14.0	Shallow Monitoring Well/ Vertical Profile	N 681227.62 E 828918.04	87.77	87.16
76-22	2/20/99	30.0	N/A	Vertical Profile	N 681242.34 E 829003.20	87.09	N/A
76-23	2/18/99	15.0	4.0 – 14.0	Shallow Monitoring Well	N 681201.70 E 828870.31	87.24	86.89
76-24	2/17/99	15.8	4.8 – 14.8	Shallow Monitoring Well	N 681101.78 E 828959.19	86.82	86.59
76-25	2/19/99	15.0	1.6 – 11.6	Shallow Monitoring Well	N 681114.70 E 828823.12	85.93	85.52
76-26	2/19/99	15.3	4.9 – 14.9	Shallow Monitoring Well	N 681009.44 E 828916.34	84.86	84.48
76-27	2/19/99	15.0	3.0 – 13.0	Shallow Monitoring Well	N 680996.54 E 829113.70	83.93	83.54
76-28	2/19/99	15.0	3.9 – 13.9	Shallow Monitoring Well	N 681155.83 E 829090.91	84.14	83.83
76-29	9/24/99	12.0	6.4 – 11.2	Shallow Monitoring Well	N 681354.92 E 828919.00	86.70	86.29
76-30	9/29/99	12.0	2.0 – 12.0	Shallow Monitoring Well	N 681257.76 E 828853.21	87.32	87.15
76-31	9/27/99	13.0	2.9 – 12.9	Shallow Monitoring Well	N 681211.85 E 828839.23	86.73	86.58
76-32	9/24/99	15.5	5.1 – 15.1	Shallow Monitoring Well	N 681236.59 E 828886.43	87.86	87.54
79-33	9/24/99	13.6	8.5 – 13.4	Shallow Monitoring Well	N 681203.27 E 828924.00	87.90	87.65
76-34	9/24/99	14.0	8.5 – 13.4	Shallow Monitoring Well	N 681161.36 E 828958.83	87.92	87.77
76-35	9/24/99	13.5	2.9 – 12.9	Shallow Monitoring Well	N 681300.18 E 829067.06	84.73	84.33
76-36	9/24/99	15.0	4.4 – 14.4	Shallow Monitoring Well	N 681187.51 E 829063.71	84.78	84.47

Table 6. CAP-Part A/B -- Well Construction Details (continued)

Boring/Well Number	Date Installed	Boring Depth (ft BGS)	Screened Interval (ft BGS)	Type of Completion	Coordinates (NAD 88)	Ground Surface Elevation (NGVD 29)	Top of Casing Elevation (NGVD 29)
76-37	9/24/99	14.0	3.7 - 13.7	Shallow Monitoring Well	N 681252.43 E 829137.60	84.20	84.38
76-38	9/23/99	15.0	4.7 - 14.7	Shallow Monitoring Well	N 681140.38 E 829137.49	87.20	*
76-39	9/23/99	14.5	4.3 - 14.3	Shallow Monitoring Well	N 681074.88 E 829121.77	85.60	*
76-40	9/24/99	13.0	3.0 - 12.5	Shallow Monitoring Well	N 680976.49 E 829030.22	85.08	84.72
76-41	10/6/99	47.2	35.1 - 45.1	Deep Monitoring Well	N 681230.72 E 828917.95	87.76	87.54
76-42	10/6/99	45.0	34.4 - 44.4	Deep Monitoring Well	N 681074.64 E 829130.67	85.92	85.63
76-43	10/6/99	45.0	34.2 - 44.2	Deep Monitoring Well	N 681257.72 E 829138.73	84.06	83.80

* Surface completions were not finished at the time of the survey. Casing elevations will be provided in follow on documents for the site.

Table 7. 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)
73-01	05/12/98	87.49	92.54	4.0 – 14.0	N/A	7.11	N/A	N/A	80.53
73-02	05/12/98	87.49	92.43	3.0 – 13.0	N/A	7.70	N/A	N/A	80.05
73-03	05/12/98	87.10	91.08	4.2 – 14.2	N/A	8.78	N/A	N/A	79.93
73-04	05/12/98	87.14	89.71	2.5 – 12.5	N/A	8.88	N/A	N/A	81.24
76-01	05/13/98	87.28	89.72	3.0 – 13.0	N/A	9.09	N/A	N/A	80.63
76-02	05/13/98	86.26	90.61	6.0 – 16.0	N/A	10.50	N/A	N/A	80.11
76-03	05/13/98	85.71	89.94	6.0 – 16.0	N/A	10.19	N/A	N/A	79.75
76-04	05/13/98	85.63	89.97	6.0 – 16.0	N/A	9.58	N/A	N/A	80.39
76-06	05/13/98	87.98	91.96	2.0 – 12.0	N/A	11.00	N/A	N/A	80.96
76-07	05/13/98	88.00	91.59	2.0 – 12.0	N/A	10.55	N/A	N/A	81.04
76-08	05/13/98	87.92	92.26	2.0 – 12.0	N/A	11.12	N/A	N/A	81.14
76-09	05/13/98	87.91	92.71	2.0 – 12.0	N/A	11.42	N/A	N/A	81.29
76-10	05/13/98	87.85	90.67	2.0 – 12.0	N/A	9.09	N/A	N/A	81.58
76-11	03/07/99	86.33	85.82	3.0 – 13.0	N/A	5.94	N/A	N/A	79.88
76-12	03/07/99	86.93	86.64	4.2 – 14.2	N/A	7.11	N/A	N/A	79.53
76-13	03/07/99	85.18	84.81	5.0 – 15.0	N/A	6.62	N/A	N/A	78.19
76-14	03/07/99	86.60	86.08	4.0 – 14.0	N/A	7.89	N/A	N/A	78.19
76-15	03/07/99	86.92	86.56	4.0 – 14.0	N/A	8.37	N/A	N/A	78.19
76-16	03/07/99	86.41	86.05	4.0 – 14.0	N/A	8.64	N/A	N/A	77.41
76-17	03/07/99	86.75	86.43	4.0 – 14.0	N/A	8.84	N/A	N/A	77.59
76-18	03/07/99	87.45	87.06	4.0 – 14.0	N/A	8.43	N/A	N/A	78.63
76-19	03/07/99	87.70	87.01	4.0 – 19.0	7.99	8.01	0.02	N/A	79.00
79-20	03/07/99	87.25	86.97	3.5 – 13.5	N/A	7.92	N/A	N/A	79.05

Table 7. Groundwater Elevations (continued)

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)
76-21	03/07/99	87.77	87.16	4.0 – 14.0	N/A	8.07	N/A	N/A	79.09
76-23	03/07/99	87.24	86.89	4.0 – 14.0	N/A	6.99	N/A	N/A	79.90
76-24	03/07/99	86.82	86.59	4.8 – 14.8	N/A	7.47	N/A	N/A	79.12
76-25	03/07/99	85.93	85.52	1.6 – 11.6	N/A	5.51	N/A	N/A	80.01
76-26	03/07/99	84.86	84.48	4.9 – 14.9	N/A	6.24	N/A	N/A	78.24
76-27	03/07/99	83.93	83.54	3.0 – 13.0	N/A	8.10	N/A	N/A	75.44
76-28	03/07/99	84.14	83.83	3.9 – 13.9	N/A	7.08	N/A	N/A	76.75
76-11	10/07/99	86.33	85.82	3.0 – 13.0	N/A	5.17	N/A	N/A	80.65
76-12	10/07/99	86.93	86.64	4.2 – 14.2	N/A	6.57	N/A	N/A	80.07
76-13	10/07/99	85.18	84.81	5.0 – 15.0	N/A	5.75	N/A	N/A	79.06
76-14	10/07/99	86.60	86.08	4.0 – 14.0	N/A	7.03	N/A	N/A	79.05
76-15	10/07/99	86.92	86.56	4.0 – 14.0	N/A	7.54	N/A	N/A	79.02
76-16	10/07/99	86.41	86.05	4.0 – 14.0	N/A	7.81	N/A	N/A	78.24
76-17	10/07/99	86.75	86.43	4.0 – 14.0	N/A	8.05	N/A	N/A	78.38
76-18	10/07/99	87.45	87.06	4.0 – 14.0	N/A	7.65	N/A	N/A	79.41
76-19	10/07/99	87.70	87.01	4.0 – 19.0	7.19	7.20	0.01	N/A	79.81
79-20	10/07/99	87.25	86.97	3.5 – 13.5	N/A	4.14	N/A	N/A	82.83
76-21	10/07/99	87.77	87.16	4.0 – 14.0	N/A	7.29	N/A	N/A	79.87
76-23	10/07/99	87.24	86.89	4.0 – 14.0	N/A	6.30	N/A	N/A	80.59
76-24	10/07/99	86.82	86.59	4.8 – 14.8	N/A	6.71	N/A	N/A	79.88
76-25	10/07/99	85.93	85.52	1.6 – 11.6	N/A	4.76	N/A	N/A	80.76
76-26	10/07/99	84.86	84.48	4.9 – 14.9	N/A	5.72	N/A	N/A	78.76
76-27	10/07/99	83.93	83.54	3.0 – 13.0	N/A	7.82	N/A	N/A	75.72
76-28	10/07/99	84.14	83.83	3.9 – 13.9	N/A	6.36	N/A	N/A	77.47
76-29	10/06/99	86.70	86.29	6.4 – 11.2	N/A	6.61	N/A	N/A	79.68
76-30	10/06/99	87.32	87.15	2.0 – 12.0	N/A	6.37	N/A	N/A	80.78
76-31	10/06/99	86.73	86.58	2.9 – 12.9	N/A	5.66	N/A	N/A	80.92

Table 7. Groundwater Elevations (continued)

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)
76-32	10/06/99	87.86	87.54	5.1 – 15.1	N/A	7.14	N/A	N/A	80.40
76-33	10/06/99	87.90	87.65	8.5 – 13.4	7.64	7.65	0.01	N/A	80.00
76-34	10/06/99	87.92	87.77	8.5 – 13.4	N/A	7.88	N/A	N/A	79.89
76-35	10/06/99	84.73	84.33	2.9 – 12.9	N/A	6.30	N/A	N/A	78.03
76-36	10/06/99	84.78	84.47	4.4 – 14.4	N/A	6.63	N/A	N/A	77.84
76-37	10/06/99	84.20	84.38	3.7 – 13.7	N/A	6.78	N/A	N/A	77.60
76-38	10/06/99	87.20	*	4.7 – 14.7	N/A	10.39	N/A	N/A	*
76-39	10/06/99	85.60	*	4.3 – 14.3	N/A	8.52	N/A	N/A	*
76-40	10/06/99	85.08	84.72	3.0 – 12.5	N/A	6.79	N/A	N/A	77.93

* Surface completions were not finished at the time of the survey. Casing elevations will be provided in follow on documents for the site.

Table 8. CAP-Part A - Soil Data Risk-based Screening Results

Station: Sample ID: Sample Interval: Collection Date:	Screening Levels		Leaching to Groundwater ^c	73-01 (µg/kg)	73-01 2.0-4.0 10-May-98	73-01 2.0-4.0 10-May-98	73-02 (µg/kg)	73-02 2.0-4.0 10-May-98	73-02 (µg/kg)	73-03 (µg/kg)	73-03 2.0-4.0 10-May-98	73-03 (µg/kg)
	Georgia UST Soil Threshold Levels ^a	Risk-based Screening Level ^b										
Units:	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
VOLATILE ORGANIC COMPOUNDS												
Benzene	8	197,400	30	2.2 U	2.6 U	0.97 =	2.1 U	9.8 =	5.7 U	23 U	37.6 =	252 =
Toluene	6,000	408,800,000	12000	2.2 U	10.6 U	2.4 =	15 =	19.3 J	1500 U	1500 U	1500 U	1500 U
Ethylbenzene	10,000	204,400,000	13000	2.2 U	21.8 =	2.3 U	5.5 J	40.4 J	350 U	350 U	350 U	350 U
Xylenes, Total	700,000	1,000,000,000	190000	6.4 U	134 J	6.8 U	16.1 J	43.5 =	350 U	350 U	350 U	350 U
POLYNUCLEAR AROMATIC COMPOUNDS												
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Acenaphthene	N/A ^e	12,264,000	570000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Acenaphthylene	N/A ^e	61,320,000	4200000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Anthracene	N/A ^e	613,200,000	12000000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Benzo(a)anthracene	N/A ^e	7,840	2000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Benzo(a)pyrene	N/A ^e	784	8000	861 J	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Benzo(b)fluoranthene	N/A ^e	7,840	5000	1320 J	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Benzo(g,h,i)perylene	N/A ^e	--	--	765 J	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Benzo(k)fluoranthene	N/A ^e	78,400	49000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Chrysene	N/A ^e	784,000	160000	985 J	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Dibenz(a,h)anthracene	N/A ^e	784	2000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Fluoranthene	N/A ^e	81,760,000	4300000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Fluorene	N/A ^e	81,760,000	560000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Naphthalene	N/A ^e	40,880,000	84000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Phenanthrene ^f	N/A ^e	61,320,000	4200000	1430 U	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
Pyrene	N/A ^e	61,320,000	4200000	1180 J	355 U	375 U	352 U	350 U	1500 U	1500 U	1500 U	1500 U
OTHER ANALYTES												
Lead	--	5,000,000	--	11900 =	47900 =	5400 =	14700 U	15200 U	7100 =	62300 =	7100 =	62300 =
Total Petroleum Hydrocarbons	--	--	--	49100 =	47900 =	13400 U	14700 U	15200 U	7100 =	62300 =	7100 =	62300 =
TPH-Diesel Range Organics	--	--	--	49100 =	47900 =	13400 U	14700 U	15200 U	7100 =	62300 =	7100 =	62300 =
TPH-Gasoline Range Organics	--	--	--	49100 =	47900 =	13400 U	14700 U	15200 U	7100 =	62300 =	7100 =	62300 =

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval: Collection Date: Units:	Screening Levels			73-04 (µg/kg)	73-04 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)</

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

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Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval: Collection Date:	Screening Levels		Leaching to Groundwater ^c (µg/kg)	73-05							76-01 (µg/kg)	76-01 (µg/kg)
	Georgia UST Soil Threshold Levels for Soil ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)	73-05 (µg/kg)		
VOLATILE ORGANIC COMPOUNDS	8	197,400	30	98.7	2.6 U	52.4	45.5	11.9 J	289 J			
Benzene	6,000	408,800,000	12,000	39 J	2.6 U	39.5	62.9	174 J	127 J			
Toluene	10,000	204,400,000	13,000	25 U	2.6 U	5.8 J	12.5	46.8	2550 J			
Ethylbenzene	700,000	1,000,000,000	190,000	127	7.8 U	42.4	57	366 J	5280 J			
XYLENES, TOTAL												
POLYNUCLEAR AROMATIC COMPOUNDS												
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	412 U	433 U	407 U	417 U	365 U	356 U			
Acenaphthene	N/A ^e	12,264,000	570,000	412 U	433 U	407 U	417 U	365 U	356 U			
Acenaphthylene	N/A ^e	61,320,000	4,200,000	412 U	433 U	407 U	417 U	365 U	41.8 J			
Anthracene	N/A ^e	613,200,000	12,000,000	412 U	433 U	407 U	417 U	365 U	356 U			
Benzo(a)anthracene	N/A ^e	7,840	2,000	412 U	433 U	407 U	417 U	365 U	356 U			
Benzo(a)pyrene	N/A ^e	784	8,000	412 U	433 U	407 U	417 U	365 U	33.2 J			
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	412 U	433 U	407 U	417 U	365 U	356 U			
Benzo(g,h,i)perylene	N/A ^e	78,400	49,000	412 U	433 U	407 U	417 U	365 U	16.4 J			
Benzo(k)fluoranthene	N/A ^e	784,000	160,000	412 U	433 U	407 U	417 U	365 U	62.7 J			
Chrysene	N/A ^e	784	2,000	412 U	433 U	407 U	417 U	365 U				
Dibenzo(a,h)anthracene	N/A ^e	81,760,000	4,300,000	412 U	433 U	407 U	417 U	40.4 J	124 J			
Fluoranthene	N/A ^e	81,760,000	560,000	412 U	433 U	407 U	417 U	9.7 J	356 U			
Fluorene	N/A ^e	7,840	14,000	412 U	433 U	407 U	417 U	365 U	356 U			
Indeno(1,2,3-cd)pyrene	N/A ^e	40,880,000	84,000	412 U	433 U	407 U	417 U	365 U	2500			
Naphthalene	N/A ^e	61,320,000	4,200,000	412 U	433 U	407 U	417 U	36.6 J	181 J			
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	412 U	433 U	407 U	417 U	75.4 J	143 J			
Pyrene	N/A ^e			412 U	433 U	407 U	417 U		12800 J			
OTHER ANALYTES												
Lead	--	5,000,000	--	12500 U	48200 =	98500 =	12500 U	3400 U	271000 =			
Total Petroleum Hydrocarbons	--	--	--					755 J	1330000 =			
TPH-Diesel Range Organics	--	--	--									
TPH-Gasoline Range Organics	--	--	--									

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Soil Data Risk-Based Screening Results (Continued)											
Station:	Screening Levels										
Sample ID:	Georgia UST	Risk-based	Leaching to Groundwater ^c (µg/kg)								
Sample Interval:	Soil Threshold	Screening									
Collection Date:	Levels ^a	Level ^b									
Units:	(µg/kg)	(µg/kg)	(µg/kg)	76-02 (µg/kg)	76-02 (µg/kg)	76-03 (µg/kg)	76-03 (µg/kg)	76-04 (µg/kg)	76-04 (µg/kg)	76-04 (µg/kg)	
VOLATILE ORGANIC COMPOUNDS											
Benzene	8	197,400	30	12800 J	10.8 J	75.3 J	69.2 J	2.1 U	2.6 U		
Toluene	6,000	408,800,000	12,000	32900 J	138 J	168 J	142 J	32.7 =	57.9 =		
Ethylbenzene	10,000	204,400,000	13,000	24200 J	36.3 J	527 J	240 J	2.1 U	2.6 U		
Xylenes, Total	700,000	1,000,000,000	190,000	126000 J	339 J	5440 J	409 J	6.3 U	7.7 U		
POLYNUCLEAR AROMATIC COMPOUNDS											
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	402 U	404 U	415 U	388 U	347 U	424 U		
Acenaphthene	N/A ^e	12,264,000	570,000	402 U	404 U	415 U	388 U	347 U	424 U		
Acenaphthylene	N/A ^e	61,320,000	4,200,000	402 U	404 U	415 U	388 U	347 U	424 U		
Anthracene	N/A ^e	613,200,000	12,000,000	402 U	404 U	415 U	388 U	347 U	424 U		
Benzo(a)anthracene	N/A ^e	7,840	2,000	402 U	404 U	415 U	388 U	347 U	424 U		
Benzo(a)pyrene	N/A ^e	784	8,000	402 U	404 U	415 U	388 U	347 U	424 U		
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	402 U	404 U	415 U	388 U	347 U	424 U		
Benzo(g,h,i)perylene	N/A ^e	--	--	402 U	404 U	415 U	388 U	347 U	424 U		
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	402 U	404 U	415 U	388 U	347 U	424 U		
Chrysene	N/A ^e	784,000	160,000	402 U	404 U	415 U	388 U	347 U	424 U		
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	402 U	404 U	415 U	388 U	347 U	424 U		
Fluoranthene	N/A ^e	81,760,000	4,300,000	402 U	404 U	415 U	388 U	347 U	424 U		
Fluorene	N/A ^e	81,760,000	560,000	369 J	404 U	415 U	388 U	347 U	424 U		
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	402 U	404 U	415 U	388 U	347 U	424 U		
Naphthalene	N/A ^e	40,880,000	84,000	22000 =	404 U	2700 =	143 J	347 U	424 U		
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	402 U	404 U	415 U	388 U	347 U	424 U		
Pyrene	N/A ^e	61,320,000	4,200,000	402 U	404 U	415 U	388 U	347 U	424 U		
OTHER ANALYTES											
Lead	--	5,000,000	--		5300 =		5900 U		8700 =		
Total Petroleum Hydrocarbons	--	--	--	1550000 =	910 UJ	173000 =	4300 =	2600 U	1500 UJ		
TPH-Diesel Range Organics	--	--	--	2310000 =	441 J	48000 =	1780 =	1050 UJ	173 J		
TPH-Gasoline Range Organics	--	--	--								

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval: Collection Date:	Screening Levels		Leaching to Groundwater ^c (µg/kg)	76-05						76-05		76-05		76-05		76-05	
	Georgia UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05	76-05
Units:				(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
VOLATILE ORGANIC COMPOUNDS																	
Benzene	8	197,400	30	50 U	31.3 J	12.7 =	13.8 =	5.1 U	4.9 UJ								
Toluene	6,000	408,800,000	12,000	50 U	32.6 J	38.3 =	15 =	124 =	72.1 J								
Ethylbenzene	10,000	204,400,000	13,000	85.5 J	26.5 J	14.1 =	15.5 =	10.5 =	9.6 J								
Xylenes, Total	700,000	1,000,000,000	190,000	374 J	360 J	101 =	29.3 J	4.1 J	3.9 J								
POLYNUCLEAR AROMATIC COMPOUNDS																	
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	417 U	412 U	429 U	397 U	424 U	398 U								
Acenaphthene	N/A ^e	12,264,000	570,000	417 U	412 U	429 U	397 U	424 U	398 U								
Acenaphthylene	N/A ^e	61,320,000	4,200,000	417 U	412 U	429 U	397 U	424 U	398 U								
Anthracene	N/A ^e	613,200,000	12,000,000	417 U	412 U	429 U	397 U	424 U	398 U								
Benzo(a)anthracene	N/A ^e	7,840	2,000	417 U	412 U	429 U	397 U	424 U	398 U								
Benzo(a)pyrene	N/A ^e	784	8,000	417 U	412 U	429 U	397 U	424 U	398 U								
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	417 U	412 U	429 U	397 U	424 U	398 U								
Benzo(g,h,i)perylene	N/A ^e	--	--	417 U	412 U	429 U	397 U	424 U	398 U								
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	417 U	412 U	429 U	397 U	424 U	398 U								
Chrysene	N/A ^e	784,000	160,000	417 U	412 U	429 U	397 U	424 U	398 U								
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	417 U	412 U	429 U	397 U	424 U	398 U								
Fluoranthene	N/A ^e	81,760,000	4,300,000	417 U	412 U	429 U	397 U	424 U	398 U								
Fluorene	N/A ^e	81,760,000	560,000	417 U	412 U	429 U	397 U	424 U	398 U								
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	370 J	50.9 J	429 U	397 U	424 U	398 U								
Naphthalene	N/A ^e	40,880,000	84,000	417 U	412 U	429 U	397 U	424 U	398 U								
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	417 U	412 U	429 U	397 U	424 U	398 U								
Pyrene	N/A ^e	61,320,000	4,200,000	417 U	412 U	429 U	397 U	424 U	398 U								
OTHER ANALYTES				6100 J				4700 =	3500 =								
Lead	--	5,000,000	--														
Total Petroleum Hydrocarbons	--	--	--	15400 =	3200 U	3400 U	2700 U	1300 U	3400 U								
TPH-Diesel Range Organics	--	--	--	53700 =	1720 J	264 J	91.5 J	1280 UJ	160 J								
TPH-Gasoline Range Organics	--	--	--														

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Station:	Screening Levels		Leaching to Groundwater ^c								
	Georgia UST Soil Threshold Levels ^a	Risk-based Screening Level ^b	(µg/kg)	76-05	76-05	76-06	76-06	76-06	76-07	76-07	76-07
Sample ID:	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Sample Interval:											
Collection Date:											
Units:											
VOLATILE ORGANIC COMPOUNDS											
Benzene	8	197,400	30	4.6 UJ	2.7 UJ	3.7 J	4.3 U	1.2 U	1.1 U		
Toluene	6,000	408,800,000	12,000	4.6 UJ	2.7 UJ	160 J	4.8 J	31.6 =	19.3 =		
Ethylbenzene	10,000	204,400,000	13,000	4.6 UJ	2.7 UJ	118 J	4.3 U	14.4 J	17.5 J		
Xylenes, Total	700,000	1,000,000,000	190,000	14 UJ	8.1 UJ	67.1 J	13 U	57.7 =	103 =		
POLYNUCLEAR AROMATIC COMPOUNDS											
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	382 U	446 U	7000 U	354 U	386 U	365 U		
Acenaphthene	N/A ^e	12,264,000	570,000	382 U	446 U	7000 U	354 U	386 U	365 U		
Acenaphthylene	N/A ^e	61,320,000	4,200,000	382 U	446 U	421 J	354 U	386 U	365 U		
Anthracene	N/A ^e	613,200,000	12,000,000	382 U	446 U	522 J	354 U	386 U	365 U		
Benzo(a)anthracene	N/A ^e	7,840	2,000	382 U	446 U	2400 J	354 U	386 U	365 U		
Benzo(a)pyrene	N/A ^e	784	8,000	382 U	446 U	1390 J	354 U	386 U	365 U		
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	382 U	446 U	1930 J	354 U	386 U	365 U		
Benzo(g,h,i)perylene	N/A ^e	--	--	382 U	446 U	1180 J	354 U	386 U	365 U		
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	382 U	446 U	932 J	354 U	386 U	365 U		
Chrysene	N/A ^e	784,000	160,000	382 U	446 U	2650 J	354 U	386 U	365 U		
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	382 U	446 U	4320 J	354 U	386 U	365 U		
Fluoranthene	N/A ^e	81,760,000	4,300,000	382 U	446 U	1160 J	354 U	386 U	365 U		
Fluorene	N/A ^e	81,760,000	560,000	382 U	446 U	7000 U	354 U	386 U	365 U		
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	382 U	446 U	7000 U	354 U	386 U	365 U		
Naphthalene	N/A ^e	40,880,000	84,000	382 U	446 U	7030 =	22.1 J	386 U	365 U		
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	382 U	446 U	6330 J	354 U	386 U	365 U		
Pyrene	N/A ^e	61,320,000	4,200,000	382 U	446 U		354 U	386 U	365 U		
OTHER ANALYTES											
Lead	--	5,000,000	--		7100 J	4500 J					
Total Petroleum Hydrocarbons	--	--	--	1100 U	1600 UJ	59700 =	2900 U	580 UJ	1200 UJ		
TPH-Diesel Range Organics	--	--	--	1160 U	1350 UJ	1410 =	524 J	313 J	1630 J		
TPH-Gasoline Range Organics	--	--	--								

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 8. CAP-Part A - Soil Data Risk-based Screening Results (continued)

Station:	Screening Levels		Leaching to Groundwater ^e	76-08 (µg/kg)	76-08 (µg/kg)	76-09 (µg/kg)	76-09 (µg/kg)	76-10 (µg/kg)	76-10 (µg/kg)
	Georgia UST Soil Threshold Levels ^a	Risk-based Screening Level ^b							
Sample ID:	Units:								
Sample Interval:									
Collection Date:									
VOLATILE ORGANIC COMPOUNDS									
Benzene	8	197,400	30	0.55 U	1.7 J	39.8 J	15700 J	1.1 U	351 J
Toluene	6,000	408,800,000	12,000	2.5 =	3.5 =	190 J	325000 J	4.4 U	18400 J
Ethylbenzene	10,000	204,400,000	13,000	2.2 U	4.4 J	51 J	117000 J	4.4 U	18600 J
Xylenes, Total	700,000	1,000,000,000	190,000	6.6 U	6.5 J	341 J	594000 J	13.6 =	110000 J
POLYNUCLEAR AROMATIC COMPOUNDS									
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	366 U	351 U	366 U	361 U	366 U	365 U
Acenaphthene	N/A ^e	12,264,000	570,000	366 U	351 U	366 U	361 U	366 U	365 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	366 U	351 U	10.8 J	361 U	366 U	365 U
Anthracene	N/A ^e	613,200,000	12,000,000	366 U	351 U	9.2 J	361 U	366 U	365 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	366 U	351 U	52.4 J	361 U	366 U	365 U
Benzo(a)pyrene	N/A ^e	784	8,000	366 U	351 U	366 U	361 U	366 U	365 U
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	366 U	351 U	366 U	361 U	366 U	365 U
Benzo(g,h,i)perylene	N/A ^e	--	--	366 U	351 U	366 U	361 U	366 U	365 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	366 U	351 U	366 U	361 U	366 U	365 U
Chrysene	N/A ^e	784,000	160,000	366 U	351 U	64.9 J	361 U	366 U	365 U
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	366 U	351 U	83.8 J	361 U	366 U	365 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	366 U	351 U	12.3 J	366 =	366 U	365 U
Fluorene	N/A ^e	81,760,000	560,000	366 U	351 U	366 U	361 U	366 U	365 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	366 U	351 U	28.4 J	23100 =	366 U	3560 =
Naphthalene	N/A ^e	40,880,000	84,000	366 U	312 J	82.8 J	382 =	366 U	302 J
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	366 U	351 U	139 J	361 U	366 U	365 U
Pyrene	N/A ^e	61,320,000	4,200,000	366 U	351 U				
OTHER ANALYTES									
Lead	--	5,000,000	--	1600 UJ	1700 U	3200 U	818000 =	1100 U	124000 =
Total Petroleum Hydrocarbons	--	--	--	1100 U	297 J	2030 =	2820000 J	576 J	1270000 =
TPH-Diesel Range Organics	--	--	--						
TPH-Gasoline Range Organics	--	--	--						

a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

b Protective of soil exposure during Industrial Land Use.

c Protective of groundwater ingestion. Used a DAF of 20.

d Values based on naphthalene as a surrogate chemical.

e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

f Values based on pyrene as a surrogate chemical.

g Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 9. CAP-Part B - Soil Data Risk-based Screening Results

Station: Sample ID: Sample Interval (ft BGS): Collection Date:	Screening Levels		Leaching to Groundwater ^c	76-11 (µg/kg)	76-11 (µg/kg)	76-11 (µg/kg)	76-12 (µg/kg)	76-12 (µg/kg)	76-12 (µg/kg)	76-13 (µg/kg)	76-13 (µg/kg)
	GA UST Soil Threshold Levels ^a	Risk-based Screening Level ^b									
Units:	(µg/kg)	(µg/kg)	(µg/kg)								
VOLATILE ORGANIC COMPOUNDS											
Benzene	8	197,400	30	1.8 U	2.2 U	5.8 J	2.2 U	2.2 U	2.9 U	2.6 U	2.6 U
Toluene	6,000	408,800,000	12,000	1.8 U	2.2 U	0.89 J	2.2 U	2.2 U	2.9 U	1.4 J	1.4 J
Ethylbenzene	10,000	204,400,000	13,000	1.8 U	2.2 U	5.9 J	6.4 =	6.4 =	2.9 U	2.6 U	2.6 U
Xylenes, Total	700,000	1,000,000,000	190,000	2.7 U	3.3 U	14.9 J	18.2 =	18.2 =	4.3 U	2.5 J	2.5 J
POLYNUCLEAR AROMATIC HYDROCARBONS											
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Acenaphthene	N/A ^e	12,264,000	570,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Anthracene	N/A ^e	613,200,000	12,000,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Benzo(a)pyrene	N/A ^e	784	8,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Benzo(g,h,i)perylene	N/A ^e	--	--	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Chrysene	N/A ^e	784,000	160,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Fluorene	N/A ^e	81,760,000	560,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Naphthalene	N/A ^e	40,880,000	84,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
Pyrene	N/A ^e	61,320,000	4,200,000	362 U	388 U	1430 U	397 U	397 U	438 U	444 U	444 U
OTHER ANALYTES											
Lead	--	5,000,000	--	380 U	3300 =	3200 U	5900 =	5900 =	1300 U	7200 =	7200 =
TPH-Diesel Range Organics	--	--	--	109 U	530 UJ	108 U	860 U	860 U	132 U	2300 U	2300 U
TPH-Gasoline Range Organics	--	--	--		116 U	108 U	414 =	414 =		133 U	133 U

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

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Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval (ft BGS): Collection Date:	Screening Levels		Leaching to Groundwater ^f (µg/kg)	76-14						76-16	
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		76-14 (µg/kg)	76-14 (µg/kg)	76-15 (µg/kg)	76-15 (µg/kg)	76-15 (µg/kg)	76-15 (µg/kg)	76-16 (µg/kg)	76-16 (µg/kg)
VOLATILE ORGANIC COMPOUNDS											
Benzene	8	197,400	30	1330 =	51.8 J	3.1 =	5.3 =	2.5 U	2.5 U	2.6 U	2.6 U
Toluene	6,000	408,800,000	12,000	5710 =	800 =	0.74 J	2.4 U	2.5 U	2.5 U	2.6 U	2.6 U
Ethylbenzene	10,000	204,400,000	13,000	3240 =	1900 =	0.73 J	3.1 =	2.5 U	2.5 U	3.8 U	3.8 U
Xylenes, Total	700,000	1,000,000,000	190,000	23900 =	15200 =	3.8 =	6.6 =	3.8 U	3.8 U		
POLYNUCLEAR AROMATIC HYDROCARBONS											
2-Chloronaphthalene ^d	N/A ^c	40,880,000	84,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Acenaphthene	N/A ^c	12,264,000	570,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Acenaphthylene	N/A ^c	61,320,000	4,200,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Anthracene	N/A ^c	613,200,000	12,000,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Benzo(a)anthracene	N/A ^c	7,840	2,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Benzo(a)pyrene	N/A ^c	784	8,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Benzo(b)fluoranthene	N/A ^c	7,840	5,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Benzo(g,h,i)perylene	N/A ^c	--	--	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Benzo(k)fluoranthene	N/A ^c	78,400	49,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Chrysene	N/A ^c	784,000	160,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Dibenzo(a,h)anthracene	N/A ^c	784	2,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Fluoranthene	N/A ^c	81,760,000	4,300,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Fluorene	N/A ^c	81,760,000	560,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Indeno(1,2,3-cd)pyrene	N/A ^c	7,840	14,000	427 U	3660 U	422 U	379 U	417 U	417 U	402 U	402 U
Naphthalene	N/A ^c	40,880,000	84,000	1320 =	6130 =	422 U	379 U	417 U	417 U	402 U	402 U
Phenanthrene ^f	N/A ^c	61,320,000	4,200,000	427 U	408 J	422 U	379 U	417 U	417 U	402 U	402 U
Pyrene	N/A ^c	61,320,000	4,200,000	427 U	861 J	422 U	379 U	417 U	417 U	402 U	402 U
OTHER ANALYTES											
Lead	--	5,000,000	--	22800 =	4000 =	760 U	320 U	360 U	360 U	490 U	490 U
TPH-Diesel Range Organics	--	--	--	147000 =	167000 =	276 =	114 U	125 U	125 U	120 U	120 U
TPH-Gasoline Range Organics	--	--	--								

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

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Underlined values indicate results exceeding leaching to groundwater screening levels.

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Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station:	GA UST	Screening Levels	Leaching to	76-17	76-18	76-18	76-19	76-19	76-20
Sample ID:	Soil Threshold	Risk-based	Groundwater ^c	761721	761811	761821	761911	761921	762011
Sample Interval (ft BGS):	Levels ^a	Screening Level ^b	(µg/kg)	7.5-10.0	10.0-11.0	12.5-13.5	7.5-10.0	5.0-7.5	7.5-10.0
Collection Date:	(µg/kg)	(µg/kg)	(µg/kg)	19-Feb-99	18-Feb-99	18-Feb-99	17-Feb-99	17-Feb-99	18-Feb-99
Units:				(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
VOLATILE ORGANIC COMPOUNDS									
Benzene	8	197,400	30	2.8 U	7050 =	5710 =	77200 =	104000 =	2.4 U
Toluene	6,000	408,800,000	12,000	2.8 U	20600 =	12900 =	543000 =	917000 =	2.4 U
Ethylbenzene	10,000	204,400,000	13,000	2.8 U	2740 =	1040 =	148000 =	266000 =	2.4 U
Xylenes, Total	700,000	1,000,000,000	190,000	4.1 U	17800 =	6770 =	851000 =	1600000 =	3.6 U
POLYNUCLEAR AROMATIC HYDROCARBONS									
2-Chloronaphthalene ^a	N/A ^c	40,880,000	84,000	438 U	1650 U	438 U	823 U	3660 U	427 U
Acenaphthene	N/A ^c	12,264,000	570,000	438 U	1650 U	438 U	823 U	3660 U	427 U
Acenaphthylene	N/A ^c	61,320,000	4,200,000	438 U	302 J	438 U	823 U	3660 U	427 U
Anthracene	N/A ^c	613,200,000	12,000,000	438 U	106 J	438 U	823 U	3660 U	427 U
Benzo(a)anthracene	N/A ^c	7,840	2,000	438 U	830 J	438 U	823 U	3660 U	427 U
Benzo(a)pyrene	N/A ^c	784	8,000	438 U	876 J	438 U	823 U	3660 U	427 U
Benzo(b)fluoranthene	N/A ^c	7,840	5,000	438 U	784 J	438 U	823 U	3660 U	427 U
Benzo(g,h,i)perylene	N/A ^c	--	--	438 U	562 J	438 U	823 U	3660 U	427 U
Benzo(k)fluoranthene	N/A ^c	78,400	49,000	438 U	811 J	438 U	823 U	3660 U	427 U
Chrysene	N/A ^c	784,000	160,000	438 U	1090 J	438 U	823 U	3660 U	427 U
Dibenzo(a,h)anthracene	N/A ^c	784	2,000	438 U	1650 U	438 U	823 U	3660 U	427 U
Fluoranthene	N/A ^c	81,760,000	4,300,000	438 U	1090 J	438 U	823 U	3660 U	427 U
Fluorene	N/A ^c	81,760,000	560,000	438 U	1650 U	438 U	823 U	3660 U	427 U
Indeno(1,2,3-cd)pyrene	N/A ^c	7,840	14,000	438 U	880 J	438 U	823 U	3660 U	427 U
Naphthalene	N/A ^c	40,880,000	84,000	438 U	577 J	483 =	5050 =	43200 =	427 U
Phenanthrene ^f	N/A ^c	61,320,000	4,200,000	438 U	322 J	438 U	823 U	3660 U	427 U
Pyrene	N/A ^c	61,320,000	4,200,000	438 U	1520 J	438 U	823 U	3660 U	427 U
OTHER ANALYTES									
Lead	--	5,000,000	--	7200 =	4900 =	4900 =	127000 =	67600 =	390 U
TPH-Diesel Range Organics	--	--	--	580 U	5400 =	2700 J	7800000 =	7800000 =	128 U
TPH-Gasoline Range Organics	--	--	--	132 U	84500 =	74500 =	3320000 =	14200000 =	128 U

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval (ft BGS): Collection Date:	Screening Levels		Leaching to Groundwater ^c (µg/kg)							
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		76-20 (µg/kg)	76-23 (µg/kg)	76-23 (µg/kg)	76-24 (µg/kg)	76-24 (µg/kg)	76-25 (µg/kg)	76-25 (µg/kg)
VOLATILE ORGANIC COMPOUNDS										
Benzene	8	197,400	30	2.1 U	2.5 U	22.9 =	522 J	26 U	2 U	2 U
Toluene	6,000	408,800,000	12,000	2.1 U	2.5 U	2.1 U	13400 =	9.4 J	2 U	2 U
Ethylbenzene	10,000	204,400,000	13,000	2.1 U	2.5 U	1.9 =	8930 =	32 =	2 U	2 U
Xylenes, Total	700,000	1,000,000,000	190,000	3.2 U	3.7 U	3.2 U	63000 =	77.9 =	3 U	3 U
POLYNUCLEAR AROMATIC HYDROCARBONS										
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	370 U	417 U	355 U	1450 U	433 U	374 U	374 U
Acenaphthene	N/A ^e	12,264,000	570,000	370 U	417 U	355 U	1450 U	433 U	374 U	374 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	370 U	417 U	355 U	1450 U	433 U	374 U	374 U
Anthracene	N/A ^e	613,200,000	12,000,000	370 U	417 U	27.6 J	1450 U	433 U	374 U	374 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	370 U	417 U	36.2 J	1450 U	433 U	374 U	374 U
Benzo(a)pyrene	N/A ^e	784	8,000	370 U	417 U	35.8 J	1450 U	433 U	374 U	374 U
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	370 U	417 U	43.8 J	1450 U	433 U	374 U	374 U
Benzo(g,h,i)perylene	N/A ^e	--	--	370 U	417 U	34.2 J	1450 U	433 U	374 U	374 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	370 U	417 U	42.4 J	1450 U	433 U	374 U	374 U
Chrysene	N/A ^e	784,000	160,000	370 U	417 U	35.5 U	1450 U	433 U	374 U	374 U
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	370 U	417 U	25.4 J	1450 U	433 U	374 U	374 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	370 U	417 U	35.5 U	1450 U	433 U	374 U	374 U
Fluorene	N/A ^e	81,760,000	560,000	370 U	417 U	131 J	1450 U	433 U	374 U	374 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	370 U	417 U	35.5 U	1260 J	433 U	374 U	374 U
Naphthalene	N/A ^e	40,880,000	84,000	370 U	417 U	35.5 U	1450 U	433 U	374 U	374 U
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	370 U	417 U	35.5 U	1450 U	433 U	374 U	374 U
Pyrene	N/A ^e	61,320,000	4,200,000	370 U	417 U	46.2 J	1450 U	433 U	374 U	374 U
OTHER ANALYTES										
Lead	--	5,000,000	--	3600 =		5300 =		5500 =		
TPH-Diesel Range Organics	--	--	--	190 U	280 U	360 U	124000 =	2000 U	300 U	
TPH-Gasoline Range Organics	--	--	--	111 U	125 U	139 =	101000 =	3020 =	112 U	

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Table 9. CAR-Part B - Soil Data Risk-based Screening Results (continued)												
Station: Sample ID: Sample Interval (ft BGS): Collection Date: Units:	Screening Levels		Leaching to Groundwater ^c (µg/kg)									
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)										
								76-25 (µg/kg)	76-26 (µg/kg)	76-26 (µg/kg)	76-27 (µg/kg)	76-27 (µg/kg)
VOLATILE ORGANIC COMPOUNDS												
Benzene	8	197,400	30	2.2 U	1.9 U	2.3 U	2 U	2 U	2 U	2 U	2 U	3.9 =
Toluene	6,000	408,800,000	12,000	2.2 U	1.9 U	2.3 U	2 U	2 U	2 U	2 U	2 U	21.3 =
Ethylbenzene	10,000	204,400,000	13,000	2.2 U	1.9 U	2.3 U	2 U	2 U	2 U	2 U	2 U	24.9 =
Xylenes, Total	700,000	1,000,000,000	190,000	3.3 U	3.3 U	3.4 U	3 U	3 U	3 U	3 U	3.1 U	80 =
POLYNUCLEAR AROMATIC HYDROCARBONS												
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Acenaphthene	N/A ^e	12,264,000	570,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Anthracene	N/A ^e	613,200,000	12,000,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Benzo(a)pyrene	N/A ^e	784	8,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	158 J	450 U
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	397 U	107 J	427 U	203 J	374 U	427 U	374 U	192 J	450 U
Benzo(g,h,i)perylene	N/A ^e	--	--	397 U	366 U	427 U	374 U	374 U	427 U	374 U	97.1 J	450 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Chrysene	N/A ^e	784,000	160,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	183 J	450 U
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	397 U	106 J	427 U	166 J	374 U	427 U	374 U	374 U	450 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	92 J	450 U
Fluorene	N/A ^e	81,760,000	560,000	397 U	35.3 J	427 U	75.8 J	374 U	427 U	374 U	374 U	450 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	74.7 J	450 U
Naphthalene	N/A ^e	40,880,000	84,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	449 J
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	374 U	450 U
Pyrene	N/A ^e	61,320,000	4,200,000	397 U	366 U	427 U	374 U	374 U	427 U	374 U	166 J	450 U
OTHER ANALYTES												
Lead	--	5,000,000	--	5000 =	3300 =	3300 =	7700 =	7700 =	7700 =	7700 =	7700 =	4700 =
TPH-Diesel Range Organics	--	--	--	610 U	320 U	470 U	2800 =	2800 =	2800 =	1200 U	112 U	675 =
TPH-Gasoline Range Organics	--	--	--	119 U	110 U	128 U	112 U	112 U	112 U	112 U	112 U	675 =

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

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Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval (ft BGS): Collection Date:	Screening Levels		Leaching to Groundwater ^c (µg/kg)						
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		76-28 (µg/kg)	76-29 (µg/kg)	76-30 (µg/kg)	76-31 (µg/kg)	76-32 (µg/kg)	76-33 (µg/kg)
Units:									
VOLATILE ORGANIC COMPOUNDS	8		30	64.3 J	1.9 U	2 U	2.1 U	30.5 =	2270 =
Benzene	6,000	197,400	12,000	345 =	1.9 U	2 J	2.1 U	48.8 =	1510 =
Toluene	10,000	408,800,000	13,000	834 =	1.9 U	2 U	2.1 U	18.7 =	4560 =
Ethylbenzene	700,000	204,400,000	190,000	14200 =	5.7 U	6.1 U	6.2 U	50.8 =	9040 =
Xylenes, Total		1,000,000,000							
POLYNUCLEAR AROMATIC HYDROCARBONS									
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	406 U	370 U	362 U	370 U	412 U	362 U
Acenaphthene	N/A ^e	12,264,000	570,000	406 U	370 U	362 U	370 U	412 U	362 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	406 U	25.8 J	362 U	370 U	412 U	362 U
Anthracene	N/A ^e	613,200,000	12,000,000	406 U	370 U	362 U	370 U	412 U	362 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	406 U	139 J	362 U	370 U	412 U	362 U
Benzo(b)fluoranthene	N/A ^e	784	8,000	406 U	161 J	362 U	370 U	412 U	362 U
Benzo(g,h,i)perylene	N/A ^e	7,840	5,000	406 U	299 J	362 U	370 U	412 U	362 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	406 U	150 J	362 U	370 U	412 U	362 U
Chrysene	N/A ^e	784,000	160,000	406 U	370 U	362 U	370 U	412 U	362 U
Dibenzo(a,h)anthracene	N/A ^e	81,760,000	2,000	406 U	224 J	362 U	370 U	412 U	362 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	406 U	370 U	362 U	370 U	412 U	362 U
Fluorene	N/A ^e	7,840	560,000	406 U	169 J	362 U	370 U	412 U	362 U
Indeno(1,2,3-cd)pyrene	N/A ^e	40,880,000	14,000	726 =	370 U	362 U	370 U	54 J	362 U
Naphthalene	N/A ^e	61,320,000	84,000	406 U	79.7 J	362 U	370 U	412 U	362 U
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	406 U	398 J	362 U	370 U	412 U	362 U
Pyrene				8400 =	2000 =	1800 =	2800 =	3600 =	2700 =
OTHER ANALYTES				31400 =	540 U	350 U	890 U	8800 U	2700 U
Lead				135000 =	56.2 J	86.6 J	110 U	3420 =	4070 =
TPH-Diesel Range Organics	--	5,000,000	--						
TPH-Gasoline Range Organics	--	--	--						

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

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UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

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

Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station:	Screening Levels			
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)	Leaching to Groundwater ^c (µg/kg)	
VOLATILE ORGANIC COMPOUNDS				
Benzene	8	197,400	30	
Toluene	6,000	408,800,000	12,000	
Ethylbenzene	10,000	204,400,000	13,000	
Xylenes, Total	700,000	1,000,000,000	190,000	
POLYNUCLEAR AROMATIC HYDROCARBONS				
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	
Acenaphthene	N/A ^e	12,264,000	570,000	
Acenaphthylene	N/A ^e	61,320,000	4,200,000	
Anthracene	N/A ^e	613,200,000	12,000,000	
Benzo(a)anthracene	N/A ^e	7,840	2,000	
Benzo(a)pyrene	N/A ^e	784	8,000	
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	
Benzo(g,h,i)perylene	N/A ^e	--	--	
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	
Chrysene	N/A ^e	784,000	160,000	
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	
Fluoranthene	N/A ^e	81,760,000	4,300,000	
Fluorene	N/A ^e	81,760,000	560,000	
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	
Naphthalene	N/A ^e	40,880,000	84,000	
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	
Pyrene	N/A ^e	61,320,000	4,200,000	
OTHER ANALYTES				
Lead	--	5,000,000	--	
TPH-Diesel Range Organics	--	--	--	
TPH-Gasoline Range Organics	--	--	--	

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).

^b Protective of soil exposure during Industrial Land Use.

^c Protective of groundwater ingestion. Used a DAF of 20.

^d Values based on naphthalene as a surrogate chemical.

^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.

^f Values based on pyrene as a surrogate chemical.

Bold values indicate results exceeding GUST soil threshold levels.

Italicized values indicate results exceeding risk-based screening levels.

Underlined values indicate results exceeding leaching to groundwater screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R compound could not be verified.

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Table 9. CAP-Part B - Soil Data Risk-based Screening Results (continued)

Station: Sample ID: Sample Interval (ft BGS): Collection Date:	Screening Levels		Leaching to Groundwater ^c (µg/kg)	76-39		76-40		76-41		76-42		76-43	
	GA UST Soil Threshold Levels ^a (µg/kg)	Risk-based Screening Level ^b (µg/kg)		763911 5.0-8.0 23-Sep-99 (µg/kg)	2.3 U	764011 10.0-12.0 24-Sep-99 (µg/kg)	2.3 U	764111 10.0-12.0 06-Oct-99 (µg/kg)	2.3 U	764211 10.0-12.9 06-Oct-99 (µg/kg)	2.4 U	764311 5.0-7.5 06-Oct-99 (µg/kg)	2.3 U
Units:													
VOLATILE ORGANIC COMPOUNDS													
Benzene	8	197,400	30	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.4 U	2.4 U	2.3 U	2.3 U
Toluene	6,000	408,800,000	12,000	0.9 J	0.9 J	2.3 U	2.3 U	1700000	2.3 U	2.4 U	2.4 U	2.3 U	2.3 U
Ethylbenzene	10,000	204,400,000	13,000	2.3 U	2.3 U	2.3 U	2.3 U	333000	2.3 U	2.4 U	2.4 U	2.3 U	2.3 U
Xylenes, Total	700,000	1,000,000,000	190,000	1.7 J	1.7 J	6.9 U	6.9 U	1740000	6.9 U	7.2 U	7.2 U	6.8 U	6.8 U
POLYNUCLEAR AROMATIC HYDROCARBONS													
2-Chloronaphthalene ^d	N/A ^e	40,880,000	84,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Acenaphthene	N/A ^e	12,264,000	570,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Acenaphthylene	N/A ^e	61,320,000	4,200,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Anthracene	N/A ^e	613,200,000	12,000,000	161 J	161 J	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Benzo(a)anthracene	N/A ^e	7,840	2,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Benzo(a)pyrene	N/A ^e	784	8,000	188 J	188 J	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Benzo(b)fluoranthene	N/A ^e	7,840	5,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Benzo(g,h,i)perylene	N/A ^e	--	--	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Benzo(k)fluoranthene	N/A ^e	78,400	49,000	278 J	278 J	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Chrysene	N/A ^e	784,000	160,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Dibenzo(a,h)anthracene	N/A ^e	784	2,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Fluoranthene	N/A ^e	81,760,000	4,300,000	250 J	250 J	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Fluorene	N/A ^e	81,760,000	560,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Indeno(1,2,3-cd)pyrene	N/A ^e	7,840	14,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Naphthalene	N/A ^e	40,880,000	84,000	1400 U	1400 U	417 U	417 U	505 U	417 U	422 U	422 U	438 U	438 U
Phenanthrene ^f	N/A ^e	61,320,000	4,200,000	132 J	132 J	37.9 J	37.9 J	505 U	37.9 J	422 U	422 U	438 U	438 U
Pyrene	N/A ^e	61,320,000	4,200,000	446 J	446 J	71.8 J	71.8 J	505 U	71.8 J	422 U	422 U	438 U	438 U
OTHER ANALYTES													
Lead	--	5,000,000	--	11900 =	11900 =	6800 =	6800 =	7900 =	7900 =	8000 =	8000 =	5700 =	5700 =
TPH-Diesel Range Organics	--	--	--	770 U	770 U	850 U	850 U	1420000 =	1420000 =	2200 =	2200 =	11100 =	11100 =
TPH-Gasoline Range Organics	--	--	--	120 =	120 =	266 =	266 =	9770000 =	9770000 =	126 U	126 U	490 =	490 =

Italicized values indicate results exceeding risk-based screening levels.
Underlined values indicate results exceeding leaching to groundwater screening levels.
U Indicates that the compound was not detected above the reported sample quantitation limit.
J Indicates that the value for the compound was an estimated value.
UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.
= Indicates that the compound was detected at the concentration reported.

^a Average or higher groundwater pollution susceptibility area (where public water supply is within 2.0 mi.).
^b Protective of soil exposure during Industrial Land Use.
^c Protective of groundwater ingestion. Used a DAF of 20.
^d Values based on naphthalene as a surrogate chemical.
^e Not applicable. The screening level exceeds the expected soil concentration under free product condition.
^f Values based on pyrene as a surrogate chemical.
Bold values indicate results exceeding GUST soil threshold levels.

Table 10. CAP-Part A - Groundwater Data Risk-based Screening Results

Station: Sample ID: Screened Interval (ft BGS): Collection Date: Units:	Screening Levels		Risk-based ^a							
	In-Stream	Water Quality	Standards							
	(µg/L)	(µg/L)	73-01	73-02	73-03	73-04	76-01	76-02	76-03	
VOLATILE ORGANIC COMPOUNDS										
Benzene	71.28	0.36	4840	3170	2400	12000	3210	1540	356	J
Toluene	200,000	750	1130	184	72.5	11000	10700	3090	67.1	J
Ethylbenzene	28,718	1300	280	132	105	983	1830	945	238	J
Xylenes, Total	-	12,000	1600	1350	954	5630	9510	5060	2450	J
POLYNUCLEAR AROMATIC HYDROCARBONS										
2-Chloronaphthalene ^b	-	6.5	10.5	10.6	10.5	20	20	20.2	10.2	U
Acenaphthene	-	365	10.5	10.6	10.5	20	20	20.2	10.2	U
Acenaphthylene ^c	-	182.5	10.5	10.6	10.5	20	20	20.2	10.2	U
Anthracene	110,000	182.5	10.5	10.6	10.5	20	20	20.2	10.2	U
Benzo(a)anthracene	0.0311	0.092	10.5	10.6	10.5	20	20	20.2	10.2	U
Benzo(a)pyrene	0.0311	0.0092	10.5	10.6	10.5	20	20	20.2	10.2	U
Benzo(b)fluoranthene	-	0.092	10.5	10.6	10.5	20	20	20.2	10.2	U
Benzo(g,h,i)perylene	-	-	10.5	10.6	10.5	20	20	20.2	10.2	U
Benzo(k)fluoranthene	0.0311	0.92	10.5	10.6	10.5	20	20	20.2	10.2	U
Chrysene	0.0311	9.2	10.5	10.6	10.5	20	20	20.2	10.2	U
Dibenzo(a,h)anthracene	0.0311	0.0092	10.5	10.6	10.5	20	20	20.2	10.2	U
Fluoranthene	370	1460	10.5	10.6	10.5	20	20	20.2	10.2	U
Fluorene	14,000	243	10.5	10.6	10.5	20	20	20.2	10.2	U
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10.5	10.6	10.5	20	20	0.52	10.2	U
Naphthalene	-	6.5	9.7	10.6	34	49	991	236	156	U
Phenanthrene ^c	-	182.5	10.5	10.6	10.5	20	11.4	20.2	10.2	U
Pyrene	11,000	182.5	10.5	10.6	10.5	20	20	20.2	10.2	U

^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.

Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.
Underlined values indicate results exceeding risk-based screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 10. CAP-Part A - Groundwater Data Risk-based Screening Results (continued)

Station:	Screening Levels		76-04	76-05	76-05	76-05	76-06	76-07	76-08	76-09	76-10
	In-Stream	Water Quality									
Sample ID:			760412	760522	760532	760612	760712	760812	760912	761012	
Screened Interval (ft BGS):			6.0-16.0			2.0-12.0	2.0-12.0	2.0-12.0	2.0-12.0	2.0-12.0	2.0-12.0
Collection Date:			08-May-98	08-May-98	08-May-98	09-May-98	09-May-98	09-May-98	10-May-98	10-May-98	10-May-98
Units:	(µg/L)	Risk-based ^a (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS											
Benzene	71.28	0.36	2 U	159 =	675 =	138 J	432 =	7590 =	32700 =	4240 J	
Toluene	200,000	750	2 U	512 =	68.6 =	15.3 J	100 U	499 =	97800 =	17600 J	
Ethylbenzene	28,718	1300	2 U	889 =	180 =	183 J	759 =	1420 =	4450 =	5210 J	
Xylenes, Total	-	12,000	6 U	7870 =	1640 =	439 J	2970 =	1320 =	22700 =	28400 J	
POLYNUCLEAR AROMATIC HYDROCARBONS											
2-Chloronaphthalene ^b	-	6.5	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Acenaphthene	-	365	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Acenaphthylene ^c	-	182.5	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Anthracene	110,000	182.5	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Benzo(a)anthracene	0.0311	0.092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Benzo(a)pyrene	0.0311	0.0092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Benzo(b)fluoranthene	-	0.092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Benzo(g,h,i)perylene	-	-	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Benzo(k)fluoranthene	0.0311	0.092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Chrysene	0.0311	9.2	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Dibenzo(a,h)anthracene	0.0311	0.0092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Fluoranthene	370	1460	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Fluorene	14,000	243	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Naphthalene	-	6.5	10 U	352 =	93.4 =	93.1 =	17.9 =	265 =	644 =	817 =	
Phenanthrene ^c	-	182.5	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	
Pyrene	11,000	182.5	10 U	13.5 U	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U	

^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.

Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.
Underlined values indicate results exceeding risk-based screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 11. CAP-Part B – Groundwater Data Risk-based Screening Results

Station: Sample ID: Screened Interval (ft BGS): Collection Date: Units:	Screening Levels											
	In-Stream Water Quality Standards (µg/L)	Risk-based ^a (µg/L)	76-11 (µg/L)	76-12 (µg/L)	76-13 (µg/L)	76-14 (µg/L)	76-15 (µg/L)	76-16 (µg/L)	76-17 (µg/L)			
VOLATILE ORGANIC COMPOUNDS												
Benzene	71.28	0.36	2 U	1.6 J	250 =	5440 =	158 =	5390 =	2 U			
Toluene	200,000	750	0.6 J	1.1 J	76.4 =	12600 =	12.2 =	371 =	2 U			
Ethylbenzene	28,718	1300	2 U	2 U	131 =	1950 =	12.9 =	297 =	2 U			
Xylenes, Total	-	12,000	3 U	3 U	2110 =	12900 =	276 =	1600 =	3 U			
POLYNUCLEAR AROMATIC HYDROCARBONS												
2-Chloronaphthalene ^b	-	6.5	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Acenaphthene	-	365	10.2 UJ	10.2 UJ	11.8 UJ	10.6 UJ	10.2 UJ	10.3 UJ	10.5 UJ			
Acenaphthylene ^c	-	182.5	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Anthracene	110,000	182.5	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Benzo(a)anthracene	0.0311	0.092	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Benzo(a)pyrene	0.0311	0.0092	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Benzo(b)fluoranthene	-	0.092	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Benzo(g,h,i)perylene	-	-	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Benzo(k)fluoranthene	0.0311	0.92	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Chrysene	0.0311	9.2	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Dibenzo(a,h)anthracene	0.0311	0.0092	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Fluoranthene	370	1460	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Fluorene	14,000	243	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Naphthalene	-	6.5	10.2 UJ	10.2 UJ	7.6 J	231 =	10.2 U	10.3 U	10.5 U			
Phenanthrene ^c	-	182.5	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
Pyrene	11,000	182.5	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U	10.5 U			
OTHER ANALYTES												
Iron (dissolved)	-	-	299 =	2450 =	403 =	1600 =	2110 =	6720 =	325 =			

^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.
 Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.
 Underlined values indicate results exceeding risk-based screening levels.
 U Indicates that the compound was not detected above the reported sample quantitation limit.
 J Indicates that the value for the compound was an estimated value.
 UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
 R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.
 = Indicates that the compound was detected at the concentration reported.

Table 11. CAP-Part B - Groundwater Data Risk-based Screening Results (continued)

Station:	Screening Levels		76-18	76-19	76-20	76-21	76-21	76-21	76-21
	In-Stream	Water Quality							
Sample ID:									
Screened Interval (ft BGS):									
Collection Date:									
Units:	(µg/L)	Risk-based ^a	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS									
Benzene	71.28	0.36	15200	10600	36.4	21100	10100	3000	11000
Toluene	200,000	750	17300	19000	98.4 J	28200	10500	8860	13700
Ethylbenzene	28,718	1300	1700	2580	12.8	3110	2280	890 J	2650
Xylenes, Total	-	12,000	9660	13500	68 J	15400	11600	4470	13300
POLYNUCLEAR AROMATIC HYDROCARBONS									
2-Chloronaphthalene ^b	-	6.5	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Acenaphthene	-	365	10.4 UJ	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Acenaphthylene ^c	-	182.5	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Anthracene	110,000	182.5	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	0.83 J	0.79 J
Benzo(a)anthracene	0.0311	0.092	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Benzo(a)pyrene	0.0311	0.0092	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	-	0.092	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	-	-	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	0.0311	0.92	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Chrysene	0.0311	9.2	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	0.0311	0.0092	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Fluoranthene	370	1460	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	10 U	10 U
Fluorene	14,000	243	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	3.1 J	2.9 J
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	2 J	2 J
Naphthalene	-	6.5	168 J	308 J	16.1 J	2.3 J	108	10 U	10 U
Phenanthrene ^c	-	182.5	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	3.7 J	4.2 J
Pyrene	11,000	182.5	10.4 U	11.6 UJ	10.8 UJ	10 U	10 U	3.7 J	4.2 J
OTHER ANALYTES									
Iron (dissolved)	-	-	4940	9450	2260	8010	=	=	=

^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.

Underlined values indicate results exceeding Georgia In-Stream Water Quality Standards.
Underlined values indicate results exceeding risk-based screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 11. CAP-Part B -- Groundwater Data Risk-based Screening Results (continued)

Station:	Screening Levels									
Sample ID:	In-Stream									
Screened Interval (ft BGS):	Water Quality									
Collection Date:	Standards									
Units:	(µg/L)	Risk-based ^a	76-21	76-22	76-23	76-24	76-25	76-26	76-27	
VOLATILE ORGANIC COMPOUNDS										
Benzene	71.28	0.36	181	28.2	46.5	697	2	2	2	U
Toluene	200,000	750	535	4.9	6.2	3180	0.51	2	2	U
Ethylbenzene	28,718	1300	64.6	3	2.9	716	2	2	2	U
Xylenes, Total	-	12,000	324	16.5	4.7	4220	3	3	3	U
POLYNUCLEAR AROMATIC HYDROCARBONS										
2-Chloronaphthalene ^b	-	6.5	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Acenaphthene	-	365	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Acenaphthylene ^c	-	182.5	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Anthracene	110,000	182.5	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Benzo(a)anthracene	0.0311	0.092	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Benzo(a)pyrene	0.0311	0.0092	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Benzo(b)fluoranthene	-	0.092	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Benzo(g,h,i)perylene	-	-	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Benzo(k)fluoranthene	0.0311	0.92	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Chrysene	0.0311	9.2	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Dibenzo(a,h)anthracene	0.0311	0.0092	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Fluoranthene	370	1460	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Fluorene	14,000	243	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Naphthalene	-	6.5	16.7	0.74	2.1	152	10.2	10.6	10.2	UJ
Phenanthrene ^c	-	182.5	10	10.2	10.5	10	10.2	10.6	10.2	UJ
Pyrene	11,000	182.5	10	10.2	10.5	10	10.2	10.6	0.74	J
OTHER ANALYTES										
Iron (dissolved)	-	-	3390 = 15000 = 7300 = 2260 = 1360 =							

^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.

U Indicates that the compound was not detected above the reported sample quantitation limit.
J Indicates that the value for the compound was an estimated value.
UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.
= Indicates that the compound was detected at the concentration reported.

Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.
Underlined values indicate results exceeding risk-based screening levels.

Table 11. CAP-Part B – Groundwater Data Risk-based Screening Results (continued)

Station:	Screening Levels	76-28	26-29	76-30	76-31	76-32	76-33	76-34	76-35
Sample ID:	In-Stream	762812	762912	763012	763112	763212	763312	763412	763512
Screened Interval (ft BGS):	Water Quality	3.9-13.9	6.4-11.2	2.0-12.0	2.9-12.9	5.1-15.1	8.5-13.4	8.5-13.4	2.9-12.9
Collection Date:	Risk-based ^a	09-Mar-99	24-Sep-99	29-Sep-99	23-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS									
Benzene	71.28	0.36	2 U	2 U	2 U	1540	963	51.9	2 U
Toluene	200,000	750	2 U	2 U	2 U	3120	1270	19.7	2 U
Ethylbenzene	28,718	1300	2 U	2 U	2 U	1770	767	71.7	2 U
Xylenes, Total	-	12,000	6 U	6 U	0.51 J	7430	3230	164	6 U
POLYNUCLEAR AROMATIC HYDROCARBONS									
2-Chloronaphthalene ^b	-	6.5	10 U	10 U	10 U	10.6 U	10.2 U	10 U	10 U
Acenaphthene	-	365	10 U	10 U	10 U	0.7 J	10.2 U	10 U	10 U
Acenaphthylene ^c	-	182.5	10 U	10 U	10 U	0.55 J	10.2 U	10 U	10 U
Anthracene	110,000	182.5	10 U	10 U	10 U	0.65 J	10.2 U	10 U	10 U
Benzo(a)anthracene	0.0311	0.092	10 U	10 U	10 U	1.6 J	10.2 U	1.8 J	10 U
Benzo(a)pyrene	0.0311	0.0092	10 U	10 U	10 U	1.5 J	10.2 U	1.8 J	10 U
Benzo(b)fluoranthene	-	0.092	10 U	10 U	10 U	3.3 J	10.2 U	4 J	10 U
Benzo(g,h,i)perylene	-	-	10 U	10 U	10 U	1.7 J	10.2 U	2.5 J	10 U
Benzo(k)fluoranthene	0.0311	0.92	10 U	10 U	10 U	10.6 U	10.2 U	10 U	10 U
Chrysene	0.0311	9.2	10 U	10 U	10 U	2 J	10.2 U	2.3 J	10 U
Dibenzo(a,h)anthracene	0.0311	0.0092	10 U	10 U	10 U	10.6 U	10.2 U	10 U	10 U
Fluoranthene	370	1460	10 U	10 U	10 U	3.6 J	10.2 U	3.3 J	10 U
Fluorene	14,000	243	10 U	10 U	10 U	2.4 J	0.72 J	10 U	10 U
Indeno(1,2,3-cd)pyrene	0.0311	0.092	10 U	10 U	10 U	0.73 J	10.2 U	1.4 J	10 U
Naphthalene	-	6.5	254 J	10 U	10 U	156	0.56 J	29.9 J	10 U
Phenanthrene ^c	-	182.5	10 U	10 U	10 U	5 J	10.2 U	3.1 J	10 U
Pyrene	11,000	182.5	10 U	10 U	10 U	6 J	10.2 U	6.8 J	10 U
OTHER ANALYTES									
Iron (dissolved)	-	-	6180 =						

^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.

Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.

Underlined values indicate results exceeding risk-based screening levels.

U Indicates that the compound was not detected above the reported sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

UJ Indicates that the sample was not detected above an approximate sample quantitation limit.

R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.

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

Table 11. CAP-Part B – Groundwater Data Risk-based Screening Results (continued)

Station: Sample ID: Screened Interval (ft BGS): Collection Date: Units:	Screening Levels		Risk-based ^a Standards (µg/L)	73-36 (µg/L)	76-37 (µg/L)	76-38 (µg/L)	76-39 (µg/L)	76-40 (µg/L)	76-41 (µg/L)	76-42 (µg/L)	76-43 (µg/L)
	In-Stream	Water Quality									
VOLATILE ORGANIC COMPOUNDS											
Benzene	71.28	0.36		1 J	4.6 =	212 =	3.5 =	2 U	8.2 =	2 U	2 U
Toluene	200,000	750		2.1 =	2 U	19.1 U	0.66 J	2 U	1.3 J	2 U	2 U
Ethylbenzene	28,718	1300		1 J	2 U	102 =	0.51 J	2 U	5.2 =	2 U	2 U
Xylenes, Total	-	12,000		2.9 J	6 U	716 =	1.9 J	6 U	21.6 =	6 U	6 U
POLYNUCLEAR AROMATIC HYDROCARBONS											
2-Chloronaphthalene ^b	-	6.5		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Acenaphthene	-	365		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Acenaphthylene ^c	-	182.5		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Anthracene	110,000	182.5		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Benzo(a)anthracene	0.0311	0.092		10 U	10 U	10.4 U	0.62 J	11.3 U	10.3 U	10 U	10 U
Benzo(a)pyrene	0.0311	0.0092		10 U	10 U	10.4 U	0.79 J	11.3 U	10.3 U	10 U	10 U
Benzo(b)fluoranthene	-	0.092		1.2 J	10 U	10.4 U	10.2 U	2.3 J	10.3 U	10 U	10 U
Benzo(g,h,i)perylene	-	-		1.3 J	10 U	10.4 U	0.8 J	2.3 J	10.3 U	10 U	10 U
Benzo(k)fluoranthene	0.0311	0.92		10 U	10 U	10.4 U	0.94 J	11.3 U	10.3 U	10 U	10 U
Chrysene	0.0311	9.2		10 U	10 U	10.4 U	1.2 J	11.3 U	10.3 U	10 U	10 U
Dibenzo(a,h)anthracene	0.0311	0.0092		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Fluoranthene	370	1460		10 U	10 U	10.4 U	0.88 J	11.3 U	10.3 U	10 U	10 U
Fluorene	14,000	243		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	0.0311	0.092		10 U	10 U	10.4 U	10.2 U	1.4 J	10.3 U	10 U	10 U
Naphthalene	-	6.5		46.7 =	10 U	8.9 J	10.2 U	11.3 U	0.78 J	10 U	10 U
Phenanthrene ^c	-	182.5		10 U	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U	10 U
Pyrene	11,000	182.5		10 U	10 U	10.4 U	1.9 J	2.4 J	10.3 U	10 U	10 U
OTHER ANALYTES											
Iron (dissolved)	-	-									

^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.
 Bold values indicate results exceeding Georgia In-Stream Water Quality Standards.
 Underlined values indicate results exceeding risk-based screening levels.
 U Indicates that the compound was not detected above the reported sample quantitation limit.
 J Indicates that the value for the compound was an estimated value.
 UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
 R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.
 = Indicates that the compound was detected at the concentration reported.

**Table 12. AT123D Predicted Maximum 2-Year Concentrations at the
USTs 257–261 Monitoring Well Locations**

Station ID	Distance from the source (ft)	Distance from the source (m)	Predicted 2-Year Max Conc. In Groundwater ¹ (µg/L)	CAP-Part B Observed Concentration (µg/L)
76-11	80.0	24.4	11,500	<2
76-12	20.0	6.1	27,100	1.6
76-13	15.0	4.6	29,300	250
76-14	35.0	10.7	21,300	5440
76-15	55.0	16.8	15,700	158
76-16	90.0	27.4	10,600	5390
76-17	120.0	36.6	8,130	<2
76-18	40.0	12.2	19,700	15,200
76-19	25.0	7.6	25,000	10,600
76-20	50.0	15.2	17,000	36.4
76-21	5.0	1.5	34,200	21,100
76-23	20.0	6.1	27,100	46.2
76-24	20.0	6.1	27,100	697
76-25	110.0	33.5	8,950	<2
76-26	100.0	30.5	9,760	<2
76-27	140.0	42.7	6,640	<2
76-28	80.0	24.4	11,500	1010
76-29	120.0	36.6	8,130	<2
76-30	10.0	3.0	31,800	<2
76-31	35.0	10.7	21,300	<2
76-32	0.0	0.0	36,700	1540
76-33	0.0	0.0	36,700	963
76-34	0.0	0.0	36,700	51.9
76-35	160.0	48.8	5,330	<2
76-36	80.0	24.4	11,500	1
76-37	180.0	54.9	4,220	4.6
76-38	115.0	35.1	8,520	212
76-39	100.0	30.5	9,760	3.5
76-40	105.0	32.0	9,350	<2
76-41	10.0	3.0	18,800	8.2
76-42	110.0	33.5	6,630	<2
76-43	180.0	54.9	3,140	<2

76-22 was a vertical profile and not converted to a monitoring well.

¹ Based on guidance from GA EPD, predicted maximum concentration is based on a continuous, steady state source; however, the USTs have been removed.

Table 13. Evaluation of Corrective Action Technologies

Action/ Technology	Description	Effectiveness	Implementability	Costs
No Action	The "No Action" alternative provides a baseline against which other actions can be compared. Under the "No Action" alternative, all source units, surface water, and groundwater would be left "as is," without implementing any removal, treatment, or other mitigating actions to reduce existing or potential future exposure.	This alternative would not address remedial response objectives of the site. This alternative does not provide protection of human health or the environment. In addition, site specific ATLS or ACLs are not achieved.	There is no implementability involved for this alternative because no action is taken.	There would be no cost associated with the "No Action" alternative.
Institutional Controls	Technologies associated with institutional controls will reduce potential hazards by limiting exposure of humans to contaminated soils and groundwater. Land use restrictions and institutional control requirements that would be enforced include the following: deed restrictions, zoning controls, and applicable State land use control management systems in effect at the time. Deed restrictions would prohibit any construction at the site that might disturb the soil.	This technology alone would not meet the site objectives. Assuming compliance with deed restrictions, this technology should be effective and provide long-term reliability with respect to eliminating human exposure to contaminated media within the boundaries of the site. Use of surficial groundwater at this site for drinking water is unlikely. Site-specific ATLS or ACLs would not be achieved.	Very few factors limit implementability of the institutional controls. The property has been developed and will remain in use.	Low; to establish deed restriction.
Excavation	Excavation involves the removal of "hot spots" of soil contamination. The area of benzene soil contamination greater than .073 mg/kg would be removed to the depth of the water table 5 to 10 feet bgs.	Excavation has already proven to be effective in reducing the contamination level in soil at the site; however, it is not effective for groundwater remediation.	Excavation is a readily implementable alternative because it would only require excavation equipment, an operator, and disposal. However, excavation would impede current facility operations.	High; excavation and disposal of unsaturated soil.

Table 13. Evaluation of Corrective Action Technologies (continued)

Action/ Technology	Description	Effectiveness	Implementability	Costs
Soil Vapor Extraction/Air Sparging /Groundwater Extraction	Soil vapor extraction is a high flow rate system to pull air through the soil pores and volatilize BTEX compounds. It also increases aerobic biological degradation in the soil. Groundwater extraction removes dissolved phase contamination, speeds up the flushing process, and exposes more soils to SVE. Air sparging involves injecting air under pressure into the groundwater to volatilize groundwater contaminants and to promote biodegradation by increasing dissolved oxygen concentrations. Volatilized vapors migrate into the vadose zone where they can be extracted via the SVE system.	The effectiveness of each of these technologies has been demonstrated. They remove contaminants by both physical and biological processes. When the three technologies are employed simultaneously, site remediation is relatively quick and predictable. Site specific ATs and ACLs can be achieved in 12 to 24 months.	Equipment readily available. Compressors and treatment system components would need to be operated for approximately one year. Once major mass removal is accomplished, the air sparging system can be operated at low flow to continue biological degradation. Approximately 16 SVE, 7 sparge, and 4 groundwater extraction wells would have to be installed. Monitoring and maintenance of collection, distribution, and treatment systems would be required. This technology would allow for continued use of the site for current facility operations.	Moderate to moderate/high; more capital equipment costs than other options, but shorter operational life. Costs are dependent on off gas treatment for the SVE unit.
Six-Phase Soil Heating	This innovative technology utilizes electric current to heat the groundwater and soil pore moisture to the boiling point. The volatilized compounds are collected via an SVE system.	This technology is relatively new and has been primarily used to remove chlorinated hydrocarbons from fine grain units. It should be able to volatilize BTEX compounds if desired temperatures are achieved for a sufficient period of time.	There are limited vendors available to implement this technology. It requires the installation of subsurface electrical probes as well as an SVE system. Issues to be addressed include power source and safety concerns such as interaction with existing utilities made of electrically conductive materials.	High; Most projects to date have been demonstration projects. Local electrical power availability and costs are contributing factors.

Table 13. Evaluation of Corrective Action Technologies (continued)

Action/ Technology	Description	Effectiveness	Implementability	Costs
Enhanced Bioremediation (Pure Oxygen Injection)	Enhanced biodegradation is the enhancement of one aspect of natural attenuation. The activity of naturally occurring microbes is stimulated by injecting 98 percent pure oxygen to enhance in situ biological degradation of organic contaminants. Nutrients or other additives may be used to encourage the natural biodegradation process.	Technology proven for site contaminants; however, it is most effective for dissolved phase groundwater and low to moderate level soil contamination. Site-specific ACLs could be achieved, but ATLs may not be reached.	Equipment readily available, applicable to small site. Bioremediation process may require continuous monitoring and maintenance to prevent plugging of injection wells by microbial growth or mineral precipitation. Because this is a low pressure/low flow rate system, there is considerable uncertainty in terms of radius of influence and remediation times.	Moderate; similar to air sparging alone. Costs dependent on required treatment time.
Enhanced Bioremediation (PHOSter® II)	Similar to pure oxygen injection, the PHOSter® II technology enhances natural attenuation through injection of vapor-phase phosphorous, nitrogen, and air. In soils, enhanced bioremediation using air/nutrient injection is referred to as "bioventing."	PHOSter® II is an innovative technology that has been demonstrated at other sites to be effective for fuels and related BTEX components. Technical performance is highly uncertain due to limited full-scale implementation. The technology is targeted at removing dissolved phase and moderate soil contamination. It is uncertain as to its effectiveness at addressing residual saturation conditions expected in soils at this site. Site specific ATLs and ACLs could be achieved.	Equipment readily available and applicable to small sites. This technology is innovative and relatively new. Because it is a low-pressure, low-flow system, there is a relatively high uncertainty regarding the radius of influence and the treatment time required. Longer term operations may require monitoring to prevent plugging of injection wells by microbial growth or mineral precipitation.	Moderate; similar to enhanced bioremediation using pure oxygen injections; costs dependent on required treatment time.

APPENDIX III
WATER RESOURCES SURVEY DOCUMENTATION

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WATER RESOURCES SURVEY DOCUMENTATION

1.0 LOCAL WATER RESOURCES

As required by the GA EPD UST CAP-Part A guidance, a water resource survey documenting information for public and non-public water supply wells, surface water bodies, underground utilities, and potential receptors was conducted for the Fort Stewart UST investigation sites. The information presented in this appendix 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 EPD guidelines/requirements:

- Fort Stewart is located in an area of average or higher groundwater pollution susceptibility.
- Locate all public supply wells as defined by GA EPD 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.

A total of seven groundwater supply wells are located within a 2-mile radius of the Fort Stewart garrison area. Six of these wells are located within the confines of the garrison area. The other well is located at Wright Army Airfield, approximately 1.2 miles northeast of the garrison area. All of the groundwater supply wells are classified as public wells that supply water to Fort Stewart for drinking and nondrinking purposes. These wells are approximately 450 feet deep and draw groundwater from the Principal Artesian (also known as the Floridan) aquifer. Chlorine and fluoride are added into the groundwater at the well heads prior to being pumped into storage tanks and/or water towers, according to Fort Stewart DPW personnel. The location of these wells, along with a 500-foot radius drawn around each well, is shown in Figure 3.

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, 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 part of the boundaries of the State that 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 EPD guidelines/requirements:

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

Several surface water bodies are located within a 1-mile radius of the Fort Stewart garrison area. These are shown in Figure 3 and include Mill Creek, Taylors Creek, Peacock Creek, Childpen's Pond, and two unnamed ponds. Mill Creek extends along the western side of the garrison area and flows into Taylors Creek located approximately 0.75 miles northwest of the garrison area. Taylors Creek then flows northward approximately 3.5 miles to its confluence with Canoochee Creek. Peacock Creek originates near the east corner of the garrison area and flows southward from the garrison. Mill Creek, Taylors Creek, and Peacock Creek all have natural streambeds and exhibit perennial flow.

Childpen's Pond is located at the northwest end of the garrison area. The two unnamed ponds are located at the northwest end of the facility golf course in the vicinity of Childpen's Pond. All of the ponds are isolated water bodies that are relatively small in size, measuring less than 500 feet in diameter.

Typically, surface water run-off from the UST site moves over the existing concrete and asphalt cover to the Fort Stewart storm water drainage system. Since petroleum contamination at the sites primarily impacts surficial groundwater, the surface water run-off pathway is not a viable contaminant transport mechanism because of the concrete acting as a barrier and the location of the nearest surface water body.

2.0 POTENTIAL RECEPTOR SURVEY SUMMARY OF THE USTs 257–261 SITE

A field potential receptor survey was conducted for the USTs 257–261 site in May 1998. The site and adjacent areas were surveyed for locations of surface water bodies, utility lines, and basements. Basements do not exist in the buildings adjacent to the site. Additional information, provided by 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 USTs 257–261 site

The USTs 257–261 site is located approximately 1750 feet north (upgradient) of Well #2. Therefore, the USTs 257–261 site is classified as being located greater than 500 feet to a withdrawal point. The nearest downgradient water supply well is Well #2.

2.2 Surface Water Bodies Near the USTs 257–261 Site

At the closest point, an unnamed tributary that flows into Taylors Creek northeast of the Garrison Area is located approximately 1,000 feet east of the USTs 257–261 site. In the direction of groundwater flow, this tributary is located approximately 1,000 feet east of the USTs 257–261 site. Based on the distances between the UST and the nearest surface water body, the site is classified as being located greater than 500 feet to a downgradient surface water body. In addition to these surface water bodies, there are drainage swales that run parallel to Hero Road and are located east of the site. However, the depth of the drainage swales is less than 2 feet BGS, which is above the surficial aquifer.

2.3 Underground Utility Lines Near the USTs 257–261 Site

There are numerous communication, water, and/or electrical underground utilities located east (downgradient) of the site that run parallel to Hero Road. The depth of these lines is estimated to be approximately 2 to 3 feet BGS. In addition, there is a sanitary sewer line 180 feet east of the area of highest contamination. This line has an invert elevation of 74.10 feet above mean sea level, which is below the surface of the surficial aquifer.

APPENDIX IV
SOIL BORING LOGS

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HTRW DRILLING LOG						HOLE NUMBER 76-11
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Sandy top soil, fine grained, very dark gray (10YR 3/1), grass etc.				Ran 5.0, Rec. 3.6
	1	Silty SAND, very fine grained, massive, moist, yellow (10YR 7/6)			Soil Sample 761121	
	2	Silty SAND, very fine grained, massive, unconsolidated but packed, dry, dark gray (10YR 4/1) to gray (10YR 5/1). darkens with depth	35 ppm			
	3					
	4	No Recovery				
	5	dark gray silty SAND (as above)				Ran 5.0, Rec. 4.5
	6	Silty SAND, fine grained, packed to weakly cemented, massive, dry to moist, black (10YR 2/1)	23.5 ppm		Soil Sample 761111	
	7	Rootlets				
	8					
	9		28 ppm			
	10	No Recovery				

HTRW DRILLING LOG						HOLE NUMBER 76-11
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		black silty SAND (as above)				Ran. 5.0, Rec. 4.8
	11					
	12	Silty SAND, fine to medium grained with scattered thin beds of coarse sand, variably packed with some zones weakly cemented, wet, dark red brown (5YR 3/2)	N/A	Soil Sample 761131		▼ Wet below 11.0 FT BGS
	13					
	14					
	15	No Recovery				
		End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-12
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey		SHEET 1 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt				
		Coarse gravel base				
	1	sandy, silt, CLAY, light olive brown (2.5Y 5/4) to very dark gray (2.5Y 3/1), st:ff, laminated, some gravel	93 ppm		Soil Sample 761211	Ran 4.4, Rec. 3.7
	2	sandy CLAY, light gray (2.5Y 4/1) and yellow (2.5Y 7/6), laminations				
		clayey, SAND, very fine grained, black, dry				
	3	SAND, very fine grained, pale yellow (2.5Y 7/3), dry, massive but with darker and lighter intervals, friable, loose	45 ppm			
	4					
	5	No Recovery				
	6	SAND, very fine grained, pale yellow as above, dry to moist, friable, laminated, unconsolidated	24 ppm		Soil Sample 761221	Ran 5.0, Rec. 4.2
	7	silty SAND, very fine grained, black (jet black), moist, massive				
	8					
	9		31 ppm		Soil Sample 761231	
	10	No Recovery				

HTRW DRILLING LOG						HOLE NUMBER 76-12
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	silty SAND, dark reddish brown (5YR 3/4) moist to wet, unconsolidated, loose, slightly laminated, color obviously from staining	30 ppm			Ran 5.0, Rec. 5.0
	12					
	13					
	14	small (thin) gravel layer	N/A			▼ Wet below 14.0 FT BGS
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-13
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 1 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		silty SAND (SM) w/ grass roots, some organic material, very dark gray (2.5 Y 3/1)				Ran 5.0 Rec. 0.0
	1	No Recovery	N/A			
	2					
	3					
	4					
	5	silty SAND (SM), fine grained, very dark grey (2.5 Y 3/1), moist				Ran 5.0 Rec. 2.5
	6	silty SAND (SM), fine grained, black (5 Y 2.5/1)	3.3 ppm		Soil Sample 761311	
	7					
	8		3.1 ppm		Soil Sample 761321	
	9					
	10					▼ Wet below 10.0 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-13
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	SAND, (SP). fine to medium grained, subrounded, very dusky red (2.5YR2.5/2) wet		Soil Sample 761331		
	12					
	13					
	14					
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-14
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt w/aggregate				Ran 5.0, Rec. 3.0
	1	Silty SAND (SM) fine grained, with traces of gravel, moist, very dark gray (2.5Y 3/1) with light gray (2.5Y 7/1) mottling	>2500ppm			
	2	clayey SAND (SC), fine to medium grained, slight plasticity, moist, olive yellow (2.5Y 6/2) and light gray (2.5Y 7/1)				
	3	Silty SAND (SM), fine grained, moist, dark gray (5Y 3/1)				
	4	Silty SAND (SM) (as above) olive gray (5Y 4/2), moist	>2500ppm		Soil Sample 761421	
	5	grades to SAND with silt (SPSM), fine grained, loose, moist, pale yellow (2.5Y 7/4)				Ran 5.0, Rec. 5.0
	6	Silty SAND (SM), fine grained, dense, moist, black (5Y 2.5/1)	>2500ppm			
	7					
	8	as above except very dense				
	9		>2500ppm		Soil Sample 761411	
	10	as above except wet				Wet below 9.5 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-14
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	SAND (SP), fine to medium grained, wet, very dusky red (2.54R2.5/2)	N/A	Soil Sample 761431		Ran 5.0, Rec. 5.0
	12					
	13		N/A			
	14					
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-15
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Top soil with organic material, grass, roots, silty SAND (SM)				Ran 5.0 Rec. 4.0
		as above with coarse gravel				
1		clayey SAND (sc), medium grained, slight plasticity, reddish yellow (7.5YR 6/6) with gray (7.5YR 4/1) mottling	0 ppm			
2		silty SAND (SM), fine grained, very dark gray (5Y 3/1), moist				
3						
4		silty SAND (SM), as above with light gray (5Y 7/1) fine grained sand seams (1/16"), moist	24.0 ppm			
5		SAND with silt (SP-SM), fine grained, loose, light gray (5Y 7/2), moist				Ran 5.0, Rec. 5.0
6		SAND with silt (SP-SM), fine grained, loose, very dark grayish brown (10YR 3/2), moist	28.6 ppm		Soil Sample 761521	
7						
8		silty SAND (SM), fine grained, dense, slight cementation, black (2.5Y 2.5/2) moist				
9		SAND with silt (SP-SM), fine grained, very dark gray (5Y 3/1) moist	11.3 ppm		Soil Sample 761511	 Wet below 9.5 FT BGS
10		as above except wet				

HTRW DRILLING LOG						HOLE NUMBER 76-15
PROJECT: Fort Stewart USTs			INSPECTOR			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11			Soil Sample 76/531		Run 5.0, Rec. 50
	12					
	13					
	14					Set well at 14.0 FT BGS Screen from 4.0 FT TO 14.0 FT BGS
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-16
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt with coarse gravel fill				Ran 5.0, Rec. 3.5
1		clayey SAND (sc), fine to medium grained, slight plasticity, brownish yellow (10YR 4/6) with some light gray mottling	71.6 ppm			
2		silty SAND (sm), fine grained, dark gray (5Y 4/1) with gray (5Y 3/1) laminations				
3		silty SAND (sm), fine grained, moist, very dark gray (5Y 3/1)				
4		SAND (sp), fine grained, loose, moist, yellow (2.5Y 8 3/3)	43.1 ppm			
5		SAND (sp), fine to medium grained, moist grayish brown (10YR 5/2)				Ran 5.0, Rec. 4.5
6		silty SAND (sm), fine grained, moist, very dark gray (2.5Y 3/1)	79.4 ppm		Soil Sample 761621	
7						
8		silty SAND (sm), fine grained, dense, moist, black (5Y 2.5/1)			Soil Sample 761611	
9			53.2 ppm			
10		as above except wet				
						Wet below 9.5 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-116
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	silty SAND(sm) as above, wet		Soil Sample 7611631		Ran S.O, Rec. S.O
	12	SAND with silt (SP-SM), fine to medium grained, wet, very dusky red (2.5YR2.5/2)				
	13					
	14	SAND with silt (SP-SM), fine to medium grained, wet, dark reddish brown (5YR3/4) coarser with depth				
	15	End of drilling at 15.0FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-17
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	No Recovery Cuttings are Asphalt with fill				Ran 5.0, Rec. 0.0
	2	No Recovery	N/A			
	3	Cuttings are silty SAND (SM) very dark gray				
	4		N/A			
	5	SAND with silt, (SP-SM) fine grained, moist, light gray (SY 3/1), with very dark gray (SY 3/1) sand seams				Ran 5.0, Rec. 5.0
	6	as above with large root (big section of root from 5.5' to 5.7' approx. 1.0 ft long 1 1/2 inch in diameter)	89.1 ppm			
	7	silty SAND (SM), fine grained, moist, very dark gray (SY 3/1)				
	8					
	9		6.2 ppm			Soil Sample 761721
	10	silty SAND (SM), fine grained, dense, moist, black (SY 2.5/1) as above except wet				
						▼ wet below 9.5 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-17
PROJECT: Fort Stewart USTs			INSPECTOR			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11			Soil Sample 761731		Ran S.O, Rec. S.O
	12					
	13	SAND with silt (SP-SM), fine to medium grained, wet, very dusky red (2.5YR 2.5/2)				
	14					
	15	SAND with silt (SP-SM) fine to medium grained, wet, dark reddish brown (5YR 3/4), sand gets coarser with depth				
	16	End of drilling at 15.0 FT BGS				
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-18
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt	4.2 ppm			
		No Recovery				
1		Cuttings:				
		first cuttings				
2		were SAND(sp)				
		with traces of clay,				
		damp, tacky, grayish				
		brown (10YR 5/2)				
3		changed to fine	N/A			
		grained SAND (sp)				
		with silt, damp,				
4		very dark gray				
		(10YR 3/1)				
5		-----				
		No Recovery				
6		Cuttings changed				
		to fine grained				
7		SAND with traces				
		of very fine				
		grained sand,				
		damp, very pale	N/A			
		brown (10YR 7/3)				
8						
9						
10						

HTRW DRILLING LOG						HOLE NUMBER 76-18
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SAND with clay (sc), firm, very pale brown, (10YR 7/3), very moist	100ppm		Soil Sample 761811	▼ Wet below = 10.3 FT BGS
	11	SAND (SP) very fine to fine grained, black (10YR 2/6), organic residue, saturated,				
	12	medium grading to soft, hydrocarbon odor				
	13		900ppm	Soil Sample 761831	Soil Sample 761821	
	14					
	15	End of drilling at 15 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-19
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt w/ aggregate				Ran 5.0 Rec. 2.5
		Angular gravel fill				
1		No Recovery	(N/A)			
2						
3		Silty SAND (SM), fine to medium grained, traces of clay, dry, dark greenish gray (1 gley 10Y4/1)	43.8 ppm			
4						
5						
6		SAND (SP), fine grained, subrounded, dry, light gray (2.5Y7/1)	72500 ppm		Soil Sample 761921	Ran 5.0 Rec. 5.0
7						
8		Silty SAND (SM) fine grained, black (5Y2.5/1), hydrocarbon odor, smear zone	72500 ppm		Soil Sample 761911	
9						
10						

HTRW DRILLING LOG						HOLE NUMBER 76-19
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	silty SAND (SM), as above, wet, traces of roots, hydrocarbon odor				Ran 5.0 Rec. 5.0
	12					▼ Wet below 11.0 FT BGS
	13	SAND (SP), fine to medium grained, subrounded, wet, very dusky red (2.5YR 2.5/2)		Soil Sample 761931		
	14					
	15	End of sampling and soil description				
	16					Set well at 19.0 FT BGS
	17					Screen from 4.0 FT to 19 FT BGS
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-20
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Asphalt with coarse gravel fill	5.4 ppm		Soil Sample 762021	Ran 5.0, Rec.
	2	clayey SAND (sc), fine to medium grained, slight plasticity, brownish yellow (10YR 6/6) with some light gray mottling				
	3	silty SAND (sm), dark gray (5Y 4/1) with gray (5Y 6/1) mottling				
	4	as above silty SAND dark grayish brown (10YR 4/2)	3.1 ppm			
	5	SAND (sp), fine grained, loose, moist, pale yellow (2.5Y 8/2) grading to SAND (sp), moist, yellow (2.5Y 7/3) with brownish yellow (10YR 6/8) laminations				
	6	as above SAND (sp), moist, grayish brown (10YR 5/2)	4.5 ppm			Ran 5.0, Rec. 5.0
	7	silty SAND (sm), fine grained, moist, dark gray (2.5Y 3/1)				
	8	silty SAND (sm), fine grained, dense, moist, black (5Y 2.5/1)	2.9 ppm		Soil Sample 762011	
	9	as above except wet				
	10					Wet below 9.5 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-20
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND (SM), fine to medium grained, dense, wet, black (5Y2.5/1)	N/A	Soil Sample 762031		Ran 5.0, Rec 5.0
	12	SAND with silt (SP-SM), fine to medium grained, wet, very dusky red (2.5YR 2.5/2)				
	13					
	14	SAND with silt (SP-SM), fine to medium grained, coarser with depth, wet, dark reddish brown (5YR 3/4)	N/A			
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-21
PROJECT: Fort Stewart USTs			INSPECTOR K. Ledbetter			SHEET 1 OF 3
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Vertical profile borehole for the purpose of collecting groundwater samples. No soil was collected for lithologic description				
	2					
	4					
	6					
	8				Dry	PUSHED TO 10.0 FT BGS AND PULLED BACK TO 7.0 FT BGS TO EXPOSE SCREEN
	10					
	12		420 ppm		Groundwater Sample 762112	PUSHED TO 15.0 FT BGS AND PULLED BACK TO 11.0 FT BGS TO EXPOSE SCREEN
	14					
	16					
	18		292 ppm		Groundwater Sample 762122	PUSHED TO 20.0 FT BGS AND PULLED BACK TO 17.0 FT BGS TO EXPOSE SCREEN
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-21
PROJECT: Fort Stewart USTs			INSPECTOR K. Ledbetter			SHEET 2 OF 3
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Vertical profile borehole for the purpose of collecting groundwater samples. No soil was collected for lithologic description				
	22					
	24					
	26					
	28		156ppm		Groundwater Sample 762132	PUSHED TO 30.0 FT BGS AND PULLED BACK TO 27.0 FT BGS TO EXPOSE SCREEN
	30					
	32					
	34					
	36					
	38		360ppm		Groundwater Sample 762142	PUSHED TO 40.0 FT BGS AND PULLED BACK TO 36.0 FT BGS TO EXPOSE SCREEN
	40					

HTRW DRILLING LOG						HOLE NUMBER 76-21
PROJECT: Fort Stewart USTs			INSPECTOR K. Ledbetter			SHEET 3 OF 3
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Vertical profile borehole for the purpose of collecting groundwater samples. No soil was collected for lithologic description.				
42						
44			28ppm		Groundwater Sample 762152	PUSHED TO 45.0 FT BGS AND PULLED BACK TO 42.0 FT BGS TO EXPOSE SCREEN
		END OF DRILLING AT 45.0 FT				
46						
48						
50						
52						
54						
56						
58						
60						

HTRW DRILLING LOG						HOLE NUMBER 76-22
PROJECT: Fort Stewart USTs			INSPECTOR K. Ledbetter		SHEET 1 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Vertical profile borehole for the purpose of collecting groundwater samples. No soil was collected for lithologic description				
	2					
	4					
	6					
	8					
	10					
	12					
	14					
	16					
	18					
	20					

Auger rig used to drill down to 20.0 FT BGS and leave the augers in the hole for the Geoprobe to push through due to very dense silt between 5.0 to 20.0 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-22
PROJECT: Fort Stewart USTs			INSPECTOR K. Ledbetter			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Vertical profile borehole for the purpose of collecting groundwater samples. No soil was collected for lithologic description				
	22					
	24					
	26					
	28		7.0 ppm		Groundwater Sample 762212	PUSHED TO 30.0 FT BGS AND PULLED BACK TO 27.0 FT BGS TO EXPOSE SCREEN
	30	END OF DRILLING AT 30.0 FT				
	32					
	34					
	36					
	38					
	40					

HTRW DRILLING LOG						HOLE NUMBER 76-23
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 1 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt w/ aggregate				Ran 5.0 Rec. 4.0
	1	Silty SAND (SM), fine grained, gray (2.5Y 5/1), dry	113ppm		Soil Sample 762321	
	2	Clayey SAND (sc), fine to medium grained, slight plasticity, light brownish gray (2.5Y 6/2), dry				
	3	Silty SAND (SM), fine grained, traces of organic material, very dark gray (5Y 3/1), dry				
	4	SAND (SP), fine grained, rounded, olive gray (5Y 4/2) with light gray (5Y 7/1) laminations grading to	59.5ppm			
	5	SAND (SP) as above fine grained, light olive gray (5Y 6/2), moist				
	6					Ran 5.0, Rec. 5.0
	7	Silty SAND (SM), fine grained, dense, very dark gray (5Y 3/1) moist	65.8ppm			
	8	Silty SAND (SM) as above, fine grained, black (2.5Y 2.5/2), moist, slight cementation	3.2ppm		Soil Sample 762311	
	9	as above except wet				
	10					▼ Wet below = 9.0 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-23
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11			Soil Sample 762331		Ran 5.0, Rec. 5.0
	12	SAND(SP), fine to medium grained, subrounded, very dusky red (2.5YR2.5/2) wet				
	13					
	14					Set well at 14.0 FT BGS Screen from 4.0 FT to 14.0 FT BGS
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-24
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Asphalt w/aggregate				Ran 5.0 Rec. 5.0
	1	Silty SAND (SM), fine to medium grained, traces of organic material, very dark gray (5Y3/1)	621 ppm		Soil Sample 762411	
	2	Clayey SAND (SC), fine to medium grained, low plasticity, reddish yellow (7.5YR 6/6) mottled with light gray (7.5YR 7/1)				
	3	Silty SAND (SM) fine to medium grained, moist, dark gray (7.5YR 4/1)	563 ppm			
	4	Silty SAND (SP-SM) fine to medium grained, subrounded, light gray (2.5Y 2/2)				
	5	Silty SAND (SP-SM) fine grained, 10% silt, pinkish gray (7.5YR 7/2)	545 ppm			Ran 5.0 Rec. 5.0
	6	grading to Silty SAND (SM), fine grained, black (5Y 2.5/1), strong hydrocarbon odor				
	7	Smear zone from 6-9 FT BGS	23.3 ppm			
	8					
	9	SAND (SP), fine to medium grained, subrounded, wet, very dusky red (2.5YR 2.5/2)			Soil Sample 762421	Wet below 9.0 FT BGS
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-24
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	SAND (sp) as above, wet				
	12					
	13					
	14					
	15					Set well at 14.8 FT BGS Screen from 4.8 FT to 14.8 FT BGS
	16			Soil Sample 762431		
	17					
	18					
	19					
	20	End of sampling at 20.0 FT BGS				

HTRW DRILLING LOG						HOLE NUMBER 76-Z5
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Silty sandy topsoil, fine grained, generally densely packed, with grass, rootlets, etc., dry, very dark gray (10YR 3/1)	0 ppm			Ran 5.0, Rec. 4.0
	2	SAND, fine grained, unconsolidated, loose, massive, dry, very pale brown (10YR 7/3) gradational from above to below				
	3		0.2 ppm		Soil Sample 76Z511	
	4	Silty SAND, fine grained, densely packed, moist, very dark brown (10YR 2/2)				
	5	No Recovery				
	6	very dark brown Silty SAND (as above) moisture increases with depth	0 ppm		Soil Sample 76Z521	Ran 5.0, Rec. 4.5
	7	lost 0.4 FT of interval predominantly coarse grained				
	8		N/A			▼ Wet below 8.0 FT BGS
	9					
	10	No Recovery				

HTRW DRILLING LOG						HOLE NUMBER 76.25
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	silty SAND, very dark brown (10YR 3/2). Cemented concretionary zones	N/A	Soil Sample 762531		Ran 5.0, Rec. 5.0
	13	silty SAND, fine to medium grained, massive, some zones loose, some zones cemented, dark red brown (5YR 3/4), wet	N/A			
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-26
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	SAND (SP), fine grained, poorly sorted, very moist, traces of silt, mixed matrix: brown (10YR 4/3), pale brown (10YR 6/3), traces of wood ashes, subrounded, soft	2.1 ppm			
	2					
	3	SAND (SP), fine grained, subrounded, wet, heavy organic staining, no odor, soft, reddish black (10R 2.5/1)	1.7 ppm		Soil Sample 76Z611	
	4					
	5	SAND (SP) fine grained, poorly sorted, subrounded, saturated, heavy organic staining, soft to medium, black (N 2/0)	1.6 ppm			
	6					
	7				Soil Sample 76Z621	
	8					
	9		2.0 ppm	Soil Sample 76Z631		
	10					▼ Wet below 9.0 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-26
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Hard Pan at ~ 11.0 FT				
	12	No Recovery				
	13					
	14					
	15	End of drilling at 15.3 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-27
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	silty SAND, fine grained, massive, weakly packed (crumbles under pressure) rare gravel sized fragments, dry, black (10 YR 2/1)	0 ppm			Ran 5.0, Rec. 4.0
	2					
	3					
	4		0 ppm			
	5	No Recovery			Soil Sample 762711	
	6	black silty SAND (as above); possibly more silt, gravel fragments more prevalent	0 ppm			Ran 5.0, Rec. 2.3
	7				Soil Sample 762721	
	8	No Recovery	N/A			
	9					
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-27
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		black silty SAND (as above)				Ran 5.0, Rec. 5.0
	11	Silty SAND, fine grained, well cemented, very hard (indurated) wet, dark reddish- brown (5YR 3/4)		Soil Sample 762731		 Wet below 12.0 FT BGS
	12					
	13	hard throughout the interval				
	14					
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-288
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SAND (sp) fine grained, soft, poorly graded, subangular, wet, very dark gray (10YR3/1)				
	1	as above except a pale yellow (2.5Y8/2) matrix and a lack of organic matter	3.2 ppm			
	2					
	3					
	4	SAND (SP-SM), with silt, fine grained, poorly graded, wet, soft, very dark gray (10YR3/1)	160 ppm			
	5	as above except black (10Y2/6) with traces of roots and a slight hydrocarbon odor	1070 ppm			
	6					
	7	Stronger hydrocarbon odor				
	8					
	9		345 ppm			
	10			Soil Sample 76-288-31 9.0 FT - 11.0 FT	Soil Sample 76-288-21	Wet below 8.8 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 46-28
PROJECT: Fort Stewart USTs			INSPECTOR C. Klinger		SHEET 2 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11			Soil Sample #62831 9.0 FT - 11.0 FT		
	12	SAND (SP), subrounded, iron coatings, saturated, very dusky red (10R 3.5/2) medium consistency	260 ppm			
	13	SAND (SP), subrounded, saturated, strong brown (7.5YR 4/6), matrix, medium consistency with thin bands of iron cemented sand (moderate cementation)	95 ppm		Soil Sample #62811	
	14					
	15	End of drilling at 15.0 FT BGS				
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-29
PROJECT: Fort Stewart USTs			INSPECTOR P. Lucot			SHEET 1 OF 1
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		ASPHALT				
		gravelly SAND with some clay angular to subangular, moist brown (7.5 YR 5/4)				
	1	clayey SAND (sc), medium to coarse grained, subrounded, very stiff, moist, light brown (7.5 YR 6/4)	1.1 ppm			
	2	Silty SAND (SM), fine grained, loose, moist, light yellowish brown (10 YR 6/4) to black (10 YR 2/1)				
	3		1.2 ppm			
	4					
	5		1.3 ppm			
	6					
	7		2.3 ppm		Soil Sample 762911	WET BELOW 6.9 FT BGS
	8					Collected groundwater sample 762912 from monitoring point
	9		2.3 ppm			Pushed to 12.0 ft BGS to set 3/4" monitoring point screened from 6.4 to 11.2 ft BGS
	10	END OF SOIL SAMPLING AT 10.0 FT BGS				

HTRW DRILLING LOG						HOLE NUMBER 76-30
PROJECT: Fort Stewart USTs			INSPECTOR S. Budd		SHEET 1 OF 1	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Fill				
	1	SAND with gravel, very fine grained, subrounded, yellow				
	2	Silty SAND, well sorted, subrounded, very dark gray to black				
	3		16.9ppm			
	4					
	5		27.5ppm			
	6				Soil Sample 763011	
	7		0.0ppm			WET BELOW 6.5 FT BGS
	8	END OF SOIL SAMPLING AT 8.0 FT BGS				Pushed to 12.0ft BGS TO SET 3/4" MONITORING POINT SCREENED FROM 2.0 to 11.9 FT BGS
	9					Collected groundwater sample 763012 from monitoring point
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-31
PROJECT: Fort Stewart USTs			INSPECTOR P. Lucot			SHEET 1 OF 1
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		ASPHALT				
	1	gravelly SAND with some clay, angular to subangular, brown (7.5 YR 5/4)	1.9 ppm			
	2	clayey SAND (SC), medium to coarse grained, subrounded, very stiff, moist light brown (7.5 YR 6/4)				
	3	silty SAND (SM), fine grained, very loose, light yellowish brown (10 YR 6/4) to black (10 YR 2/1)	4.6 ppm			
	4					
	5		3.6 ppm			
	6					
	7		3.6 ppm		Soil Sample 763111	
	8					WET BELOW 7.8 FT BGS
	9		3.0 ppm			Collected groundwater sample 763112 from monitoring point
	10	END OF SOIL SAMPLING AT 10.0 FT BGS				Pushed to 13.0 ft BGS to set 3/4" monitoring point screened from 2.9 to 12.9 ft BGS

HTRW DRILLING LOG

HOLE NUMBER 76-32

PROJECT: Fort Stewart USTs

INSPECTOR H. Smith

SHEET 1 OF 2

ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	clayey SAND (SC), angular to subrounded, medium to low plasticity, moist, yellow (104R7/6)	231 ppm			
	2					
	3	Silty SAND (SM), fine to medium grained, subangular to subrounded, soft, dry to moist, yellowish brown (104R5/4) to black (104R2/1)	231 ppm			
	4					
	5		2275 ppm			
	6					
	7		2275 ppm			
	8					
	9		1035 ppm			
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-32
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND (sm), medium to coarse grained, angular to subrounded, soft, non plastic, wet, dark reddish brown (5/8 3/4)	1035 ppm		Soil Sample 763211	7' wet below 10.2' BGS
	12					
	13		1698 ppm			
	14					
	15		1698 ppm			
	16	END OF SAMPLING AT 15.5 FT BGS				Set 3/4" monitoring point screened from 5.1 to 15.1 ft BGS
	17					Collected groundwater sample 76-32 from monitoring point
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-33
PROJECT: Fort Stewart USTs			INSPECTOR P. Lucot			SHEET 1 OF 1
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	clayey SAND (sc), medium to coarse grained, subrounded, stiff, moist, strong brown (7.5YR 5/8)	112ppm			
	2					
	3	silty SAND (sm), fine grained, moist, very dark grayish brown (10YR 3/2) to black (10YR 2/1)	469ppm			
	4					
	5		536ppm			
	6					
	7		134ppm		Soil Sample 763311	
	8					V WET BELOW 7.9' BGS
	9		744ppm			Collected groundwater sample 763312 from monitoring point
	10	END OF SOIL SAMPLING AT 10.0 FT BGS				Pushed to 13.6 ft BGS to set 3/4" monitoring point screened from 8.5 to 13.4 ft BGS

HTRW DRILLING LOG						HOLE NUMBER 76-34
PROJECT: Fort Stewart USTs			INSPECTOR P. Lucot			SHEET 1 OF 1
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		CONCRETE				
	1	silty SAND (SM), fine grained, loose, moist, very dark brown (7.5 YR 2.5/2)	72.9 ppm			Strong hydrocarbon odor at 1.0 ft BGS
	2	clayey SAND (SC), medium to coarse grained, subrounded, stiff, pinkish gray (7.5 YR 7/2)				
	3	silty SAND (SM), fine grained, moist, very dark grayish brown (10YR 3/1) to black (10YR 2/1)	491 ppm			
	4					
	5		86.5 ppm			
	6					
	7		315 ppm		Soil Sample 763411	
	8					
	9		118 ppm			WET BELOW 8.2 FT BGS Groundwater sample 763412 collected from monitoring point
	10	END OF SOIL SAMPLING AT 10.0 FT BGS				Pushed to 14.0 ft BGS to set 3/4" monitoring point screened from 8.5 to 13.4 ft BGS

HTRW DRILLING LOG						HOLE NUMBER 76-35
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	sandy silty GRAVEL - FILL dark gray (10YR 4/1)	1.0 ppm			
	2	silty SAND (SM), fine to medium grained, subrounded to rounded, non plastic, dry light gray (10YR 7/2) to dark brown (7.5 YR 3/3) to black (7.5 YR 2/1)				
	3		1.0 ppm			
	4					
	5		0.5 ppm			
	6					
	7		0.5 ppm			
	8					
	9		1.9 ppm			
	10					

Soil Sample
763511

Wet below 8.3 ft Bas

HTRW DRILLING LOG						HOLE NUMBER 76-35
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND (sm), medium to coarse grained, wet, dark reddish brown (2.5% $\frac{2}{3}$)	0.8ppm			
	12					
	13		0.8ppm			
	14	END OF SAMPLING AT 13.5 FT BGS				SET $\frac{3}{4}$ " MONITORING POINT SCREENED FROM 2.9 TO 12.9 FT BGS
	15					COLLECTED GROUNDWATER SAMPLE 763512 FROM MONITORING POINT
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-36
PROJECT: Fort Stewart USTs			INSPECTOR S. Budd			SHEET 1 OF 1
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		ASPHALT				
		Gravel				
	1		9.4ppm			
	2	Silty SAND, well sorted, subangular, dark brown to yellow to black				
	3		9.0ppm			
	4					
	5		11.8ppm			
	6					
	7		482.0ppm			
	8				Soil Sample 763611	7' wet below 8.0ft BGS
	9		NA			Collected groundwater sample 763612 from monitoring point
	10					Pushed to 15.0 ft BGS to set 3/4" monitoring point screened from 4.4 to 14.4 ft BGS

HTRW DRILLING LOG						HOLE NUMBER 76-37
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		TOP SOIL				
	1	Silty SAND (SM), fine to medium grained, subangular to rounded, soft, nonplastic, dry, brown (7.5YR 4/2)	1.1 ppm			
	2	SAND (SP), fine to medium grained, poorly sorted, subangular to rounded, soft, dry, very pale brown (10YR 7/4)				
	3	Silty SAND (SM), fine to medium grained, subangular to rounded, brown (7.5YR 5/4) to black (10YR 2/1)	1.1 ppm			
	4					
	5		1.8 ppm			
	6					
	7		1.8 ppm			
	8					
	9		1.8 ppm			
	10					

Soil Sample

763711

Wet below 8.4 ft BGS

HTRW DRILLING LOG						HOLE NUMBER 76-37
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		silty SAND (sm), fine to medium grained, subangular to rounded, soft, wet, dark reddish brown (SY23/4)				
	11		1.8 ppm			
	12					
	13		1.6 ppm			
	14	END OF SAMPLING AT 14.0 FT BGS				SET 3/4" MONITORING POINT SCREENED FROM 3.7 to 13.7 FT BGS
	15					COLLECTED GROUNDWATER SAMPLE 763712 FROM MONITORING POINT
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-38
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		TOP SOIL				
	1	Silty SAND (SM), fine to medium grained, subangular to subrounded, soft, dry, dark yellowish brown (10YR 2.5/4) to light gray (10YR 7/1)	0.3 ppm			
	2					
	3		0.3 ppm			
	4					
	5		0.4 ppm			
	6					
	7		0.4 ppm			
	8					
	9		0.6 ppm			
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-38
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND(sm): same as above but wet at 11.5	0.6 ppm		Soil Sample 763811	WET BELOW 11.5 FT BGS
	12					
	13		0.6 ppm			
	14					
	15		0.6 ppm			
	15	END OF SAMPLING AT 15.0 FT BGS				SET 3/4" MONITORING POINT SCREENED FROM 4.7 to 14.7 FT BGS
	16					COLLECTED GROUNDWATER SAMPLE 763812 FROM MONITORING POINT
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-39
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith		SHEET 1 OF 2	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		TOP SOIL				
	1	Silty SAND (SM), fine to medium grained, subangular to rounded, soft, nonplastic grayish brown (10YR5/2) to very dark gray (10YR3/1) to dark yellowish brown (10YR3/4)	0.2 ppm			
	2					
	3		0.2 ppm			
	4					
	5		0.1 ppm			
	6					
	7		0.1 ppm		Soil Sample 763911	
	8					
	9		0.0 ppm			
	10					∇ wet below 8.6 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-39
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	silty SAND (sm): same as above, but wet	0.0			
	12					
	13					
	14					
	15	END OF SAMPLING AT 14.5 FT BGS				SET 3/4" MONITORING POINT SCREENED FROM 4.3 FT TO 14.3 FT BGS
	16					COLLECTED GROUNDWATER SAMPLE 763912 FROM MONITORING POINT
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-40
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 1 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		TOP SOIL				
	1	Silty SAND (SM), soft, non plastic, dry, brown (10 YR 5/3)	1.4 ppm			
	2	SAND (SP), poorly graded, fine grained, soft, nonplastic, moist, very pale brown (10 YR 8/3)				
	3		0.6 ppm			
	4					
	5	Silty SAND (SM), fine to medium grained, subangular to subrounded, soft, moist dark grayish brown (10 YR 4/2) to black (10 YR 2/1)	1.1 ppm			
	6					
	7		1.1 ppm			
	8					
	9		0.7 ppm			
	10					WET BELOW 9.0 FT BGS

HTRW DRILLING LOG						HOLE NUMBER 76-40
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 2 OF 2
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND (sm), medium grained, subangular to sub rounded, firm to soft, wet, black (10YR 2/1)	0.7 ppm			
	12					
	13	END OF SOIL SAMPLING AT 13.0 ft BGS				3/4" MONITORING POINT SCREENED 3.0 TO 12.5 FT BGS
	14					Collected groundwater sample 764012 from monitoring point
	15					
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-41
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith		SHEET 1 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		ASPHALT				
	1	clayey SAND, coarse to very coarse grained, low plasticity, soft, slightly moist, very pale brown (10YR7/4)	>2500ppm			STRONG HYDROCARBON ODOR
	2	~~CONCRETE w/ sand and silt~~				
	3	Silty SAND, fine to medium grained, subrounded, nonplastic, soft, dry very dark grayish brown (10YR2 1/2) to black (10YR2/1)				
	4		>2500ppm			
	5	~~NO RECOVERY~~				
	6					
	7					
	8					
	9					
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-41
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith		SHEET 2 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND, fine to medium grained, subangular, non plastic, soft, wet black (10YR 2/1) to dark reddish brown (5YR 3/4)	>2500		Soil Sample 764111	
	12					WET BELOW 12.0 FT BGS
	13					PRODUCT SHEEN ON WATER COMING OFF CORE. VERY STRONG ODOR
	14		N/A			
	15					
	16					
	17		>2500			
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-41
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith		SHEET 3 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND; same as above				
	21					
	22					
	23		>2500			
	24					
	25					
	26					
	27					
	28		>2500			
	29					
	30					

HTRW DRILLING LOG						HOLE NUMBER 76-41
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith			SHEET 4 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEO TECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND: same as above				STILL A STRONG HYDROCARBON ODOR
	31					
	32					
	33		>2500 ppm			
	34					
	35					
	36					
	37					
	38		>2500 ppm			
	39					
	40					

HTRW DRILLING LOG						HOLE NUMBER 76-41
PROJECT: Fort Stewart USTs			INSPECTOR H. Smith		SHEET 5 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND: same as above				
	41					
	42		>2500ppm			
	43					
	44					
	45					
	46		>2500ppm			
	47	END OF DRILLING AT 47.0 FT BGS				
	48					
	49					
	50					

HTRW DRILLING LOG						HOLE NUMBER 76-42
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 1 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		TOP SOIL				
	1					
		SAND, very fine grained, loose, dry, gray (10YR 6/1)	0.0 ppm			
	2	Silty SAND, fine grained, dry very dark gray (10YR 3/1) to very pale brown (10YR 8/4) to dark grayish brown (10YR 4/2)				
	3					
	4		0.0 ppm			
	5					
	6		0.0 ppm			
	7	Silty clayey SAND, fine to medium grained, black (10YR 4/2)				
	8					
	9		0.0 ppm			
	10					

HTRW DRILLING LOG						HOLE NUMBER 76-42
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey		SHEET 2 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	11	Silty SAND, fine grained, moist, dark reddish brown (SYR 3 1/2)	0.0 ppm		Soil Sample 764211	
	12					
	13	SAND, fine grained, wet, some lenses, yellowish red (SYR 4/6)				
	14		N/A			
	15	Silty SAND, fine grained, wet, black (SYR 2.5/1)				
	16		N/A			
	17					
	18					
	19		N/A			
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-42
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 3 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SAND, fine to medium grained, wet, dark reddish brown (5 YR 3/4)	NA			
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					

HTRW DRILLING LOG						HOLE NUMBER 76-42
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey		SHEET 4 OF 5	
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SAND, fine to medium grained, wet, dark reddish brown (5 YR 3/4)	NA			
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

Geotechnical Soil Sample 35-45

HTRW DRILLING LOG						HOLE NUMBER 76-42
PROJECT: Fort Stewart USTs			INSPECTOR T. Coffey			SHEET 5 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		SAND, fine to medium grained, wet, dark reddish brown (SY23/4)	NA			
	41					
	42					
	43					
	44					
	45					
		END OF DRILLING AT 45.0 FT BGS				SET 2" MONITORING WELL SCREENED FROM 34.4 TO 44.4 FT BGS
	46					
	47					
	48					
	49					
	50					

HTRW DRILLING LOG						HOLE NUMBER 76-43
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 1 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
	1	Silty SAND (SM), fine grained, loose, dry, very dark gray (2.5 Y 3/1)				
	2	SAND (SP), fine grained, loose, rounded, dry, yellow (2.5 Y 7/6)	0.3ppm			
	3					
	4		0.3ppm			
	5	Silty SAND (SM), fine grained, loose, rounded, moist, black (2.5 Y 2.5/1)				
	6		0.6ppm			
	7				Soil Sample 764311	
	8					$\frac{V}{L}$ WET BELOW 8.0FT Hydrocarbon odor
	9					
	10					

HTRW DRILLING LOG						HOLE NUMBER <u>7643</u>
PROJECT: Fort Stewart USTs			INSPECTOR <u>L. Mercado</u>			SHEET 2 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND (sm), fine grained loose, wet, very dark gray (10YR 3/1)				Hydrocarbon odor
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					

HTRW DRILLING LOG						HOLE NUMBER 76-43
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 3 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND (sm), fine grained loose, wet, very dark gray (10 YR 3/1)				
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					

HTRW DRILLING LOG						HOLE NUMBER 76-43
PROJECT: Fort Stewart USTs			INSPECTOR L. Mercado			SHEET 4 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND (sm), Fine grained loose, wet, very dark gray (10 YR 3/1)				
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

HTRW DRILLING LOG						HOLE NUMBER 76-43
PROJECT: Fort Stewart USTs			INSPECTOR L. MERCADO			SHEET 5 OF 5
ELEV. (A)	DEPTH (B)	DESCRIPTION OF MATERIALS (C)	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX	ANALYTICAL SAMPLE NO. (F)	REMARKS (G)
		Silty SAND (SM), fine grained, loose, wet, very dark gray (10 YR 2.3/1)				
	41					
	42					
	43					
	44					
	45	END OF DRILLING AT 45.0 FT BGS				SET 2" MONITORING WELL SCREENED FROM 34.2 TO 44.2 FT BGS
	46					
	47					
	48					
	49					
	50					

APPENDIX V
SOIL LABORATORY REPORTS

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Table V-A. Summary of CAP-Part A (UST 261) Soil Analytical Results

Station:	Georgia UST	73-01	73-01	73-02	73-02	73-03	73-03
Sample ID:	Soil	730111	730121	730211	730221	730311	730321
Sample Interval:	Threshold	2.0 - 4.0	4.0 - 6.0	2.0 - 4.0	4.0 - 6.0	4.0 - 6.0	6.0 - 8.0
Collection Date:	Levels ¹	10-May-98	10-May-98	10-May-98	10-May-98	10-May-98	10-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0026 U	0.0022 U	0.0021 U	0.00097 =	0.0098 =	0.0057 U
Toluene	6	0.0106 U	0.0022 U	0.015 =	0.0024 =	0.0193 J	0.023 U
Ethylbenzene	10	0.0218 =	0.0022 U	0.0055 J	0.0023 U	0.0404 J	0.0376 =
Xylenes, Total	700	0.134 J	0.0064 U	0.0161 J	0.0068 U	0.0435 =	0.252 =
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Acenaphthene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Acenaphthylene	NRC	0.355 U	1.43 UJ	0.352 UJ	0.375 U	0.35 U	1.5 U
Anthracene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Benzo(a)anthracene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Benzo(a)pyrene	NRC	0.355 U	0.861 J	0.352 U	0.375 U	0.35 U	1.5 U
Benzo(b)fluoranthene	NRC	0.355 U	1.32 J	0.352 U	0.375 U	0.35 U	1.5 U
Benzo(g,h,i)perylene	NRC	0.355 U	0.765 J	0.352 U	0.375 U	0.35 U	1.5 U
Benzo(k)fluoranthene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Chrysene	NRC	0.355 U	0.985 J	0.352 U	0.375 U	0.35 U	1.5 U
Dibenzo(a,h)anthracene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Fluoranthene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Fluorene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Indeno(1,2,3-cd)pyrene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Naphthalene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Phenanthrene	NRC	0.355 U	1.43 U	0.352 U	0.375 U	0.35 U	1.5 U
Pyrene	NRC	0.355 U	1.18 J	0.352 U	0.375 U	0.35 U	1.5 U
OTHER ANALYTES							
Lead	NRC		11.9 =		5.4 =		7.1 =
Total Organic Carbon	NRC						6270 =
Total Petroleum Hydrocarbons	NRC	47.9 =	49.1 =	14.7 U	13.4 U	15.2 U	62.3 =

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-A. Summary of CAP-Part A (UST 261) Soil Analytical Results (continued)

Station:	Georgia UST	73-04	73-04	73-05	73-05	73-05	73-05
Sample ID:	Soil	730411	730421	730511	730521	730531	730541
Sample Interval:	Threshold	4.0 - 6.0	6.0 - 8.0	2.0 - 4.0	6.0 - 8.0	8.0 - 10.0	14.0 - 16.0
Collection Date:	Levels ¹	10-May-98	10-May-98	09-May-98	09-May-98	09-May-98	09-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0053 U	0.0575 UJ	0.0027 J	0.0136 J	0.0024 U	1.02 =
Toluene	6	0.021 U	0.23 UJ	0.0735 =	0.138 J	0.0025 =	0.318 =
Ethylbenzene	10	1.33 J	0.23 UJ	0.0152 J	0.292 J	0.0024 U	0.555 =
Xylenes, Total	700	4.05 =	0.97 J	0.0281 J	1.81 =	0.0072 U	3.67 =
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Acenaphthene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Acenaphthylene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Anthracene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Benzo(a)anthracene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Benzo(a)pyrene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Benzo(b)fluoranthene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Benzo(g,h,i)perylene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Benzo(k)fluoranthene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Chrysene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Dibenzo(a,h)anthracene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Fluoranthene	NRC	0.346 U	0.377 U	0.014 J	0.362 U	0.402 U	0.427 U
Fluorene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Indeno(1,2,3-cd)pyrene	NRC	0.346 U	0.377 U	0.373 U	0.362 U	0.402 U	0.427 U
Naphthalene	NRC	0.346 U	0.377 U	0.0314 J	0.0445 J	0.402 =	0.104 J
Phenanthrene	NRC	0.346 U	0.377 U	0.0326 J	0.362 U	0.402 U	0.0947 J
Pyrene	NRC	0.346 U	0.377 U	0.0293 J	0.362 U	0.402 U	0.427 U
OTHER ANALYTES							
Lead	NRC		7 =	5.8 J			
Total Organic Carbon	NRC						
Total Petroleum Hydrocarbons	NRC	616 =	238 =	12.4 J	31.8 =	79.5 =	12.8 U

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-A. Summary of CAP-Part A (UST 261) Soil Analytical Results (continued)

Station:	Georgia UST	73-05	73-05	73-05	73-05
Sample ID:	Soil	730551	730561	730571	730581
Sample Interval:	Threshold	18.0 - 20.0	22.0 - 24.0	26.0 - 28.0	32.0 - 34.0
Collection Date:	Levels ¹	09-May-98	09-May-98	09-May-98	09-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<i>VOLATILE ORGANIC COMPOUNDS</i>					
Benzene	0.008	0.0987 =	0.0026 U	0.0524 =	0.0455 =
Toluene	6	0.039 J	0.0026 U	0.0395 =	0.0629 =
Ethylbenzene	10	0.025 U	0.0026 U	0.0058 J	0.0125 =
Xylenes, Total	700	0.127 =	0.0078 U	0.0424 =	0.057 =
<i>POLYNUCLEAR AROMATIC HYDROCARBONS</i>					
2-Chloronaphthalene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Acenaphthene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Acenaphthylene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Anthracene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Benzo(a)anthracene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Benzo(a)pyrene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Benzo(b)fluoranthene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Benzo(g,h,i)perylene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Benzo(k)fluoranthene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Chrysene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Dibenzo(a,h)anthracene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Fluoranthene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Fluorene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Indeno(1,2,3-cd)pyrene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Naphthalene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Phenanthrene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
Pyrene	NRC	0.412 U	0.433 U	0.407 U	0.417 U
<i>OTHER ANALYTES</i>					
Lead	NRC				
Total Organic Carbon	NRC				
Total Petroleum Hydrocarbons	NRC	12.5 U	48.2 =	98.5 =	12.5 U

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-B. Summary of CAP-Part A (USTs 257-260) Soil Analytical Results

Station:	Georgia UST	76-01	76-01	76-02	76-02	76-03	76-03
Sample ID:	Soil	760111	760121	760211	760221	760311	760321
Sample Interval:	Threshold	2.0-4.0	6.0-8.0	7.0-8.0	15.0-16.0	7.0-8.0	13.0-14.0
Collection Date:	Levels ¹	10-May-98	10-May-98	08-May-98	08-May-98	08-May-98	08-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0119 J	0.289 J	12.8 J	0.0108 J	0.0753 J	0.0692 J
Toluene	6	0.174 J	0.127 J	32.9 J	0.138 J	0.168 J	0.142 J
Ethylbenzene	10	0.0468 =	2.55 J	24.2 J	0.0363 J	0.527 J	0.24 J
Xylenes, Total	700	0.366 J	5.28 J	126 J	0.339 J	5.44 J	0.409 J
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Acenaphthene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Acenaphthylene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Anthracene	NRC	0.365 U	0.0418 J	0.402 U	0.404 U	0.415 U	0.388 U
Benzo(a)anthracene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Benzo(a)pyrene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Benzo(b)fluoranthene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Benzo(g,h,i)perylene	NRC	0.365 U	0.0332 J	0.402 U	0.404 U	0.415 U	0.388 U
Benzo(k)fluoranthene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Chrysene	NRC	0.365 U	0.0164 J	0.402 U	0.404 U	0.415 U	0.388 U
Dibenzo(a,h)anthracene	NRC	0.365 U	0.0627 J	0.402 U	0.404 U	0.415 U	0.388 U
Fluoranthene	NRC	0.0404 J	0.124 J	0.402 U	0.404 U	0.415 U	0.388 U
Fluorene	NRC	0.0097 J	0.356 U	0.369 J	0.404 U	0.415 U	0.388 U
Indeno(1,2,3-cd)pyrene	NRC	0.365 U	0.356 U	0.402 U	0.404 U	0.415 U	0.388 U
Naphthalene	NRC	0.365 U	2.5 =	22 =	0.404 U	2.7 =	0.143 J
Phenanthrene	NRC	0.0366 J	0.181 J	0.402 U	0.404 U	0.415 U	0.388 U
Pyrene	NRC	0.0754 J	0.143 J	0.402 U	0.404 U	0.415 U	0.388 U
OTHER ANALYTES							
Lead	NRC		12.8 J		5.3 =		5.9 U
Total Organic Carbon	NRC						18300 =
TPH-Diesel Range Organics	NRC	3.4 U	271 =	1550 =	0.91 UJ	173 =	4.3 =
TPH-Gasoline Range Organics	NRC	0.755 J	1330 =	2310 =	0.441 J	48 =	1.78 =

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-B. Summary of CAP-Part A (USTs 257-260) Soil Analytical Results (continued)

Station:	Georgia UST	76-04	76-04	76-05	76-05	76-05	76-05
Sample ID:	Soil	760411	760421	760511	760521	760531	760541
Sample Interval:	Threshold	2.0-3.0	12.0-13.0	6.0-8.0	10.0-12.0	12.0-14.0	20.0-22.0
Collection Date:	Levels ¹	08-May-98	08-May-98	9-May-98	9-May-98	9-May-98	9-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0021 U	0.0026 U	0.05 U	0.0313 J	0.0127 =	0.0138 =
Toluene	6	0.0327 =	0.0579 =	0.05 U	0.0326 J	0.0383 =	0.015 =
Ethylbenzene	10	0.0021 U	0.0026 U	0.0855 J	0.0265 J	0.0141 =	0.0155 =
Xylenes, Total	700	0.0063 U	0.0077 U	0.374 J	0.36 J	0.101 =	0.0293 J
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Acenaphthene	NRC	0.347 UJ	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Acenaphthylene	NRC	0.347 U	0.424 UJ	0.417 U	0.412 U	0.429 U	0.397 U
Anthracene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Benzo(a)anthracene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Benzo(a)pyrene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Benzo(b)fluoranthene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Benzo(g,h,i)perylene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Benzo(k)fluoranthene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Chrysene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Dibenzo(a,h)anthracene	NRC						
Fluoranthene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Fluorene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Indeno(1,2,3-cd)pyrene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Naphthalene	NRC	0.347 U	0.424 U	0.37 J	0.0509 J	0.429 U	0.397 U
Phenanthrene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
Pyrene	NRC	0.347 U	0.424 U	0.417 U	0.412 U	0.429 U	0.397 U
OTHER ANALYTES							
Lead	NRC		8.7 =	6.1 J			
Total Organic Carbon	NRC						
TPH-Diesel Range Organics	NRC	2.6 U	1.5 UJ	15.4 =	3.2 U	3.4 U	2.7 U
TPH-Gasoline Range Organics	NRC	1.05 UJ	0.173 J	53.7 =	1.72 J	0.264 J	0.0915 J

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table V-B. Summary of CAP-Part A (USTs 257-260) Soil Analytical Results (continued)

Station:	Georgia UST	76-05	76-05	76-05	76-05	76-06	76-06	76-07
Sample ID:	Soil	760551	760561	760571	760581	760621	760611	760711
Sample Interval:	Threshold	30.0-32.0	40.0-42.0	55.0-57.0	57.0-59.0	2.0-4.0	4.0-6.0	0.0-2.0
Collection Date:	Levels ¹	9-May-98	9-May-98	9-May-98	9-May-98	9-May-98	9-May-98	9-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS								
Benzene	0.008	0.0051 U	0.0049 UJ	0.0046 UJ	0.0027 UJ	0.0037 J	0.0043 U	0.0012 U
Toluene	6	0.124 =	0.0721 J	0.0046 UJ	0.0027 UJ	0.16 J	0.0048 J	0.0316 =
Ethylbenzene	10	0.0105 =	0.0096 J	0.0046 UJ	0.0027 UJ	0.118 J	0.0043 U	0.0144 J
Xylenes, Total	700	0.0041 J	0.0039 J	0.014 UJ	0.0081 UJ	0.0671 J	0.013 U	0.0577 =
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	7.000 U	0.354 U	0.386 U
Acenaphthene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	7.000 U	0.354 U	0.386 U
Acenaphthylene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	0.421 J	0.354 U	0.386 U
Anthracene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	0.522 J	0.354 U	0.386 U
Benzo(a)anthracene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	2.400 J	0.354 U	0.386 U
Benzo(a)pyrene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	1.390 J	0.354 U	0.386 U
Benzo(b)fluoranthene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	1.930 J	0.354 U	0.386 U
Benzo(g,h,i)perylene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	1.180 J	0.354 U	0.386 U
Benzo(k)fluoranthene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	0.932 J	0.354 U	0.386 U
Chrysene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	2.650 J	0.354 U	0.386 U
Dibenzo(a,h)anthracene	NRC							
Fluoranthene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	4.32 J	0.354 U	0.386 U
Fluorene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	1.16 J	0.354 U	0.386 U
Indeno(1,2,3-cd)pyrene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	7.00 U	0.354 U	0.386 U
Naphthalene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	7.00 U	0.0221 J	0.386 U
Phenanthrene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	7.03 =	0.354 U	0.386 U
Pyrene	NRC	0.424 U	0.398 U	0.382 U	0.446 U	6.33 J	0.354 U	0.386 U
OTHER ANALYTES								
Lead	NRC	4.7 =	3.5 =		7.1 J	4.5 J		
Total Organic Carbon	NRC							
TPH-Diesel Range Organics	NRC	1.3 U	3.4 U	1.1 U	1.6 UJ	59.7 =	2.9 U	0.58 UJ
TPH-Gasoline Range Organics	NRC	1.28 UJ	0.16 J	1.16 U	1.35 UJ	1.41 =	0.524 J	0.313 J

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table V-B. Summary of CAP-Part A (USTs 257-260) Soil Analytical Results (continued)

Station:	Georgia UST	76-07	76-08	76-08	76-09	76-09	76-10	76-10
Sample ID:	Soil	760721	760811	760821	760911	760921	761011	761021
Sample Interval:	Threshold	4.0-5.5	0.0-2.0	2.0-4.0	0.0-2.0	4.0-5.5	0.0-2.0	4.0-5.2
Collection Date:	Levels ¹	9-May-98	9-May-98	9-May-98	10-May-98	10-May-98	10-May-98	10-May-98
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS								
Benzene	0.008	0.0011 U	0.00055 U	0.0017 J	0.0398 J	15.7 J	0.0011 U	0.351 J
Toluene	6	0.0193 =	0.0025 =	0.0035 =	0.19 J	325 J	0.0044 U	18.4 J
Ethylbenzene	10	0.0175 J	0.0022 U	0.0044 J	0.051 J	117 J	0.0044 U	18.6 J
Xylenes, Total	700	0.103 =	0.0066 U	0.0065 J	0.341 J	594 J	0.0136 =	110 J
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Acenaphthene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Acenaphthylene	NRC	0.365 U	0.366 U	0.351 U	0.0108 J	0.361 U	0.366 U	0.365 U
Anthracene	NRC	0.365 U	0.366 U	0.351 U	0.0092 J	0.361 U	0.366 U	0.365 U
Benzo(a)anthracene	NRC	0.365 U	0.366 U	0.351 U	0.0524 J	0.361 U	0.366 U	0.365 U
Benzo(a)pyrene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Benzo(b)fluoranthene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Benzo(g,h,i)perylene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Benzo(k)fluoranthene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Chrysene	NRC	0.365 U	0.366 U	0.351 U	0.0649 J	0.361 U	0.366 U	0.365 U
Dibenzo(a,h)anthracene	NRC							
Fluoranthene	NRC	0.365 U	0.366 U	0.351 U	0.0838 J	0.361 U	0.366 U	0.365 U
Fluorene	NRC	0.365 U	0.366 U	0.351 U	0.0123 J	0.366 =	0.366 U	0.365 U
Indeno(1,2,3-cd)pyrene	NRC	0.365 U	0.366 U	0.351 U	0.366 U	0.361 U	0.366 U	0.365 U
Naphthalene	NRC	0.365 U	0.366 U	0.312 J	0.0284 J	23.1 =	0.366 U	3.56 =
Phenanthrene	NRC	0.365 U	0.366 U	0.351 U	0.0828 J	0.382 =	0.366 U	0.302 J
Pyrene	NRC	0.365 U	0.366 U	0.351 U	0.139 J	0.361 U	0.366 U	0.365 U
OTHER ANALYTES								
Lead	NRC	1.5 J		1.7 U		13.7 J		2.7 J
Total Organic Carbon	NRC	1700 =		5080 =		2420 =		1790 =
TPH-Diesel Range Organics	NRC	1.2 UJ	1.6 UJ	7.8 =	3.2 U	818 =	1.1 U	124 =
TPH-Gasoline Range Organics	NRC	1.63 J	1.1 U	0.297 J	2.03 =	2820 J	0.576 J	1270 =

NOTE:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Analytical data sheets associated with the CAP-Part A investigation were provided in the CAP-Part A Report, dated December 1998.

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results

Station:	GA UST	76-11	76-11	76-12	76-12	76-13	76-13
Sample ID:	Soil	761111	761121	761211	761221	761311	761321
Sample Interval:	Threshold	5.0-7.5	0.0-2.5	0.0-2.5	5.0-7.5	5.0-7.5	7.5-10.0
Collection Date:	Levels ¹	18-Feb-99	18-Feb-99	17-Feb-99	17-Feb-99	17-Feb-99	17-Feb-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0018 U	0.0022 U	0.0058 J	0.0022 U	0.0029 U	0.0026 U
Toluene	6	0.0018 U	0.0022 U	0.00089 J	0.0022 U	0.0029 U	0.0014 J
Ethylbenzene	10	0.0018 U	0.0022 U	0.0059 J	0.0064 =	0.0029 U	0.0026 U
Xylenes, Total	700	0.0027 U	0.0033 U	0.0149 J	0.0182 =	0.0043 U	0.0025 J
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Acenaphthene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Acenaphthylene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Anthracene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Benzo(a)anthracene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Benzo(a)pyrene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Benzo(b)fluoranthene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Benzo(g,h,i)perylene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Benzo(k)fluoranthene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Chrysene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Dibenzo(a,h)anthracene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Fluoranthene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Fluorene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Indeno(1,2,3-cd)pyrene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Naphthalene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Phenanthrene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
Pyrene	NRC	0.362 U	0.388 U	1.43 U	0.397 U	0.438 U	0.444 U
OTHER ANALYTES							
Lead	NRC		3.3 =		5.9 =		7.2 =
Total Organic Carbon	NRC		28600 =		12000 =		40200 =
TPH-Diesel Range Organics	NRC	0.38 U	0.53 UJ	3.2 U	0.86 U	1.3 U	2.3 U
TPH-Gasoline Range Organics	NRC	0.109 U	0.116 U	0.108 U	0.414 =	0.132 U	0.133 U

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-14	76-14	76-15	76-15	76-16	76-16
Sample ID:	Soil	761411	761421	761511	761521	761611	761621
Sample Interval:	Threshold	7.5-10.0	2.5-5.0	7.5-10.0	5.0-7.5	7.5-10.0	5.0-7.5
Collection Date:	Levels ¹	18-Feb-99	18-Feb-99	18-Feb-99	18-Feb-99	19-Feb-99	19-Feb-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	1.33 =	0.0518 J	0.0031 =	0.0053 =	0.0025 U	0.0026 U
Toluene	6	5.71 =	0.80 =	0.00074 J	0.0024 U	0.0025 U	0.0026 U
Ethylbenzene	10	3.24 =	1.90 =	0.00073 J	0.0031 =	0.0025 U	0.0026 U
Xylenes, Total	700	23.9 =	15.2 =	0.0038 =	0.0066 =	0.0038 U	0.0038 U
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Acenaphthene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Acenaphthylene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Anthracene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Benzo(a)anthracene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Benzo(a)pyrene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Benzo(b)fluoranthene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Benzo(g,h,i)perylene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Benzo(k)fluoranthene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Chrysene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Dibenzo(a,h)anthracene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Fluoranthene	NRC	0.427 U	0.633 J	0.422 U	0.379 U	0.417 U	0.402 U
Fluorene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Indeno(1,2,3-cd)pyrene	NRC	0.427 U	3.66 U	0.422 U	0.379 U	0.417 U	0.402 U
Naphthalene	NRC	1.32 =	6.13 =	0.422 U	0.379 U	0.417 U	0.402 U
Phenanthrene	NRC	0.427 U	0.408 J	0.422 U	0.379 U	0.417 U	0.402 U
Pyrene	NRC	0.427 U	0.861 J	0.422 U	0.379 U	0.417 U	0.402 U
OTHER ANALYTES							
Lead	NRC		4 =		2.2 =		3.8 =
Total Organic Carbon	NRC		4150 =		8480 =		8430 =
TPH-Diesel Range Organics	NRC	22.8 =	167 =	0.76 U	0.32 U	0.36 U	0.49 U
TPH-Gasoline Range Organics	NRC	147 =	813 =	0.276 =	0.114 U	0.125 U	0.12 U

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

- U Indicates that the compound was not detected above the reported sample quantitation limit.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates that the value for the compound was an estimated value.
- = Indicates that the compound was detected at the concentration reported.

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-17	76-18	76-18	76-19	76-19	76-20
Sample ID:	Soil	761721	761811	761821	761911	761921	762011
Sample Interval:	Threshold	7.5-10.0	10.0-10.8	12.5-13.2	7.5-10.0	5.0-7.5	7.5-10.0
Collection Date:	Levels ¹	19-Feb-99	18-Feb-99	18-Feb-99	17-Feb-99	17-Feb-99	18-Feb-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0028 U	7.05 =	5.71 =	77.2 =	104 =	0.0024 U
Toluene	6	0.0028 U	20.6 =	12.9 =	543 =	917 =	0.0024 U
Ethylbenzene	10	0.0028 U	2.74 =	1.04 =	148 =	266 =	0.0024 U
Xylenes, Total	700	0.0041 U	17.8 =	6.77 =	851 =	1600 =	0.0036 U
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.438 U	1.65 U	0.438 U	0.823 U	3.66 U	0.427 U
Acenaphthene	NRC	0.438 U	1.65 U	0.438 U	0.823 U	3.66 U	0.427 U
Acenaphthylene	NRC	0.438 U	0.302 J	0.438 U	0.823 U	3.66 U	0.427 U
Anthracene	NRC	0.438 U	0.106 J	0.438 U	0.823 U	3.66 U	0.427 U
Benzo(a)anthracene	NRC	0.438 U	0.83 J	0.438 U	0.823 U	3.66 U	0.427 U
Benzo(a)pyrene	NRC	0.438 U	0.816 J	0.438 U	0.823 U	3.66 U	0.427 U
Benzo(b)fluoranthene	NRC	0.438 U	0.784 J	0.438 U	0.823 U	3.66 U	0.427 U
Benzo(g,h,i)perylene	NRC	0.438 U	0.562 J	0.438 U	0.823 U	3.66 U	0.427 U
Benzo(k)fluoranthene	NRC	0.438 U	0.811 J	0.438 U	0.823 U	3.66 U	0.427 U
Chrysene	NRC	0.438 U	1.09 J	0.438 U	0.823 U	3.66 U	0.427 U
Dibenzo(a,h)anthracene	NRC	0.438 U	1.65 U	0.438 U	0.823 U	3.66 U	0.427 U
Fluoranthene	NRC	0.438 U	1.09 J	0.438 U	0.823 U	3.66 U	0.427 U
Fluorene	NRC	0.438 U	1.65 U	0.438 U	0.823 U	0.578 J	0.427 U
Indeno(1,2,3-cd)pyrene	NRC	0.438 U	0.88 J	0.438 U	0.823 U	3.66 U	0.427 U
Naphthalene	NRC	0.438 U	0.577 J	0.483 =	5.05 =	43.2 =	0.427 U
Phenanthrene	NRC	0.438 U	0.322 J	0.438 U	0.823 U	3.66 U	0.427 U
Pyrene	NRC	0.438 U	1.52 J	0.438 U	0.823 U	3.66 U	0.427 U
OTHER ANALYTES							
Lead	NRC	7.2 =		4.9 =		67.6 =	
Total Organic Carbon	NRC	19600 =		13300 =		3940 =	
TPH-Diesel Range Organics	NRC	0.58 U	5.4 =	2.7 J	127 =	7800 =	0.39 U
TPH-Gasoline Range Organics	NRC	0.132 U	84.5 =	74.5 =	3320 =	14200 =	0.128 U

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-20	76-23	76-23	76-24	76-24	76-25
Sample ID:	Soil	762021	762311	762321	762411	762421	762511
Sample Interval:	Threshold	1.0-2.5	7.5-10.0	0.5-2.5	0.5-2.5	7.5-10.0	2.5-5.0
Collection Date:	Levels ¹	18-Feb-99	18-Feb-99	18-Feb-99	17-Feb-99	17-Feb-99	19-Feb-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0021 U	0.0025 U	0.0229 =	0.522 J	0.026 U	0.002 U
Toluene	6	0.0021 U	0.0025 U	0.0021 U	13.4 =	0.0094 J	0.002 U
Ethylbenzene	10	0.0021 U	0.0025 U	0.0019 =	8.93 =	0.032 =	0.002 U
Xylenes, Total	700	0.0032 U	0.0037 U	0.0032 U	63 =	0.0779 =	0.003 U
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Acenaphthene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Acenaphthylene	NRC	0.37 U	0.417 U	0.02 J	1.45 U	0.433 U	0.374 U
Anthracene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Benzo(a)anthracene	NRC	0.37 U	0.417 U	0.0276 J	1.45 U	0.433 U	0.374 U
Benzo(a)pyrene	NRC	0.37 U	0.417 U	0.0362 J	1.45 U	0.433 U	0.374 U
Benzo(b)fluoranthene	NRC	0.37 U	0.417 U	0.0358 J	1.45 U	0.433 U	0.374 U
Benzo(g,h,i)perylene	NRC	0.37 U	0.417 U	0.0438 J	1.45 U	0.433 U	0.374 U
Benzo(k)fluoranthene	NRC	0.37 U	0.417 U	0.0342 J	1.45 U	0.433 U	0.374 U
Chrysene	NRC	0.37 U	0.417 U	0.0424 J	1.45 U	0.433 U	0.374 U
Dibenzo(a,h)anthracene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Fluoranthene	NRC	0.37 U	0.417 U	0.0254 J	1.45 U	0.433 U	0.374 U
Fluorene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Indeno(1,2,3-cd)pyrene	NRC	0.37 U	0.417 U	0.131 J	1.45 U	0.433 U	0.374 U
Naphthalene	NRC	0.37 U	0.417 U	0.355 U	1.26 J	0.433 U	0.374 U
Phenanthrene	NRC	0.37 U	0.417 U	0.355 U	1.45 U	0.433 U	0.374 U
Pyrene	NRC	0.37 U	0.417 U	0.0462 J	1.45 U	0.433 U	0.374 U
OTHER ANALYTES							
Lead	NRC	3.6 =		5.3 =		5.5 =	
Total Organic Carbon	NRC	680 =		3060 =		31000 =	
TPH-Diesel Range Organics	NRC	0.19 U	0.28 U	0.36 U	124 =	2 U	0.3 U
TPH-Gasoline Range Organics	NRC	0.111 U	0.125 U	0.139 =	101 =	3.02 =	0.112 U

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

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UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-25	76-26	76-26	76-27	76-27	76-28
Sample ID:	Soil	762521	762611	762621	762711	762721	762811
Sample Interval:	Threshold	5.0-7.5	3.0-4.5	7.0-9.0	2.5-5.0	5.0-7.5	12.5-15.0
Collection Date:	Levels ¹	19-Feb-99	19-Feb-99	19-Feb-99	19-Feb-99	19-Feb-99	19-Feb-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0022 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.0039 =
Toluene	6	0.0022 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.0213 =
Ethylbenzene	10	0.0022 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.0249 =
Xylenes, Total	700	0.0033 U	0.0033 U	0.0034 U	0.003 U	0.0031 U	0.080 =
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Acenaphthene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Acenaphthylene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Anthracene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Benzo(a)anthracene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Benzo(a)pyrene	NRC	0.397 U	0.366 U	0.427 U	0.147 J	0.158 J	0.45 U
Benzo(b)fluoranthene	NRC	0.397 U	0.107 J	0.427 U	0.203 J	0.192 J	0.45 U
Benzo(g,h,i)perylene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.0971 J	0.45 U
Benzo(k)fluoranthene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Chrysene	NRC	0.397 U	0.106 J	0.427 U	0.166 J	0.183 J	0.45 U
Dibenzo(a,h)anthracene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Fluoranthene	NRC	0.397 U	0.0353 J	0.427 U	0.0758 J	0.092 J	0.45 U
Fluorene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Indeno(1,2,3-cd)pyrene	NRC	0.397 U	0.366 U	0.427 U	0.0841 J	0.0747 J	0.45 U
Naphthalene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.449 J
Phenanthrene	NRC	0.397 U	0.366 U	0.427 U	0.374 U	0.374 U	0.45 U
Pyrene	NRC	0.397 U	0.0641 J	0.427 U	0.141 J	0.166 J	0.45 U
OTHER ANALYTES							
Lead	NRC	5 =		3.3 =		7.7 =	
Total Organic Carbon	NRC	15000 =		16000 =		17400 =	
TPH-Diesel Range Organics	NRC	0.61 U	0.32 U	0.47 U	2.8 =	1.2 U	4.7 =
TPH-Gasoline Range Organics	NRC	0.119 U	0.11 U	0.128 U	0.112 U	0.112 U	0.675 =

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates that the value for the compound was an estimated value.

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

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-28	76-29	76-30	76-31	76-32	76-33
Sample ID:	Soil	762821	762911	763011	763111	763211	763311
Sample Interval:	Threshold	7.5-10.0	5.0-7.5	5.5-6.5	6.0-8.0	10.0-12.0	6.0-8.0
Collection Date:	Levels ¹	19-Feb-99	24-Sep-99	29-Sep-99	23-Sep-99	24-Sep-99	24-Sep-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS							
Benzene	0.008	0.0643 J	0.0019 U	0.002 U	0.0021 U	0.0305 =	2.27 =
Toluene	6	0.345 =	0.0019 U	0.002 J	0.0021 U	0.0488 =	1.51 =
Ethylbenzene	10	0.834 =	0.0019 U	0.002 U	0.0021 U	0.0187 =	4.56 =
Xylenes, Total	700	14.2 =	0.0057 U	0.0061 U	0.0062 U	0.0508 =	9.04 =
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Acenaphthene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Acenaphthylene	NRC	0.406 U	0.0258 J	0.362 U	0.370 U	0.412 U	0.362 U
Anthracene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Benzo(a)anthracene	NRC	0.406 U	0.139 J	0.362 U	0.370 U	0.412 U	0.362 U
Benzo(a)pyrene	NRC	0.406 U	0.161 J	0.362 U	0.370 U	0.412 U	0.362 U
Benzo(b)fluoranthene	NRC	0.406 U	0.299 J	0.362 U	0.370 U	0.412 U	0.362 U
Benzo(g,h,i)perylene	NRC	0.406 U	0.150 J	0.362 U	0.370 U	0.412 U	0.362 U
Benzo(k)fluoranthene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Chrysene	NRC	0.406 U	0.224 J	0.362 U	0.370 U	0.412 U	0.362 U
Dibenzo(a,h)anthracene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Fluoranthene	NRC	0.406 U	0.179 J	0.362 U	0.370 U	0.412 U	0.362 U
Fluorene	NRC	0.406 U	0.370 U	0.362 U	0.370 U	0.412 U	0.362 U
Indeno(1,2,3-cd)pyrene	NRC	0.406 U	0.169 J	0.362 U	0.370 U	0.412 U	0.362 U
Naphthalene	NRC	0.726 =	0.370 U	0.362 U	0.370 U	0.054 J	0.362 U
Phenanthrene	NRC	0.406 U	0.0797 J	0.362 U	0.370 U	0.412 U	0.362 U
Pyrene	NRC	0.406 U	0.398 J	0.362 U	0.370 U	0.412 U	0.362 U
OTHER ANALYTES							
Lead	NRC	8.4 =	2 =	1.8 =	2.8 =	3.6 =	2.7 =
Total Organic Carbon	NRC	24900 =					
TPH-Diesel Range Organics	NRC	31.4 =	0.54 U	0.35 U	0.89 U	8.8 U	2.7 U
TPH-Gasoline Range Organics	NRC	135 =	0.0562 J	0.0866 J	0.11 U	3.42 =	4.07 =

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

Bold values exceed GUST action levels for soil

NRC No regulatory criteria

Laboratory Qualifiers

U Indicates that the compound was not detected above the reported sample quantitation limit.

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

Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-34	76-35	76-36	76-37	76-38
Sample ID:	Soil	763411	763511	763611	763711	763811
Sample Interval:	Threshold	6.0-8.0	6.0-8.3	7.0-8.0	6.5-8.4	10.0-12.0
Collection Date:	Levels ¹	24-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99	23-Sep-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS						
Benzene	0.008	0.0161 =	0.0022 R	0.217 U	0.0026 U	0.0024 U
Toluene	6	0.0009 J	0.0028 J	0.217 U	0.0026 U	0.00079 J
Ethylbenzene	10	0.034 =	0.0022 R	0.217 U	0.0026 U	0.0024 U
Xylenes, Total	700	0.0016 J	0.00077 J	0.650 U	0.0077 U	0.0074 U
POLYNUCLEAR AROMATIC HYDROCARBONS						
2-Chloronaphthalene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Acenaphthene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Acenaphthylene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Anthracene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Benzo(a)anthracene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Benzo(a)pyrene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Benzo(b)fluoranthene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Benzo(g,h,i)perylene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Benzo(k)fluoranthene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Chrysene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Dibenzo(a,h)anthracene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Fluoranthene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Fluorene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Indeno(1,2,3-cd)pyrene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Naphthalene	NRC	0.0192 J	0.406 U	0.721 =	0.417 U	0.412 U
Phenanthrene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
Pyrene	NRC	0.366 U	0.406 U	0.402 U	0.417 U	0.412 U
OTHER ANALYTES						
Lead	NRC	3.6 =	3.5 =	10.3 =	8.5 =	4 =
Total Organic Carbon	NRC					
TPH-Diesel Range Organics	NRC	0.98 U	0.66 U	10.1 =	0.87 U	0.84 U
TPH-Gasoline Range Organics	NRC	0.104 J	0.101 J	30.3 =	0.0373 J	0.117 J

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

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Table V-C. Summary of CAP-Part B (USTs 257-261) Soil Analytical Results (continued)

Station:	GA UST	76-39	76-40	76-41	76-42	76-43
Sample ID:	Soil	763911	764011	764111	764211	764311
Sample Interval:	Threshold	5.0-8.0	10.0-12.0	10.0-12.0	10.0-12.9	5.0-7.5
Collection Date:	Levels ¹	23-Sep-99	24-Sep-99	06-Oct-99	06-Oct-99	06-Oct-99
Units:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
VOLATILE ORGANIC COMPOUNDS						
Benzene	0.008	0.0023 U	0.0023 U	267 =	0.0024 U	0.0023 U
Toluene	6	0.0009 J	0.0023 U	1700 =	0.0024 U	0.0023 U
Ethylbenzene	10	0.0023 U	0.0023 U	333 =	0.0024 U	0.0023 U
Xylenes, Total	700	0.0017 J	0.0069 U	1740 =	0.0072 U	0.0068 U
POLYNUCLEAR AROMATIC HYDROCARBONS						
2-Chloronaphthalene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Acenaphthene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Acenaphthylene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Anthracene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Benzo(a)anthracene	NRC	0.161 J	0.417 U	0.505 U	0.422 U	0.438 U
Benzo(a)pyrene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Benzo(b)fluoranthene	NRC	0.188 J	0.417 U	0.505 U	0.422 U	0.438 U
Benzo(g,h,i)perylene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Benzo(k)fluoranthene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Chrysene	NRC	0.278 J	0.417 U	0.505 U	0.422 U	0.438 U
Dibenzo(a,h)anthracene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Fluoranthene	NRC	0.25 J	0.417 U	0.505 U	0.422 U	0.438 U
Fluorene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Indeno(1,2,3-cd)pyrene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Naphthalene	NRC	1.4 U	0.417 U	0.505 U	0.422 U	0.438 U
Phenanthrene	NRC	0.132 J	0.0379 J	0.505 U	0.422 U	0.438 U
Pyrene	NRC	0.446 J	0.0718 J	0.505 U	0.422 U	0.438 U
OTHER ANALYTES						
Lead	NRC	11.9 =	6.8 =	7.9 =	8 =	5.7 =
Total Organic Carbon	NRC					
TPH-Diesel Range Organics	NRC	0.77 U	0.85 U	1420 =	2.2 =	11.1 =
TPH-Gasoline Range Organics	NRC	0.12 =	0.266 =	9770 =	0.126 U	0.49 =

NOTE:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761323 (duplicate), 761923 (duplicate), 762423 (duplicate), 762913 (duplicate), 763715 (equipment rinsate), 763913 (duplicate), and 764113 (duplicate) are contained within this appendix, but are not summarized in this table.

Elevated PAH detection limits are a result of associated organic content such as TPH or other organic compounds. During extraction of the PAH compounds, all other organic compounds are extracted, causing a wide range of organic compounds to be present; thus, the target PAHs become small peaks in the chromatograph. As a result, the laboratory dilutes the concentrate, in turn elevating the detection limit.

¹ Georgia Department of Natural Resources Applicable Soil Threshold Levels (Table A, Column 2)

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-01

Sample wt/vol: 6.0 (g/mL) G Lab File ID: 5Y111

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 8 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
71-43-2-----	benzene	1.8	U	↓
108-88-3-----	toluene	1.8	U	
100-41-4-----	ethylbenzene	1.8	U	
1330-20-7-----	xlenes (total)	2.7	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902807-01
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J208
 Level: (low/med) LOW Date Received: 02/19/99
 % Moisture: 8 decanted: (Y/N) N Date Extracted: 02/22/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	-----naphthalene	362	U
91-58-7	-----2-chloronaphthalene	362	U
208-96-8	-----acenaphthylene	362	U
83-32-9	-----acenaphthene	362	U
86-73-7	-----fluorene	362	U
85-01-8	-----phenanthrene	362	U
120-12-7	-----anthracene	362	U
206-44-0	-----fluoranthene	362	U
129-00-0	-----pyrene	362	U
56-55-3	-----benzo(a)anthracene	362	U
218-01-9	-----chrysene	362	U
205-99-2	-----benzo(b)fluoranthene	362	U
207-08-9	-----benzo(k)fluoranthene	362	U
50-32-8	-----benzo(a)pyrene	362	U
193-39-5	-----indeno(1,2,3-cd)pyrene	362	U
53-70-3	-----dibenz(a,h)anthracene	362	U
191-24-2	-----benzo(g,h,i)perylene	362	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A093

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
-----Diesel Range Organics		0.38	JB	V F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X406

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 8 Date Analyzed: 02/25/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	109	U	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-16

Sample wt/vol: 5.3 (g/mL) G Lab File ID: 5Y305

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 14 Date Analyzed: 03/03/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
71-43-2-----	benzene	2.2	U	↓
108-88-3-----	toluene	2.2	U	
100-41-4-----	ethylbenzene	2.2	U	
1330-20-7-----	xylene (total)	3.3	U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J223

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	388	U
91-58-7-----	2-chloronaphthalene	388	U
208-96-8-----	acenaphthylene	388	U
83-32-9-----	acenaphthene	388	U
86-73-7-----	fluorene	388	U
85-01-8-----	phenanthrene	388	U
120-12-7-----	anthracene	388	U
206-44-0-----	fluoranthene	388	U
129-00-0-----	pyrene	388	U
56-55-3-----	benzo(a) anthracene	388	U
218-01-9-----	chrysene	388	U
205-99-2-----	benzo(b) fluoranthene	388	U
207-08-9-----	benzo(k) fluoranthene	388	U
50-32-8-----	benzo(a) pyrene	388	U
193-39-5-----	indeno(1,2,3-cd) pyrene	388	U
53-70-3-----	dibenz(a,h) anthracene	388	U
191-24-2-----	benzo(g,h,i) perylene	388	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications 19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2005

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.53	JB	

USFO1, F06,
GOL

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-16

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X4020

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 14 Date Analyzed: 02/25/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	116	U	U

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 761121
Lab ID : 9902807-16
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		28600	=	280	649	mg/kg	1.0	LS	03/08/99	1706	143839 1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

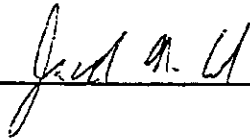
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-16

Client ID: 761121

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 86.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.3	mg/kg	=		P	0.74	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-04

Sample wt/vol: 4.9 (g/mL) G Lab File ID: 5X421

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 7 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	5.8		
108-88-3-----toluene	0.89	J	
100-41-4-----ethylbenzene	5.9		
1330-20-7-----xylenes (total)	14.9		

J G02
↓ ↓

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I111

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/22/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	1430	U
91-58-7-----	2-chloronaphthalene	1430	U
208-96-8-----	acenaphthylene	1430	U
83-32-9-----	acenaphthene	1430	U
86-73-7-----	fluorene	1430	U
85-01-8-----	phenanthrene	1430	U
120-12-7-----	anthracene	1430	U
206-44-0-----	fluoranthene	1430	U
129-00-0-----	pyrene	1430	U
56-55-3-----	benzo (a) anthracene	1430	U
218-01-9-----	chrysene	1430	U
205-99-2-----	benzo (b) fluoranthene	1430	U
207-08-9-----	benzo (k) fluoranthene	1430	U
50-32-8-----	benzo (a) pyrene	1430	U
193-39-5-----	indeno (1,2,3-cd) pyrene	1430	U
53-70-3-----	dibenz (a,h) anthracene	1430	U
191-24-2-----	benzo (g,h,i) perylene	1430	U

U
↓

FORM I SV-1

OLM03.0

FORM 1 Science Applications18-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A083

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	3.2	B

U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X1010

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 7 Date Analyzed: 02/22/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	108	U	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-10

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 5X422

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 16 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	2.2	U	piece
108-88-3-----toluene	2.2	U	
100-41-4-----ethylbenzene	6.4		
1330-20-7-----xylenes (total)	18.2		

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I117

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 16 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/23/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	397	U
91-58-7-----	2-chloronaphthalene	397	U
208-96-8-----	acenaphthylene	397	U
83-32-9-----	acenaphthene	397	U
86-73-7-----	fluorene	397	U
85-01-8-----	phenanthrene	397	U
120-12-7-----	anthracene	397	U
206-44-0-----	fluoranthene	397	U
129-00-0-----	pyrene	397	U
56-55-3-----	benzo (a) anthracene	397	U
218-01-9-----	chrysene	397	U
205-99-2-----	benzo (b) fluoranthene	397	U
207-08-9-----	benzo (k) fluoranthene	397	U
50-32-8-----	benzo (a) pyrene	297	U
193-39-5-----	indeno (1,2,3-cd) pyrene	397	U
53-70-3-----	dibenz (a,h) anthracene	397	U
191-24-2-----	benzo (g,h,i) perylene	397	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications18-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A064

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 16 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.86	B

UF01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X205

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 16 Date Analyzed: 02/23/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	414	=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 761221
Lab ID : 9902752-10
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		12000	<	43.1	100	mg/kg	1.0	JHC	02/27/99	1435	143154 1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Janet A. Galt

DATA
COPY FILE



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

Sample ID: 9902752-10

Client ID: 761221

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOL

Date Received: 2/18/99

Level: LOW

% Solids: 84.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.9	mg/kg	=		P	0.16	TJA61 Trace ICPAES	990308-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-02

Sample wt/vol: 4.6 (g/mL) G Lab File ID: 5X406

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 24 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.9	U
108-88-3-----	toluene	2.9	U
100-41-4-----	ethylbenzene	2.9	U
1330-20-7-----	xylene (total)	4.3	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902752-02
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I109
 Level: (low/med) LOW Date Received: 02/18/99
 % Moisture: 24 decanted: (Y/N) N Date Extracted: 02/20/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/22/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	438	U
91-58-7-----	2-chloronaphthalene	438	U
208-96-8-----	acenaphthylene	438	U
83-32-9-----	acenaphthene	438	U
86-73-7-----	fluorene	438	U
85-01-8-----	phenanthrene	438	U
120-12-7-----	anthracene	438	U
206-44-0-----	fluoranthene	438	U
129-00-0-----	pyrene	438	U
56-55-3-----	benzo (a) anthracene	438	U
218-01-9-----	chrysene	438	U
205-99-2-----	benzo (b) fluoranthene	438	U
207-08-9-----	benzo (k) fluoranthene	438	U
50-32-8-----	benzo (a) pyrene	438	U
193-39-5-----	indeno (1,2,3-cd) pyrene	438	U
53-70-3-----	dibenz (a,h) anthracene	438	U
191-24-2-----	benzo (g,h,i) perylene	438	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications 18-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A055

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
-----Diesel Range Organics		1.3	B	U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X108

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 24 Date Analyzed: 02/22/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	132	U	U

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-12

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 5X413

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 25 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.6	U
108-88-3-----	toluene	1.4	J
100-41-4-----	ethylbenzene	2.6	U
1330-20-7-----	xylene (total)	2.5	J

JCTU

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I119

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 25 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/23/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	444	U
91-58-7-----	2-chloronaphthalene	444	U
208-96-8-----	acenaphthylene	444	U
83-32-9-----	acenaphthene	444	U
86-73-7-----	fluorene	444	U
85-01-8-----	phenanthrene	444	U
120-12-7-----	anthracene	444	U
206-44-0-----	fluoranthene	444	U
129-00-0-----	pyrene	444	U
56-55-3-----	benzo (a) anthracene	444	U
218-01-9-----	chrysene	444	U
205-99-2-----	benzo (b) fluoranthene	444	U
207-08-9-----	benzo (k) fluoranthene	444	U
50-32-8-----	benzo (a) pyrene	444	U
193-39-5-----	indeno (1,2,3-cd) pyrene	444	U
53-70-3-----	dibenz (a,h) anthracene	444	U
191-24-2-----	benzo (g,h,i) perylene	444	U

FORM I SV-1

OLM03.0

761321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A066

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 25 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	MG/KG	
	-----Diesel Range Organics	2.3	B	U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X1019

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 25 Date Analyzed: 02/22/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	133	U	U

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 761321
Lab ID : 9902752-12
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		40200	=	191	442	mg/kg	1.0	JHC	02/27/99	1607	143154 1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

John A. Cost



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

Sample ID: 9902752-12

Client ID: 761321

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/18/99

Level: LOW

% Solids: 75.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	7.2	mg/kg	=		P	0.88	TJA61 Trace ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761323

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-15

Sample wt/vol: 4.6 (g/mL) G Lab File ID: 5X415

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 21 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.7	U
108-88-3-----	toluene	0.86	J
100-41-4-----	ethylbenzene	2.7	U
1330-20-7-----	xylene (total)	1.1	J

JCYC

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761323

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S
Matrix: (soil/water) SOIL Lab Sample ID: 9902752-15
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I308
Level: (low/med) LOW Date Received: 02/18/99
% Moisture: 21 decanted: (Y/N) N Date Extracted: 02/20/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/24/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	-----naphthalene	422	U	U ↓
91-58-7	-----2-chloronaphthalene	422	U	
208-96-8	-----acenaphthylene	422	U	
83-32-9	-----acenaphthene	422	U	
86-73-7	-----fluorene	422	U	
85-01-8	-----phenanthrene	422	U	
120-12-7	-----anthracene	422	U	
206-44-0	-----fluoranthene	422	U	
129-00-0	-----pyrene	422	U	
56-55-3	-----benzo (a) anthracene	422	U	
218-01-9	-----chrysene	422	U	
205-99-2	-----benzo (b) fluoranthene	422	U	
207-08-9	-----benzo (k) fluoranthene	422	U	
50-32-8	-----benzo (a) pyrene	422	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	422	U	
53-70-3	-----dibenz (a,h) anthracene	422	U	
191-24-2	-----benzo (g,h,i) perylene	422	U	

FORM I SV-1

OLM03.0

DUPLICATE

FORM 1 Science Applications 18-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761323

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A00515

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 21 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
-----Diesel Range Organics		0.68	JB	U FDI, FOL

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761323

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-15

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X1021

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 21 Date Analyzed: 02/22/99

GC Column: J&W DB-624(FID) ID: 0.53 (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	126 U	U

FORM I VOA

DUPLICATE

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 761323
Lab ID : 9902752-15
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		17800	43.1	100	mg/kg	1.0	JHC	02/28/99	1355	143154	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

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U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Just A. Galt



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

DUPLICATE

Sample ID: 9902752-15

Client ID: 761323

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/18/99

Level: LOW

% Solids: 79.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	13.1	mg/kg	=		P	0.81	TJA61 Trace ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-10

Sample wt/vol: 4.8 (g/mL) G Lab File ID: 5Y313

Level: (low/med) MED Date Received: 02/19/99

% Moisture: not dec. 22 Date Analyzed: 03/03/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5.(ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	1330		
108-88-3-----toluene	5710		
100-41-4-----ethylbenzene	3240		
1330-20-7-----xylenes (total)	23900	B	

F01, F02

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J217

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	-----naphthalene	1320		= U ↓
91-58-7	-----2-chloronaphthalene	427	U	
208-96-8	-----acenaphthylene	427	U	
83-32-9	-----acenaphthene	427	U	
86-73-7	-----fluorene	427	U	
85-01-8	-----phenanthrene	427	U	
120-12-7	-----anthracene	427	U	
206-44-0	-----fluoranthene	427	U	
129-00-0	-----pyrene	427	U	
56-55-3	-----benzo (a) anthracene	427	U	
218-01-9	-----chrysene	427	U	
205-99-2	-----benzo (b) fluoranthene	427	U	
207-08-9	-----benzo (k) fluoranthene	427	U	
50-32-8	-----benzo (a) pyrene	427	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	427	U	
53-70-3	-----dibenz (a,h) anthracene	427	U	
191-24-2	-----benzo (g,h,i) perylene	427	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2003

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	22.8	3	= F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X5016

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 22 Date Analyzed: 02/26/99

GC Column: J&W DB-624(FID) ID: 0.53 (mm) Dilution Factor: 200.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics_____	147000	=

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902807-17
 Sample wt/vol: 4.5 (g/mL) G Lab File ID: 5Y314
 Level: (low/med) MED Date Received: 02/19/99
 % Moisture: not dec. 9 Date Analyzed: 03/03/99
 GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 5 (ml) Soil Aliquot Volume: 100 (

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	benzene	51.8	J
108-88-3-----	toluene	800	
100-41-4-----	ethylbenzene	1900	
1330-20-7-----	xylene (total)	15200	B

J
= F01, F03

DATA VALIDATION
COPY

SUPERSEDES

FORM I VOA

OLM03.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSR04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J224

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	-----naphthalene	6130	
91-58-7	-----2-chloronaphthalene	3660	U
208-96-8	-----acenaphthylene	3660	U
83-32-9	-----acenaphthene	3660	U
86-73-7	-----fluorene	3660	U
85-01-8	-----phenanthrene	408	J
120-12-7	-----anthracene	3660	U
206-44-0	-----fluoranthene	633	J
129-00-0	-----pyrene	861	J
56-55-3	-----benzo (a) anthracene	3660	U
218-01-9	-----chrysene	3660	U
205-99-2	-----benzo (b) fluoranthene	3660	U
207-08-9	-----benzo (k) fluoranthene	3660	U
50-32-8	-----benzo (a) pyrene	3660	U
193-39-5	-----indeno (1,2,3-cd) pyrene	3660	U
53-70-3	-----dibenz (a,h) anthracene	3660	U
191-24-2	-----benzo (g,h,i) perylene	3660	U

110-16-shh3-11

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2006

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 40.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	167	13	= F01, F03

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-17

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X5013

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 9 Date Analyzed: 02/26/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 1000.0

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

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

-----Gasoline Range Organics	813000	

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 761421
Lab ID : 9902807-17
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		4150	=	43.1	100	mg/kg	1.0	LS	03/08/99	1718	143839 1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Janet A. G.



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-17

Client ID: 761421

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 91.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	4.0	mg/kg	=		P	0.74	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-04

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 5Y114

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 21 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	3.1		
108-88-3-----toluene	0.74	J	J
100-41-4-----ethylbenzene	0.73	J	J
1330-20-7-----xylenes (total)	3.8		=

FORM I VOA

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J211

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 21 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	naphthalene	422	U	U
91-58-7	2-chloronaphthalene	422	U	
208-96-8	acenaphthylene	422	U	
83-32-9	acenaphthene	422	U	
86-73-7	fluorene	422	U	
85-01-8	phenanthrene	422	U	
120-12-7	anthracene	422	U	
206-44-0	fluoranthene	422	U	
129-00-0	pyrene	422	U	
56-55-3	benzo (a) anthracene	422	U	
218-01-9	chrysene	422	U	
205-99-2	benzo (b) fluoranthene	422	U	
207-08-9	benzo (k) fluoranthene	422	U	
50-32-8	benzo (a) pyrene	422	U	
193-39-5	indeno (1,2,3-cd) pyrene	422	U	
53-70-3	dibenz (a,h) anthracene	422	U	
191-24-2	benzo (g,h,i) perylene	422	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A096

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 21 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.76	JB	

U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X409

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 21 Date Analyzed: 02/25/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	276		=

FORM I VOA

1A

761521

SDG No.: FSB04S

Lab Sample ID: 9902807-19

Lab File ID: 5Y214

Date Received: 02/19/99

Date Analyzed: 03/02/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

71-43-2-----benzene	5.3	
108-88-3-----toluene	2.4	U
100-41-4-----ethylbenzene	3.1	
1330-20-7-----xylenes (total)	6.6	B

=
 =
 6F81FF F01,
 F08

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J304

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	379	U
91-58-7-----	2-chloronaphthalene	379	U
208-96-8-----	acenaphthylene	379	U
83-32-9-----	acenaphthene	379	U
86-73-7-----	fluorene	379	U
85-01-8-----	phenanthrene	379	U
120-12-7-----	anthracene	379	U
206-44-0-----	fluoranthene	379	U
129-00-0-----	pyrene	379	U
56-55-3-----	benzo (a) anthracene	379	U
218-01-9-----	chrysene	379	U
205-99-2-----	benzo (b) fluoranthene	379	U
207-08-9-----	benzo (k) fluoranthene	379	U
50-32-8-----	benzo (a) pyrene	379	U
193-39-5-----	indeno (1,2,3-cd) pyrene	379	U
53-70-3-----	dibenz (a,h) anthracene	379	U
191-24-2-----	benzo (g,h,i) perylene	379	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2008

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 12 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Diesel Range Organics	0.32	J B

UF01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-19

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X4022

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 12 Date Analyzed: 02/25/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	114	U	U

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 761521
Lab ID : 9902807-19
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		8480	43.1	100	mg/kg	1.0	LS	03/08/99	1753	143839	1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

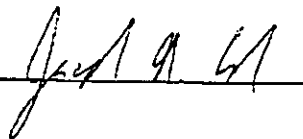
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-19

Client ID: 761521

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 88.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	2.2	mg/kg	=		P	0.79	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-05

Sample wt/vol: 5.0.(g/mL) G Lab File ID: 2Y111

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 20 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q

71-43-2-----	benzene	2.5	U	↓
108-88-3-----	toluene	2.5	U	
100-41-4-----	ethylbenzene	2.5	U	
75-71-8-----	xylenes (total)	3.8	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J219

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	417 U	
91-58-7-----	2-chloronaphthalene	417 U	
208-96-8-----	acenaphthylene	417 U	
83-32-9-----	acenaphthene	417 U	
86-73-7-----	fluorene	417 U	
85-01-8-----	phenanthrene	417 U	
120-12-7-----	anthracene	417 U	
206-44-0-----	fluoranthene	417 U	
129-00-0-----	pyrene	417 U	
56-55-3-----	benzo (a) anthracene	417 U	
218-01-9-----	chrysene	417 U	
205-99-2-----	benzo (b) fluoranthene	417 U	
207-08-9-----	benzo (k) fluoranthene	417 U	
50-32-8-----	benzo (a) pyrene	417 U	
193-39-5-----	indeno (1,2,3-cd) pyrene	417 U	
53-70-3-----	dibenz (a,h) anthracene	417 U	
191-24-2-----	benzo (g,h,i) perylene	417 U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A031

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.36	JB	U FOI, FO6

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y3017

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 20 Date Analyzed: 03/03/99

GC Column: J&W DB-624(FID) ID: 0.53 (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	125	U	u

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-15

Sample wt/vol: 4.7 (g/mL) G Lab File ID: 2Y210

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 17 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	2.6	U	
108-88-3-----toluene	2.6	U	
100-41-4-----ethylbenzene	2.6	U	
1330-20-7-----xylenes (total)	3.8	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J311

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	402	U
91-58-7-----	2-chloronaphthalene	402	U
208-96-8-----	acenaphthylene	402	U
83-32-9-----	acenaphthene	402	U
86-73-7-----	fluorene	402	U
85-01-8-----	phenanthrene	402	U
120-12-7-----	anthracene	402	U
206-44-0-----	fluoranthene	402	U
129-00-0-----	pyrene	402	U
56-55-3-----	benzo(a)anthracene	402	U
218-01-9-----	chrysene	402	U
205-99-2-----	benzo(b)fluoranthene	402	U
207-08-9-----	benzo(k)fluoranthene	402	U
50-32-8-----	benzo(a)pyrene	402	U
193-39-5-----	indeno(1,2,3-cd)pyrene	402	U
53-70-3-----	dibenz(a,h)anthracene	402	U
191-24-2-----	benzo(g,h,i)perylene	402	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A042

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.49	JB	U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-15

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2018

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 17 Date Analyzed: 03/02/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	120	U	4

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 761621
Lab ID : 9902812-15
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		8430	43.1	100	mg/kg	1.0	LS	03/10/99	1423	144238	1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

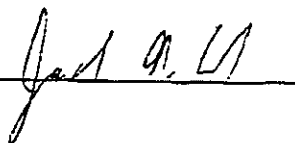
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



0007912 15

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-15

Client ID: 761621

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 83.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.8	mg/kg	=		P	0.15	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-16

Sample wt/vol: 4.8 (g/mL) G Lab File ID: 2Y211

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 24 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
71-43-2-----	benzene	2.8	U	0 ↓
108-88-3-----	toluene	2.8	U	
100-41-4-----	ethylbenzene	2.8	U	
1330-20-7-----	xylene (total)	4.1	U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J312

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	-----naphthalene	438	U	U ↓
91-58-7	-----2-chloronaphthalene	438	U	
208-96-8	-----acenaphthylene	438	U	
83-32-9	-----acenaphthene	438	U	
86-73-7	-----fluorene	438	U	
85-01-8	-----phenanthrene	438	U	
120-12-7	-----anthracene	438	U	
206-44-0	-----fluoranthene	438	U	
129-00-0	-----pyrene	438	U	
56-55-3	-----benzo (a) anthracene	438	U	
218-01-9	-----chrysene	438	U	
205-99-2	-----benzo (b) fluoranthene	438	U	
207-08-9	-----benzo (k) fluoranthene	438	U	
50-32-8	-----benzo (a) pyrene	438	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	438	U	
53-70-3	-----dibenz (a,h) anthracene	438	U	
191-24-2	-----benzo (g,h,i) perylene	438	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A044

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.58	JB

UFD, FOL

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-16

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2019

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 24 Date Analyzed: 03/02/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	132	U	U

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 761721
Lab ID : 9902812-16
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		19600	==	259	602	mg/kg	1.0	LS	03/10/99	1605	144238 1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

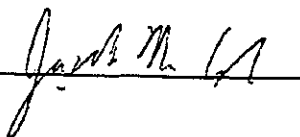
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-16

Client ID: 761721

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 76.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	7.2	mg/kg	=		P	0.87	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761811DL

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-05

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 5Y311

Level: (low/med) MED Date Received: 02/19/99

% Moisture: not dec. 19 Date Analyzed: 03/03/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 20 (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

71-43-2-----benzene	7050	D
108-88-3-----toluene	20600	D
100-41-4-----ethylbenzene	2740	D
1330-20-7-----xylenes (total)	17800	DB

=
1

F01, F08

USE
May
4/13/99

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J212

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	577	J
91-58-7-----	2-chloronaphthalene	1650	U
208-96-8-----	acenaphthylene	302	J
83-32-9-----	acenaphthene	1650	U
86-73-7-----	fluorene	1650	U
85-01-8-----	phenanthrene	322	J
120-12-7-----	anthracene	106	J
206-44-0-----	fluoranthene	1090	J
129-00-0-----	pyrene	1520	J
56-55-3-----	benzo (a) anthracene	830	J
218-01-9-----	chrysene	1090	J
205-99-2-----	benzo (b) fluoranthene	784	J
207-08-9-----	benzo (k) fluoranthene	811	J
50-32-8-----	benzo (a) pyrene	816	J
193-39-5-----	indeno (1,2,3-cd) pyrene	880	J
53-70-3-----	dibenz (a,h) anthracene	1650	U
191-24-2-----	benzo (g,h,i) perylene	562	J

4cc ←

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C20010

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----	Diesel Range Organics	5.4	<u>B</u>

= F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X5018

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 19 Date Analyzed: 02/26/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 200.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics	84500	=

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-15

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 5Y312

Level: (low/med) MED Date Received: 02/19/99

% Moisture: not dec. 24 Date Analyzed: 03/03/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	5710		
108-88-3-----toluene	12900		
100-41-4-----ethylbenzene	1040		
1330-20-7-----xylenes (total)	6770	B	

=

↓ F01, F28

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J222

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	483	
91-58-7-----	2-chloronaphthalene	438	U
208-96-8-----	acenaphthylene	438	U
83-32-9-----	acenaphthene	438	U
86-73-7-----	fluorene	438	U
85-01-8-----	phenanthrene	438	U
120-12-7-----	anthracene	438	U
206-44-0-----	fluoranthene	438	U
129-00-0-----	pyrene	438	U
56-55-3-----	benzo (a) anthracene	438	U
218-01-9-----	chrysene	438	U
205-99-2-----	benzo (b) fluoranthene	438	U
207-08-9-----	benzo (k) fluoranthene	438	U
50-32-8-----	benzo (a) pyrene	438	U
193-39-5-----	indeno (1,2,3-cd) pyrene	438	U
53-70-3-----	dibenz (a,h) anthracene	438	U
191-24-2-----	benzo (g,h,i) perylene	438	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2004

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Diesel Range Organics	2.7	<u>B</u>

J F01, F03, G02

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-15

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X5020

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 24 Date Analyzed: 02/26/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 200.0

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

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

-----Gasoline Range Organics	74500		=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 761821
Lab ID : 9902807-15
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		13300 =	43.1	100	mg/kg	1.0	LS	03/08/99	1636	143839	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Jan 9. 91



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-15

Client ID: 761821

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 76.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	4.9	mg/kg	=		P	0.91	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-06

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 5Y108

Level: (low/med) MED Date Received: 02/18/99

% Moisture: not dec. 19 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (mL) Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	benzene	77200	
108-88-3-----	toluene	543000	
100-41-4-----	ethylbenzene	148000	
1330-20-7-----	xlenes (total)	851000	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I305

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3-----	naphthalene	5050		
91-58-7-----	2-chloronaphthalene	823	U	
208-96-8-----	acenaphthylene	823	U	
83-32-9-----	acenaphthene	823	U	
86-73-7-----	fluorene	823	U	
85-01-8-----	phenanthrene	823	U	
120-12-7-----	anthracene	823	U	
206-44-0-----	fluoranthene	823	U	
129-00-0-----	pyrene	823	U	
56-55-3-----	benzo (a) anthracene	823	U	
218-01-9-----	chrysene	823	U	
205-99-2-----	benzo (b) fluoranthene	823	U	
207-08-9-----	benzo (k) fluoranthene	823	U	
50-32-8-----	benzo (a) pyrene	823	U	
193-39-5-----	indeno (1,2,3-cd) pyrene	823	U	
53-70-3-----	dibenz (a,h) anthracene	823	U	
191-24-2-----	benzo (g,h,i) perylene	823	U	

FORM I SV-1

OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications 10-220-1000 SA

761911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A085

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	127	B	= F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X3014

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 19 Date Analyzed: 02/24/99

GC Column: J&W DB-624(FID) ID: 0.53 (mm) Dilution Factor: 5000.0

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

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

-----Gasoline Range Organics_____	3320000	_____	=

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-07

Sample wt/vol: 4.8 (g/mL) G Lab File ID: 5X515

Level: (low/med) MED Date Received: 02/18/99

% Moisture: not dec. 18 Date Analyzed: 02/26/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	122000	
108-88-3-----	toluene	1100000	
100-41-4-----	ethylbenzene	305000	
1330-20-7-----	xylene (total)	1840000	

11 11 11

~~FOI~~ FOI, FOI

4/9/99

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902752-07
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I306
 Level: (low/med) LOW Date Received: 02/18/99
 % Moisture: 18 decanted: (Y/N) N Date Extracted: 02/20/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/24/99
 Injection Volume: 1.0 (uL) Dilution Factor: 2.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	6380	
91-58-7	2-chloronaphthalene	813	U
208-96-8	acenaphthylene	813	U
83-32-9	acenaphthene	813	U
86-73-7	fluorene	813	U
85-01-8	phenanthrene	813	U
120-12-7	anthracene	813	U
206-44-0	fluoranthene	813	U
129-00-0	pyrene	813	U
56-55-3	benzo (a) anthracene	813	U
218-01-9	chrysene	813	U
205-99-2	benzo (b) fluoranthene	813	U
207-08-9	benzo (k) fluoranthene	813	U
50-32-8	benzo (a) pyrene	813	U
193-39-5	indeno (1,2,3-cd) pyrene	813	U
53-70-3	dibenz (a,h) anthracene	813	U
191-24-2	benzo (g,h,i) perylene	813	U

FORM I SV-1

OLM03.0

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications
18-FEB-1999

DUPLICATE

761913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A086

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	211	B	= FOI, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X209

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 18 Date Analyzed: 02/23/99

GC Column: J&W DB-624(FID) ID: 0.53 (mm) Dilution Factor: 1000.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics	1440000		

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761921

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-14

Sample wt/vol: 4.4 (g/mL) G Lab File ID: 5Y107

Level: (low/med) MED Date Received: 02/18/99

% Moisture: not dec. 9 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	104000		
108-88-3-----toluene	917000		
100-41-4-----ethylbenzene	266000		
1330-20-7-----xylenes (total)	1600000		

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761921

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I307

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	43200	
91-58-7-----	2-chloronaphthalene	3660	U
208-96-8-----	acenaphthylene	3660	U
83-32-9-----	acenaphthene	3660	U
86-73-7-----	fluorene	578	J
85-01-8-----	phenanthrene	3660	U
120-12-7-----	anthracene	3660	U
206-44-0-----	fluoranthene	3660	U
129-00-0-----	pyrene	3660	U
56-55-3-----	benzo (a) anthracene	3660	U
218-01-9-----	chrysene	3660	U
205-99-2-----	benzo (b) fluoranthene	3660	U
207-08-9-----	benzo (k) fluoranthene	3660	U
50-32-8-----	benzo (a) pyrene	3660	U
193-39-5-----	indenc (1,2,3-cd) pyrene	3660	U
53-70-3-----	dibenz (a,h) anthracene	3660	U
191-24-2-----	benzo (g,h,i) perylene	3660	U

110-100

FORM I SV-1

OLM03.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

761921

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A00517

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 2000.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	7800	B	= F20, F28

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761921

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-14

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X3015

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 9 Date Analyzed: 02/24/99

GC Column: J&W DB-624(FID) ID: 0.53 (mm) Dilution Factor: 10000.0

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

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

-----Gasoline Range Organics	14200000	1

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAF-Part A and B UST Sites

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 761921
Lab ID : 9902752-14
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		3940	43.1	100	mg/kg	1.0	JHC	02/27/99	1631	143154	1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

John A. Carl



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

Sample ID: 9902752-14

Client ID: 761921

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/18/99

Level: LOW

% Solids: 91.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	67.6	mg/kg	=		P	0.14	TJA61 Trace ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-02

Sample wt/vol: 5.3 (g/mL) G Lab File ID: 5Y112

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 22 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	2.4	U	
108-88-3-----toluene	2.4	U	
100-41-4-----ethylbenzene	2.4	U	
1330-20-7-----xylenes (total)	3.6	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902807-02
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J209
 Level: (low/med) LOW Date Received: 02/19/99
 % Moisture: 22 decanted: (Y/N) N Date Extracted: 02/22/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	427 U	C ↓
91-58-7	2-chloronaphthalene	427 U	
208-96-8	acenaphthylene	427 U	
83-32-9	acenaphthene	427 U	
86-73-7	fluorene	427 U	
85-01-8	phenanthrene	427 U	
120-12-7	anthracene	427 U	
206-44-0	fluoranthene	427 U	
129-00-0	pyrene	427 U	
56-55-3	benzo (a) anthracene	427 U	
218-01-9	chrysene	427 U	
205-99-2	benzo (b) fluoranthene	427 U	
207-08-9	benzo (k) fluoranthene	427 U	
50-32-8	benzo (a) pyrene	427 U	
193-39-5	indeno (1,2,3-cd) pyrene	427 U	
53-70-3	dibenz (a,h) anthracene	427 U	
191-24-2	benzo (g,h,i) perylene	427 U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A094

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.39	JB	UFOI, FOL

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X407

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 22 Date Analyzed: 02/25/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	128	U	✓

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762021

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-13

Sample wt/vol: 5.3 (g/mL) G Lab File ID: 5Y209

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 10 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (ml) 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 ↓ U F01, F06
108-88-3-----toluene	2.1	U	
100-41-4-----ethylbenzene	2.1	U	
1330-20-7-----xylenes (total)	3.2 ~~0.55~~	JB	

μg
4/12/99

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762021

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J220

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	-----naphthalene	370	U	U ↓
91-58-7	-----2-chloronaphthalene	370	U	
208-96-8	-----acenaphthylene	370	U	
83-32-9	-----acenaphthene	370	U	
86-73-7	-----fluorene	370	U	
85-01-8	-----phenanthrene	370	U	
120-12-7	-----anthracene	370	U	
206-44-0	-----fluoranthene	370	U	
129-00-0	-----pyrene	370	U	
56-55-3	-----benzo (a) anthracene	370	U	
218-01-9	-----chrysene	370	U	
205-99-2	-----benzo (b) fluoranthene	370	U	
207-08-9	-----benzo (k) fluoranthene	370	U	
50-32-8	-----benzo (a) pyrene	370	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	370	U	
53-70-3	-----dibenz (a,h) anthracene	370	U	
191-24-2	-----benzo (g,h,i) perylene	370	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762021

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A0106

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.19	JB	

U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762021

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X4018

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 10 Date Analyzed: 02/25/99

GC Column: J&W DB-624(FID) ID: 0.53 (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
-----	Gasoline Range Organics	111	U

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 762021
Lab ID : 9902807-13
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		680	43.1	100	mg/kg	1.0	LS	03/08/99	1552	143839	1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Valerie Davis



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-13

Client ID: 762021

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 90.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.6	mg/kg	=		P	0.78	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-03

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 5Y113

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 20 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.5	U	C ↓
108-88-3-----	toluene	2.5	U	
100-41-4-----	ethylbenzene	2.5	U	
1330-20-7-----	xylene (total)	3.7	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J210

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/02/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	417	U
91-58-7-----	2-chloronaphthalene	417	U
208-96-8-----	acenaphthylene	417	U
83-32-9-----	acenaphthene	417	U
86-73-7-----	fluorene	417	U
85-01-8-----	phenanthrene	417	U
120-12-7-----	anthracene	417	U
206-44-0-----	fluoranthene	417	U
129-00-0-----	pyrene	417	U
56-55-3-----	benzo(a)anthracene	417	U
218-01-9-----	chrysene	417	U
205-99-2-----	benzo(b)fluoranthene	417	U
207-08-9-----	benzo(k)fluoranthene	417	U
50-32-8-----	benzo(a)pyrene	417	U
193-39-5-----	indeno(1,2,3-cd)pyrene	417	U
53-70-3-----	dibenz(a,h)anthracene	417	U
191-24-2-----	benzo(g,h,i)perylene	417	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A095

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----	Diesel Range Organics	0.28	JB

UF01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X408

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 20 Date Analyzed: 02/25/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	125	U	0

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-18

Sample wt/vol: 6.1 (g/mL) G Lab File ID: 5Y213

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 6 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

71-43-2-----benzene		22.9		
108-88-3-----toluene	2.1	~~0.89~~	BJ	= U F01, F06
100-41-4-----ethylbenzene		1.9		
1330-20-7-----xylenes (total)	3.2	~~3.1~~	BJ	= U F01, F07

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7J303

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	-----naphthalene	355	U
91-58-7	-----2-chloronaphthalene	355	U
208-96-8	-----acenaphthylene	20.0	J
83-32-9	-----acenaphthene	355	U
86-73-7	-----fluorene	355	U
85-01-8	-----phenanthrene	355	U
120-12-7	-----anthracene	355	U
206-44-0	-----fluoranthene	25.4	J
129-00-0	-----pyrene	46.2	J
56-55-3	-----benzo (a) anthracene	27.6	J
218-01-9	-----chrysene	42.4	J
205-99-2	-----benzo (b) fluoranthene	35.8	J
207-08-9	-----benzo (k) fluoranthene	34.2	J
50-32-8	-----benzo (a) pyrene	36.2	J
193-39-5	-----indeno (1,2,3-cd) pyrene	131	J
53-70-3	-----dibenz (a,h) anthracene	355	U
191-24-2	-----benzo (g,h,i) perylene	43.8	J

JJC

FORM I SV-1

OLM03.0

FORM 1 Science Applications19-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3C2007

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 02/25/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Diesel Range Organics	0.36	J 8

V F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762321

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB04S

Matrix: (soil/water) SOIL Lab Sample ID: 9902807-18

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X4021

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. 6 Date Analyzed: 02/25/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	139	=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 11, 1999

Page 1 of 1

Sample ID : 762321
Lab ID : 9902807-18
Matrix : Soil
Date Collected : 02/18/99
Date Received : 02/19/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		3060	43.1	100	mg/kg	1.0	LS	03/08/99	1739	143839	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

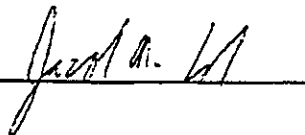
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB04S

Method Type: Total Metals

Sample ID: 9902807-18

Client ID: 762321

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/19/99

Level: LOW

% Solids: 94.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.3	mg/kg	=		P	0.68	TJA61 Trace ICPAES	990225-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-05

Sample wt/vol: 4.6 (g/mL) G Lab File ID: 5Y105

Level: (low/med) MED Date Received: 02/18/99

% Moisture: not dec. 8 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 20 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	522	J	
108-88-3-----toluene	13400		
100-41-4-----ethylbenzene	8930		
1330-20-7-----xylenes (total)	63000		

J
J
J
J

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I112

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/22/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	1260	J
91-58-7-----	2-chloronaphthalene	1450	U
208-96-8-----	acenaphthylene	1450	U
83-32-9-----	acenaphthene	1450	U
86-73-7-----	fluorene	1450	U
85-01-8-----	phenanthrene	1450	U
120-12-7-----	anthracene	1450	U
206-44-0-----	fluoranthene	1450	U
129-00-0-----	pyrene	1450	U
56-55-3-----	benzo (a) anthracene	1450	U
218-01-9-----	chrysene	1450	U
205-99-2-----	benzo (b) fluoranthene	1450	U
207-08-9-----	benzo (k) fluoranthene	1450	U
50-32-8-----	benzo (a) pyrene	1450	U
193-39-5-----	indeno (1,2,3-cd) pyrene	1450	U
53-70-3-----	dibenz (a,h) anthracene	1450	U
191-24-2-----	benzo (g,h,i) perylene	1450	U

J
↓

FORM I SV-1

OLM03.0

FORM 1 Science Applications18-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A084

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	124	B	= F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X207

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 8 Date Analyzed: 02/23/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 100.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics_____	101000	=

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762421DL

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-09

Sample wt/vol: 0.5 (g/mL) G Lab File ID: 5Y212

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 23 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	26.0	U
108-88-3-----	toluene	9.4	DJ3
100-41-4-----	ethylbenzene	32.0	D
1330-20-7-----	xlenes (total)	77.9	D

U
J FDI, F08
111

USE

FORM I VOA

OLM03.0

18
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I116

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 23 decanted: (Y/N) N Date Extracted: 02/20/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/22/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	433	U
91-58-7-----	2-chloronaphthalene	433	U
208-96-8-----	acenaphthylene	433	U
83-32-9-----	acenaphthene	433	U
86-73-7-----	fluorene	433	U
85-01-8-----	phenanthrene	433	U
120-12-7-----	anthracene	433	U
206-44-0-----	fluoranthene	433	U
129-00-0-----	pyrene	433	U
56-55-3-----	benzo(a)anthracene	433	U
218-01-9-----	chrysene	433	U
205-99-2-----	benzo(b)fluoranthene	433	U
207-08-9-----	benzo(k)fluoranthene	433	U
50-32-8-----	benzo(a)pyrene	433	U
193-39-5-----	indeno(1,2,3-cd)pyrene	433	U
53-70-3-----	dibenz(a,h)anthracene	433	U
191-24-2-----	benzo(g,h,i)perylene	433	U

FORM I SV-1

OLM03.0

FORM I
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications, Inc. 1999

762421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A063

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: 23 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	2.0	B

U FOI, FDT

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762421

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X2011

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 23 Date Analyzed: 02/23/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics_____	3020	=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 762421
Lab ID : 9902752-09
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		31000	=	107	249	mg/kg	1.0	JHC	02/27/99	1448	143154 1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

Janet R. Cant

DATA
COPY



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

Sample ID: 9902752-09

Client ID: 762421

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/18/99

Level: LOW

% Solids: 77.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.5	mg/kg	=		P	0.88	TJA61 Trace ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762423

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-17

Sample wt/vol: 4.5 (g/mL) G Lab File ID: 5X417

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 21 Date Analyzed: 02/25/99

GC Column: DB624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene		9.1	
108-88-3-----toluene		3.3	
100-41-4-----ethylbenzene		2.4	J
1330-20-7-----xylenes (total)		4.1	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762423

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902752-17
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4I310
 Level: (low/med) LOW Date Received: 02/18/99
 % Moisture: 21 decanted: (Y/N) N Date Extracted: 02/20/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/24/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	-----naphthalene	422	U	U ↓
91-58-7	-----2-chloronaphthalene	422	U	
208-96-8	-----acenaphthylene	422	U	
83-32-9	-----acenaphthene	422	U	
86-73-7	-----fluorene	422	U	
85-01-8	-----phenanthrene	422	U	
120-12-7	-----anthracene	422	U	
206-44-0	-----fluoranthene	422	U	
129-00-0	-----pyrene	422	U	
56-55-3	-----benzo (a) anthracene	422	U	
218-01-9	-----chrysene	422	U	
205-99-2	-----benzo (b) fluoranthene	422	U	
207-08-9	-----benzo (k) fluoranthene	422	U	
50-32-8	-----benzo (a) pyrene	422	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	422	U	
53-70-3	-----dibenz (a,h) anthracene	422	U	
191-24-2	-----benzo (g,h,i) perylene	422	U	

FORM I SV-1

OLM03.0

DUPLICATE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications 18-FEB-1999 SA

Lab Name: GENERAL ENGINEERING LABOR		Contract: NA	762423
Lab Code: NA	Case No.: NA	SAS No.: NA	SDG No.: FSB01S
Matrix: (soil/water) SOIL		Lab Sample ID: 9902752-17	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID: 3A3A073	
Level: (low/med)	LOW	Date Received: 02/18/99	
% Moisture: 21	decanted: (Y/N) N	Date Extracted: 02/24/99	
Concentrated Extract Volume: 1.00 (mL)		Date Analyzed: 03/04/99	
Injection Volume: 1.0 (uL)		Dilution Factor: 1.0	
GPC Cleanup: (Y/N) N		pH: 7.0	

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Diesel Range Organics	2.0	B

UF21, F27

DATA VALIDATION
COPY

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762423

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB01S

Matrix: (soil/water) SOIL Lab Sample ID: 9902752-17

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1X1023

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. 21 Date Analyzed: 02/22/99

GC Column: J&W DB-624(FID) ID: 0.53 (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	1410	=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

DUPLICATE

cc: SAIC00299

Report Date: March 12, 1999

Page 1 of 1

Sample ID : 762423
Lab ID : 9902752-17
Matrix : Soil
Date Collected : 02/17/99
Date Received : 02/18/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		29000	100	233	mg/kg	1.0	JHC	02/28/99	1519	143154	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By

James G. Cook



9902752 17

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB01S

Method Type: Total Metals

DUPLICATE

Sample ID: 9902752-17

Client ID: 762423

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/18/99

Level: LOW

% Solids: 79.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.3	mg/kg	=		P	0.86	TJA61 Trace ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-07

Sample wt/vol: 5.7 (g/mL) G Lab File ID: 2Y113

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/01/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

71-43-2-----benzene	2.0	U
108-88-3-----toluene	2.0	U
100-41-4-----ethylbenzene	2.0	U
75-71-8-----xylenes (total)	3.0	U

U
↓

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J221

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	374	U
91-58-7-----	2-chloronaphthalene	374	U
208-96-8-----	acenaphthylene	374	U
83-32-9-----	acenaphthene	374	U
86-73-7-----	fluorene	374	U
85-01-8-----	phenanthrene	374	U
120-12-7-----	anthracene	374	U
206-44-0-----	fluoranthene	374	U
129-00-0-----	pyrene	374	U
56-55-3-----	benzo(a)anthracene	374	U
218-01-9-----	chrysene	374	U
205-99-2-----	benzo(b)fluoranthene	374	U
207-08-9-----	benzo(k)fluoranthene	374	U
50-32-8-----	benzo(a)pyrene	374	U
193-39-5-----	indeno(1,2,3-cd)pyrene	374	U
53-70-3-----	dibenz(a,h)anthracene	374	U
191-24-2-----	benzo(g,h,i)perylene	374	U

U
↓

FORM I SV-1

OLM03.0

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A034

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.30	JB

U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2014

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/02/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	112	U	u

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-17

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 2Y212

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 16 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

71-43-2-----	benzene	2.2	U
108-88-3-----	toluene	2.2	U
100-41-4-----	ethylbenzene	2.2	U
1330-20-7-----	xylene (total)	3.3	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J313

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 16 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3-----	naphthalene	397	U	U ↓
91-58-7-----	2-chloronaphthalene	397	U	
208-96-8-----	acenaphthylene	397	U	
83-32-9-----	acenaphthene	397	U	
86-73-7-----	fluorene	397	U	
85-01-8-----	phenanthrene	397	U	
120-12-7-----	anthracene	397	U	
206-44-0-----	fluoranthene	397	U	
129-00-0-----	pyrene	397	U	
56-55-3-----	benzo (a) anthracene	397	U	
218-01-9-----	chrysene	397	U	
205-99-2-----	benzo (b) fluoranthene	397	U	
207-08-9-----	benzo (k) fluoranthene	397	U	
50-32-8-----	benzo (a) pyrene	397	U	
193-39-5-----	indeno (1,2,3-cd) pyrene	397	U	
53-70-3-----	dibenz (a,h) anthracene	397	U	
191-24-2-----	benzo (g,h,i) perylene	397	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A045

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 16 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762521

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-17

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2020

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 16 Date Analyzed: 03/02/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	119	U	u

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 762521
Lab ID : 9902812-17
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		15000	≡	43.1	100	mg/kg	1.0	LS	03/10/99	1618	144238 1

M = Method

Method-Description

M 1

EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

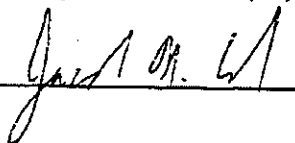
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form I: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-17

Client ID: 762521

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 84.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.0	mg/kg	=		P	0.15	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-08

Sample wt/vol: 5.7 (g/mL) G Lab File ID: 2Y224

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 9 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (ml) 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 ↓ U F01, F06
108-88-3-----toluene	1.9	U	
100-41-4-----ethylbenzene	1.9	U	
1330-20-7-----xylenes (total)	3.3 0.75	JB	

not
4/6/99

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

752611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J304

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	366	U
91-58-7-----	2-chloronaphthalene	366	U
208-96-8-----	acenaphthylene	366	U
83-32-9-----	acenaphthene	366	U
86-73-7-----	fluorene	366	U
85-01-8-----	phenanthrene	366	U
120-12-7-----	anthracene	366	U
206-44-0-----	fluoranthene	35.3	J
129-00-0-----	pyrene	64.1	J
56-55-3-----	benzo (a) anthracene	366	U
218-01-9-----	chrysene	106	J
205-99-2-----	benzo (b) fluoranthene	107	J
207-08-9-----	benzo (k) fluoranthene	366	U
50-32-8-----	benzo (a) pyrene	366	U
193-39-5-----	indeno (1,2,3-cd) pyrene	366	U
53-70-3-----	dibenz (a,h) anthracene	366	U
191-24-2-----	benzo (g,h,i) perylene	366	U

c44c44

FORM I SV-1

OLM03.0

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A075

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.32	JB	U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2015

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 9 Date Analyzed: 03/02/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	110	U	4

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-18

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 2Y213

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 22 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (ml) 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)	3.4	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S
 Matrix: (soil/water) SOIL Lab Sample ID: 9902812-18
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J314
 Level: (low/med) LOW Date Received: 02/20/99
 % Moisture: 22 decanted: (Y/N) N Date Extracted: 02/24/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	-----naphthalene	427	U	↓
91-58-7	-----2-chloronaphthalene	427	U	
208-96-8	-----acenaphthylene	427	U	
83-32-9	-----acenaphthene	427	U	
86-73-7	-----fluorene	427	U	
85-01-8	-----phenanthrene	427	U	
120-12-7	-----anthracene	427	U	
206-44-0	-----fluoranthene	427	U	
129-00-0	-----pyrene	427	U	
56-55-3	-----benzo (a) anthracene	427	U	
218-01-9	-----chrysene	427	U	
205-99-2	-----benzo (b) fluoranthene	427	U	
207-08-9	-----benzo (k) fluoranthene	427	U	
50-32-8	-----benzo (a) pyrene	427	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	427	U	
53-70-3	-----dibenz (a,h) anthracene	427	U	
191-24-2	-----benzo (g,h,i) perylene	427	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S
Matrix: (soil/water) SOIL Lab Sample ID: 9902812-18
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A046
Level: (low/med) LOW Date Received: 02/20/99
% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/26/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
	-----Diesel Range Organics	0.47	JB	

UFOI, FOI

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762621

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-18

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y3020

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 22 Date Analyzed: 03/03/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	128	U	4

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 762621
Lab ID : 9902812-18
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		16000	43.1	100	mg/kg	1.0	LS	03/10/99	1645	144238	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

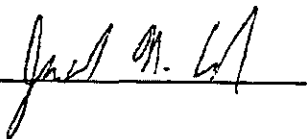
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



9902812-18

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-18

Client ID: 762621

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 78.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.3	mg/kg	=		P	0.86	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-09

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 2Y206

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

71-43-2-----benzene	2.0	U	U ↓
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	3.0	U	

FORM I VOA

OLM03.0

13

762711

0

cc44c94c94←---

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A076

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	2.8	B	= F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y2016

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/02/99

GC Column: J&W DB-624(FID) ID: 0.53 (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	112	U	4

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-19

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 2Y214

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/02/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	2.0	U	↓
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	3.1	U	

FORM I VOA

OLM03.0

EPA SAMPLE NO.

762721

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----naphthalene	374	U
91-58-7-----2-chloronaphthalene	374	U
208-96-8-----acenaphthylene	374	U
83-32-9-----acenaphthene	374	U
86-73-7-----fluorene	374	U
85-01-8-----phenanthrene	374	U
120-12-7-----anthracene	374	U
206-44-0-----fluoranthene	92.0	J
129-00-0-----pyrene	166	J
56-55-3-----benzo(a)anthracene	374	U
218-01-9-----chrysene	183	J
205-99-2-----benzo(b)fluoranthene	192	J
207-08-9-----benzo(k)fluoranthene	374	U
50-32-8-----benzo(a)pyrene	158	J
193-39-5-----indeno(1,2,3-cd)pyrene	74.7	J
53-70-3-----dibenz(a,h)anthracene	374	U
191-24-2-----benzo(g,h,i)perylene	97.1	J

4544544544

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

762721

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSE06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A081

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 11 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	1.2	B	UF01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762721

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-19

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y405

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 11 Date Analyzed: 03/04/99

GC Column: J&W DB-624 (FID) ID: 0.53 (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_____	112	U	u

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 762721
Lab ID : 9902812-19
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		17400	259	600	mg/kg	1.0	LS	03/10/99	1709	144238	1

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

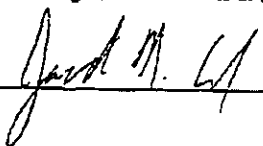
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



000000000000

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-19

Client ID: 762721

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 89.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	7.7	mg/kg	=		P	0.15	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-10

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 2Y428

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 26 Date Analyzed: 03/04/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	3.9		= ↓
108-88-3-----toluene	21.3		
100-41-4-----ethylbenzene	24.9		
1330-20-7-----xylenes (total)	80.0		

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J306

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 26 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	449	J
91-58-7-----	2-chloronaphthalene	450	U
208-96-8-----	acenaphthylene	450	U
83-32-9-----	acenaphthene	450	U
86-73-7-----	fluorene	450	U
85-01-8-----	phenanthrene	450	U
120-12-7-----	anthracene	450	U
206-44-0-----	fluoranthene	450	U
129-00-0-----	pyrene	450	U
56-55-3-----	benzo (a) anthracene	450	U
218-01-9-----	chrysene	450	U
205-99-2-----	benzo (b) fluoranthene	450	U
207-08-9-----	benzo (k) fluoranthene	450	U
50-32-8-----	benzo (a) pyrene	450	U
193-39-5-----	indeno (1,2,3-cd) pyrene	450	U
53-70-3-----	dibenz (a,h) anthracene	450	U
191-24-2-----	benzo (g,h,i) perylene	450	U

JU

FORM I SV-1

OLM03.0

FORM 1 Science Applications20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A037

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 26 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	4.7	B	= F01, F03

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1Y407

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 26 Date Analyzed: 03/04/99

GC Column: J&W DB-624(FID) ID: 0.53 (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_____	675	=

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-20

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 2Y313

Level: (low/med) MED Date Received: 02/20/99

% Moisture: not dec. 18 Date Analyzed: 03/03/99

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	benzene	64.3	J
108-88-3-----	toluene	345	
100-41-4-----	ethylbenzene	834	
1330-20-7-----	xylenes (total)	14200	

J
=

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-20

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2J316

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/24/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	726	
91-58-7	2-chloronaphthalene	406	U
208-96-8	acenaphthylene	406	U
83-32-9	acenaphthene	406	U
86-73-7	fluorene	406	U
85-01-8	phenanthrene	406	U
120-12-7	anthracene	406	U
206-44-0	fluoranthene	406	U
129-00-0	pyrene	406	U
56-55-3	benzo (a) anthracene	406	U
218-01-9	chrysene	406	U
205-99-2	benzo (b) fluoranthene	406	U
207-08-9	benzo (k) fluoranthene	406	U
50-32-8	benzo (a) pyrene	406	U
193-39-5	indeno (1,2,3-cd) pyrene	406	U
53-70-3	dibenz (a,h) anthracene	406	U
191-24-2	benzo (g,h,i) perylene	406	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications 20-FEB-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-20

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 3A3A082

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 02/26/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 6.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	31.4	B	= F01, F02

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762821

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB06S

Matrix: (soil/water) SOIL Lab Sample ID: 9902812-20

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 1Y3016

Level: (low/med) LOW Date Received: 02/20/99

% Moisture: not dec. 18 Date Analyzed: 03/03/99

GC Column: J&W DB-624 (FID) ID: 0.53 (mm) Dilution Factor: 500.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics_____	135000	=

FORM I VOA

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Leslie Barbour
Project Description: CAP-Part A and B UST Sites

cc: SAIC00299

Report Date: March 15, 1999

Page 1 of 1

Sample ID : 762821
Lab ID : 9902812-20
Matrix : Soil
Date Collected : 02/19/99
Date Received : 02/20/99
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
TOTAL ORGANIC CARBON (TOC)		24900	240	557	mg/kg	1.0 LS	03/10/99	1735	144238	1	

M = Method	Method-Description
M 1	EPA 415.1 Modified

Notes:

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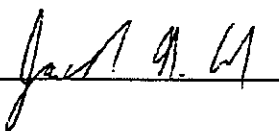
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standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (843) 769-7391.

Reviewed By



Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB06S

Method Type: Total Metals

Sample ID: 9902812-20

Client ID: 762821

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 2/20/99

Level: LOW

% Solids: 82.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	8.4	mg/kg	=		P	0.79	TJA61 Trace2 ICPAES	990303-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

PROJECT NAME: CAP-Part B UST Investigations				REQUESTED PARAMETERS														LABORATORY NAME: General Engineering Laboratory				
PROJECT NUMBER: 01-0331-04-1593-200																		LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417				
PROJECT MANAGER: Patty Stoll																		PHONE NO: (803) 556-8171				
Sampler (Signature) <i>Patty Stoll</i>				(Printed Name) Laura Lumley														OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS 9908082-01				
Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	GRO	PAH, DRO	PAH, DRO, Lead, TOC	PAH, TPH	PAH, TPH, Lead, TOC	Dissolved Iron									OVA SCREENING		
421221	2/17/99	1445	Soil	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	02	
761311	2/17/99	1715		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	03	
790611	2/17/99	1101		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	04	
761211	2/17/99	1819		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	05	
762411	2/17/99	1445		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	06	
761911	2/17/99	1130		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	07	
761913	2/17/99	1130		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	08	
421223	2/17/99	1515		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	09	
762421	2/17/99	1515		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	
761221	2/17/99	1621		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	
790623	2/17/99	1058		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
761321	2/17/99	1725		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	
790621	2/17/99	1059		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		

RELINQUISHED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

RECEIVED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

RELINQUISHED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

RECEIVED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

RELINQUISHED BY: *[Signature]* Date/Time: 2/18/99

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COMPANY NAME: *SAIC*

RECEIVED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

RELINQUISHED BY: *[Signature]* Date/Time: 2/18/99

COMPANY NAME: *SAIC*

 $\frac{1}{2}$

Science Applications International Corporation
500 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4600

CHAIN OF CUSTODY RECORD

COC NO.: D03505

PROJECT NAME: CAP-Part B UST Investigations			REQUESTED PARAMETERS										LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-0331-04-1593-200													LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417	
PROJECT MANAGER: Patty Stoll													PHONE NO: (803) 556-8171	
Sampler (Signature) <i>Laura Summey</i>			(Printed Name) Laura Summey										OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	GRO	PAH, DRO	PAH, DRO, Lead, TOC	PAH, TPH	PAH, TPH, Lead, TOC	Dissolved Iron	No. of Bottles/Vials	OVA SCREENING	
01	7/6/11	2/18/99	1647	Soi	1	1	1	1	1	1	1	3		
02	7/6/2011	2/18/99	1630		1	1	1	1	1	1	1	3		
03	7/6/2311	2/18/99	950		1	1	1	1	1	1	1	3		
04	7/6/1511	2/18/99	1120		1	1	1	1	1	1	1	3		
05	7/6/1811	2/18/99	1445		1	1	1	1	1	1	1	3		
06	7/9/1011	2/18/99	1324		1	1	1	1	1	1	1	3		
07	7/9/1111	2/18/99	1436		1	1	1	1	1	1	1	3		
08	7/9/0811	2/18/99	1023		1	1	1	1	1	1	1	3		
09	7/9/0711	2/18/99	921		1	1	1	1	1	1	1	3		
10	7/6/1411	2/18/99	1415		1	1	1	1	1	1	1	3		
11	7/9/0911	2/18/99	1159		1	1	1	1	1	1	1	3		
12	7/9/0921	2/18/99	1145		1	1	1	1	1	1	1	3		
13	7/6/2021	2/18/99	1623		1	1	1	1	1	1	1	3		

RECEIVED BY: *Laura Summey*

DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

RECEIVED BY: *Laura Summey*

DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

RECEIVED BY: *Laura Summey*

DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

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DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

RECEIVED BY: *Laura Summey*

DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

RECEIVED BY: *Laura Summey*

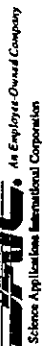
DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*

RECEIVED BY: *Laura Summey*

DATE/TIME: 2/19/99

COMPANY NAME: *General Engineering Laboratory*



COC NO.: D03507

CHAIN OF CUSTODY RECORD

V-195

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-06

Sample wt/vol: 5.9 (g/mL) G Lab File ID: 5D133

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 10 Date Analyzed: 10/05/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
71-43-2-----	benzene	1.9	U	U
108-88-3-----	toluene	1.9	U	
100-41-4-----	ethylbenzene	1.9	U	
1330-20-7-----	xylene (total)	5.7	U	

DATA VALIDATION
COPY

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762911

Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: FSBA03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-06
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 8N423
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/28/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	-----naphthalene	370	U
91-58-7	-----2-chloronaphthalene	370	U
208-96-8	-----acenaphthylene	25.8	J
83-32-9	-----acenaphthene	370	U
86-73-7	-----fluorene	370	U
85-01-8	-----phenanthrene	79.7	J
120-12-7	-----anthracene	370	U
206-44-0	-----fluoranthene	179	J
129-00-0	-----pyrene	398	
56-55-3	-----benzo (a) anthracene	139	J
218-01-9	-----chrysene	224	J
205-99-2	-----benzo (b) fluoranthene	299	J
207-08-9	-----benzo (k) fluoranthene	370	U
50-32-8	-----benzo (a) pyrene	161	J
193-39-5	-----indeno (1,2,3-cd) pyrene	169	J
53-70-3	-----dibenz (a,h) anthracene	370	U
191-24-2	-----benzo (g,h,i) perylene	150	J

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cos

FORM 1 Science Applications25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

762911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 012F1201

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.54	JB

U FOI, FOL

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762911

Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: FSBA03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-06
Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1C508
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: not dec. 10 Date Analyzed: 10/01/99
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	56.2	J

Form I: Inorganic Analyses Data Sheet

SDG No.: FSB A03S

Method Type: Total Metals

Sample ID: 9909744-06

Client ID: 762911

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 90.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	2.0	mg/kg			P	0.18	TJA61 Trace ICPAES	991005-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE

EPA SAMPLE NO.

762913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-08

Sample wt/vol: 5.7 (g/mL) G Lab File ID: 5D113

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 10 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.0 U	✓
108-88-3-----	toluene	2.0 U	
100-41-4-----	ethylbenzene	2.0 U	
1330-20-7-----	xylenes (total)	5.9 U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762913

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 8N425

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	-----naphthalene	370	U	cccccccccccccc
91-58-7	-----2-chloronaphthalene	370	U	
208-96-8	-----acenaphthylene	370	U	
83-32-9	-----acenaphthene	370	U	
86-73-7	-----fluorene	370	U	
85-01-8	-----phenanthrene	56.7	J	
120-12-7	-----anthracene	370	U	
206-44-0	-----fluoranthene	101	J	
129-00-0	-----pyrene	230	J	
56-55-3	-----benzo (a) anthracene	82.4	J	
218-01-9	-----chrysene	125	J	
205-99-2	-----benzo (b) fluoranthene	205	J	
207-08-9	-----benzo (k) fluoranthene	370	U	
50-32-8	-----benzo (a) pyrene	104	J	
193-39-5	-----indeno (1,2,3-cd) pyrene	124	J	
53-70-3	-----dibenz (a,h) anthracene	370	U	
191-24-2	-----benzo (g,h,i) perylene	98.6	J	

DUPLICATE

FORM 1 Science Applications
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 25-SEP-1999 SA

762913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 015F1501

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
	-----Diesel Range Organics	0.89	B	U F01, F07

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762913

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: FSBA03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-08
Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1C5010
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: not dec. 10 Date Analyzed: 10/01/99
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	110	U

U

DUPLICATE

Form 1: Inorganic Analyses Data Sheet

OG No.: FSBA03S

Method Type: Total Metals

Sample ID: 9909744-08

Client ID: 762913

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 90.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	1.4	mg/kg			P	0.17	TJA61 Trace ICPAES	991005-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA FROM
C-11

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763011

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBA11S

Matrix: (soil/water) SOIL Lab Sample ID: 9909889-04

Sample wt/vol: 5.3 (g/mL) G Lab File ID: 8D613

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. 8 Date Analyzed: 10/09/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
71-43-2-----	benzene	2.0	U	CCE
108-88-3-----	toluene	2.0	J	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylene (total)	6.1	U	

DATA VALIDATION
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA11S

Matrix: (soil/water) SOIL Lab Sample ID: 9909889-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 7P213

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/04/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/12/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3	-----naphthalene	362	U
91-58-7	-----2-chloronaphthalene	362	U
208-96-8	-----acenaphthylene	362	U
83-32-9	-----acenaphthene	362	U
86-73-7	-----fluorene	362	U
85-01-8	-----phenanthrene	362	U
120-12-7	-----anthracene	362	U
206-44-0	-----fluoranthene	362	U
129-00-0	-----pyrene	362	U
56-55-3	-----benzo (a) anthracene	362	U
218-01-9	-----chrysene	362	U
205-99-2	-----benzo (b) fluoranthene	362	U
207-08-9	-----benzo (k) fluoranthene	362	U
50-32-8	-----benzo (a) pyrene	362	U
193-39-5	-----indeno (1,2,3-cd) pyrene	362	U
53-70-3	-----dibenz (a, h) anthracene	362	U
191-24-2	-----benzo (g, h, i) perylene	362	U

FORM I SV-1

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FORM 1 Science Applications30-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA11S

Matrix: (soil/water) SOIL Lab Sample ID: 9909889-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 014F1401

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 10/06/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.35	JB	U F01, F06

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763011

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA11S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909889-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1D3017

Level: (low/med) LOW

Date Received: 09/30/99

% Moisture: not dec. 8

Date Analyzed: 10/06/99

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	86.6	J

J

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA115

Method Type: Total Metals

Sample ID: 9909889-04

Client ID: 763011

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/30/99

Level: LOW

% Solids: 92.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	1.8	mg/kg			P	0.08	TJA61 Trace ICPAES	991001-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-13

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 8D217

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 10 Date Analyzed: 10/05/99

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	2.1	U	↓
108-88-3-----toluene	2.1	U	
100-41-4-----ethylbenzene	2.1	U	
1330-20-7-----xylenes (total)	6.2	U	

FORM I VOA

OLM03.0

DATA VALIDATION
COPY

V-211

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 50104

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	-----naphthalene	370	U	U ↓
91-58-7	-----2-chloronaphthalene	370	U	
208-96-8	-----acenaphthylene	370	U	
83-32-9	-----acenaphthene	370	U	
86-73-7	-----fluorene	370	U	
85-01-8	-----phenanthrene	370	U	
120-12-7	-----anthracene	370	U	
206-44-0	-----fluoranthene	370	U	
129-00-0	-----pyrene	370	U	
56-55-3	-----benzo(a)anthracene	370	U	
218-01-9	-----chrysene	370	U	
205-99-2	-----benzo(b)fluoranthene	370	U	
207-08-9	-----benzo(k)fluoranthene	370	U	
50-32-8	-----benzo(a)pyrene	370	U	
193-39-5	-----indeno(1,2,3-cd)pyrene	370	U	
53-70-3	-----dibenz(a,h)anthracene	370	U	
191-24-2	-----benzo(g,h,i)perylene	370	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 046F4601

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 10 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/01/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics_____	0.89	B	VFD1, F07

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763111

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: FSBA06S
Matrix: (soil/water) SOIL Lab Sample ID: 9909747-13
Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1D2018
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: not dec. 10 Date Analyzed: 10/05/99
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	110	U

Form 1: Inorganic Analyses Data Sheet

DG No.: FSBA06S

Method Type: Total Metals

Sample ID: 9909747-13

Client ID: 763111

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 90.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	2.8	mg/kg			P	0.18	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-18

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 5D123

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 20 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	30.5		
108-88-3-----toluene	48.8		
100-41-4-----ethylbenzene	18.7		
1330-20-7-----xylenes (total)	50.8		

FORM I VOA

DATA VALIDATION
COPY

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 5N413

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3-----	naphthalene	54.0	J
91-58-7-----	2-chloronaphthalene	412	U
208-96-8-----	acenaphthylene	412	U
83-32-9-----	acenaphthene	412	U
86-73-7-----	fluorene	412	U
85-01-8-----	phenanthrene	412	U
120-12-7-----	anthracene	412	U
206-44-0-----	fluoranthene	412	U
129-00-0-----	pyrene	412	U
56-55-3-----	benzo (a) anthracene	412	U
218-01-9-----	chrysene	412	U
205-99-2-----	benzo (b) fluoranthene	412	U
207-08-9-----	benzo (k) fluoranthene	412	U
50-32-8-----	benzo (a) pyrene	412	U
193-39-5-----	indeno (1,2,3-cd) pyrene	412	U
53-70-3-----	dibenz (a,h) anthracene	412	U
191-24-2-----	benzo (g,h,i) perylene	412	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 011F1101

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	8.8	B

U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763211

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-06

Sample wt/vol: 1.0 (g/mL) G Lab File ID: 1D3010

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 19 Date Analyzed: 10/06/99

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:		Q
		(ug/L or ug/Kg)	UG/KG	
-----	Gasoline Range Organics	3420		

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB A06S

Method Type: Total Metals

Sample ID: 9909747-06

Client ID: 763211

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 81.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.6	mg/kg			P	0.20	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-16

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 8D310

Level: (low/med) MED Date Received: 09/25/99

% Moisture: not dec. 8 Date Analyzed: 10/06/99

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	2270	
108-88-3-----	toluene	1510	
100-41-4-----	ethylbenzene	4560	
1330-20-7-----	xylene (total)	9040	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 50106

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	362	U
91-58-7-----	2-chloronaphthalene	362	U
208-96-8-----	acenaphthylene	362	U
83-32-9-----	acenaphthene	362	U
86-73-7-----	fluorene	362	U
85-01-8-----	phenanthrene	362	U
120-12-7-----	anthracene	362	U
206-44-0-----	fluoranthene	362	U
129-00-0-----	pyrene	362	U
56-55-3-----	benzo (a) anthracene	362	U
218-01-9-----	chrysene	362	U
205-99-2-----	benzo (b) fluoranthene	362	U
207-08-9-----	benzo (k) fluoranthene	362	U
50-32-8-----	benzo (a) pyrene	362	U
193-39-5-----	indeno (1,2,3-cd) pyrene	362	U
53-70-3-----	dibenz (a,h) anthracene	362	U
191-24-2-----	benzo (g,h,i) perylene	362	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 25-SEP-1999 SA

763311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 015F1501

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics_____	2.7	B	U F01, F07

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763311

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA06S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909747-16

Sample wt/vol: 1.1 (g/mL) G

Lab File ID: 1D2021

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 8

Date Analyzed: 10/05/99

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

4070

=

FORM I VOA

Form 1: Inorganic Analyses Data Sheet

JG No.: FSB A065

Method Type: Total Metals

Sample ID: 9909747-16

Client ID: 763311

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 92.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	2.7	mg/kg			P	0.18	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-19

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 8D317

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 9 Date Analyzed: 10/06/99

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	16.1		J J J J
108-88-3-----toluene	0.90	J	
100-41-4-----ethylbenzene	34.0		
1330-20-7-----xylenes (total)	1.6	J	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 50108

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	19.2	J
91-58-7-----	2-chloronaphthalene	366	U
208-96-8-----	acenaphthylene	366	U
83-32-9-----	acenaphthene	366	U
86-73-7-----	fluorene	366	U
85-01-8-----	phenanthrene	366	U
120-12-7-----	anthracene	366	U
206-44-0-----	fluoranthene	366	U
129-00-0-----	pyrene	366	U
56-55-3-----	benzo (a) anthracene	366	U
218-01-9-----	chrysene	366	U
205-99-2-----	benzo (b) fluoranthene	366	U
207-08-9-----	benzo (k) fluoranthene	366	U
50-32-8-----	benzo (a) pyrene	366	U
193-39-5-----	indeno (1,2,3-cd) pyrene	366	U
53-70-3-----	dibenz (a,h) anthracene	366	U
191-24-2-----	benzo (g,h,i) perylene	366	U

J
U
↓

FORM 1 Science Applications25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763411

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 018F1801

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 9 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.98	B	U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763411

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA06S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909747-19

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: 1D305

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 9

Date Analyzed: 10/06/99

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_____	104	J

J

FORM I VOA

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA06S

Method Type: Total Metals

Sample ID: 9909747-19

Client ID: 763411

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 91.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.6	mg/kg			P	0.17	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-05

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 5D132

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 18 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
71-43-2-----	benzene	2.2	U	R K02 J R J ↓
108-88-3-----	toluene	2.8		
100-41-4-----	ethylbenzene	2.2	U	
1330-20-7-----	xylenes (total)	0.77	J	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763511

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: FSBA03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-05
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 80412
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: 18 decanted: (Y/N) N Date Extracted: 09/28/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	406	U
91-58-7-----	2-chloronaphthalene	406	U
208-96-8-----	acenaphthylene	406	U
83-32-9-----	acenaphthene	406	U
86-73-7-----	fluorene	406	U
85-01-8-----	phenanthrene	406	U
120-12-7-----	anthracene	406	U
206-44-0-----	fluoranthene	406	U
129-00-0-----	pyrene	406	U
56-55-3-----	benzo(a)anthracene	406	U
218-01-9-----	chrysene	406	U
205-99-2-----	benzo(b)fluoranthene	406	U
207-08-9-----	benzo(k)fluoranthene	406	U
50-32-8-----	benzo(a)pyrene	406	U
193-39-5-----	indeno(1,2,3-cd)pyrene	406	U
53-70-3-----	dibenz(a,h)anthracene	406	U
191-24-2-----	benzo(g,h,i)perylene	406	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications 25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763511

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 004F0401

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 10/06/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.66	JB

U F21, F26

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763511

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA03S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909744-05

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1C507

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 18

Date Analyzed: 10/01/99

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_____	101	J	J

FORM I VOA

Form 1: Inorganic Analyses Data Sheet

OG No.: FSB A03S

Method Type: Total Metals

Sample ID: 9909744-05

Client ID: 763511

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 82.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	3.5	mg/kg			P	0.18	TJA61 Trace ICPAES	991005-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSEA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-04

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 5D131

Level: (low/med) MED Date Received: 09/25/99

% Moisture: not dec. 17 Date Analyzed: 10/04/99

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

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	217	U	
108-88-3-----toluene	217	U	
100-41-4-----ethylbenzene	217	U	
1330-20-7-----xylenes (total)	650	U	

FORM I VOA

OLM03.0

18
SEMIVOLATILE ORGANICS ANALYSTS DATA SHEET

EPA SAMPLE NO.

763611

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: FS3A03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-04
Sample wt/vol: 33.0 (g/mL) G Lab File ID: 8N421
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: 17 decanted: (Y/N) N Date Extracted: 09/28/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
91-20-3	-----naphthalene	721		11 ↓
91-58-7	-----2-chloronaphthalene	402		
208-96-8	-----acenaphthylene	402		
83-32-9	-----acenaphthene	402		
86-73-7	-----fluorene	402		
85-01-8	-----phenanthrene	402		
120-12-7	-----anthracene	402		
206-44-0	-----fluoranthene	402		
129-00-0	-----pyrene	402		
56-55-3	-----benzo(a)anthracene	402		
218-01-9	-----chrysene	402		
205-99-2	-----benzo(b)fluoranthene	402		
207-08-9	-----benzo(k)fluoranthene	402		
50-32-8	-----benzo(a)pyrene	402		
193-39-5	-----indeno(1,2,3-cd)pyrene	402		
53-70-3	-----dibenz(a,h)anthracene	402		
191-24-2	-----benzo(g,h,i)perylene	402		

FORM 1 Science Applications25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 004F0401

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 17 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics			

10.1

B

= F01, F03

FORM 1 SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763611

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA03S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909744-04

Sample wt/vol: 10.0 (g/mL) G

Lab File ID: 1D106

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 17

Date Analyzed: 10/04/99

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 100.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics_____	30300	

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Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA03S

Method Type: Total Metals

Sample ID: 9909744-04

Client ID: 763611

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 83.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	10.3	mg/kg			P	0.19	TJA61 Trace ICPAES	991005-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-19

Sample wt/vol: 4.8 (g/mL) G Lab File ID: 5D124

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 19 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----benzene	2.6	U	U ↓
108-88-3-----toluene	2.6	U	
100-41-4-----ethylbenzene	2.6	U	
1330-20-7-----xylenes (total)	7.7	U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 5N412

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3-----	naphthalene	417 U	U
91-58-7-----	2-chloronaphthalene	417 U	
208-96-8-----	acenaphthylene	417 U	
83-32-9-----	acenaphthene	417 U	
86-73-7-----	fluorene	417 U	
85-01-8-----	phenanthrene	417 U	
120-12-7-----	anthracene	417 U	
206-44-0-----	fluoranthene	417 U	
129-00-0-----	pyrene	417 U	
56-55-3-----	benzo (a) anthracene	417 U	
218-01-9-----	chrysene	417 U	
205-99-2-----	benzo (b) fluoranthene	417 U	
207-08-9-----	benzo (k) fluoranthene	417 U	
50-32-8-----	benzo (a) pyrene	417 U	
193-39-5-----	indeno (1,2,3-cd) pyrene	417 U	
53-70-3-----	dibenz (a,h) anthracene	417 U	
191-24-2-----	benzo (g,h,i) perylene	417 U	

FORM 1 Science Applications 25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763711

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 038F3801

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/01/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.87	B	0 F01, F07

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763711

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA06S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909747-05

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: 1D208

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 20

Date Analyzed: 10/05/99

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_____	37.3	J

5

Form 1: Inorganic Analyses Data Sheet

OG No.: FSBA06S

Method Type: Total Metals

Sample ID: 9909747-05

Client ID: 763711

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 80.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	8.5	mg/kg			P	0.20	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

RINSATE
EPA SAMPLE NO.

763715

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-17

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D213

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

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	2.0	U
108-88-3-----	toluene	2.0	U
100-41-4-----	ethylbenzene	2.0	U
1330-20-7-----	xlenes (total)	6.0	U

FORM I VOA

OLM03.0

V-246

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

RINSTATE
EPA SAMPLE NO.

763715

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FSBA07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909748-01

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: 40414

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/08/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
91-20-3	-----naphthalene	10.3	U	21 ↓
91-58-7	-----2-chloronaphthalene	10.3	U	
208-96-8	-----acenaphthylene	10.3	U	
83-32-9	-----acenaphthene	10.3	U	
86-73-7	-----fluorene	10.3	U	
85-01-8	-----phenanthrene	10.3	U	
120-12-7	-----anthracene	10.3	U	
206-44-0	-----fluoranthene	10.3	U	
129-00-0	-----pyrene	10.3	U	
56-55-3	-----benzo (a) anthracene	10.3	U	
218-01-9	-----chrysene	10.3	U	
205-99-2	-----benzo (b) fluoranthene	10.3	U	
207-08-9	-----benzo (k) fluoranthene	10.3	U	
50-32-8	-----benzo (a) pyrene	10.3	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	10.3	U	
53-70-3	-----dibenz (a,h) anthracene	10.3	U	
191-24-2	-----benzo (g,h,i) perylene	10.3	U	

RINSTATE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications25-SEP-1999 SA

763715

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909748-01

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 026F2601

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) MG/L	Q
-----	Diesel Range Organics	0.031	B

UF01, F07*

DATA VALIDATION
COPY

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763611

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 5D118

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 18 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.4	U	COG
108-88-3-----	toluene	0.79	J	
100-41-4-----	ethylbenzene	2.4	U	
1330-20-7-----	xylenes (total)	7.4	U	

12
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 5N410

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	412	U
91-58-7-----	2-chloronaphthalene	412	U
208-96-8-----	acenaphthylene	412	U
83-32-9-----	acenaphthene	412	U
86-73-7-----	fluorene	412	U
85-01-8-----	phenanthrene	412	U
120-12-7-----	anthracene	412	U
206-44-0-----	fluoranthene	412	U
129-00-0-----	pyrene	412	U
56-55-3-----	benzo(a)anthracene	412	U
218-01-9-----	chrysene	412	U
205-99-2-----	benzo(b)fluoranthene	412	U
207-08-9-----	benzo(k)fluoranthene	412	U
50-32-8-----	benzo(a)pyrene	412	U
193-39-5-----	indeno(1,2,3-cd)pyrene	412	U
53-70-3-----	dibenz(a,h)anthracene	412	U
191-24-2-----	benzo(g,h,i)perylene	412	U

FORM I SV-1

OLM03.0

FORM 1 Science Applications
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763811

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 035F3501

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 19 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/01/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Diesel Range Organics_____	0.84	B

U FOI, FOT

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763811

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA06S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909747-03

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: 1D206

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 19

Date Analyzed: 10/05/99

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	117	J

FORM I VOA

Form I: Inorganic Analyses Data Sheet

DUG No.: FSBA06S

Method Type: Total Metals

Sample ID: 9909747-03

Client ID: 763811

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 81.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	4.0	mg/kg			P	0.20	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-16

Sample wt/vol: 4.5 (g/mL) G Lab File ID: 5D121

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 5 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q

71-43-2-----	benzene	2.3	U	J J J J
108-88-3-----	toluene	0.90	J	
100-41-4-----	ethylbenzene	2.3	U	
1330-20-7-----	xlenes (total)	1.7	J	

18
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 50109

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	1400	U
91-58-7-----	2-chloronaphthalene	1400	U
208-96-8-----	acenaphthylene	1400	U
83-32-9-----	acenaphthene	1400	U
86-73-7-----	fluorene	1400	U
85-01-8-----	phenanthrene	132	J
120-12-7-----	anthracene	1400	U
206-44-0-----	fluoranthene	250	J
129-00-0-----	pyrene	446	J
56-55-3-----	benzo (a) anthracene	161	J
218-01-9-----	chrysene	278	J
205-99-2-----	benzo (b) fluoranthene	188	J
207-08-9-----	benzo (k) fluoranthene	1400	U
50-32-8-----	benzo (a) pyrene	1400	U
193-39-5-----	indeno (1,2,3-cd) pyrene	1400	U
53-70-3-----	dibenz (a,h) anthracene	1400	U
191-24-2-----	benzo (g,h,i) perylene	1400	U

2-4-99

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

763911

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 044F4401

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/01/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	0.77	B	UFOI, FOT

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763911

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA06S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909747-11

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: 1D2016

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 5

Date Analyzed: 10/05/99

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_____	120	=

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB A06S

Method Type: Total Metals

Sample ID: 9909747-11

Client ID: 763911

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 95.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	11.9	mg/kg			P	0.17	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

763913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-17

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 5D122

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 6 Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	2.1	U
108-88-3-----	toluene	1.5	J
100-41-4-----	ethylbenzene	2.1	U
1330-20-7-----	xylenes (total)	2.6	J

4040

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

763913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 50110

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 09/28/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/04/99

Injection Volume: 1.0 (uL) Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

91-20-3-----	naphthalene	1420	U
91-58-7-----	2-chloronaphthalene	1420	U
208-96-8-----	acenaphthylene	1420	U
83-32-9-----	acenaphthene	1420	U
86-73-7-----	fluorene	1420	U
85-01-8-----	phenanthrene	82.9	J
120-12-7-----	anthracene	1420	U
206-44-0-----	fluoranthene	174	J
129-00-0-----	pyrene	310	J
56-55-3-----	benzo (a) anthracene	1420	U
218-01-9-----	chrysene	1420	U
205-99-2-----	benzo (b) fluoranthene	183	J
207-08-9-----	benzo (k) fluoranthene	1420	U
50-32-8-----	benzo (a) pyrene	1420	U
193-39-5-----	indeno (1,2,3-cd) pyrene	1420	U
53-70-3-----	dibenz (a,h) anthracene	1420	U
191-24-2-----	benzo (g,h,i) perylene	1420	U

cyclohexane

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Science Applications
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DUPLICATE

763913

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA06S

Matrix: (soil/water) SOIL Lab Sample ID: 9909747-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 006F0601

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 4.00 (mL) Date Analyzed: 10/05/99

Injection Volume: 1.0 (uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	58.6	B	= F01, F08

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

763913

Lab Name:	Contract:		
Lab Code:	Case No.:	SAS No.:	SDG No.: FSBA06S
Matrix: (soil/water) SOIL		Lab Sample ID: 9909747-15	
Sample wt/vol: 5.0 (g/mL) G		Lab File ID: 1D306	
Level: (low/med) LOW		Date Received: 09/25/99	
% Moisture: not dec. 6		Date Analyzed: 10/06/99	
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_____	104	J	

J

DUPLICATE

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA06S

Method Type: Total Metals

Sample ID: 9909747-15

Client ID: 763913

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 94.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	13.9	mg/kg			P	0.17	TJA61 Trace ICPAES	991004-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-07

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 5D112

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. 20 Date Analyzed: 10/04/99

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

Soil Extract Volume: _____ (ml) 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-----	xylene (total)	6.9	U

C
↓

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764011

Lab Name: Contract:
Lab Code: Case No.: SAS No.: SDG No.: FSBA03S
Matrix: (soil/water) SOIL Lab Sample ID: 9909744-07
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 8N424
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: 20 decanted: (Y/N) N Date Extracted: 09/28/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	-----naphthalene	417	U	U ↓ J G01 U J G01, C05 U ↓
91-58-7	-----2-chloronaphthalene	417	U	
208-96-8	-----acenaphthylene	417	U	
83-32-9	-----acenaphthene	417	U	
86-73-7	-----fluorene	417	U	
85-01-8	-----phenanthrene	37.9	J	
120-12-1	-----anthracene	417	U	
206-44-0	-----fluoranthene	417	U	
129-00-0	-----pyrene	71.8	J	
56-55-3	-----benzo (a) anthracene	417	U	
218-01-9	-----chrysene	417	U	
205-99-2	-----benzo (b) fluoranthene	417	U	
207-08-9	-----benzo (k) fluoranthene	417	U	
50-32-8	-----benzo (a) pyrene	417	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	417	U	
53-70-3	-----dibenz (a,h) anthracene	417	U	
191-24-2	-----benzo (g,h,i) perylene	417	U	

FORM 1 Science Applications 25-SEP-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

764011

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA03S

Matrix: (soil/water) SOIL Lab Sample ID: 9909744-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 014F1401

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 09/29/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 09/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics	0.85	B

U F01, F07

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764011

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA03S

Matrix: (soil/water) SOIL

Lab Sample ID: 9909744-07

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1C509

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: not dec. 20

Date Analyzed: 10/01/99

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	266	

11

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB A03S

Method Type: Total Metals

Sample ID: 9909744-07

Client ID: 764011

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 9/25/99

Level: LOW

% Solids: 80.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	6.8	mg/kg			P	0.20	TJA61 Trace ICPAES	991005-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 5E317

Level: (low/med) MED Date Received: 10/07/99

% Moisture: not dec. 34 Date Analyzed: 10/13/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 200.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	benzene	267000	
108-88-3-----	toluene	1700000	
100-41-4-----	ethylbenzene	333000	
1330-20-7-----	xylene (total)	1740000	

FORM I VOA

DATA VALIDATION
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2P519

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 34 decanted: (Y/N) N Date Extracted: 10/09/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/15/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3	naphthalene	505	U
91-58-7	2-chloronaphthalene	505	U
208-96-8	acenaphthylene	505	U
83-32-9	acenaphthene	505	U
86-73-7	fluorene	505	U
85-01-8	phenanthrene	505	U
120-12-7	anthracene	505	U
206-44-0	fluoranthene	505	U
129-00-0	pyrene	505	U
56-55-3	benzo(a)anthracene	505	U
218-01-9	chrysene	505	U
205-99-2	benzo(b)fluoranthene	505	U
207-08-9	benzo(k)fluoranthene	505	U
50-32-8	benzo(a)pyrene	505	U
193-39-5	indeno(1,2,3-cd)pyrene	505	U
53-70-3	dibenz(a,h)anthracene	505	U
191-24-2	benzo(g,h,i)perylene	505	U

U
↓

FORM I SV-1

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FORM 1 Science Applications 07-OCT-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

764111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-01

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 048F4801

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 34 decanted: (Y/N) N Date Extracted: 10/18/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG . Q

-----Diesel Range Organics	1420	B	= F01, F03

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-01

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 1E1014

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 34 Date Analyzed: 10/11/99

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10000.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

-----Gasoline Range Organics	9770000		11

FORM I VOA

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA13S

Method Type: Total Metals

Sample ID: 9910253-01

Client ID: 764111

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 10/7/99

Level: LOW

% Solids: 66.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	7.9	mg/kg			P	0.24	TJA61 Trace ICPAES	991014-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

764113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-02

Sample wt/vol: 5.7 (g/mL) G Lab File ID: 5E319

Level: (low/med) MED Date Received: 10/07/99

% Moisture: not dec. 29 Date Analyzed: 10/13/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 200.0

Soil Extract Volume: 10 (ml) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q

71-43-2-----	benzene	196000	
108-88-3-----	toluene	1340000	
100-41-4-----	ethylbenzene	273000	
1330-20-7-----	xylenes (total)	1460000	

FORM I VOA

DATA VALIDATION
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13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

764113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S
 Matrix: (soil/water) SOIL Lab Sample ID: 9910253-02
 Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2P520
 Level: (low/med) LOW Date Received: 10/07/99
 % Moisture: 29 decanted: (Y/N) N Date Extracted: 10/09/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/15/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3-----	naphthalene	469	U	U ↓
91-58-7-----	2-chloronaphthalene	469	U	
208-96-8-----	acenaphthylene	469	U	
83-32-9-----	acenaphthene	469	U	
86-73-7-----	fluorene	469	U	
85-01-8-----	phenanthrene	469	U	
120-12-7-----	anthracene	469	U	
206-44-0-----	fluoranthene	469	U	
129-00-0-----	pyrene	469	U	
56-55-3-----	benzo (a) anthracene	469	U	
218-01-9-----	chrysene	469	U	
205-99-2-----	benzo (b) fluoranthene	469	U	
207-08-9-----	benzo (k) fluoranthene	469	U	
50-32-8-----	benzo (a) pyrene	469	U	
193-39-5-----	indeno (1,2,3-cd) pyrene	469	U	
53-70-3-----	dibenz (a,h) anthracene	469	U	
191-24-2-----	benzo (g,h,i) perylene	469	U	

FORM I SV-1

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DUPLICATE

FORM 1 Science Applications 07-OCT-1999 SA

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

764113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-02

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 049F4901

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 29 decanted: (Y/N) N Date Extracted: 10/18/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
-----Diesel Range Organics	951	B	=F01, F08	

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

764113

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-02

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 1E1015

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 29 Date Analyzed: 10/11/99

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 2500.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) UG/KG	Q
	-----Gasoline Range Organics_____	3800000	_____ =

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA13S

Method Type: Total Metals

DUPLICATE

Sample ID: 9910253-02

Client ID: 764113

Contract: SAJC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 10/7/99

Level: LOW

% Solids: 71.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	8.0	mg/kg			P	0.23	TJA61 Trace ICPAES	991014-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-04

Sample wt/vol: 5.3 (g/mL) G Lab File ID: 5E216

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 21 Date Analyzed: 10/12/99

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

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

71-43-2-----benzene	2.4	U
108-88-3-----toluene	2.4	U
100-41-4-----ethylbenzene	2.4	U
1330-20-7-----xylenes (total)	7.2	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2P522

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 21 decanted: (Y/N) N Date Extracted: 10/09/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/15/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

91-20-3-----	naphthalene	422	U
91-58-7-----	2-chloronaphthalene	422	U
208-96-8-----	acenaphthylene	422	U
83-32-9-----	acenaphthene	422	U
86-73-7-----	fluorene	422	U
85-01-8-----	phenanthrene	422	U
120-12-7-----	anthracene	422	U
206-44-0-----	fluoranthene	422	U
129-00-0-----	pyrene	422	U
56-55-3-----	benzo(a) anthracene	422	U
218-01-9-----	chrysene	422	U
205-99-2-----	benzo(b) Fluoranthene	422	U
207-08-9-----	benzo(k) fluoranthene	422	U
50-32-8-----	benzo(a) pyrene	422	U
193-39-5-----	indeno(1,2,3-cd)pyrene	422	U
53-70-3-----	dibenz(a,h)anthracene	422	U
191-24-2-----	benzo(g,h,i) perylene	422	U

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FORM 1 Science Applications 07-OCT-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

764211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-04

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 011F1101

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 21 decanted: (Y/N) N Date Extracted: 10/18/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q

-----Diesel Range Organics		2.2	B

= F06, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1E105

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 21 Date Analyzed: 10/11/99

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	126	U	U

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA13S

Method Type: Total Metals

Sample ID: 9910253-04

Client ID: 764211

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 10/7/99

Level: LOW

% Solids: 79.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	8.0	mg/kg			P	0.20	TJA61 Trace ICPAES	991014-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-03

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 5E215

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 Date Analyzed: 10/12/99

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

Soil Extract Volume: _____ (mL) 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-----	xlenes (total)	6.8	U

FORM I VOA

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2P521

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 10/09/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/15/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
91-20-3	naphthalene	438	U	U ↓
91-58-7	2-chloronaphthalene	438	U	
208-96-8	acenaphthylene	438	U	
83-32-9	acenaphthene	438	U	
86-73-7	fluorene	438	U	
85-01-8	phenanthrene	438	U	
120-12-7	anthracene	438	U	
206-44-0	fluoranthene	438	U	
129-00-0	pyrene	438	U	
56-55-3	benzo (a) anthracene	438	U	
218-01-9	chrysene	438	U	
205-99-2	benzo (b) fluoranthene	438	U	
207-08-9	benzo (k) fluoranthene	438	U	
50-32-8	benzo (a) pyrene	438	U	
193-39-5	indeno (1,2,3-cd) pyrene	438	U	
53-70-3	dibenz (a,h) anthracene	438	U	
191-24-2	benzo (g,h,i) perylene	438	U	

FORM I SV-1

OLM03.0

FORM 1 Science Applications07-OCT-1999 SA
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

764311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-03

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 050F5001

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 24 decanted: (Y/N) N Date Extracted: 10/18/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) MG/KG Q

-----Diesel Range Organics	11.1	B	=F01, F08

FORM I SV

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764311

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA13S

Matrix: (soil/water) SOIL Lab Sample ID: 9910253-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1E107

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: not dec. 24 Date Analyzed: 10/11/99

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	490	

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Form 1: Inorganic Analyses Data Sheet

SDG No.: FSBA13S

Method Type: Total Metals

Sample ID: 9910253-03

Client ID: 764311

Contract: SAIC01699

Lab Code: GEL

Case No.:

SAS No.:

Matrix: SOIL

Date Received: 10/7/99

Level: LOW

% Solids: 76.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	5.7	mg/kg			P	0.21	TJA61 Trace ICPAES	991014-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
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APPENDIX VI

**ALTERNATE CONCENTRATION LIMITS (ACL) AND
ALTERNATE THRESHOLD LEVEL (ATL)
CALCULATIONS**

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1.0 Alternate Concentration Limits

Benzene, ethylbenzene, toluene, xylenes, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and naphthalene were identified as COPCs for groundwater at the site. Benzene is the indicator compound for VOCs, and naphthalene is the indicator compound for PAHs. The modeling results for benzene and naphthalene estimated a DAF of 10 and 1,587,000, respectively, for the sanitary sewer line located 180 feet downgradient of the source area. The compound specific regulatory levels or risk-based screening values were used in conjunction with the DAF to develop constituent specific ACLs that are presented in Table VI-A. The DAF for the tributary to Taylors Creek was 73,400, which would result in an excessive ACL that would be much larger than the ACL associated with the sanitary sewer line. Thus no ACLs were developed for this location. As indicated in Table VI-A, the maximum observed concentration of each constituent is presented below for comparison with the calculated ACL.

Table VI-A. Alternate Concentration Limits for Contaminants in Groundwater

Contaminant	Regulatory Level (µg/L)	Sanitary Sewer Line		Maximum Observed CAP-Part B Concentration (µg/L)	Maximum Observed CAP-Part A Concentration (µg/L)
		DAF ¹	ACL ² (µg/L)		
Benzene	71.28 ^a	10	713	21,100	32,700
Toluene	200,000 ^a	10	2,000,000	28,200	97,800
Ethylbenzene	28,718 ^a	10	287,180	3,110	5,210
Xylenes	12,000 ^b	10	120,000	15,400	28,400
Benzo(a)anthracene	0.0311 ^a	1,587,000	49,356	1.8	ND
Benzo(a)pyrene	0.0311 ^a	1,587,000	49,356	1.8	ND
Benzo(b)fluoranthene	0.092 ^b	1,587,000	146,000	3.3	ND
Benzo(k)fluoranthene	0.0311 ^a	1,587,000	49,356	0.94	ND
Chrysene	0.0311 ^a	1,587,000	49,356	2.3	ND
Indeno(1,2,3-cd)pyrene	0.0311 ^a	1,587,000	49,356	1.4	ND
Naphthalene	6.5 ^b	1,587,000	10,315,500	392	991

¹ DAF = Maximum Predicted Concentration ÷ Predicted Concentration at the Receptor
= 36700 ÷ 3740 ≈ 10 at the sanitary sewer line

² ACL = Regulatory Level × DAF

^a In-Stream Water Quality Standard

^b Risk-based screening criteria

ND Note detected

2.0 Alternate Threshold Levels

The highest benzene concentration in soil above the water table was 104 mg/kg in sample 761921, which was located at 5.0 – 7.5 ft BGS in boring 76-19. Thus, this value was used to determine ATLs as opposed to the maximum benzene concentration in soil of 267 mg/kg that was observed below the water table. The nearest potential receptor location is a sanitary sewer line, which is located 180 feet downgradient of the area of highest contamination. Thus, the dilution attenuation for benzene from the source to the sanitary sewer line was considered in the ATL calculations. The DAF for benzene is calculated for migration of leachate to the water table based on SESOIL modeling results. The ATLs for soil are presented in Table VI-B along with the maximum observed concentration of each constituent.

The ATL for benzene can be calculated using the following steps:

- Step 1 – calculate the fractional organic carbon (f_{cs}) content of the contaminated soil:
 $f_{cs} = 0.0095$ (geometric mean of site specific total organic carbon data)
- Step 2 – calculate the contaminant concentration in soil pore water (C_w) directly in contact with contaminated soil:

$$C_w = \frac{C_s}{K_{oc} \times f_{cs}}$$

where: C_s = maximum concentration in soil above the water table
 K_{oc} = organic carbon partitioning coefficient (GA UST CAP-Part A Guidance, Appendix I, Table 1)
 f_{cs} = fractional organic carbon content (calculated in step 1)

Contaminant	C_s (mg/kg)	K_{oc} (mL/g)	f_{cs} (dimensionless)	C_w (mg/L)
Benzene	104	81	0.0095	135.2
Toluene	1700	133	0.0095	1345.5
Ethylbenzene	333	176	0.0095	199.2
Xylenes	1740	639	0.0095	286.6

- Step 3 – calculate the dilution attenuation factor for migration of leachate (DAF_1) to the water table based on the SESOIL predicted maximum contaminant concentration in groundwater:

$$DAF_1 = \frac{C_w}{C_{max,w}}$$

where: C_w = concentration in soil pore water directly in contact with contaminated soil
 $C_{max,w}$ = SESOIL predicted maximum concentration in the leachate at the water table interface

Contaminant	C_w (mg/L)	$C_{max,w}$ (mg/L)	DAF_1 (dimensionless)
Benzene	135.2	70.9	1.9
Toluene	1345.5	71.9	18.7
Ethylbenzene	199.2	12.7	15.7
Xylenes	286.6	10.13	28.3

- Step 4 – calculate the alternate threshold level:

$$ATL = (K_{oc}) (f_{cs}) (C_{std}) (DAF_1) (DAF_w)$$

where: K_{oc} = organic carbon partitioning coefficient (GA UST CAP-Part A Guidance, Appendix I, Table 1)

f_{cs} = fractional organic carbon content (calculated in step 1)
 C_{std} = applicable water quality standard
 DAF_i = dilution attenuation factor for the migration of leachate
 DAF_w = dilution attenuation factor for the migration of groundwater (calculated for ACLs in Section 1.0)

Contaminant	K_{oc} (mL/g)	f_{cs}	C_{std} (mg/L)	DAF_i	DAF_w	ATL (mg/kg)
Benzene	81	0.0095	0.005	1.9	10	0.073
Toluene	133	0.0095	1.0	1.9	10	24
Ethylbenzene	176	0.0095	0.7	1.9	10	22
Xylenes	639	0.0095	10	1.9	10	1153
Benzo(a)pyrene	282,185	0.0095	0.0002	1.9	10	10

Table VI-B. Alternative Threshold Levels for Contaminants in Soil

	ATL (mg/kg)	Maximum Observed Concentration (mg/kg)	
		CAP-Part A	CAP-Part B
Benzene	0.073	15.7	267
Toluene	24	325	1700
Ethylbenzene	22	117	333
Xylenes	1153	594	1740
Benzo(a)pyrene	10	1.39	0.816

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APPENDIX VII

MONITORING WELL DETAILS

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MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-11

BEGIN: 2/18/99

END: 2/18/99

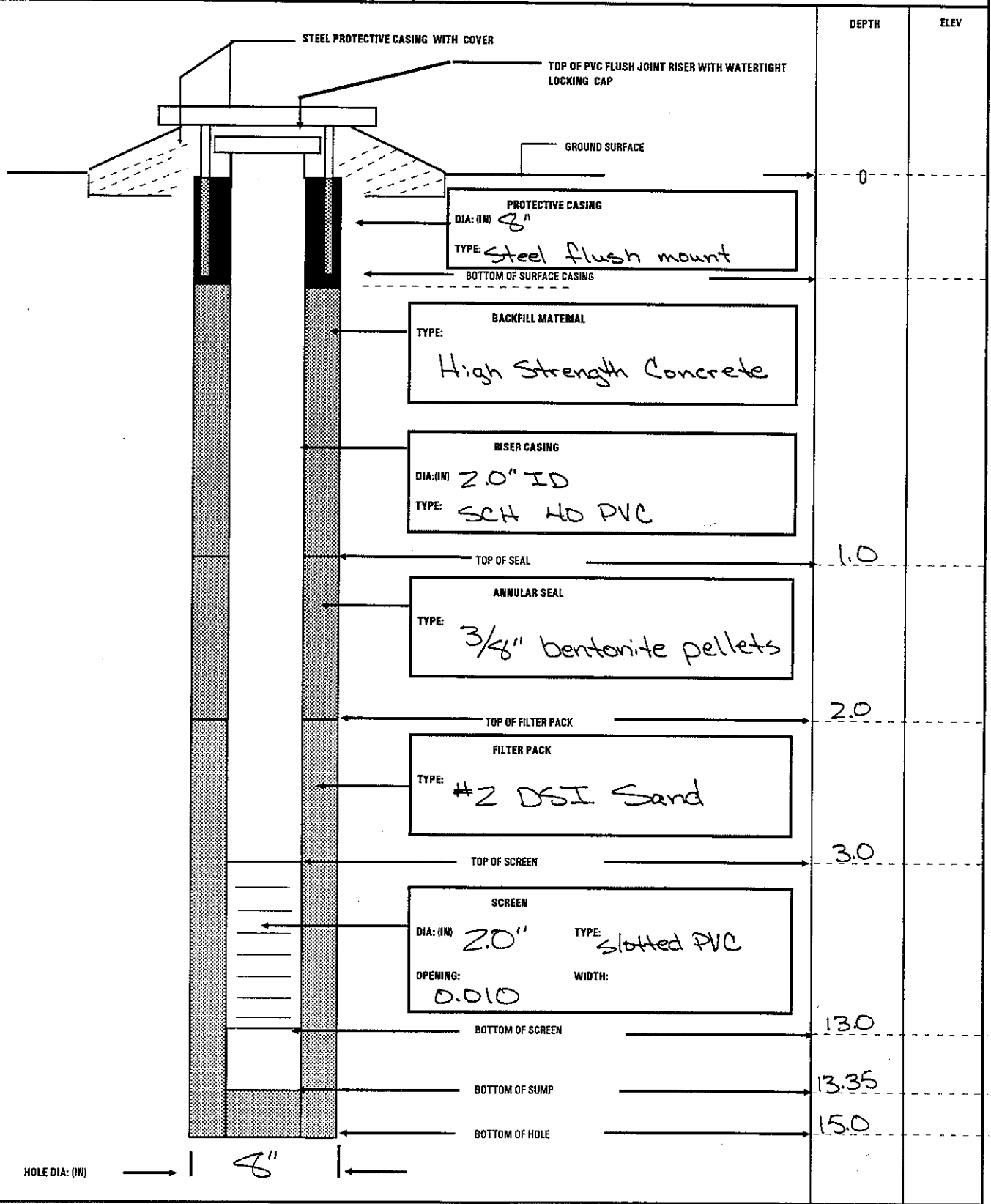
COORDINATES: N: 681308.11
E: 828809.55

REFERENCE POINT:

ELEVATION:

TOC

85.82



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-12

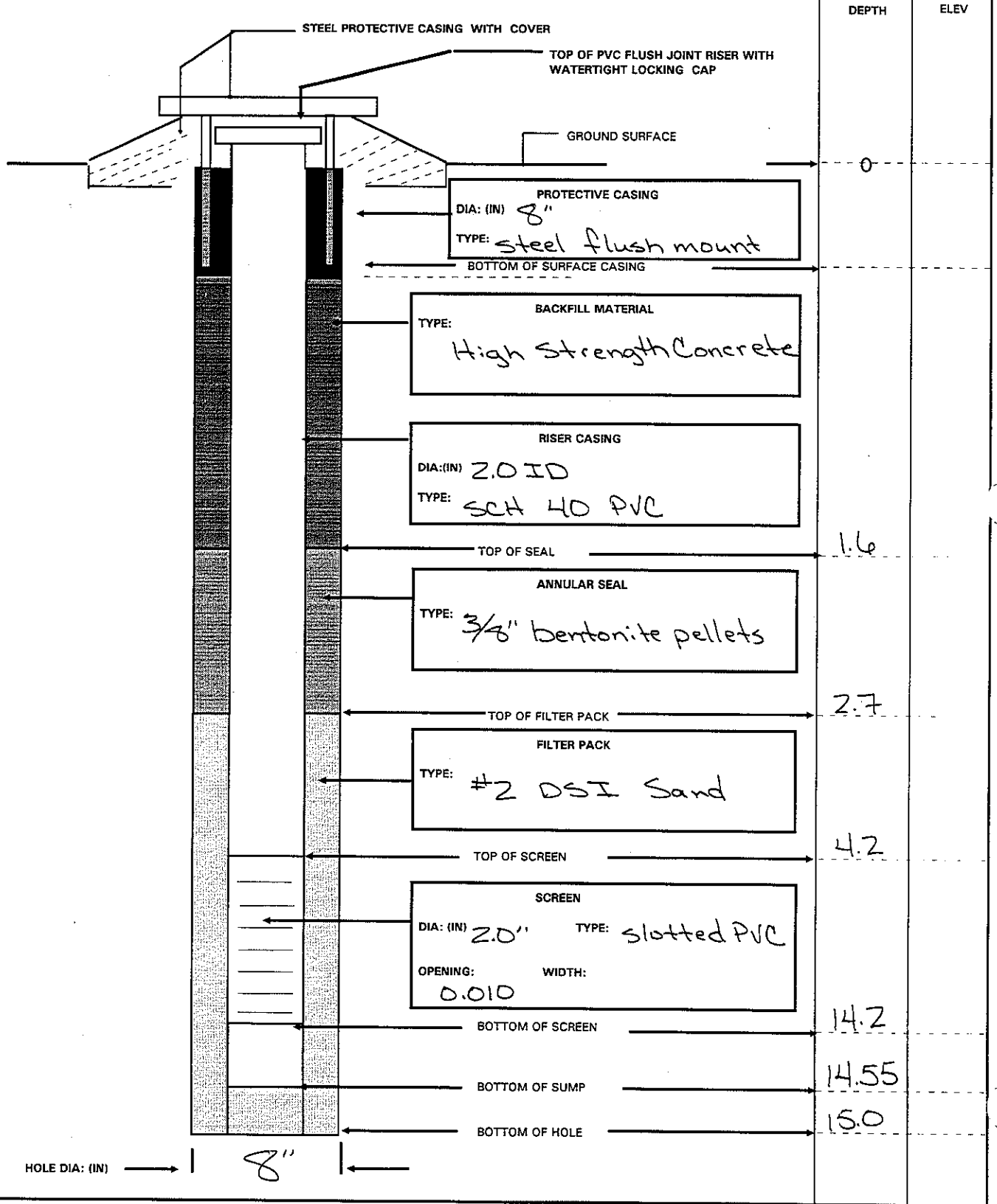
BEGIN: 2/17/99

END: 2/17/99

COORDINATES: N: 681155.31
E: 828911.64

REFERENCE POINT:
TOC

ELEVATION:
86.64



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-13

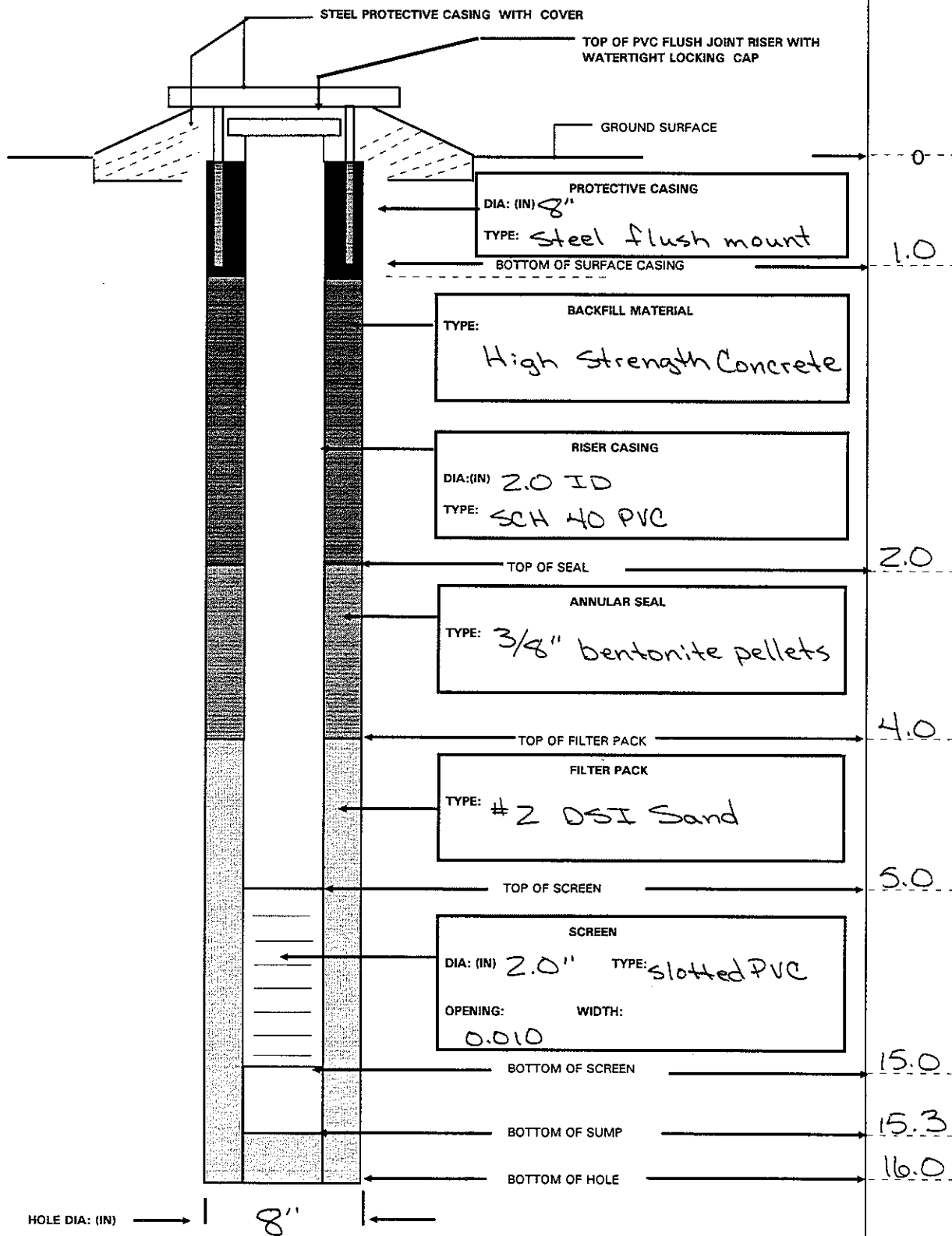
BEGIN: 2/17/99

END: 2/17/99

COORDINATES: N: 681074.38
E: 829014.25

REFERENCE POINT:
TDC

ELEVATION:
84.81



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-14

BEGIN: 2/18/99

END: 2/18/99

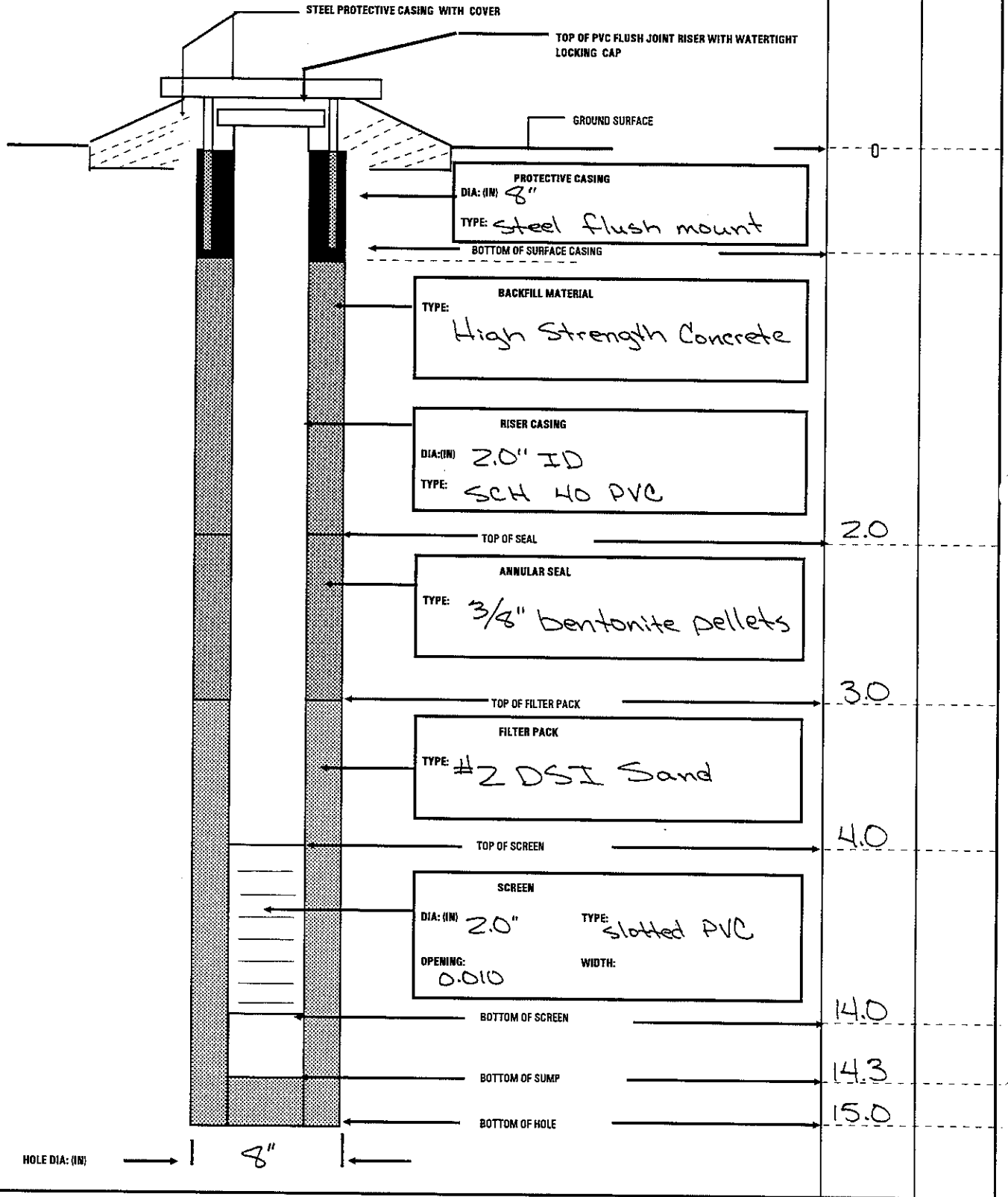
COORDINATES: N: 681166.42
E: 829014.75

REFERENCE POINT:

ELEVATION:

TBC

86.08



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-15

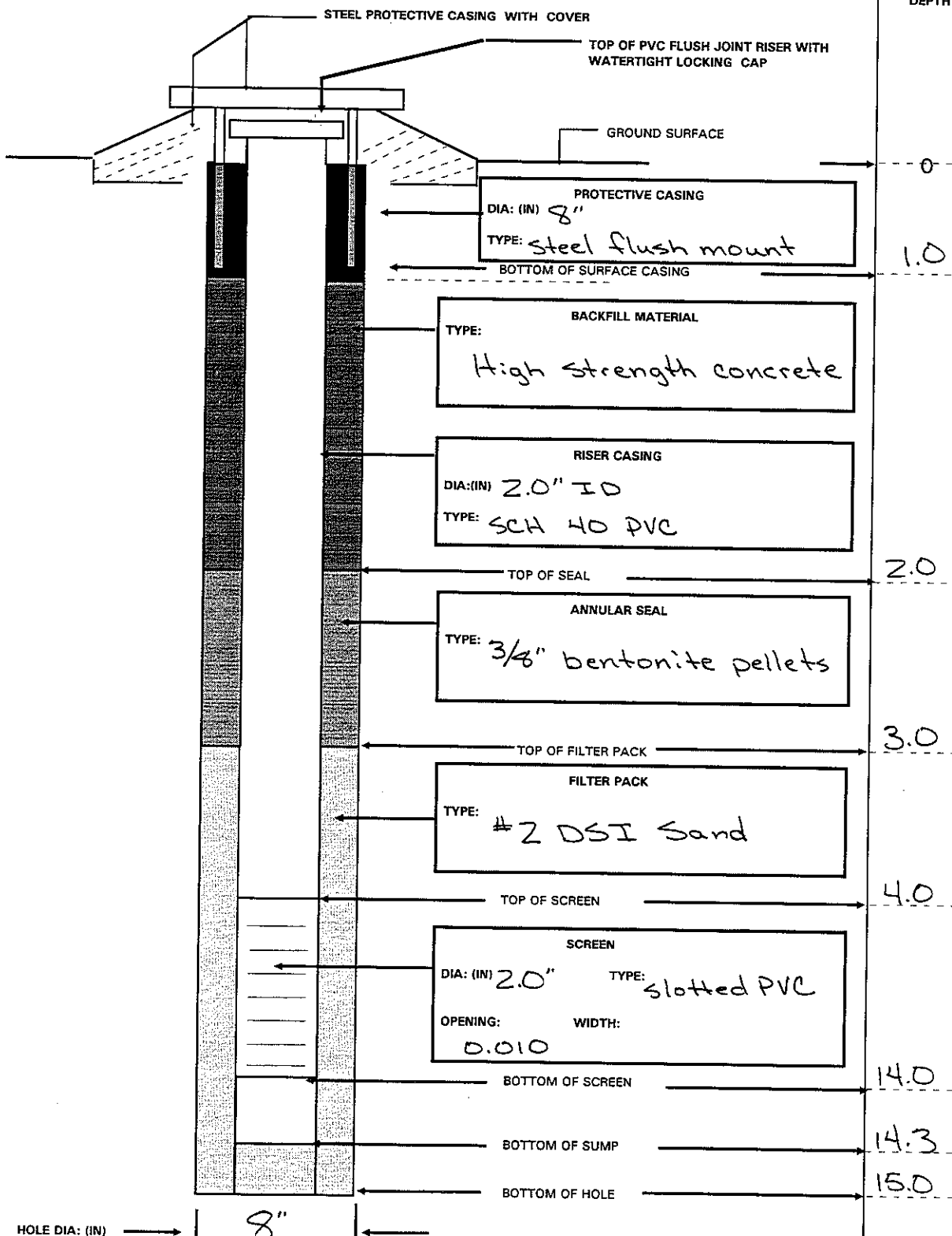
BEGIN: 2/18/99

END: 2/18/99

COORDINATES: N: 681206.73
E: 829004.38

REFERENCE POINT:
TOC

ELEVATION:
86.56



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-16

BEGIN: 2/19/99

END: 2/19/99

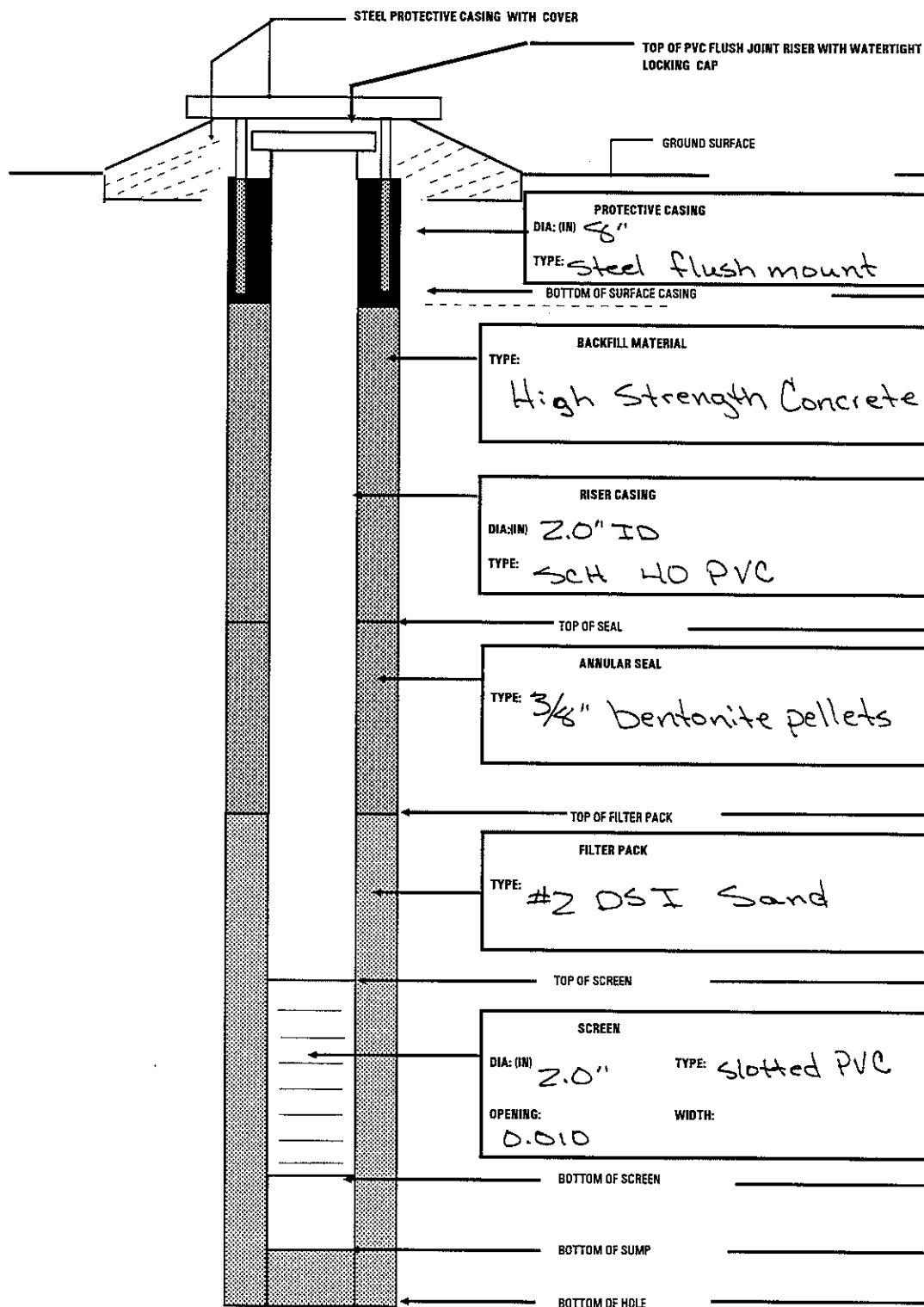
COORDINATES: N: 681238.27
E: 829024.41

REFERENCE POINT:

ELEVATION:

TOC

86.05



DEPTH

ELEV

0

1.0

3.0

4.0

14.0

14.3

15.0

HOLE DIA: (IN)

8"

PROJECT: Ft. Stewart USTs

MONITORING WELL

WELL NUMBER: 76-17

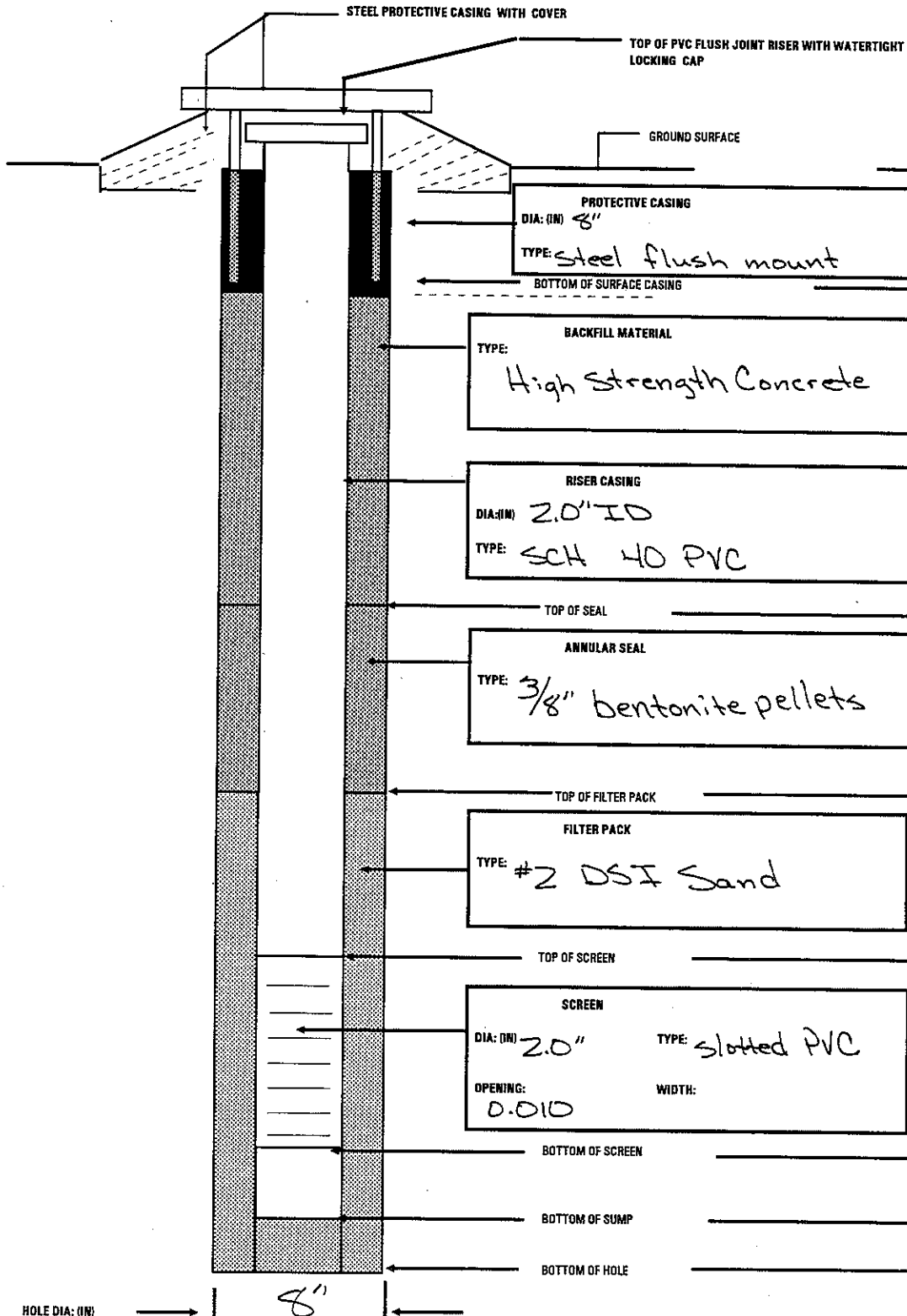
BEGIN: 2/19/99

END: 2/19/99

COORDINATES: N: 681313.68
E: 828995.88

REFERENCE POINT:
TOC

ELEVATION:
86.43



DEPTH

ELEV

0

1.0

3.0

4.0

14.0

14.3

15.0

MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-18

BEGIN: 2/18/99

END: 2/18/99

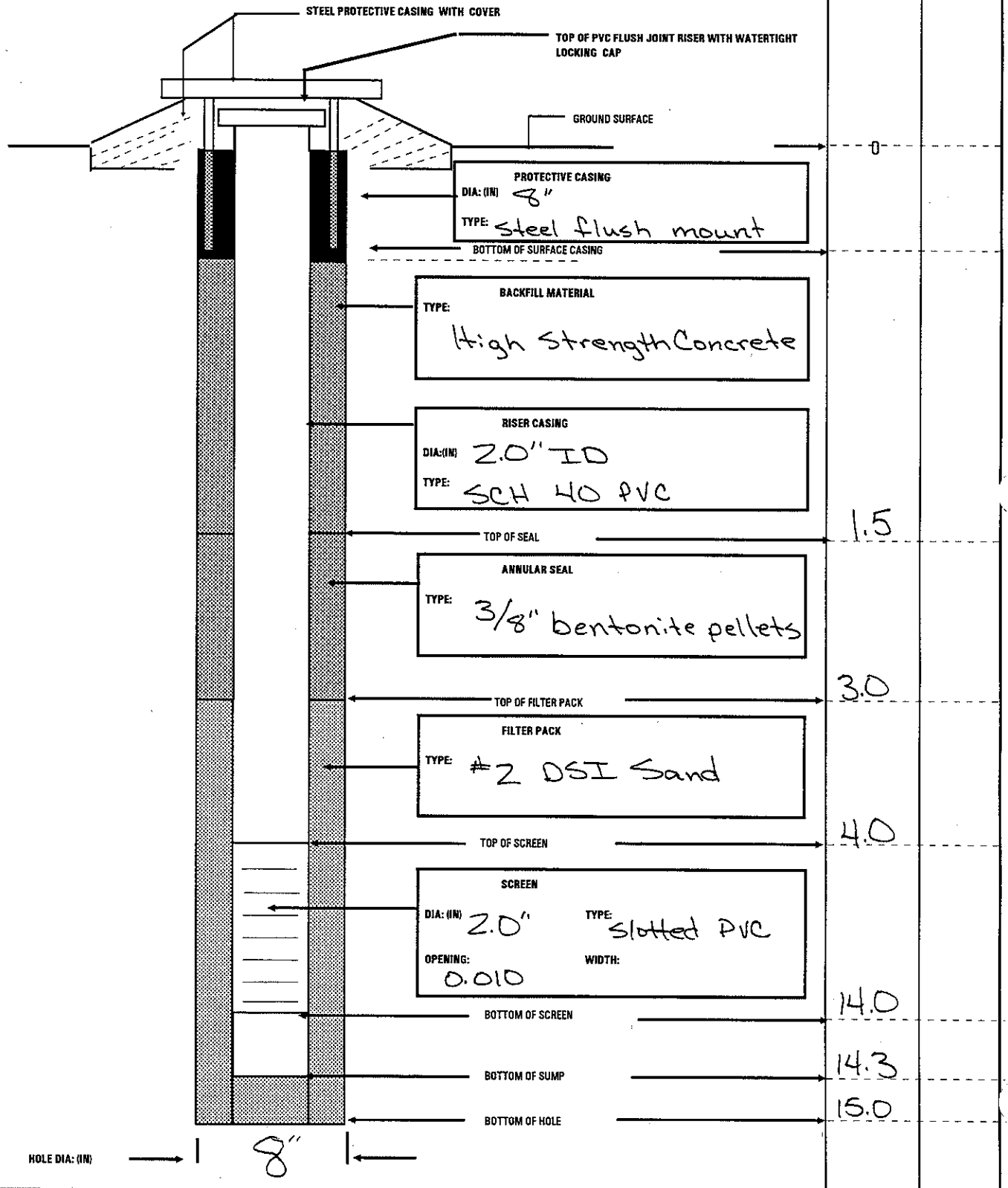
COORDINATES: N: 681223.40
E: 828969.93

REFERENCE POINT:

ELEVATION:

TOC

87.06



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-19

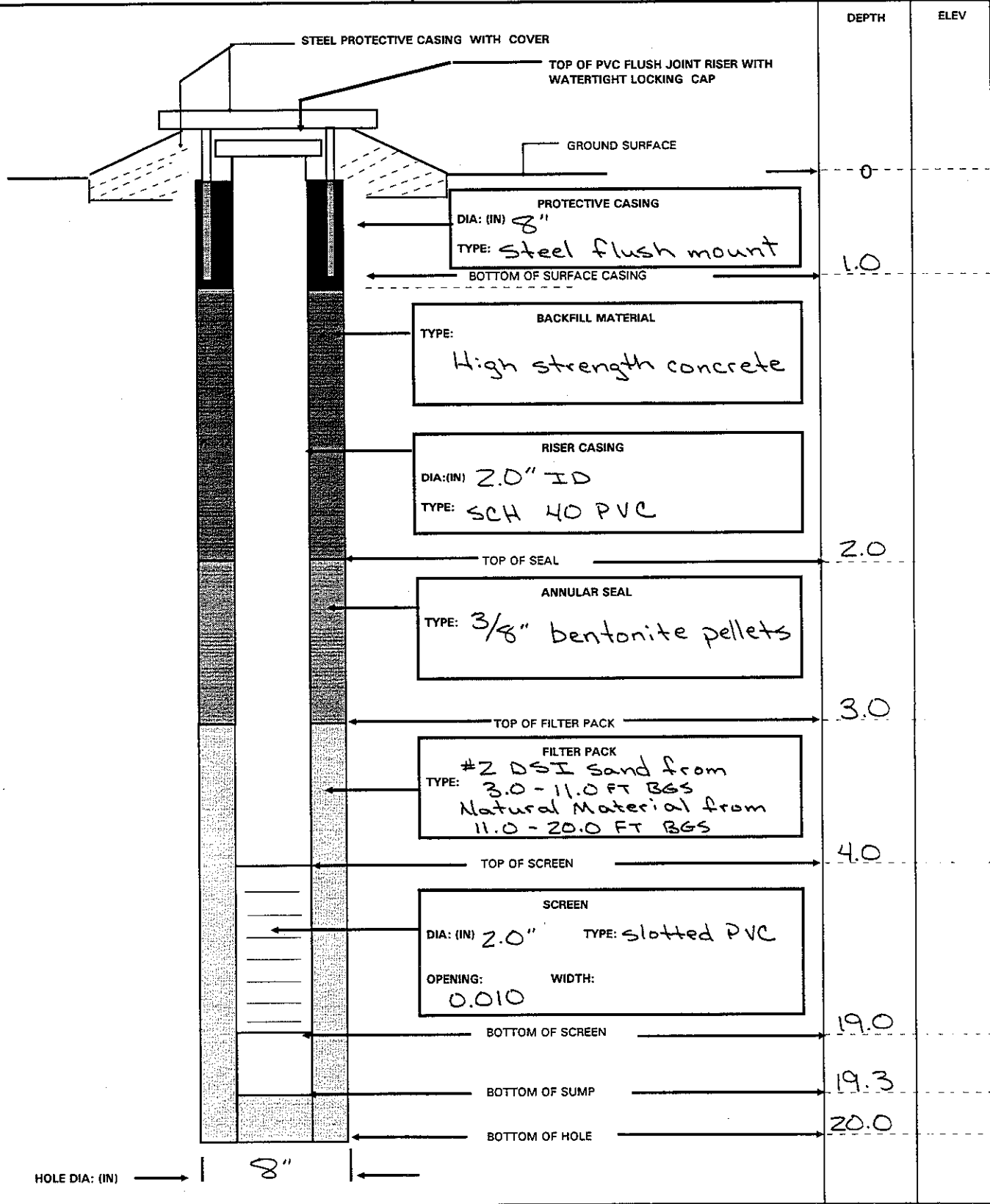
BEGIN: 2/17/99

END: 2/17/99

COORDINATES: N: 681249.53
E: 828922.25

REFERENCE POINT:
TOC

ELEVATION:
87.01



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-20

BEGIN: 2/18/99

END: 2/18/99

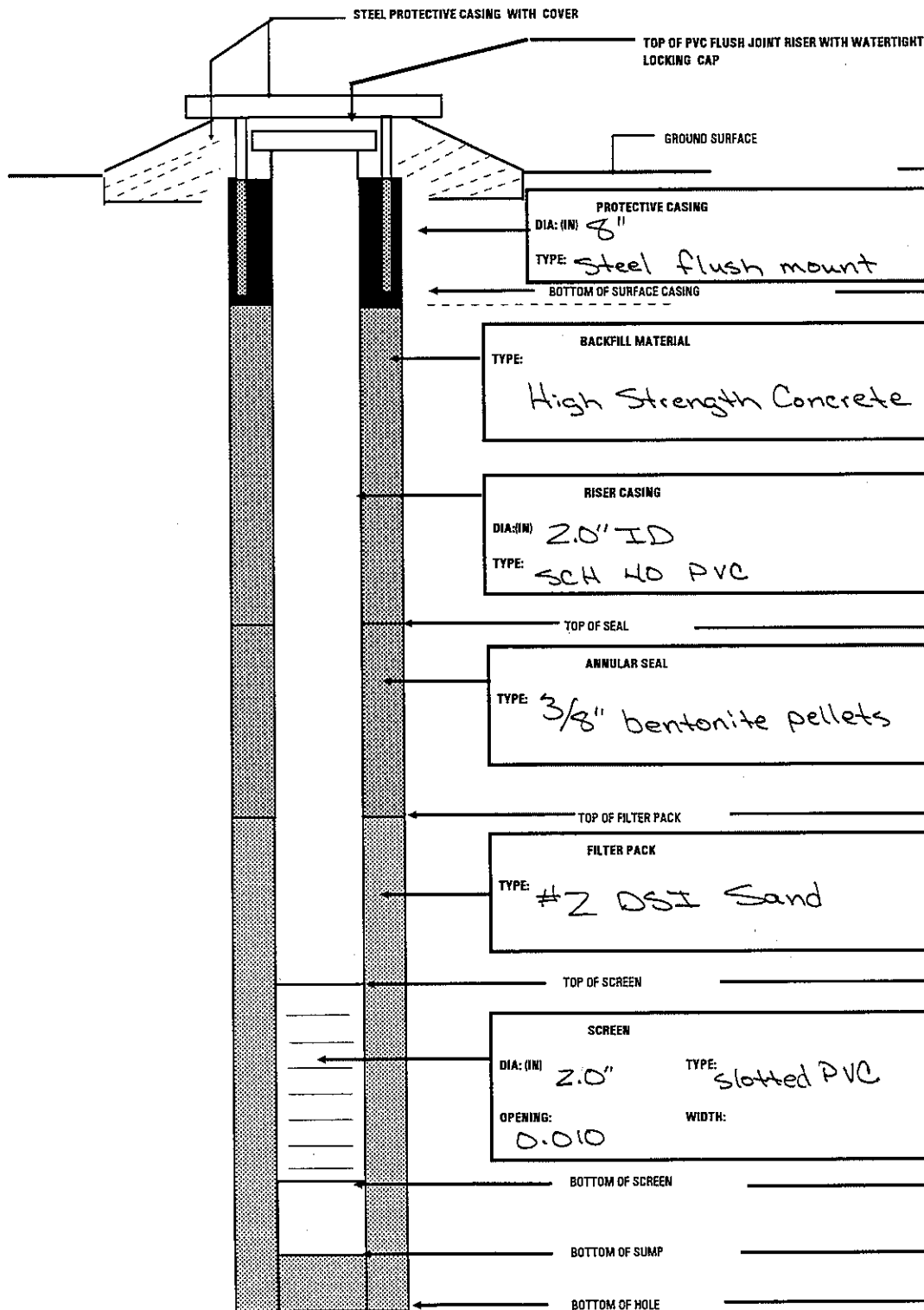
COORDINATES: N: 681303.48
E: 828907.25

REFERENCE POINT:

ELEVATION:

TDC

86.97



DEPTH

ELEV

0

2.0

3.2

3.5

13.5

13.8

15.0

HOLE DIA: (IN)

8"

MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-21

BEGIN: 2/20/99

END: 2/20/99

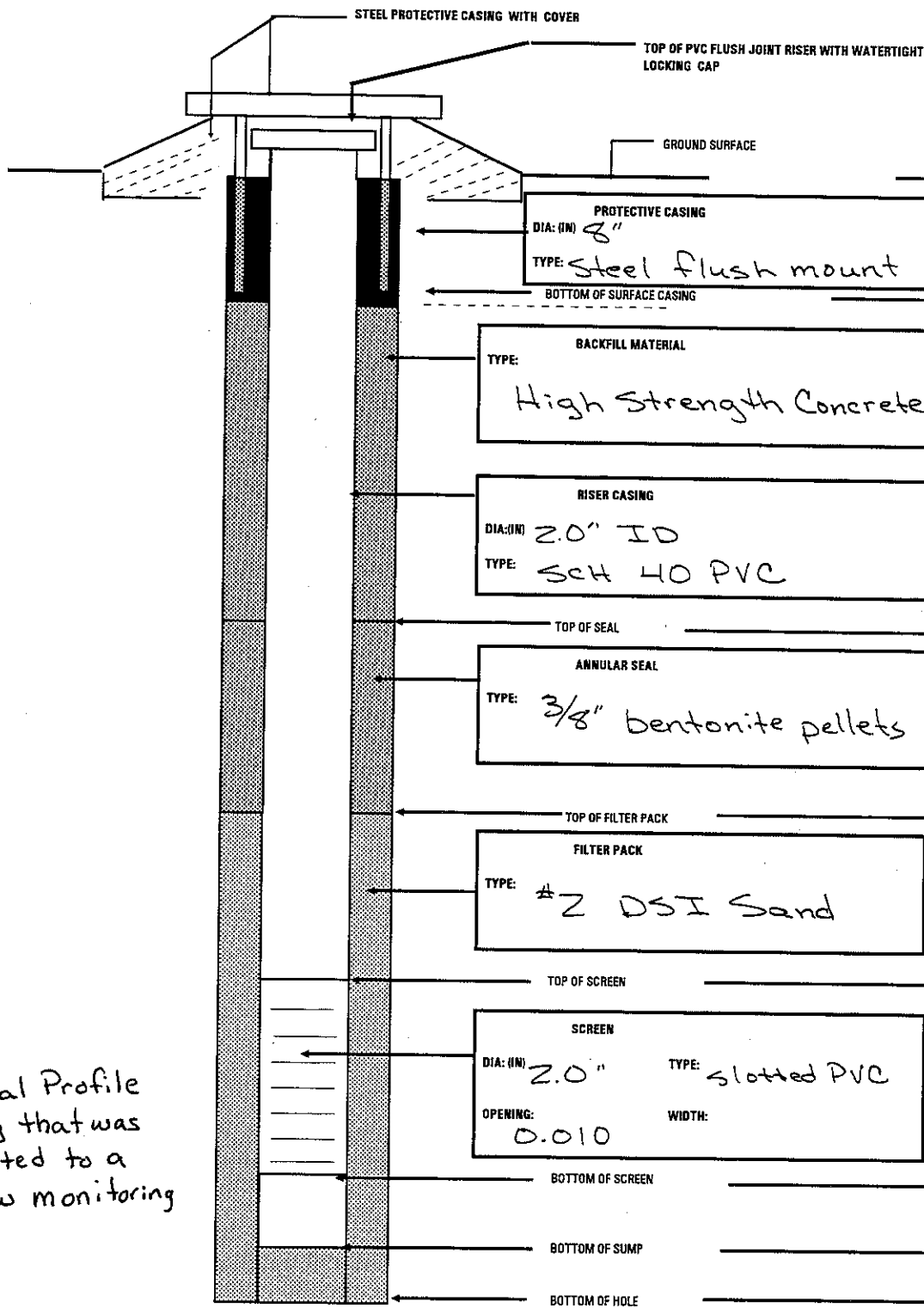
COORDINATES: N: 681227.62
E: 828918.04

REFERENCE POINT:

ELEVATION:

TOC

87.16



Vertical Profile boring that was converted to a shallow monitoring well.

HOLE DIA: (IN)

8"

MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-23

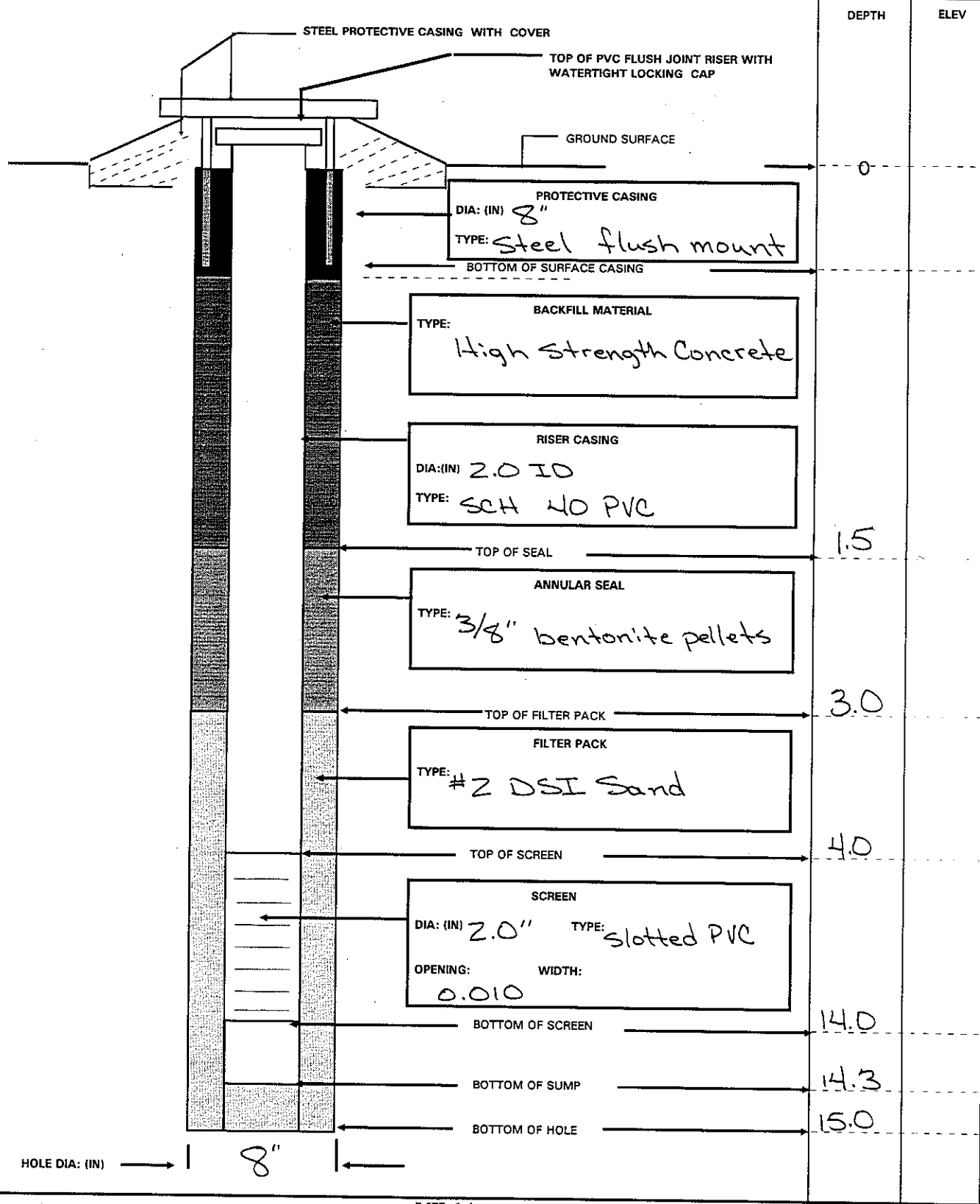
BEGIN: 2/18/99

END: 2/18/99

COORDINATES: N: 681201.70
E: 828870.31

REFERENCE POINT:
TOC

ELEVATION:
86.89



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-24

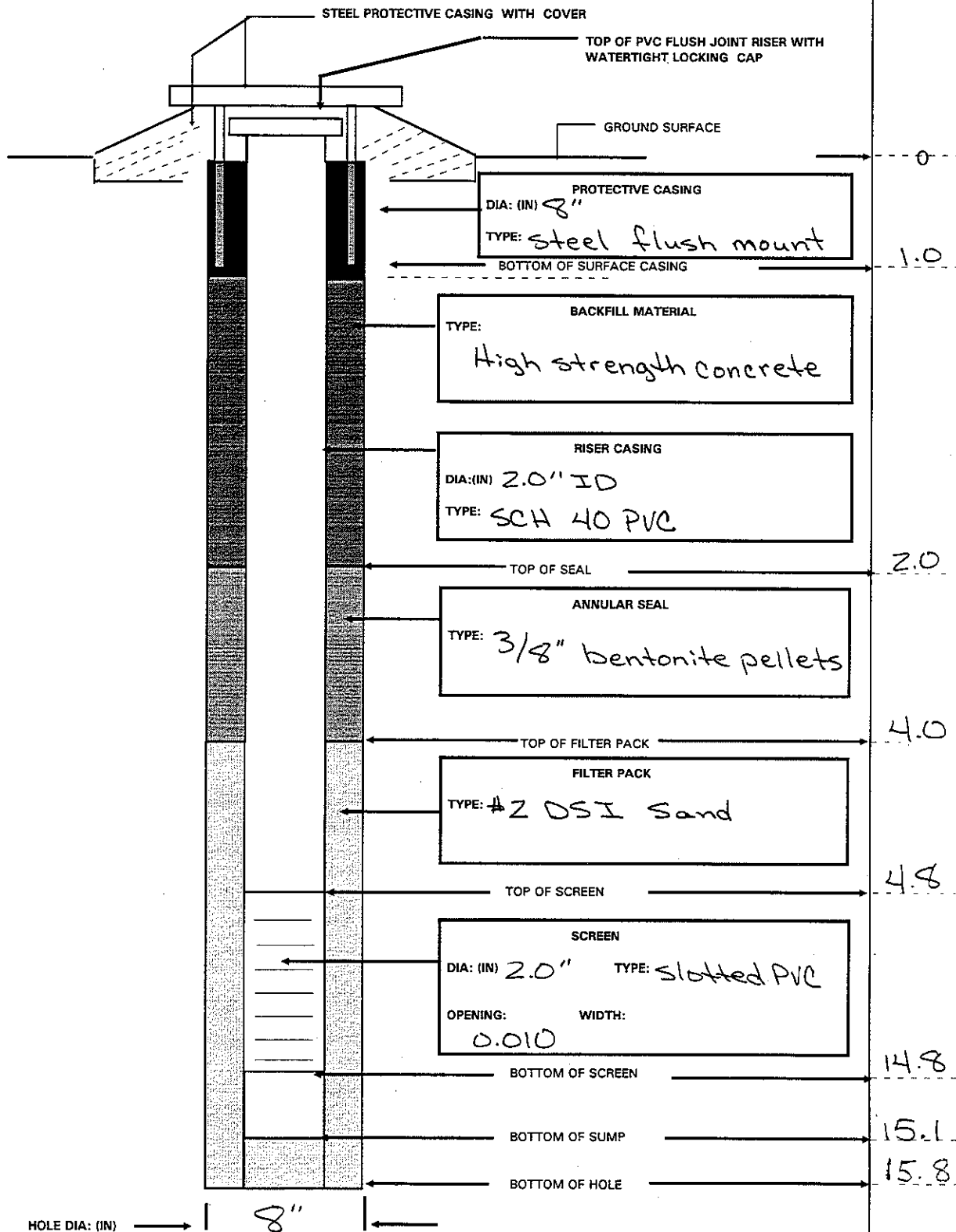
BEGIN: 2/17/99

END: 2/17/99

COORDINATES: N: 681101.78
E: 828959.19

REFERENCE POINT:
TOC

ELEVATION:
86.59



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-25

BEGIN: 2/19/99

END: 2/19/99

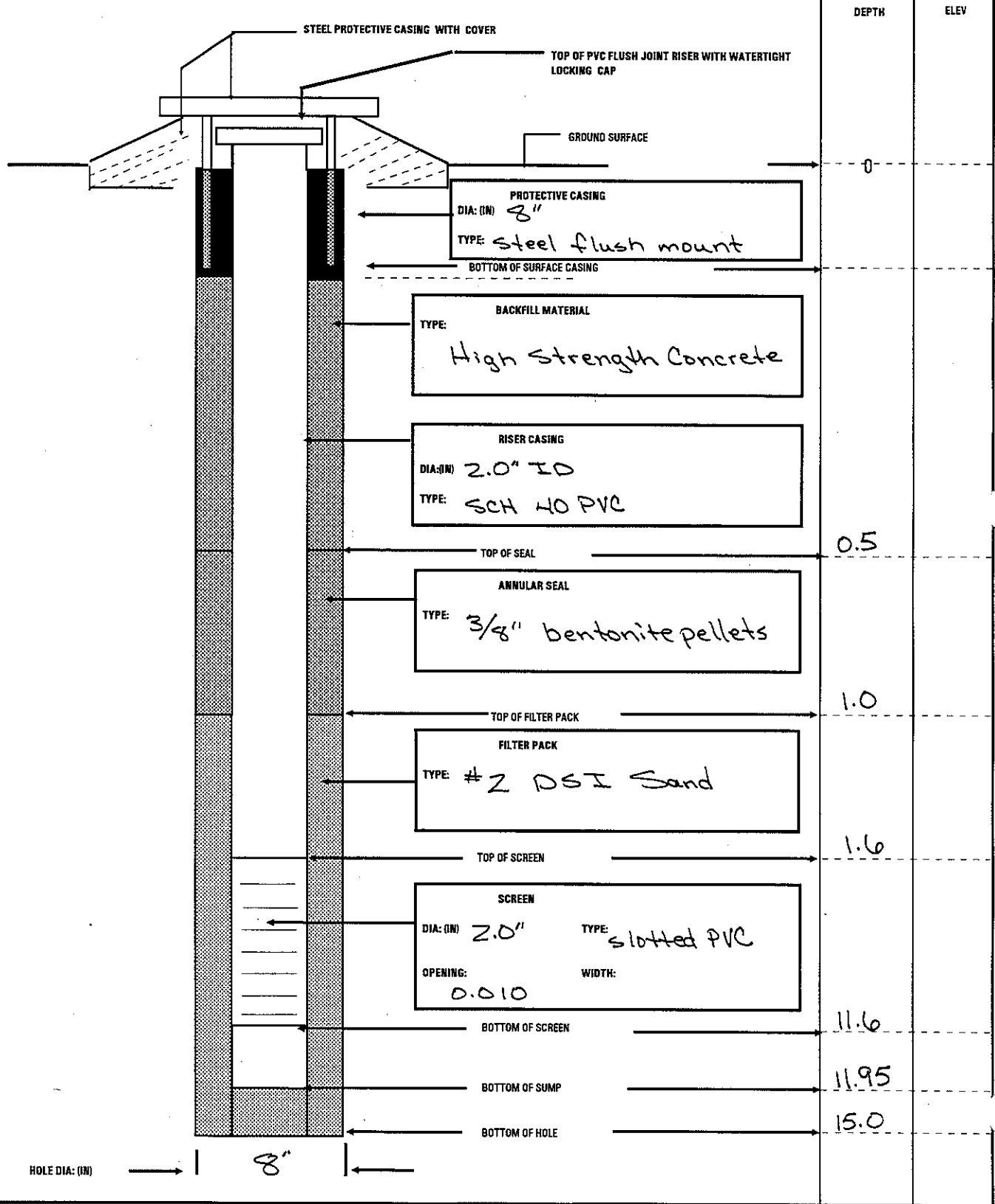
COORDINATES: N: 68114.70
E: 828823.12

REFERENCE POINT:

ELEVATION:

TOC

85.52



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-26

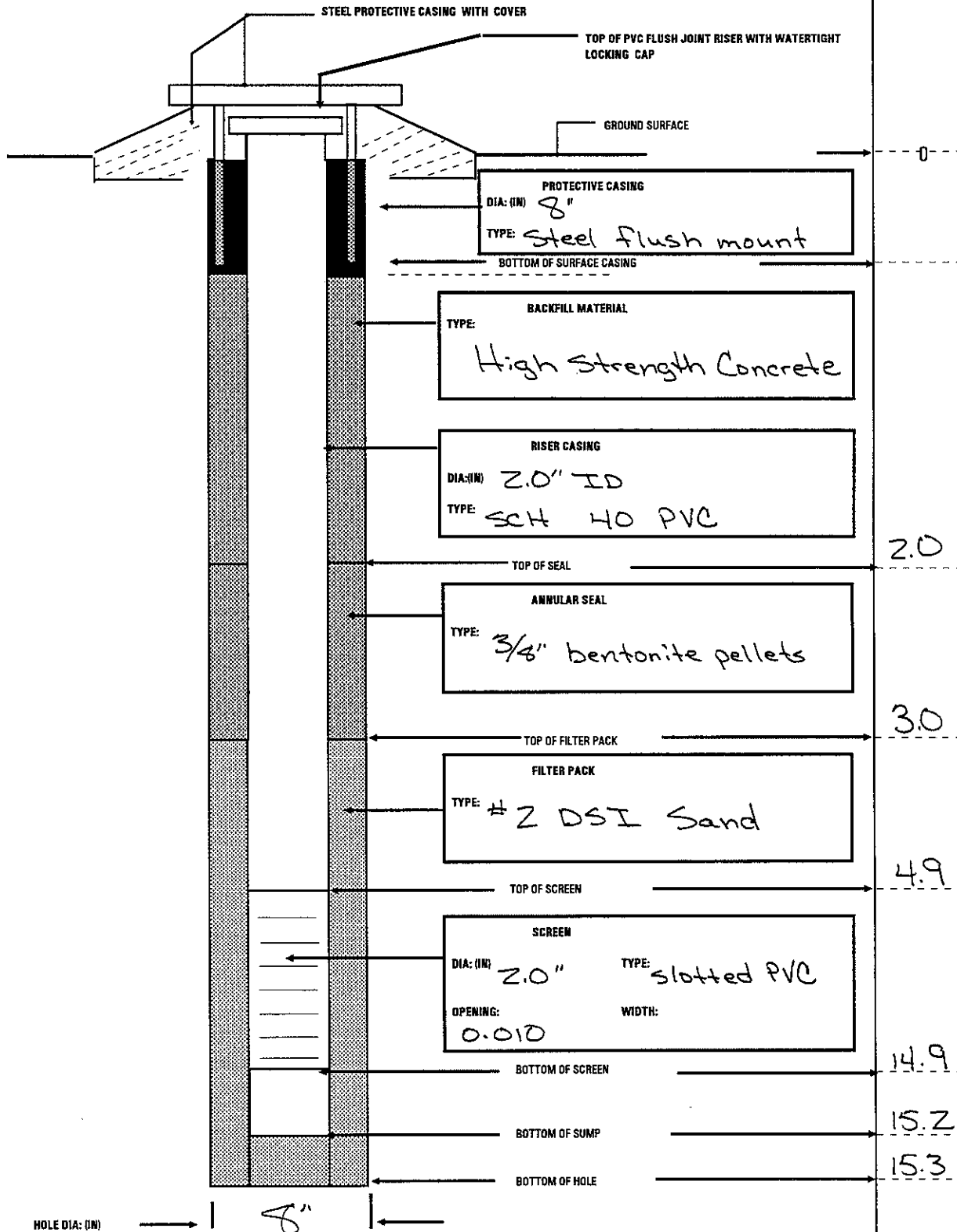
BEGIN: 2/19/99

END: 2/19/99

COORDINATES: N: 681009.44
E: 828916.34

REFERENCE POINT: TOC

ELEVATION: 84.48



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-27

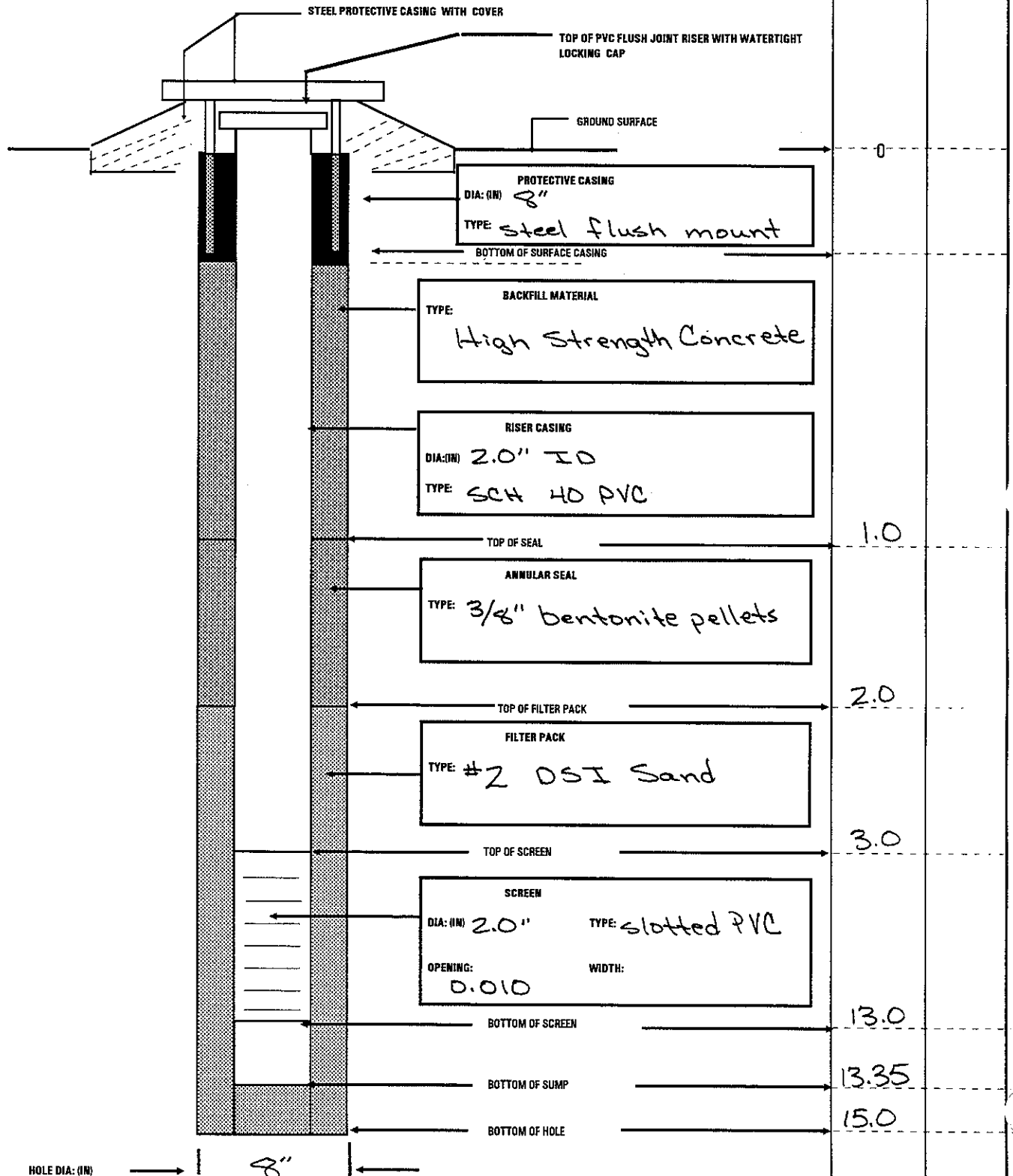
BEGIN: 2/19/99

END: 2/19/99

COORDINATES: N: 680996.54
E: 829113.70

REFERENCE POINT:
TOC

ELEVATION:
83.54



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-28

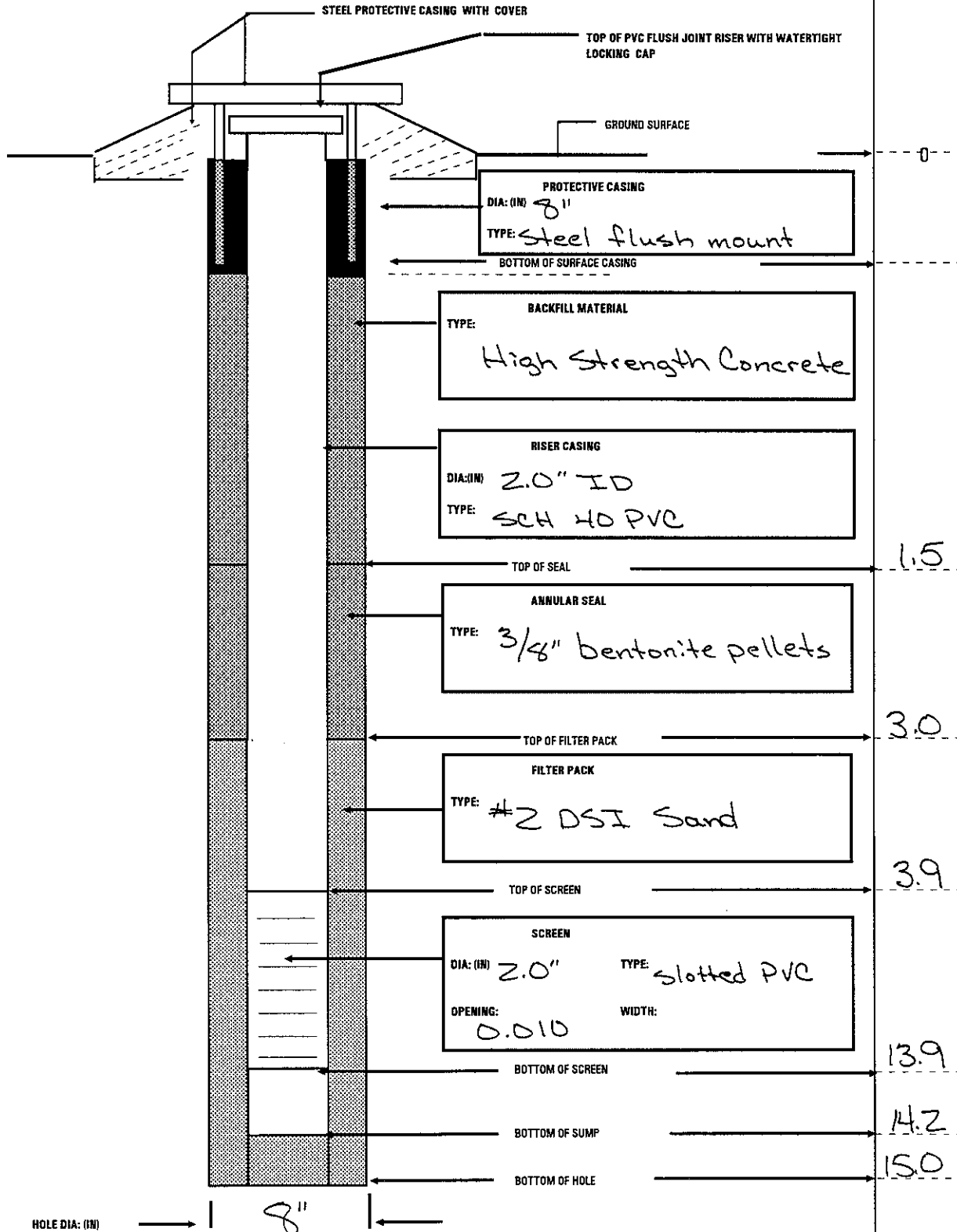
BEGIN: 2/19/99

END: 2/19/99

COORDINATES: N: 681155.83
E: 829090.91

REFERENCE POINT:
TOC

ELEVATION:
83.83



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-29

BEGIN: 9/24/99

END: 9/24/99

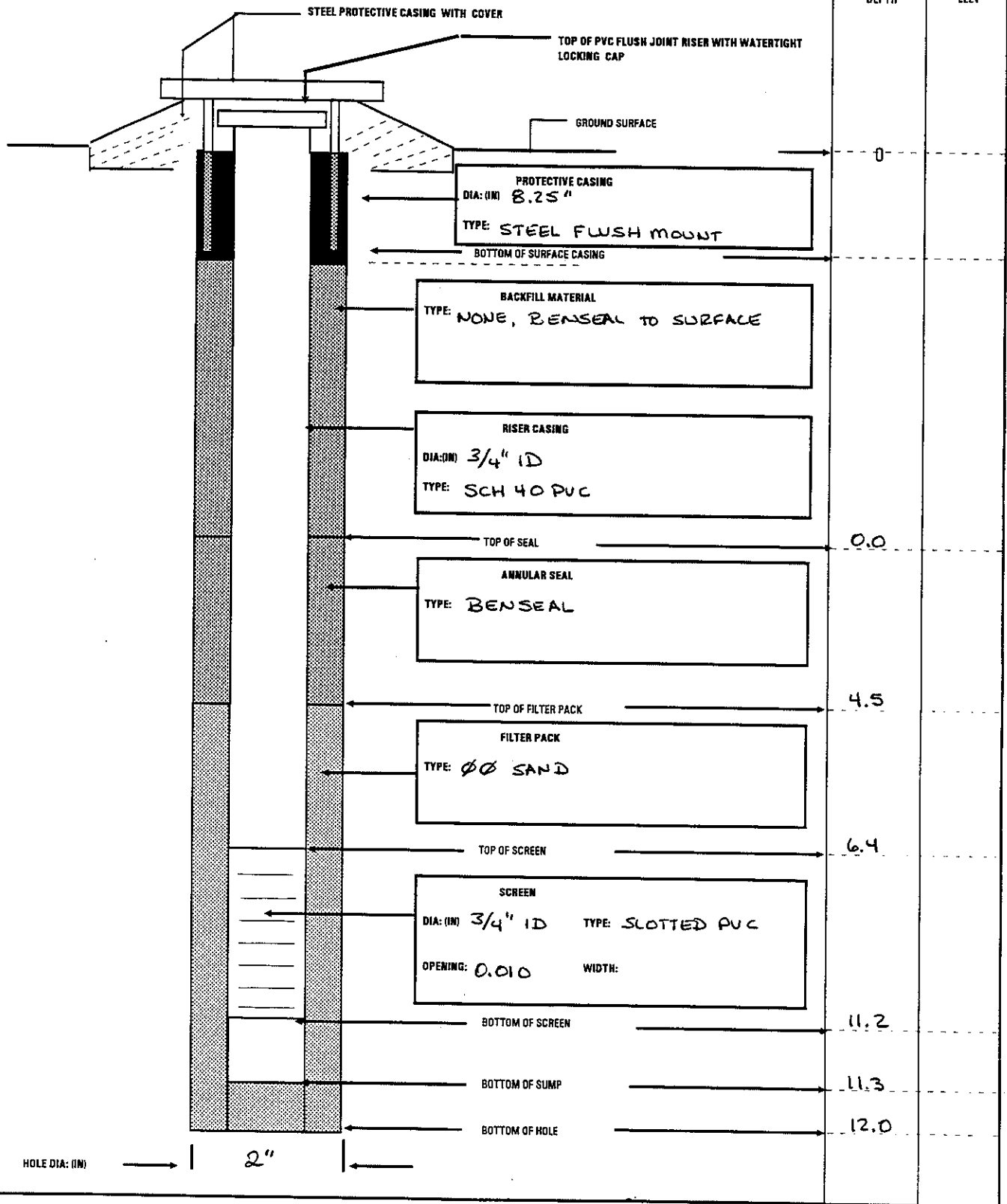
COORDINATES: N: 681354.92
E: 828919.00

REFERENCE POINT:

ELEVATION:

TOC

96.29



PROJECT: Ft. Stewart USTs

MONITORING WELL

WELL NUMBER: 76-30

BEGIN: 9/29/99

END: 9/29/99

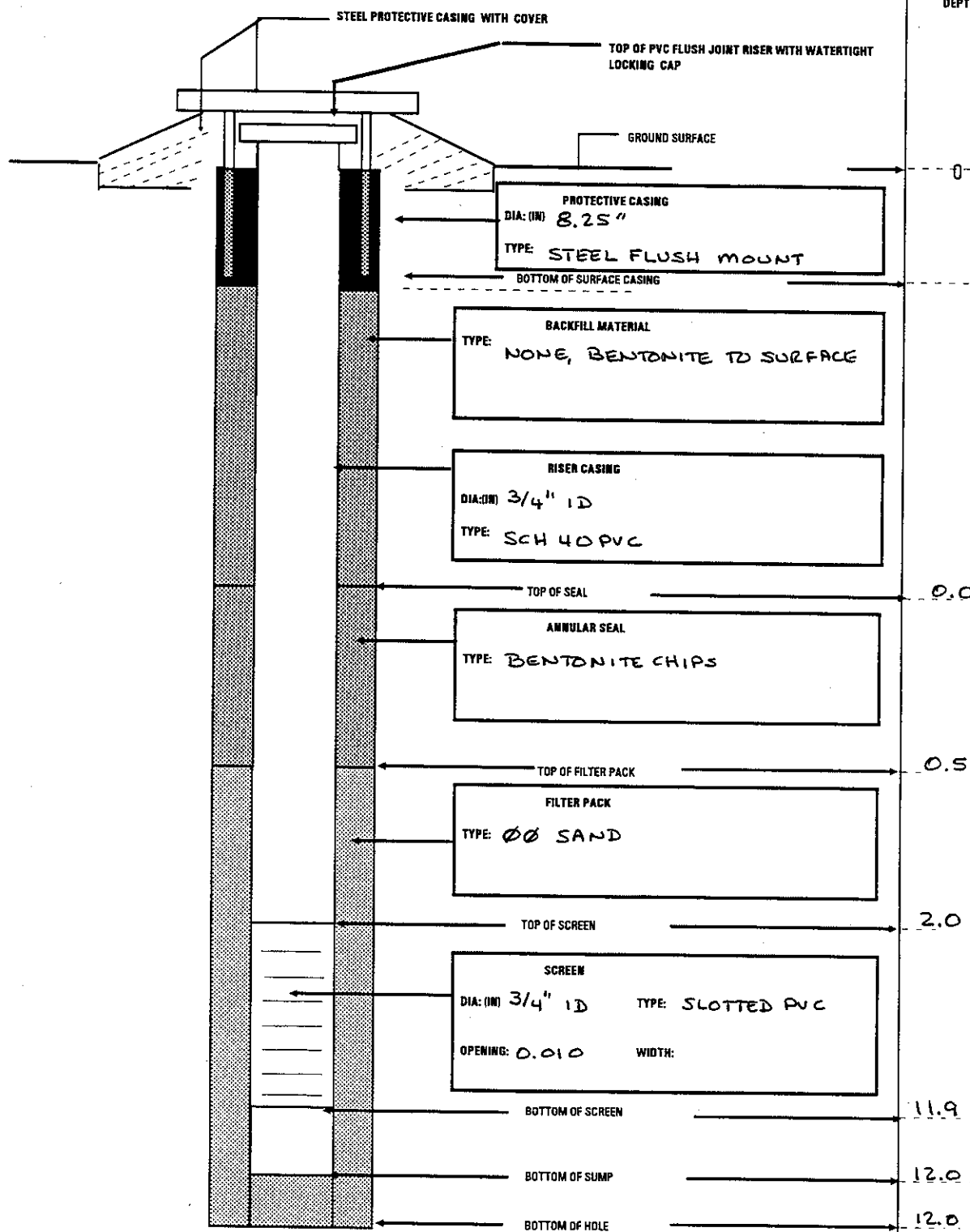
COORDINATES: N: 681257.76
E: 828853.21

REFERENCE POINT:

ELEVATION:

TDC

87.15



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-31

BEGIN: 9/27/99

END: 9/27/99

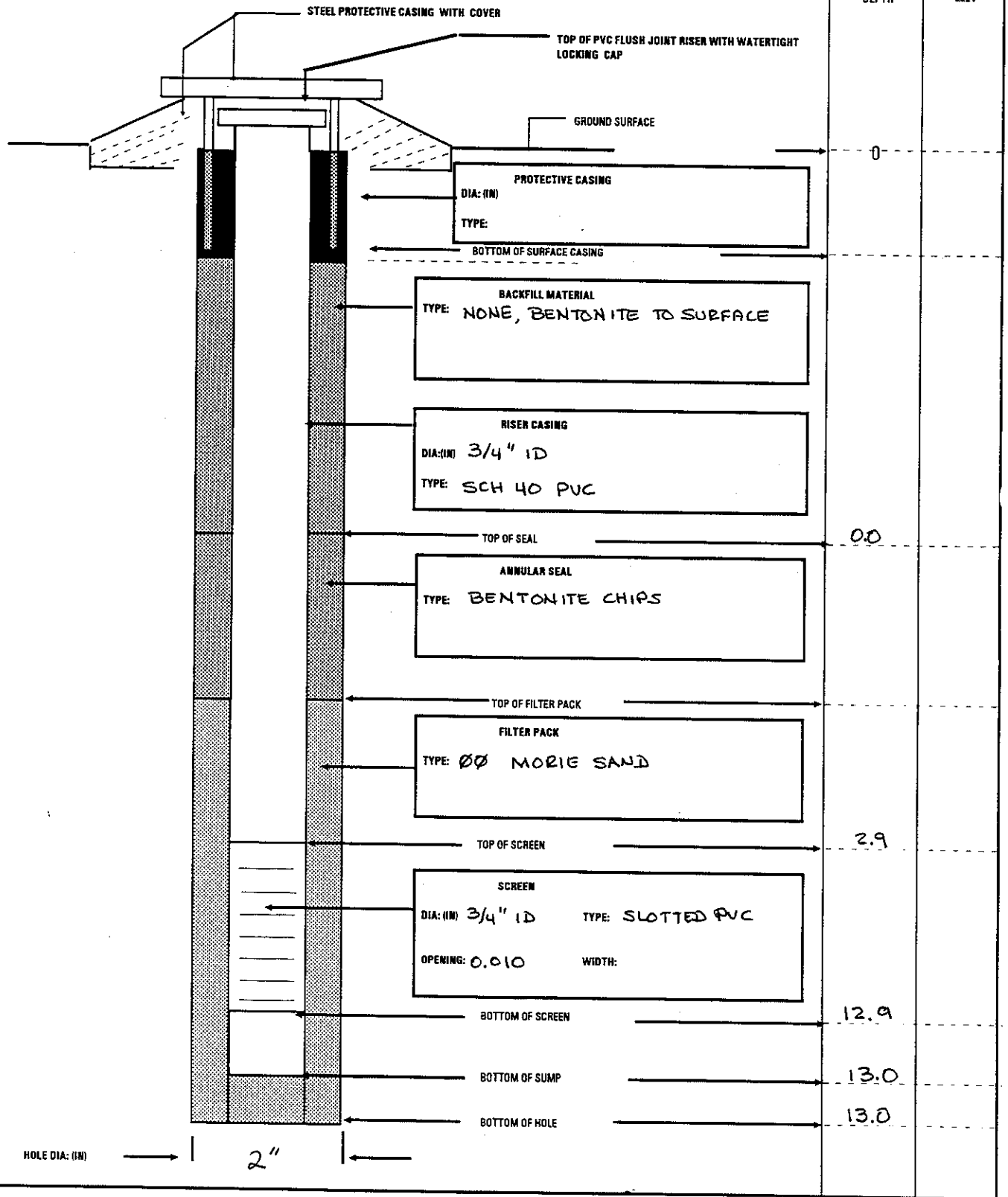
COORDINATES: N: 681211.85
E: 828839.23

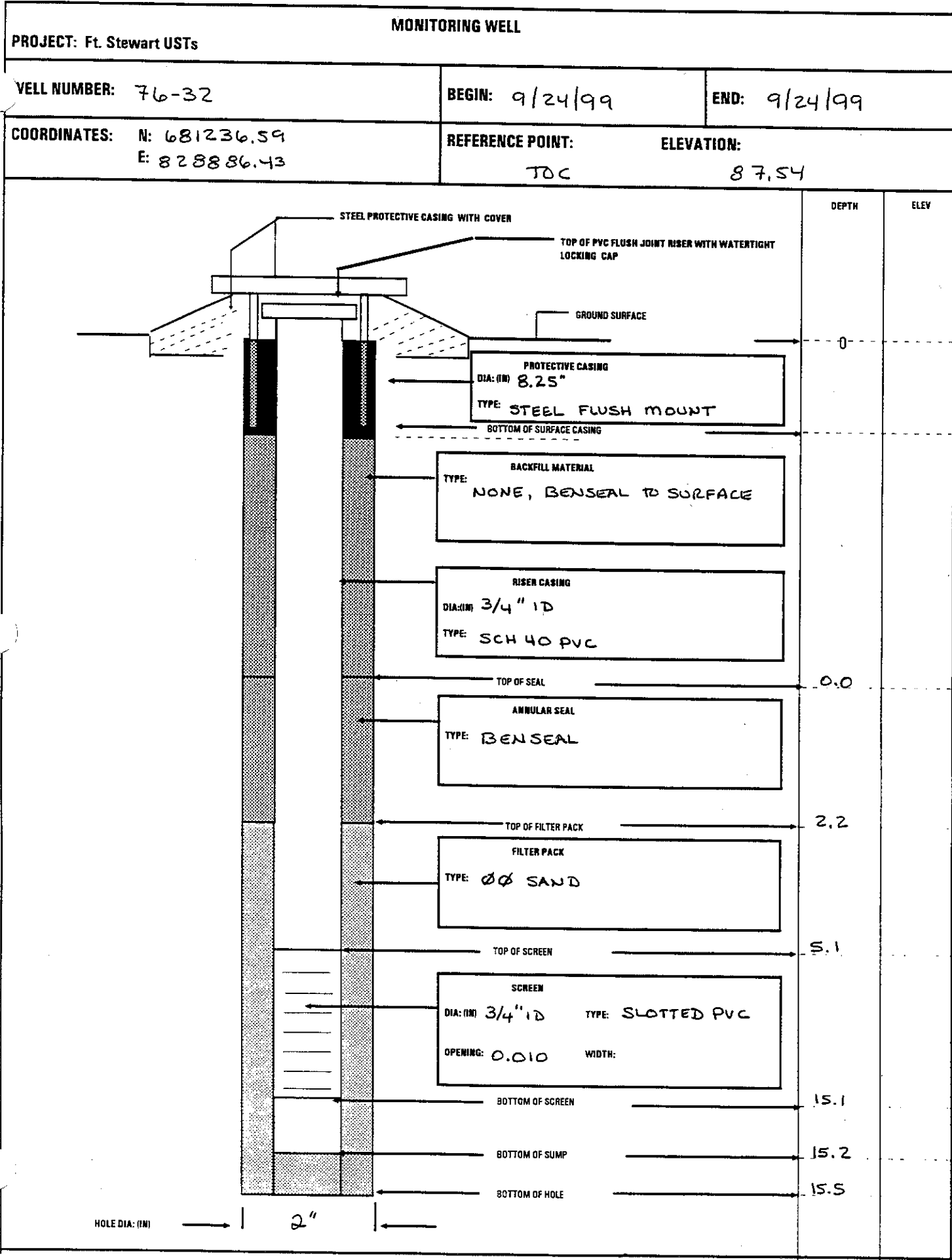
REFERENCE POINT:

TO C

ELEVATION:

86.58





MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 79-33

BEGIN: 9/24/99

END: 9/24/99

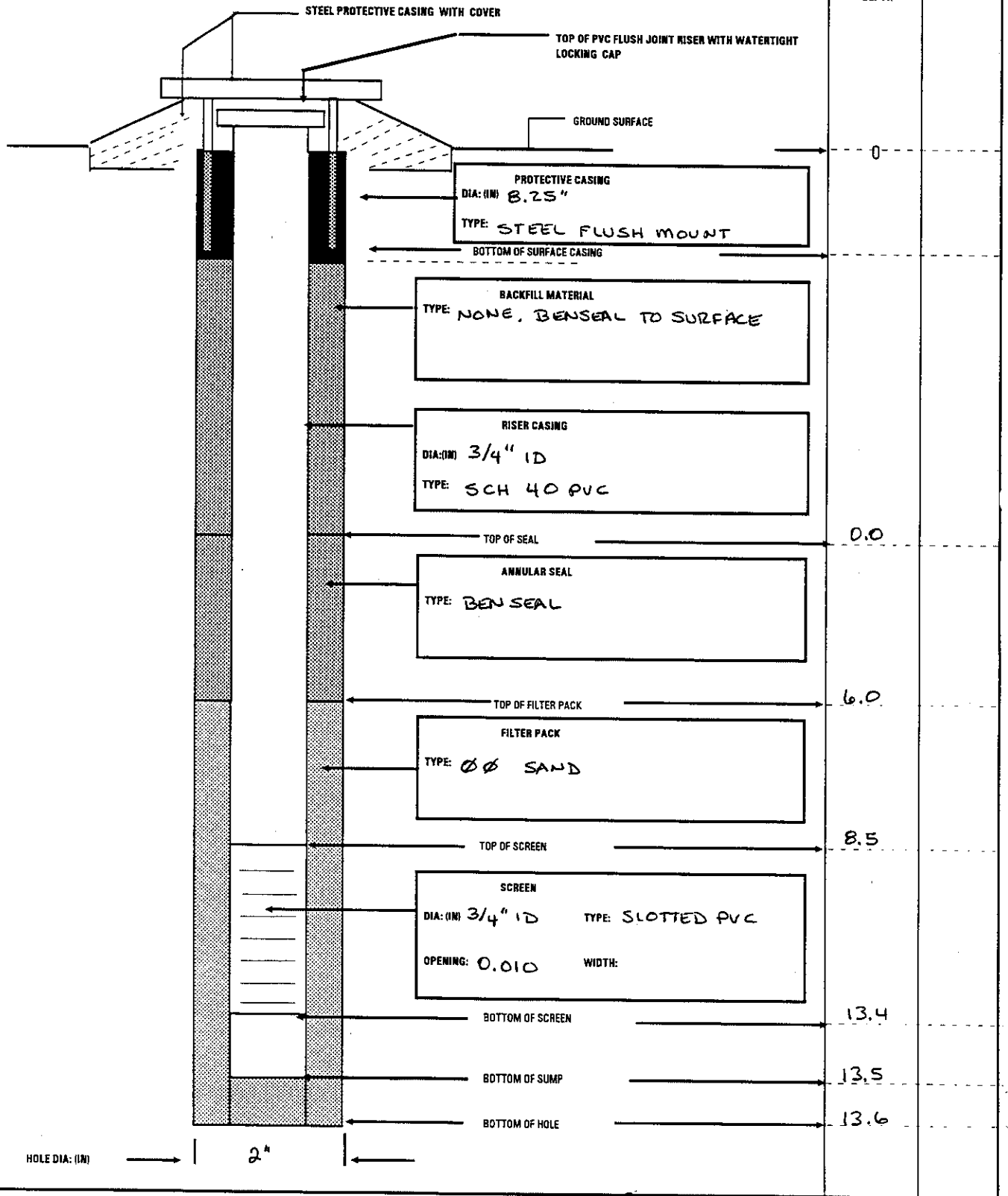
COORDINATES: N: 681203.27
E: 828924.00

REFERENCE POINT:

ELEVATION:

TOC

87.65



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-34

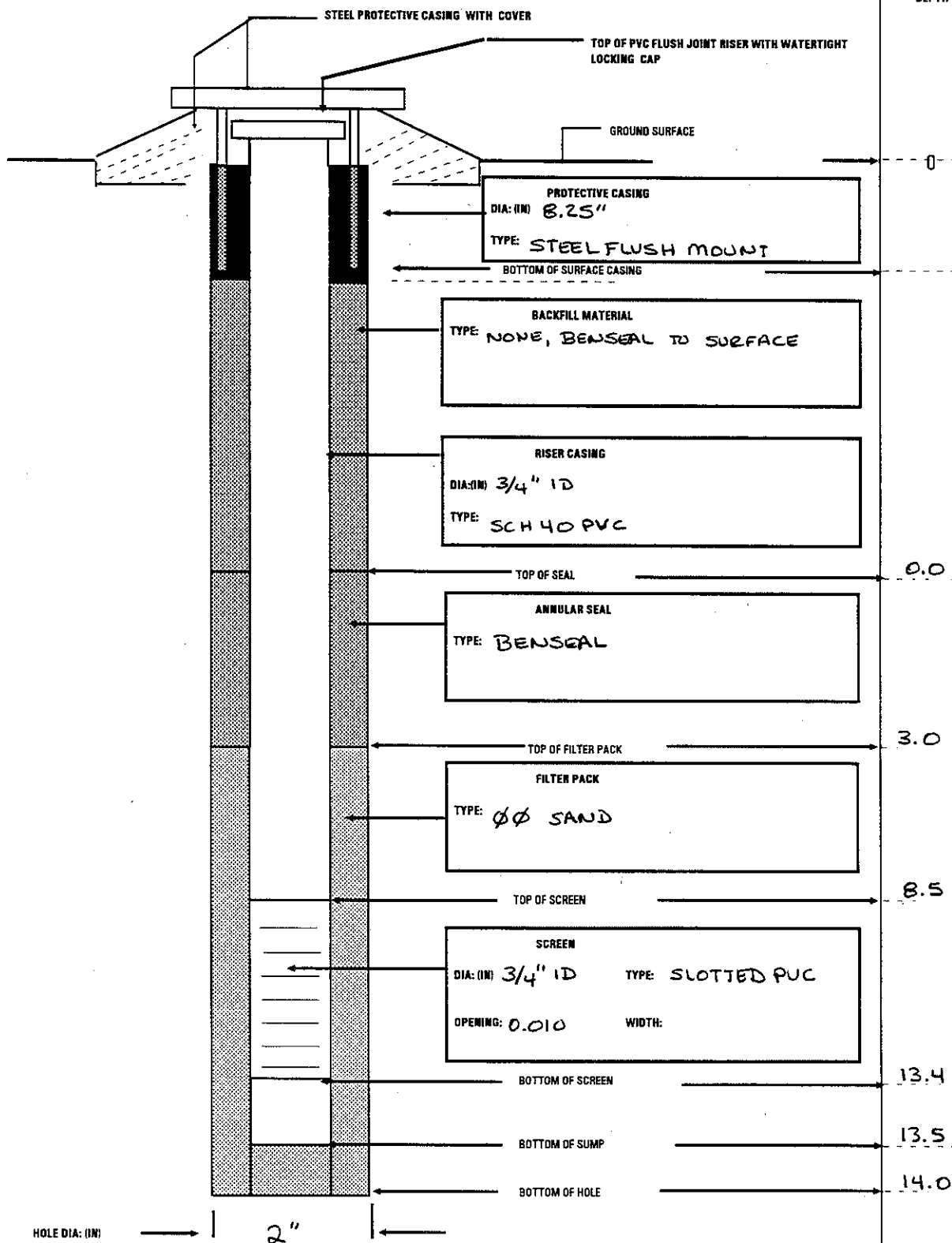
BEGIN: 9/24/99

END: 9/24/99

COORDINATES: N: 681161.36
E: 828958.83

REFERENCE POINT:
TOC

ELEVATION:
87.77



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-35

BEGIN: 9/24/99

END: 9/24/99

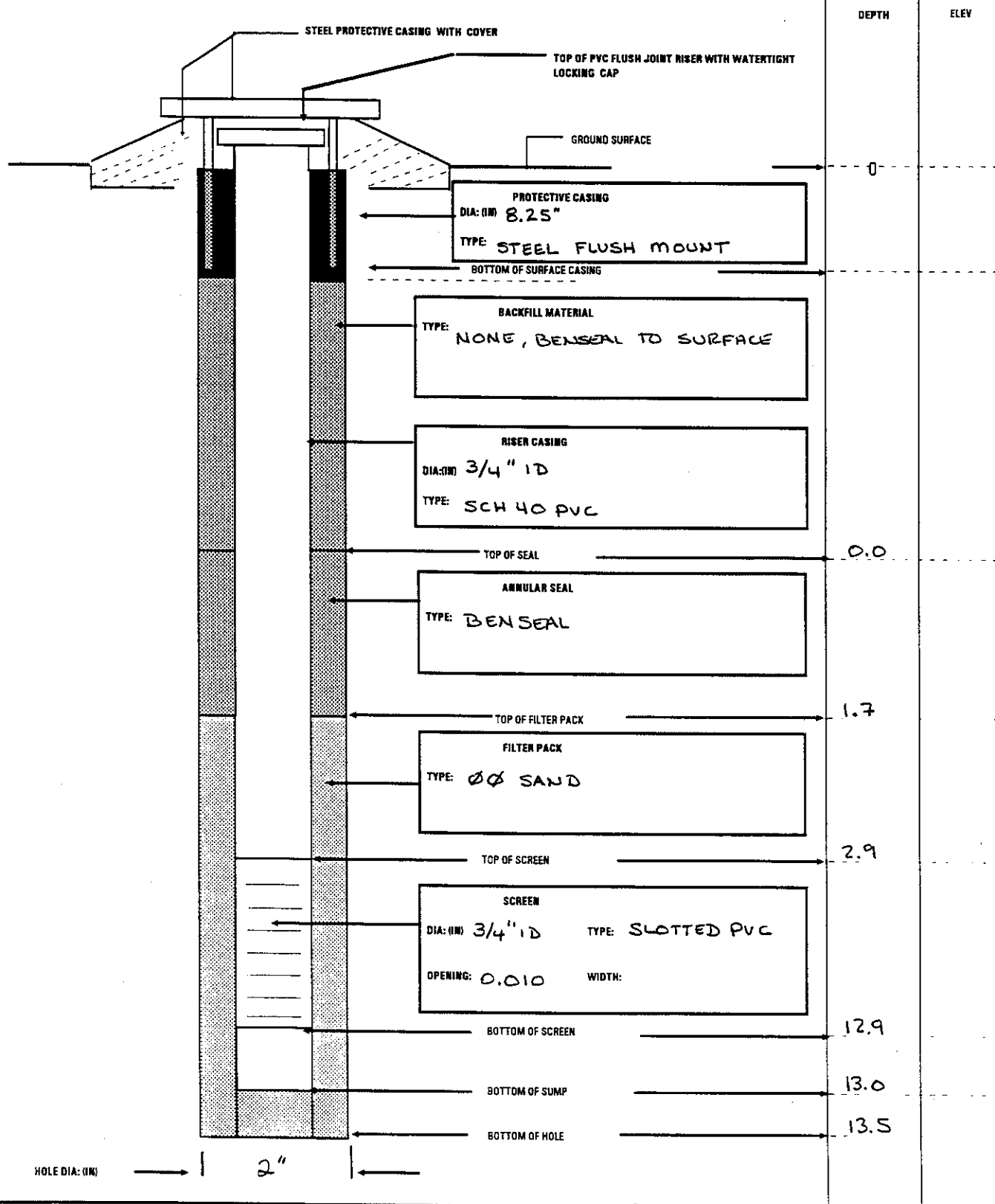
COORDINATES: N: 681300.18
E: 829067.06

REFERENCE POINT:

ELEVATION:

TOC

84.33



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-36

BEGIN: 9/24/99

END: 9/24/99

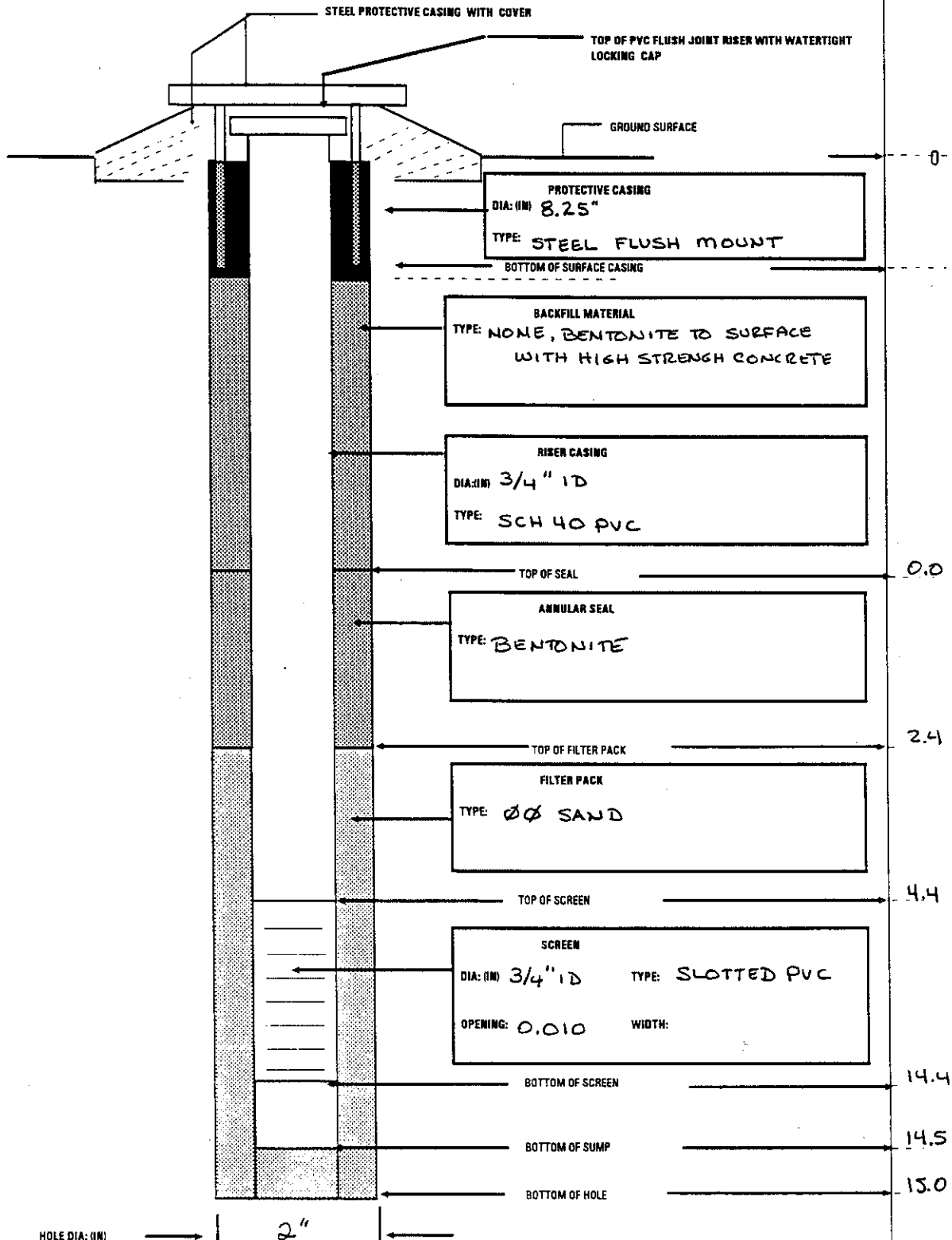
COORDINATES: N: 681187.51
E: 829063.71

REFERENCE POINT:

ELEVATION:

TOC

84.47



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-37

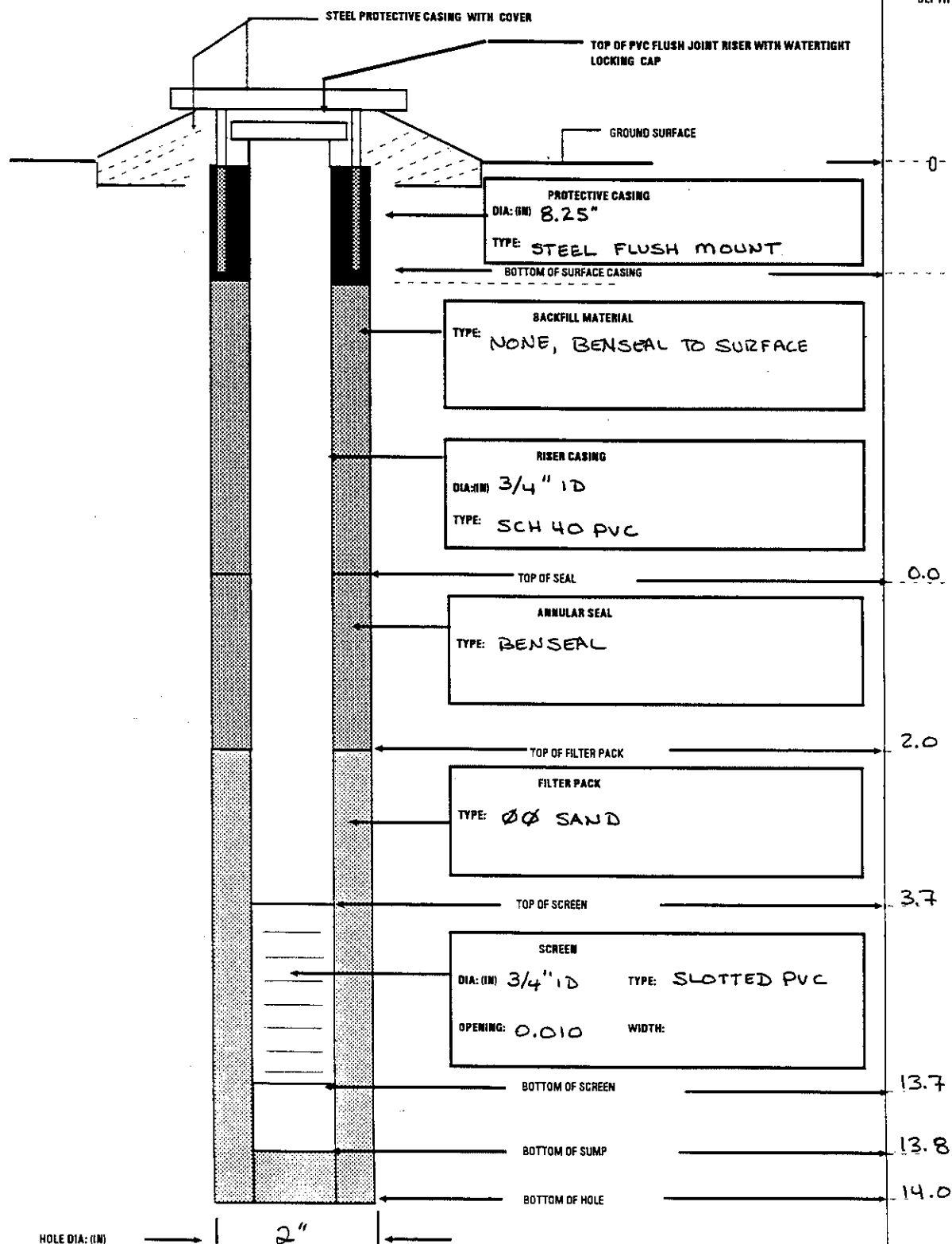
BEGIN: 9/24/99

END: 9/24/99

COORDINATES: N: 681252.43
E: 829137.60

REFERENCE POINT:
TOC

ELEVATION:
84.38



PROJECT: Ft. Stewart USTs

MONITORING WELL

WELL NUMBER: 76-38

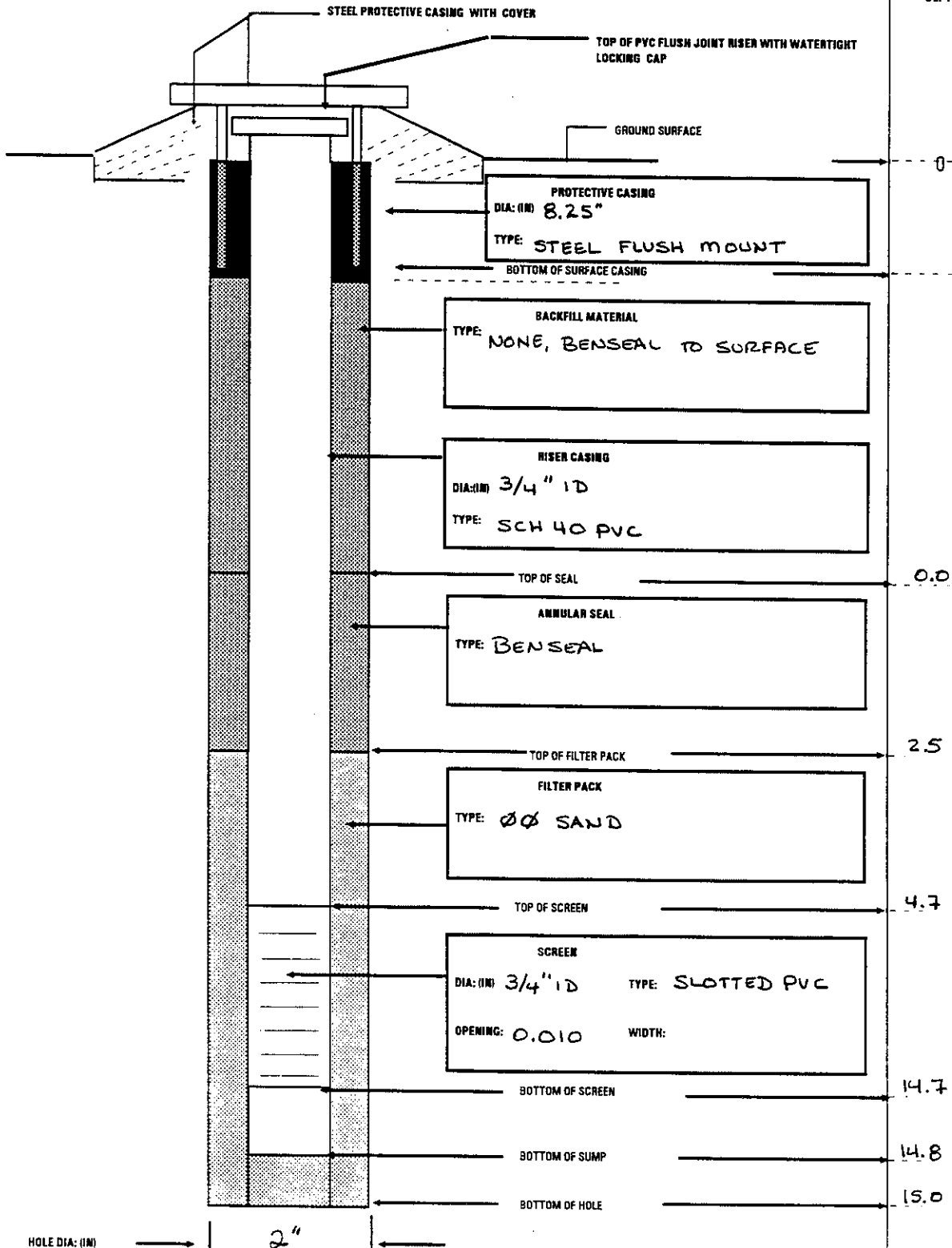
BEGIN: 9/23/99

END: 9/23/99

COORDINATES: N: 681140.38
E: 829137.49

REFERENCE POINT:

ELEVATION:



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-39

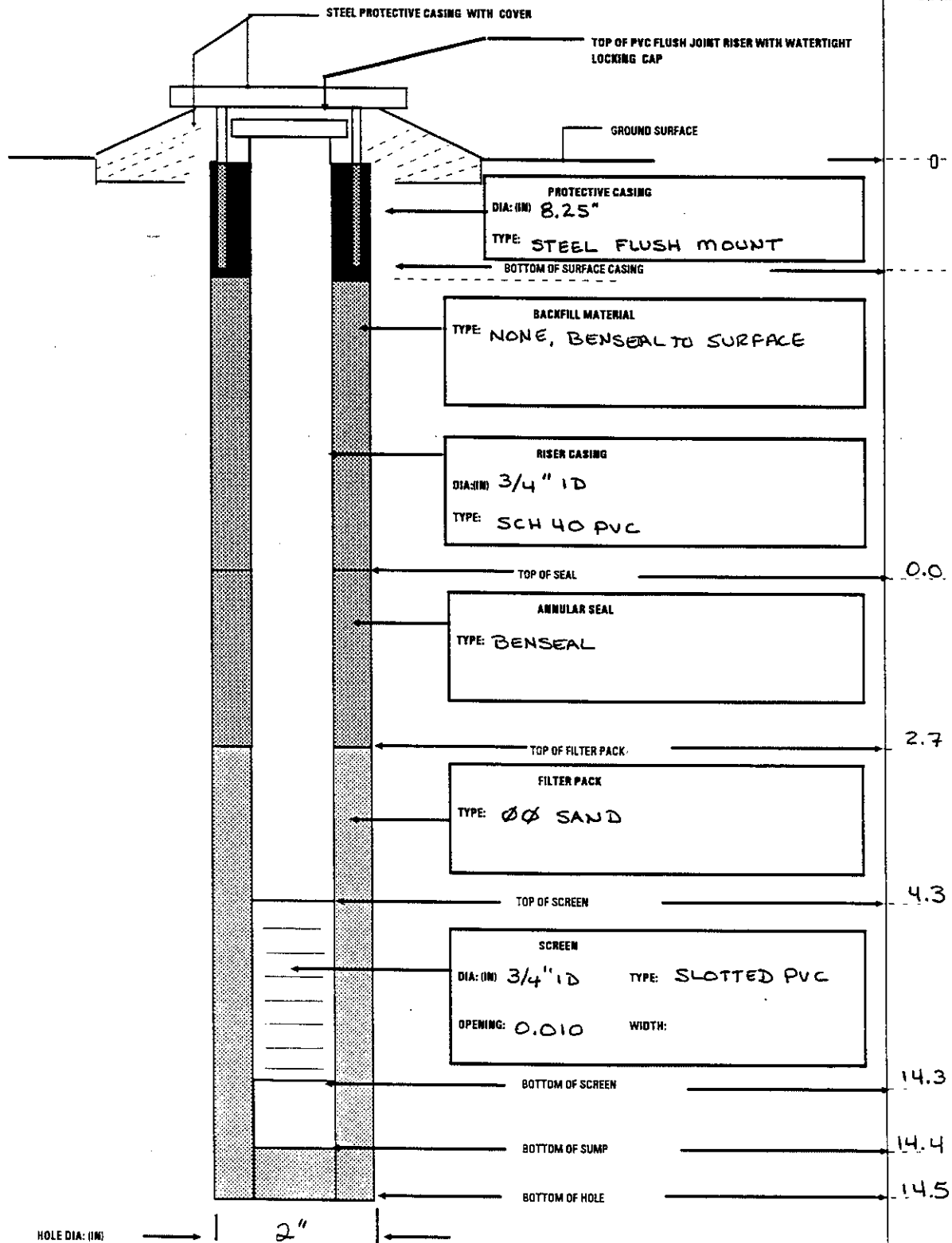
BEGIN: 9-23-99

END: 9-23-99

COORDINATES: N: 681074.88
E: 829121.77

REFERENCE POINT:

ELEVATION:



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-40

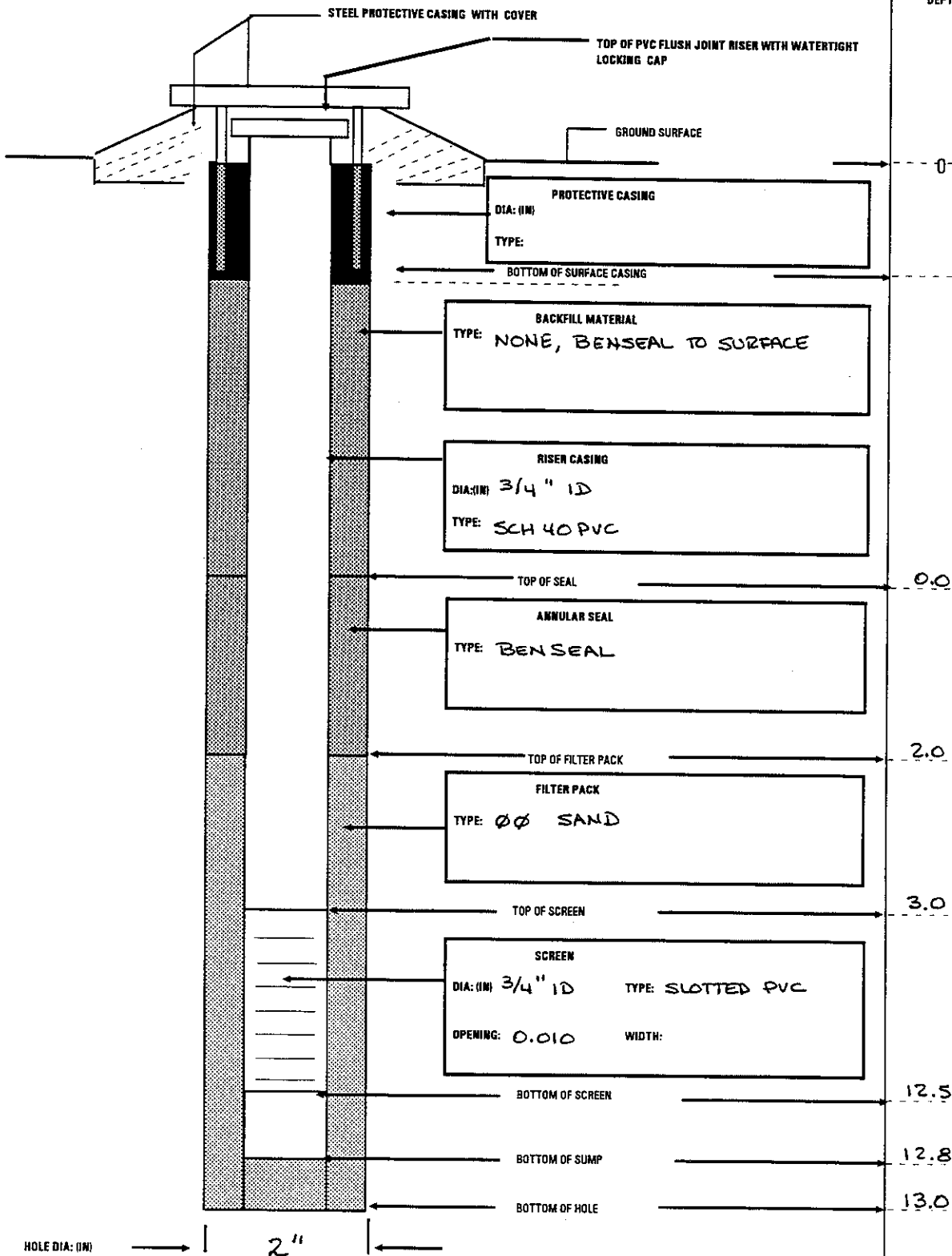
BEGIN: 9/24/99

END: 9/24/99

COORDINATES: N: 680976.49
E: 829030.22

REFERENCE POINT:
TOC

ELEVATION:
84.72



MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-41

BEGIN: 10/6/99

END: 10/6/99

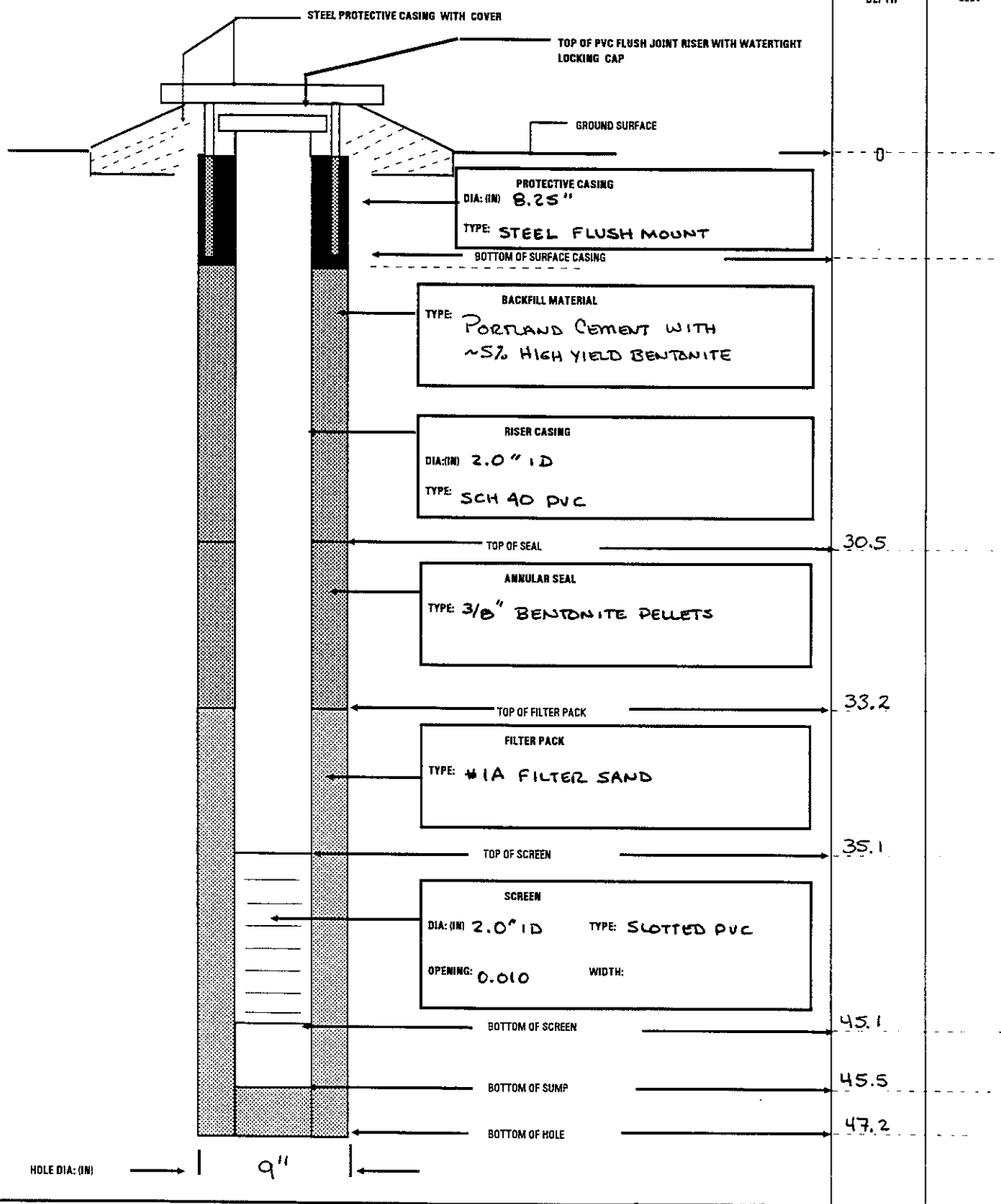
COORDINATES: N: 681230.72
E: 828917.95

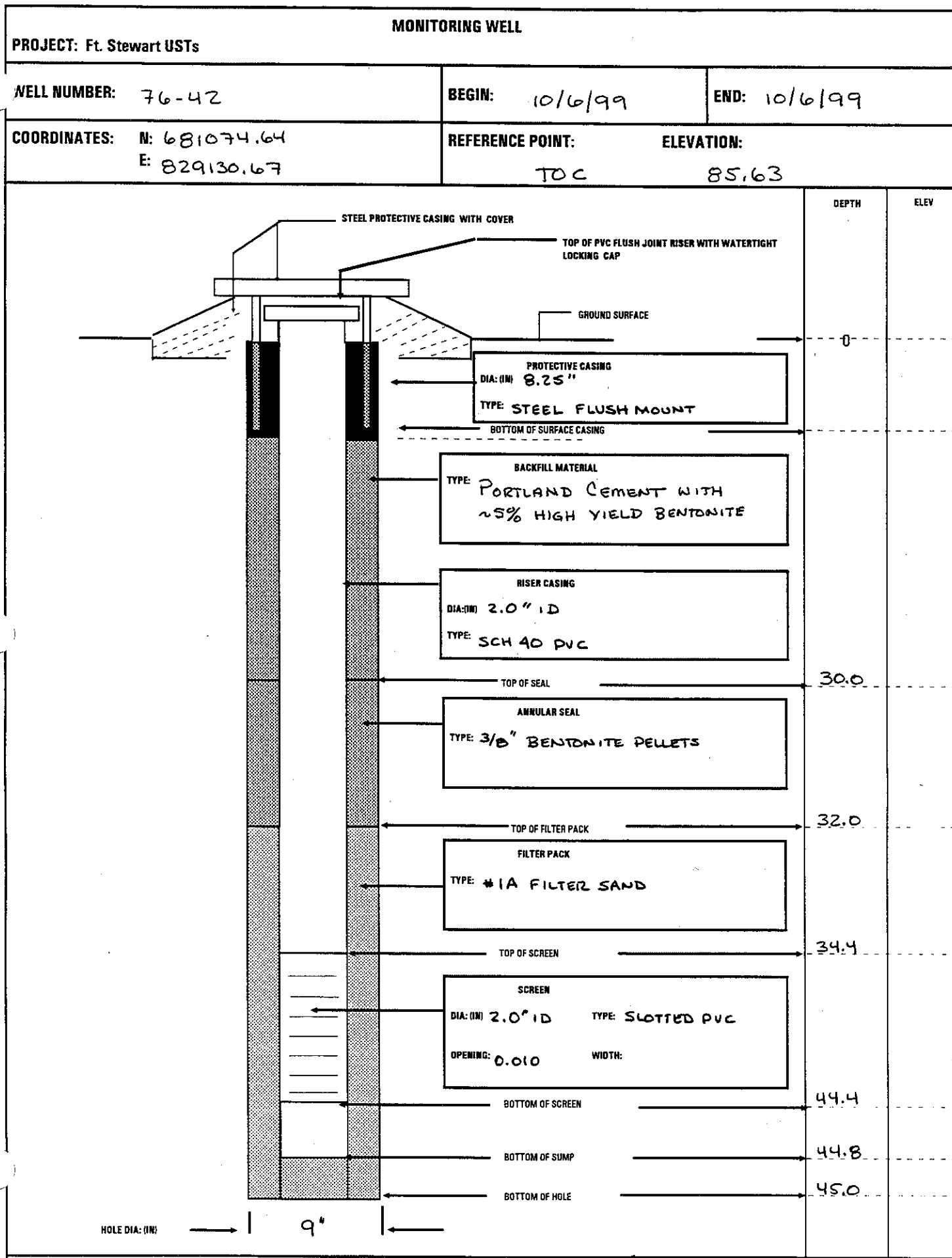
REFERENCE POINT:

ELEVATION:

TDC

87.54





MONITORING WELL

PROJECT: Ft. Stewart USTs

WELL NUMBER: 76-43

BEGIN: 10/6/99

END: 10/6/99

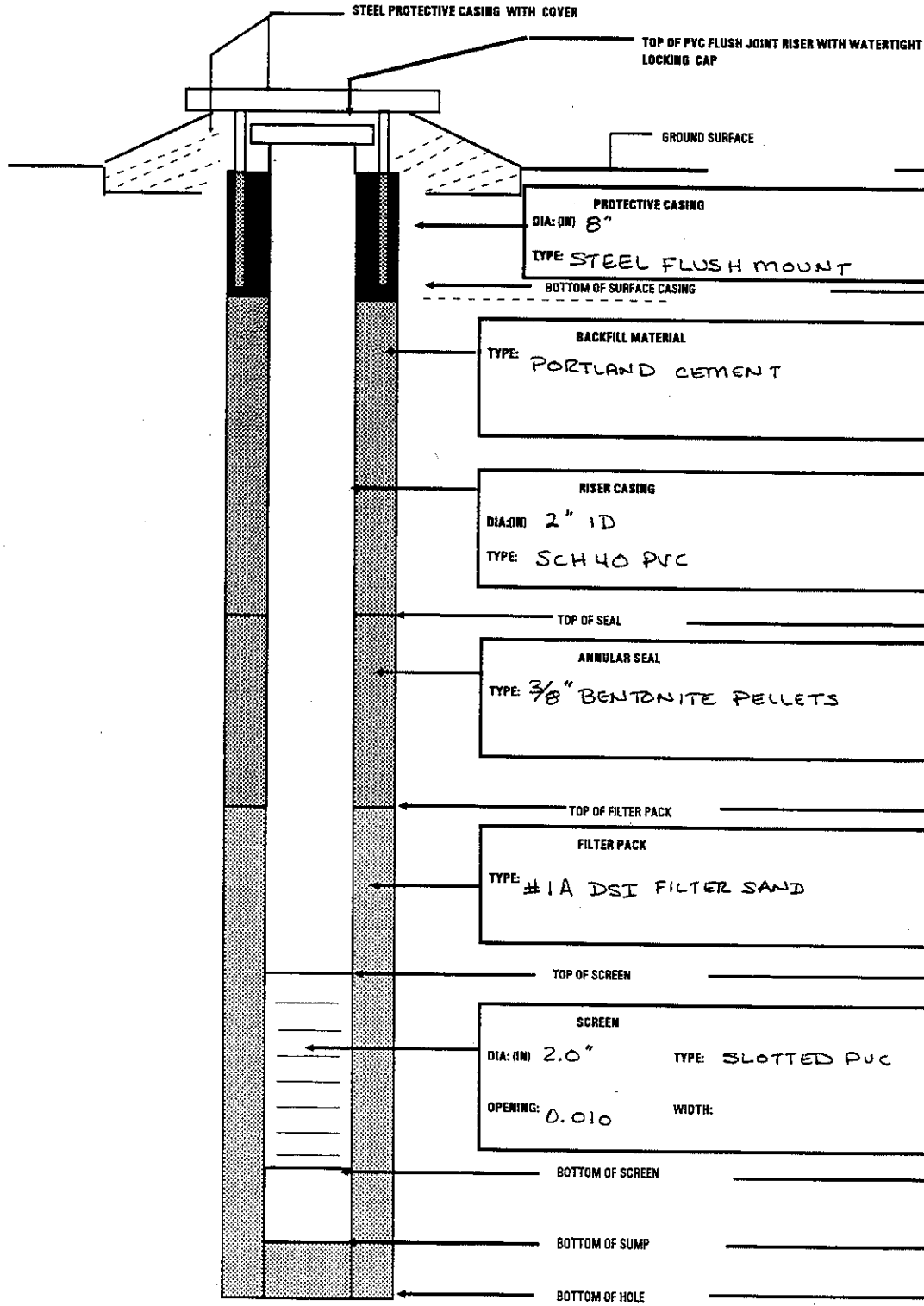
COORDINATES: N: 681257.72
E: 829138.73

REFERENCE POINT:

ELEVATION:

TOC

83.80



DEPTH

ELEV

0

29.5

31.8

34.2

44.2

44.0

45.0

HOLE DIA: (IN)

9'

APPENDIX VIII
GROUNDWATER LABORATORY RESULTS

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Table VIII-A. Summary of CAP-Part A (UST 261) Groundwater Analytical Results

Station:			73-01	73-02	73-03	73-04
Sample ID:	Federal	In Stream	730112	730212	730312	730412
Screened Interval (ft BGS):	SDWA	Water	4.0 - 14.0	3.0 - 13.0	4.2 - 14.2	2.5 - 12.5
Collection Date:	MCLs ¹	Quality	10-May-98	10-May-98	10-May-98	10-May-98
Units:	(µg/L)	Standards ²	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS						
Benzene	5	71.28	4840 =	3170 =	2400 =	12000 =
Toluene	1,000	200,000	1130 =	184 =	72.5 =	11000 =
Ethylbenzene	700	28,718	280 =	132 =	105 =	983 =
Xylenes, Total	10,000	NRC	1600 =	1350 =	954 =	5630 =
POLYNUCLEAR AROMATIC HYDROCARBONS						
2-Chloronaphthalene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Acenaphthene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Acenaphthylene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Anthracene	NRC	110,000	10.5 U	10.6 U	10.5 U	20 U
Benzo(a)anthracene	NRC	0.0311	10.5 U	10.6 U	10.5 U	20 U
Benzo(a)pyrene	0.2	0.0311	10.5 U	10.6 U	10.5 U	20 U
Benzo(b)fluoranthene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Benzo(g,h,i)perylene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Benzo(k)fluoranthene	NRC	0.0311	10.5 U	10.6 U	10.5 U	20 U
Chrysene	NRC	0.0311	10.5 U	10.6 U	10.5 U	20 U
Dibenzo(a,h)anthracene	NRC	0.0311	10.5 U	10.6 U	10.5 U	20 U
Fluoranthene	NRC	370	10.5 U	10.6 U	10.5 U	20 U
Fluorene	NRC	14,000	10.5 U	10.6 U	10.5 U	20 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10.5 U	10.6 U	10.5 U	20 U
Naphthalene	NRC	NRC	9.7 J	10.6 U	34 =	49 =
Phenanthrene	NRC	NRC	10.5 U	10.6 U	10.5 U	20 U
Pyrene	NRC	11,000	10.5 U	10.6 U	10.5 U	20 U

NOTES:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-3-6.03)

Bold values exceed In-Stream Water Quality Standards

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

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

UJ Indicates the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

Table VIII-B. Summary of CAP-Part A (USTs 257-260) Groundwater Analytical Results

Station:	In Stream	76-01	76-02	76-03	76-04	76-05	76-05
Sample ID:	Federal Water	760112	760212	760312	760412	760522	760532
Screened Interval (ft BGS):	SDWA Quality	3.0 - 13.0	6.0 - 16.0	6.0 - 16.0	6.0 - 16.0	7.0 - 12.0	12.0 - 17.0
Collection Date:	MCLs ¹ Standards	10-May-98	10-May-98	8-May-98	8-May-98	8-May-98	8-May-98
Units:	(µg/L) (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<i>VOLATILE ORGANIC COMPOUNDS</i>							
Benzene	5 71.28	3210 =	1540 =	356 J	2 U	159 =	675 =
Toluene	1,000 200,000	10700 =	3090 =	67.1 J	2 U	512 =	68.6 =
Ethylbenzene	700 28,718	1830 =	945 =	238 J	2 U	889 =	180 =
Xylenes, Total	10,000 NRC	9510 =	5060 =	2450 J	6 U	7870 =	1640 =
<i>POLYNUCLEAR AROMATIC HYDROCARBONS</i>							
2-Chloronaphthalene	NRC NRC	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Acenaphthene	NRC NRC	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Acenaphthylene	NRC NRC	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Anthracene	NRC 110,000	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Benzo(a)anthracene	NRC 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Benzo(a)pyrene	0.2 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Benzo(b)fluoranthene	NRC NRC	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Benzo(g,h,i)perylene	NRC NRC	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Benzo(k)fluoranthene	NRC 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Chrysene	NRC 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Dibenzo(a,h)anthracene	NRC 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Fluoranthene	NRC 370	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Fluorene	NRC 14,000	20 U	0.52 J	10.2 U	10 U	13.5 U	10.5 U
Indeno(1,2,3-cd)pyrene	NRC 0.0311	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Naphthalene	NRC NRC	991 =	236 =	156 =	10 U	352 =	93.4 =
Phenanthrene	NRC NRC	11.4 J	20.2 U	10.2 U	10 U	13.5 U	10.5 U
Pyrene	NRC 11,000	20 U	20.2 U	10.2 U	10 U	13.5 U	10.5 U

NOTES:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-3-6.03)

Bold values exceed In-Stream Water Quality Standards

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

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

UJ Indicates the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

Table VIII-B. Summary of CAP-Part A (USTs 257-260) Groundwater Analytical Results
(continued)

Station:		In Stream	76-05	76-06	76-07	76-08	76-09	76-10
Sample ID:	Federal	Water	760532	760612	760712	760812	760912	761012
Screened Interval (ft BGS):	SDWA	Quality	12.0 - 17.0	2.0 - 12.0	2.0 - 12.0	2.0 - 12.0	2.0 - 12.0	2.0 - 12.0
Collection Date:	MCLs	Standards	8-May-98	09-May-98	09-May-98	09-May-98	10-May-98	10-May-98
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS								
Benzene	5	71.28	675 =	138 J	432 =	7590 =	32700 =	4240 J
Toluene	1,000	200,000	68.6 =	15.3 J	100 U	499 =	97800 =	17600 J
Ethylbenzene	700	28,718	180 =	183 J	759 =	1420 =	4450 =	5210 J
Xylenes, Total	10,000	NRC	1640 =	439 J	2970 =	1320 =	22700 =	28400 J
OLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Acenaphthene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Acenaphthylene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Anthracene	NRC	110,000	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Benzo(a)anthracene	NRC	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Benzo(a)pyrene	0.2	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Benzo(b)fluoranthene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Benzo(g,h,i)perylene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Benzo(k)fluoranthene	NRC	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Chrysene	NRC	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Dibenzo(a,h)anthracene	NRC	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Fluoranthene	NRC	370	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Fluorene	NRC	14,000	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Naphthalene	NRC	NRC	93.4 =	93.1 =	17.9 =	265 =	644 =	817 =
Phenanthrene	NRC	NRC	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U
Pyrene	NRC	11,000	10.5 U	10.5 U	10.6 U	10.6 U	20 U	42.1 U

NOTES:

CAP-Part A sampling performed in May 1998 was conducted prior to the new CAP-Part A guidance that was published in May 1998. Thus, the new SW-846 analytical methods were not used during the CAP-Part A sampling event.

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-3-6.03)

Bold values exceed In-Stream Water Quality Standards

QA/QC samples were collected. The laboratory data sheets for the QA/QC samples were included in Appendix V of the CAP-Part A, however, the results are not summarized in this table.

Laboratory Qualifiers

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

UJ Indicates the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

Analytical data sheets associated with the CAP-Part A investigation were provided in the CAP-Part A Report, dated December 1998.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results

Station:		In Stream	76-11	76-12	76-13	76-14	76-15	76-16
Sample ID:	Federal	Water	761112	761212	761312	761412	761512	761612
Screened Interval (ft BGS):	SDWA	Quality	3.0-13.0	4.2-14.2	5.0-15.0	4.0-14.0	4.0-14.0	4.0-14.0
Collection Date:	MCLs ¹	Standards ²	09-Mar-99	09-Mar-99	08-Mar-99	08-Mar-99	08-Mar-99	08-Mar-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS								
Benzene	5	71.28	2 U	1.6 J	250 =	5440 =	158 =	5390 =
Toluene	1000	200,000	0.6 J	1.1 J	76.4 =	12600 =	12.2 =	371 =
Ethylbenzene	700	28,718	2 U	2 U	131 =	1950 =	12.9 =	297 =
Xylenes, Total	10,000	NRC	3 U	3 U	2110 =	12900 =	276 =	1600 =
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Acenaphthene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 UJ	10.6 UJ	10.2 UJ	10.3 UJ
Acenaphthylene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Anthracene	NRC	110,000	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Benzo(a)anthracene	NRC	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Benzo(a)pyrene	0.2	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Benzo(b)fluoranthene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Benzo(g,h,i)perylene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Benzo(k)fluoranthene	NRC	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Chrysene	NRC	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Dibenzo(a,h)anthracene	NRC	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Fluoranthene	NRC	370	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Fluorene	NRC	14,000	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Naphthalene	NRC	NRC	10.2 UJ	10.2 UJ	7.6 J	231 =	10.2 U	5 J
Phenanthrene	NRC	NRC	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
Pyrene	NRC	11,000	10.2 UJ	10.2 UJ	11.8 U	10.6 U	10.2 U	10.3 U
OTHER ANALYTES								
Iron	NRC	NRC	299 =	2450 =	403 =	1600 =	2110 =	6720 =

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

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

UJ Indicates the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results
(continued)

Station:	In Stream	76-17	76-18	76-19	76-20	76-21	76-21
Sample ID:	Federal	761712	761812	761912	762012	762112	762122
Screened Interval (ft BGS)	SDWA	4.0-14.0	4.0-14.0	4.0-19.0	3.5-13.5	11.0-15.0	17.0-20.0
Collection Date:	MCLs ¹	08-Mar-99	08-Mar-99	09-Mar-99	09-Mar-99	18-Feb-99	18-Feb-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS							
Benzene	5	71.28	2 U	15200 =	10600 =	36.4 =	21100 =
Toluene	1000	200,000	2 U	17300 =	19000 =	98.4 J	28200 =
Ethylbenzene	700	28718	2 U	1700 =	2580 =	12.8 =	3110 =
Xylenes, Total	10,000	NRC	3 U	9660 =	13500 =	68 J	15400 =
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	NRC	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Acenaphthene	NRC	NRC	10.5 UJ	10.4 UJ	11.6 UJ	10.8 UJ	10 U
Acenaphthylene	NRC	NRC	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Anthracene	NRC	110,000	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Benzo(a)anthracene	NRC	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Benzo(a)pyrene	0.2	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Benzo(b)fluoranthene	NRC	NRC	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Benzo(g,h,i)perylene	NRC	NRC	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Benzo(k)fluoranthene	NRC	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Chrysene	NRC	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Dibenzo(a,h)anthracene	NRC	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Fluoranthene	NRC	370	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Fluorene	NRC	14,000	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10.5 U	10.4 U	11.6 UJ	10.8 UJ	10 U
Naphthalene	NRC	NRC	10.5 U	168 J	308 J	16.1 J	2.3 J
Phenanthrene	NRC	NRC	10.5 U	10.4 U	11.6 UJ	10.8 J	10 U
Pyrene	NRC	11,000	10.5 U	10.4 U	11.6 UJ	10.8 J	10 U
OTHER ANALYTES							
Iron	NRC	NRC	325 =	4940 =	9450 =	2260 =	8180 =

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.
Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

- U Indicates the compound was not detected at the concentration reported.
- UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
- J Indicates the value for the compound is an estimated value.
- = Indicates the compound was detected at the concentration reported.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results
(continued)

Station:		In Stream	76-21	76-21	76-21	76-22	76-23	76-24
Sample ID:	Federal	Water	762132	762142	762152	762212	762312	762412
Screened Interval (ft BGS)	SDWA	Quality	27.0-30.0	36.0-40.0	42.0-45.0	27.0-3.0	4.0-14.0	4.8-14.8
Collection Date:	MCLs ¹	Standards ²	18-Feb-99	18-Feb-99	18-Feb-99	20-Feb-99	08-Mar-99	08-Mar-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS								
Benzene	5	71.28	3000 =	11000 =	181 =	28.2 =	46.5 =	697 =
Toluene	1000	200,000	8860 =	13700 =	535 =	4.9 =	6.2 =	3180 =
Ethylbenzene	700	28718	890 J	2650 =	64.6 =	3 =	2.9 =	716 =
Xylenes, Total	10,000	NRC	4470 =	13300 =	324 =	16.5 =	4.7 =	4220 =
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	NRC	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Acenaphthene	NRC	NRC	10 U	10 U	10 U	10.2 UJ	10.5 UJ	10 UJ
Acenaphthylene	NRC	NRC	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Anthracene	NRC	110,000	0.83 J	0.79 J	10 U	10.2 UJ	10.5 U	10 U
Benzo(a)anthracene	NRC	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Benzo(a)pyrene	0.2	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Benzo(b)fluoranthene	NRC	NRC	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Benzo(g,h,i)perylene	NRC	NRC	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Benzo(k)fluoranthene	NRC	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Chrysene	NRC	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Dibenzo(a,h)anthracene	NRC	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Fluoranthene	NRC	370	3.1 J	2.9 J	10 U	10.2 UJ	10.5 U	10 U
Fluorene	NRC	14,000	2 J	2 J	10 U	10.2 UJ	10.5 U	10 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10 U	10 U	10 U	10.2 UJ	10.5 U	10 U
Naphthalene	NRC	NRC	392 =	393 =	16.7 =	0.74 J	2.1 J	152 J
Phenanthrene	NRC	NRC	4.6 J	4.7 J	10 U	10.2 UJ	10.5 U	10 U
Pyrene	NRC	11,000	3.7 J	4.2 J	10 U	10.2 UJ	10.5 U	10 U
OTHER ANALYTES								
Iron	NRC	NRC					3390 =	15000 =

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

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

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results
(continued)

Station:	In Stream	76-25	76-26	76-27	76-28	76-29	76-30
Sample ID:	Federal Water	762512	762612	762712	762812	762912	763012
Screened Interval (ft BGS)	SDWA Quality	1.6-11.6	4.9-14.9	3.0-13.0	3.9-13.9	6.4-11.2	2.0-12.0
Collection Date:	MCLs ¹ Standards ²	09-Mar-99	09-Mar-99	09-Mar-99	09-Mar-99	24-Sep-99	29-Sep-99
Units:	(µg/L) (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS							
Benzene	5	71.28	2 U	2 U	2 U	1010 =	2 U
Toluene	1000	200,000	0.51 J	2 U	2 U	5650 =	2 U
Ethylbenzene	700	28718	2 U	2 U	2 U	1670 =	2 U
Xylenes, Total	10,000	NRC	3 U	3 U	3 U	11800 =	6 U
POLYNUCLEAR AROMATIC HYDROCARBONS							
2-Chloronaphthalene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Acenaphthene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Acenaphthylene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Anthracene	NRC	110,000	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Benzo(a)anthracene	NRC	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Benzo(a)pyrene	0.2	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Benzo(b)fluoranthene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Benzo(g,h,i)perylene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Benzo(k)fluoranthene	NRC	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Chrysene	NRC	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Dibenzo(a,h)anthracene	NRC	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Fluoranthene	NRC	370	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Fluorene	NRC	14,000	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Naphthalene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	254 J	10 U
Phenanthrene	NRC	NRC	10.2 UJ	10.6 UJ	10.2 UJ	10 UJ	10 U
Pyrene	NRC	11,000	10.2 UJ	10.6 UJ	0.74 J	10 UJ	10 U
OTHER ANALYTES							
Iron	NRC	NRC	7300 =	2260 =	1360 =	6180 =	

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.
Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

U Indicates the compound was not detected at the concentration reported.
UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
J Indicates the value for the compound is an estimated value.
= Indicates the compound was detected at the concentration reported.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results
(continued)

Station:		In Stream	76-31	76-32	76-33	76-34	76-35	76-36
Sample ID:	Federal	Water	763112	763212	763312	763412	763512	763612
Screened Interval (ft BGS):	SDWA	Quality	2.9-12.9	5.1-15.1	8.5-13.4	8.5-13.4	2.9-12.9	4.4-14.4
Collection Date:	MCLs ¹	Standards ²	23-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99	24-Sep-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS								
Benzene	5	71.28	2 U	1540 =	963 =	51.9 =	2 U	1 J
Toluene	1000	200,000	2 U	3120 =	1270 =	19.7 =	2 U	2.1 =
Ethylbenzene	700	28718	2 U	1770 =	767 =	71.7 =	2 U	1 J
Xylenes, Total	10,000	NRC	0.51 J	7430 =	3230 =	164 =	6 U	2.9 J
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	NRC	10 U	10.6 U	10.2 U	10 UJ	10 U	10 U
Acenaphthene	NRC	NRC	10 U	0.7 J	10.2 U	10 UJ	10 U	10 U
Acenaphthylene	NRC	NRC	10 U	0.55 J	10.2 U	10 UJ	10 U	10 U
Anthracene	NRC	110,000	10 U	0.65 J	10.2 U	10 UJ	10 U	10 U
Benzo(a)anthracene	NRC	0.0311	10 U	1.6 J	10.2 U	1.8 J	10 U	10 U
Benzo(a)pyrene	0.2	0.0311	10 U	1.5 J	10.2 U	1.8 J	10 U	10 U
Benzo(b)fluoranthene	NRC	NRC	10 U	3.3 J	10.2 U	4 J	10 U	1.2 J
Benzo(g,h,i)perylene	NRC	NRC	10 U	1.7 J	10.2 U	2.5 J	10 U	1.3 J
Benzo(k)fluoranthene	NRC	0.0311	10 U	10.6 U	10.2 U	10 UJ	10 U	10 U
Chrysene	NRC	0.0311	10 U	2 J	10.2 U	2.3 J	10 U	10 U
Dibenzo(a,h)anthracene	NRC	0.0311	10 U	10.6 U	10.2 U	10 UJ	10 U	10 U
Fluoranthene	NRC	370	10 U	3.6 J	10.2 U	3.3 J	10 U	10 U
Fluorene	NRC	14,000	10 U	2.4 J	0.72 J	10 UJ	10 U	10 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10 U	0.73 J	10.2 U	1.4 J	10 U	10 U
Naphthalene	NRC	NRC	10 U	156 =	0.56 J	29.9 J	10 U	46.7 =
Phenanthrene	NRC	NRC	10 U	5 J	10.2 U	3.1 J	10 U	10 U
Pyrene	NRC	11,000	10 U	6 J	10.2 U	6.8 J	10 U	10 U
OTHER ANALYTES								
Iron	NRC	NRC						

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.
Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

U Indicates the compound was not detected at the concentration reported.
UJ Indicates that the compound was not detected above an approximated sample quantitation limit.
J Indicates the value for the compound is an estimated value.
= Indicates the compound was detected at the concentration reported.

Table VIII-C. Summary of CAP-Part B (USTs 257-261) Groundwater Analytical Results
(continued)

Station:	In Stream	76-37	76-38	76-39	76-40	76-41	76-42	76-43
Sample ID:	Federal Water	763712	763812	763912	764012	764112	764212	764312
Screened Interval (ft BGS):	SDWA Quality	3.7-13.7	4.7-14.7	4.3-14.3	3.0-12.5	35.1-45.1	34.4-44.4	34.2-44.2
Collection Date:	MCLs ¹	24-Sep-99	24-Sep-99	23-Sep-99	24-Sep-99	31-Oct-99	31-Oct-99	31-Oct-99
Units:	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOLATILE ORGANIC COMPOUNDS								
Benzene	5	71.28	4.6 =	212 =	3.5 =	2 U	8.2 =	2 U
Toluene	1000	200,000	2 U	19.1 U	0.66 J	2 U	1.3 J	2 U
Ethylbenzene	700	28718	2 U	102 =	0.51 J	2 U	5.2 =	2 U
Xylenes, Total	10,000	NRC	6 U	716 =	1.9 J	6 U	21.6 =	6 U
POLYNUCLEAR AROMATIC HYDROCARBONS								
2-Chloronaphthalene	NRC	NRC	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Acenaphthene	NRC	NRC	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Acenaphthylene	NRC	NRC	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Anthracene	NRC	110,000	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Benzo(a)anthracene	NRC	0.0311	10 U	10.4 U	0.62 J	11.3 U	10.3 U	10 U
Benzo(a)pyrene	0.2	0.0311	10 U	10.4 U	0.79 J	11.3 U	10.3 U	10 U
Benzo(b)fluoranthene	NRC	NRC	10 U	10.4 U	10.2 U	2.3 J	10.3 U	10 U
Benzo(g,h,i)perylene	NRC	NRC	10 U	10.4 U	0.8 J	2.3 J	10.3 U	10 U
Benzo(k)fluoranthene	NRC	0.0311	10 U	10.4 U	0.94 J	11.3 U	10.3 U	10 U
Chrysene	NRC	0.0311	10 U	10.4 U	1.2 J	11.3 U	10.3 U	10 U
Dibenzo(a,h)anthracene	NRC	0.0311	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Fluoranthene	NRC	370	10 U	10.4 U	0.88 J	11.3 U	10.3 U	10 U
Fluorene	NRC	14,000	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Indeno(1,2,3-cd)pyrene	NRC	0.0311	10 U	10.4 U	10.2 U	1.4 J	10.3 U	10 U
Naphthalene	NRC	NRC	10 U	8.9 J	10.2 U	11.3 U	0.78 J	10 U
Phenanthrene	NRC	NRC	10 U	10.4 U	10.2 U	11.3 U	10.3 U	10 U
Pyrene	NRC	11,000	10 U	10.4 U	1.9 J	2.4 J	10.3 U	10 U
OTHER ANALYTES								
Iron	NRC	NRC						

NOTES:

CAP-Part B field work performed in 1999 was conducted in accordance the CAP-A guidance published in May 1998, thus the new SW-846 analytical methods were used during the CAP-Part B investigation conducted in 1999.

Analytical data for QA/QC sample 761114 (duplicate), 761516 (equipment rinsate), 762124 (duplicate), and 762914 (duplicate) are contained within this appendix, but are not summarized in this table.

Bold values exceed In-Stream Water Quality Standards

¹ U.S. Environmental Protection Agency maximum contaminant level

² GA EPD water quality standards (Chapter 391-03-6.03)

Laboratory Qualifiers

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

UJ Indicates that the compound was not detected above an approximated sample quantitation limit.

J Indicates the value for the compound is an estimated value.

= Indicates the compound was detected at the concentration reported.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-07

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A608

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/20/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	ccyc
108-88-3	toluene	0.60	J	
100-41-4	ethylbenzene	2.0	U	
75-71-8	xlenes (total)	3.0	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761112RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-10

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 7M315

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	-----naphthalene	10.2	U
91-58-7	-----2-chloronaphthalene	10.2	U
208-96-8	-----acenaphthylene	10.2	U
83-32-9	-----acenaphthene	10.2	U
86-73-7	-----fluorene	10.2	U
85-01-8	-----phenanthrene	10.2	U
120-12-7	-----anthracene	10.2	U
206-44-0	-----fluoranthene	10.2	U
129-00-0	-----pyrene	10.2	U
56-55-3	-----benzo (a) anthracene	10.2	U
218-01-9	-----chrysene	10.2	U
205-99-2	-----benzo (b) fluoranthene	10.2	U
207-08-9	-----benzo (k) fluoranthene	10.2	U
50-32-8	-----benzo (a) pyrene	10.2	U
193-39-5	-----indeno (1,2,3-cd) pyrene	10.2	U
53-70-3	-----dibenz (a,h) anthracene	10.2	U
191-24-2	-----benzo (g,h,i) perylene	10.2	U

USE
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↓

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-07

Client ID: 761112

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	299	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE

EPA SAMPLE NO.

761114

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-09

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A610

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/20/99

GC Column: DB-624 ID: 0.53 (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	2.0 U	2522
108-88-3-----	toluene	0.57 J	
100-41-4-----	ethylbenzene	2.0 U	
75-71-8-----	xlenes (total)	3.0 U	

DATA VALIDATION

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

761114RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-07
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 7M312
 Level: (low/med) LOW Date Received: 03/11/99
 % Moisture: decanted: (Y/N) Date Extracted: 03/19/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

USD

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
91-20-3	-----naphthalene	10.0	U	
91-58-7	-----2-chloronaphthalene	10.0	U	
208-96-8	-----acenaphthylene	10.0	U	
83-32-9	-----acenaphthene	10.0	U	
86-73-7	-----fluorene	10.0	U	
85-01-8	-----phenanthrene	10.0	U	
120-12-7	-----anthracene	10.0	U	
206-44-0	-----fluoranthene	10.0	U	
129-00-0	-----pyrene	10.0	U	
56-55-3	-----benzo (a) anthracene	10.0	U	
218-01-9	-----chrysene	10.0	U	
205-99-2	-----benzo (b) fluoranthene	10.0	U	
207-08-9	-----benzo (k) fluoranthene	10.0	U	
50-32-8	-----benzo (a) pyrene	10.0	U	
193-39-5	-----indeno (1,2,3-cd) pyrene	10.0	U	
53-70-3	-----dibenz (a,h) anthracene	10.0	U	
191-24-2	-----benzo (g,h,i) perylene	10.0	U	

USA 21
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DUPLICATE

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-09

Client ID: 761114

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	292	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-10

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A611

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/20/99

GC Column: DB-624 ID: 0.53 (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	1.6	J	h b c c
108-88-3	toluene	1.1	J	
100-41-4	ethylbenzene	2.0	U	
75-71-8	xlenes (total)	3.0	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761212RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-09

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 7M314

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3	-----naphthalene	10.2	U
91-58-7	-----2-chloronaphthalene	10.2	U
208-96-8	-----acenaphthylene	10.2	U
83-32-9	-----acenaphthene	10.2	U
86-73-7	-----fluorene	10.2	U
85-01-8	-----phenanthrene	10.2	U
120-12-7	-----anthracene	10.2	U
206-44-0	-----fluoranthene	10.2	U
129-00-0	-----pyrene	10.2	U
56-55-3	-----benzo (a) anthracene	10.2	U
218-01-9	-----chrysene	10.2	U
205-99-2	-----benzo (b) fluoranthene	10.2	U
207-08-9	-----benzo (k) fluoranthene	10.2	U
50-32-8	-----benzo (a) pyrene	10.2	U
193-39-5	-----indeno (1,2,3-cd) pyrene	10.2	U
53-70-3	-----dibenz (a,h) anthracene	10.2	U
191-24-2	-----benzo (g,h,i) perylene	10.2	U

US A01

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-10

Client ID: 761212

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	2450	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-10

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A320

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
71-43-2-----	benzene	250		
108-88-3-----	toluene	76.4		F04,F08
100-41-4-----	ethylbenzene	131		
1330-20-7-----	xylene (total)	2110		F04,F08

FORM I VOA

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-01
 Sample wt/vol: 850.0 (g/mL) ML Lab File ID: 5L404
 Level: (low/med) LOW Date Received: 03/09/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/18/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	-----naphthalene	7.6	J
91-58-7	-----2-chloronaphthalene	11.8	U
208-96-8	-----acenaphthylene	11.8	U
83-32-9	-----acenaphthene	11.8	U
86-73-7	-----fluorene	11.8	U
85-01-8	-----phenanthrene	11.8	U
120-12-7	-----anthracene	11.8	U
206-44-0	-----fluoranthene	11.8	U
129-00-0	-----pyrene	11.8	U
56-55-3	-----benzo(a)anthracene	11.8	U
218-01-9	-----chrysene	11.8	U
205-99-2	-----benzo(b)fluoranthene	11.8	U
207-08-9	-----benzo(k)fluoranthene	11.8	U
50-32-8	-----benzo(a)pyrene	11.8	U
193-39-5	-----indeno(1,2,3-cd)pyrene	11.8	U
53-70-3	-----dibenz(a,h)anthracene	11.8	U
191-24-2	-----benzo(g,h,i)perylene	11.8	U

C502

FORM I SV-1

OLM03.0

DATA VALIDATION
COPY

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB10W

Method Type: Total Metals

Sample ID: 9903354-10

Client ID: 761312

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	403	µg/L	=		P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761412

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-07

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A405

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/18/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

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	5440		
108-88-3-----toluene	12600		
100-41-4-----ethylbenzene	1950		
1330-20-7-----xylenes (total)	12900	8	

F04, F03

F01, F02

FORM I VOA

OLM03.0

13
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761412

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-07

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 5L315

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	231 198	ED
91-58-7-----	2-chloronaphthalene	10.6	U
208-96-8-----	acenaphthylene	10.6	U
83-32-9-----	acenaphthene	10.6	U
86-73-7-----	fluorene	10.6	U
85-01-8-----	phenanthrene	10.6	U
120-12-7-----	anthracene	10.6	U
206-44-0-----	fluoranthene	10.6	U
129-00-0-----	pyrene	10.6	U
56-55-3-----	benzo (a) anthracene	10.6	U
218-01-9-----	chrysene	10.6	U
205-99-2-----	benzo (b) fluoranthene	10.6	U
207-08-9-----	benzo (k) fluoranthene	10.6	U
50-32-8-----	benzo (a) pyrene	10.6	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.6	U
53-70-3-----	dibenz (a,h) anthracene	10.6	U
191-24-2-----	benzo (g,h,i) perylene	10.6	U

U50
C
USP2

FORM I SV-1

OLM03.0

SDG No.: FSB10W

Form 1: Inorganic Analyses Data Sheet

Method Type: Total Metals

**DATA VALIDATION
COPY**

Sample ID: 9903354-07

Client ID: 761412

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	1600	µg/L	=		P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761512

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-11

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A321

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

71-43-2-----benzene	158		=
108-88-3-----toluene	12.2		= F04, F08
100-41-4-----ethylbenzene	12.9		=
1330-20-7-----xylenes (total)	276		= F04, F08

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OLM03.0

EPA SAMPLE NO.

761512

SDG No.: FSB10W

Lab Sample ID: 9903354-02

Lab File ID: 5L310

Date Received: 03/09/99

Date Extracted: 03/11/99

Date Analyzed: 03/17/99

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Q

91-20-3-----naphthalene	10.2	U
91-58-7-----2-chloronaphthalene	10.2	U
208-96-8-----acenaphthylene	10.2	U
83-32-9-----acenaphthene	10.2	U
86-73-7-----fluorene	10.2	U
85-01-8-----phenanthrene	10.2	U
120-12-7-----anthracene	10.2	U
206-44-0-----fluoranthene	10.2	U
129-00-0-----pyrene	10.2	U
56-55-3-----benzo (a) anthracene	10.2	U
218-01-9-----chrysene	10.2	U
205-99-2-----benzo (b) fluoranthene	10.2	U
207-08-9-----benzo (k) fluoranthene	10.2	U
50-32-8-----benzo (a) pyrene	10.2	U
193-39-5-----indeno (1,2,3-cd) pyrene	10.2	U
53-70-3-----dibenz (a,h) anthracene	10.2	U
191-24-2-----benzo (g,h,i) perylene	10.2	U

USE

U
↓
U5 P02
U
↓
U

OLM03.0

Form 1: Inorganic Analyses Data Sheet

DATA VALIDATION
COPY

SDG No.: FSB10W

Method Type: Total Metals

Sample ID: 9903354-11

Client ID: 761512

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	2110	µg/L	=		P	9.2	TIA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

RINSATE
EPA SAMPLE NO.

761516

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-15

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A315

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	C ↓
108-88-3	toluene	2.0	U	
100-41-4	ethylbenzene	2.0	U	
1330-20-7	xylenes (total)	3.0	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

RINSATE
EPA SAMPLE NO.

761516

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-03
 Sample wt/vol: 990.0 (g/mL) ML Lab File ID: 5L311
 Level: (low/med) LOW Date Received: 03/09/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/17/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	10.1	U	10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U 10.1 U ↓ USE P02
91-58-7-----	2-chloronaphthalene	10.1	U	
208-96-8-----	acenaphthylene	10.1	U	
83-32-9-----	acenaphthene	10.1	U	
86-73-7-----	fluorene	10.1	U	
85-01-8-----	phenanthrene	10.1	U	
120-12-7-----	anthracene	10.1	U	
206-44-0-----	fluoranthene	10.1	U	
129-00-0-----	pyrene	10.1	U	
56-55-3-----	benzo (a) anthracene	10.1	U	
218-01-9-----	chrysene	10.1	U	
205-99-2-----	benzo (b) fluoranthene	10.1	U	
207-08-9-----	benzo (k) fluoranthene	10.1	U	
50-32-8-----	benzo (a) pyrene	10.1	U	
193-39-5-----	indeno (1,2,3-cd) pyrene	10.1	U	
53-70-3-----	dibenz (a,h) anthracene	10.1	U	
191-24-2-----	benzo (g,h,i) perylene	10.1	U	

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761612

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-12

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A322

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 100.0

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	5390	
108-88-3-----	toluene	371	
100-41-4-----	ethylbenzene	297	
1330-20-7-----	xylene (total)	1600	

FDY, F08

F04, F08

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761612

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-04
 Sample wt/vol: 970.0 (g/mL) ML Lab File ID: 5L312
 Level: (low/med) LOW Date Received: 03/09/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/17/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

91-20-3-----	naphthalene	5.0	J
91-58-7-----	2-chloronaphthalene	10.3	U
208-96-8-----	acenaphthylene	10.3	U
83-32-9-----	acenaphthene	10.3	U
86-73-7-----	fluorene	10.3	U
85-01-8-----	phenanthrene	10.3	U
120-12-7-----	anthracene	10.3	U
206-44-0-----	fluoranthene	10.3	U
129-00-0-----	pyrene	10.3	U
56-55-3-----	benzo(a)anthracene	10.3	U
218-01-9-----	chrysene	10.3	U
205-99-2-----	benzo(b)fluoranthene	10.3	U
207-08-9-----	benzo(k)fluoranthene	10.3	U
50-32-8-----	benzo(a)pyrene	10.3	U
193-39-5-----	indeno(1,2,3-cd)pyrene	10.3	U
53-70-3-----	dibenz(a,h)anthracene	10.3	U
191-24-2-----	benzo(g,h,i)perylene	10.3	U

USE
05 P02

FORM I SV-1

OLM03.0

SDG No.: FSB10W

Form 1: Inorganic Analyses Data Sheet

DATA VALIDATION
COPY

Method Type: Total Metals

Sample ID: 9903354-12

Client ID: 761612

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	6720	µg/L			P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761712

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-13

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A314

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (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	2.0	U
108-88-3-----	toluene	2.0	U
100-41-4-----	ethylbenzene	2.0	U
1330-20-7-----	xylene (total)	3.0	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761712

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA

Case No.: NA

SAS No.: NA

SDG No.: FSB10W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9903354-05

Sample wt/vol: 950.0 (g/mL) ML

Lab File ID: 5L313

Level: (low/med) LOW

Date Received: 03/09/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 03/11/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 03/17/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	10.5	U
91-58-7-----	2-chloronaphthalene	10.5	U
208-96-8-----	acenaphthylene	10.5	U
83-32-9-----	acenaphthene	10.5	U
86-73-7-----	fluorene	10.5	U
85-01-8-----	phenanthrene	10.5	U
120-12-7-----	anthracene	10.5	U
206-44-0-----	fluoranthene	10.5	U
129-00-0-----	pyrene	10.5	U
56-55-3-----	benzo(a)anthracene	10.5	U
218-01-9-----	chrysene	10.5	U
205-99-2-----	benzo(b)fluoranthene	10.5	U
207-08-9-----	benzo(k)fluoranthene	10.5	U
50-32-8-----	benzo(a)pyrene	10.5	U
193-39-5-----	indeno(1,2,3-cd)pyrene	10.5	U
53-70-3-----	dibenz(a,h)anthracene	10.5	U
191-24-2-----	benzo(g,h,i)perylene	10.5	U

USE FOR

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

~~DATA VALIDATION~~
COPY

SDG No.: FSB10W

Method Type: Total Metals

Sample ID: 9903354-13

Client ID: 761712

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	325	µg/L	=		P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761812

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-14

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A407

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/18/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 500.0

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	15200	
108-88-3-----	toluene	17300	
100-41-4-----	ethylbenzene	1700	
1330-20-7-----	xylene (total)	9660	

F04, F03
F01, F03

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761812

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-06
 Sample wt/vol: 960.0 (g/mL) ML Lab File ID: 5L314
 Level: (low/med) LOW Date Received: 03/09/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/17/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	168	107	D	JAD1
91-58-7-----	2-chloronaphthalene		10.4	U	U
208-96-8-----	acenaphthylene		10.4	U	U
83-32-9-----	acenaphthene		10.4	U	US P02
86-73-7-----	fluorene		10.4	U	U
85-01-8-----	phenanthrene		10.4	U	
120-12-7-----	anthracene		10.4	U	
206-44-0-----	fluoranthene		10.4	U	
129-00-0-----	pyrene		10.4	U	
56-55-3-----	benzo (a) anthracene		10.4	U	
218-01-9-----	chrysene		10.4	U	
205-99-2-----	benzo (b) fluoranthene		10.4	U	
207-08-9-----	benzo (k) fluoranthene		10.4	U	
50-32-8-----	benzo (a) pyrene		10.4	U	
193-39-5-----	indeno (1,2,3-cd) pyrene		10.4	U	
53-70-3-----	dibenz (a,h) anthracene		10.4	U	
191-24-2-----	benzo (g,h,i) perylene		10.4	U	

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

DATA VALIDATION
COPY

SDG No.: FSB10W

Method Type: Total Metals

Sample ID: 9903354-14

Client ID: 761812

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	4940	µg/L	=		P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761912

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-06

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A519

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/19/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 50.0

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	10600	13500	ED
108-88-3-----	toluene	19000	22800	ED
100-41-4-----	ethylbenzene		2580	
75-71-8-----	xylene (total)		13500	

MAR 4/14/99

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

761912

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-01

Sample wt/vol: 860.0 (g/mL) ML Lab File ID: 5L409

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	308	260	2-D	5 MOL
91-58-7-----	2-chloronaphthalene	11.6	U	45	45
208-96-8-----	acenaphthylene	11.6	U	45	45
83-32-9-----	acenaphthene	11.6	U	45	45
86-73-7-----	fluorene	11.6	U	45	45
85-01-8-----	phenanthrene	11.6	U	45	45
120-12-7-----	anthracene	11.6	U	45	45
206-44-0-----	fluoranthene	11.6	U	45	45
129-00-0-----	pyrene	11.6	U	45	45
56-55-3-----	benzo (a) anthracene	11.6	U	45	45
218-01-9-----	chrysene	11.6	U	45	45
205-99-2-----	benzo (b) fluoranthene	11.6	U	45	45
207-08-9-----	benzo (k) fluoranthene	11.6	U	45	45
50-32-8-----	benzo (a) pyrene	11.6	U	45	45
193-39-5-----	indeno (1,2,3-cd) pyrene	11.6	U	45	45
53-70-3-----	dibenz (a,h) anthracene	11.6	U	45	45
191-24-2-----	benzo (g,h,i) perylene	11.6	U	45	45

SDG No.: FSB13W

Form 1: Inorganic Analyses Data Sheet

Method Type: Total Metals

Sample ID: 9903450-06

Client ID: 761912

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	9450	µg/L	=		P	9.2	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762012

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-03

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A516

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. _____ Date Analyzed: 03/19/99

GC Column: DB-624 ID: 0.53 (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	36.4	
108-88-3-----	toluene	98.4	
100-41-4-----	ethylbenzene	12.8	
75-71-8-----	xylene (total)	68.0	

DATA VALIDATION
COPY

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762012RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-04
 Sample wt/vol: 930.0 (g/mL) ML Lab File ID: 7M309
 Level: (low/med) LOW Date Received: 03/11/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	-----naphthalene	16.1	
91-58-7	-----2-chloronaphthalene	10.8	U
208-96-8	-----acenaphthylene	10.8	U
83-32-9	-----acenaphthene	10.8	U
86-73-7	-----fluorene	10.8	U
85-01-8	-----phenanthrene	10.8	U
120-12-7	-----anthracene	10.8	U
206-44-0	-----fluoranthene	10.8	U
129-00-0	-----pyrene	10.8	U
56-55-3	-----benzo (a) anthracene	10.8	U
218-01-9	-----chrysene	10.8	U
205-99-2	-----benzo (b) fluoranthene	10.8	U
207-08-9	-----benzo (k) fluoranthene	10.8	U
50-32-8	-----benzo (a) pyrene	10.8	U
193-39-5	-----indeno (1,2,3-cd) pyrene	10.8	U
53-70-3	-----dibenz (a,h) anthracene	10.8	U
191-24-2	-----benzo (g,h,i) perylene	10.8	U

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FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-03

Client ID: 762012

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	2260	µg/L	=		P	46.0	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA INFORMATION
3/24

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER Lab Sample ID: 9902807-25

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y110

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 100.0

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	21100	43500	ED
108-88-3-----	toluene	28200	55300	ED B
100-41-4-----	ethylbenzene		3110	
75-71-8-----	xylene (total)		45400	B

= F01, F03
= F01, F03
= F01, F03

4/9/90

USE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-25

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I516

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	2.3	J
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

J
C
↓

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-04

Client ID: 762112

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	8180	µg/L	=		P	46.0	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762122

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER Lab Sample ID: 9902807-26

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y116

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

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	10100	
108-88-3-----	toluene	10500 22800	ED B = F01, F08
100-41-4-----	ethylbenzene	2280	=
75-71-8-----	xylene (total)	11600	B = F01, F08

UMP 4/9/99

USE

FORM I VOA

OLM03.0

15
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762122

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-26

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I517

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	108	
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762124

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER. Lab Sample ID: 9902807-23

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y115

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	benzene	8650		= F01, F03
108-88-3-----	toluene	19900	3	
100-41-4-----	ethylbenzene	2060		= F01, F03
75-71-8-----	xylene (total)	10600	13	

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762124

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-23

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I514

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

91-20-3	naphthalene	110	
91-58-7	2-chloronaphthalene	10.0	U
208-96-8	acenaphthylene	10.0	U
83-32-9	acenaphthene	10.0	U
86-73-7	fluorene	10.0	U
85-01-8	phenanthrene	10.0	U
120-12-7	anthracene	10.0	U
206-44-0	fluoranthene	10.0	U
129-00-0	pyrene	10.0	U
56-55-3	benzo (a) anthracene	10.0	U
218-01-9	chrysene	10.0	U
205-99-2	benzo (b) fluoranthene	10.0	U
207-08-9	benzo (k) fluoranthene	10.0	U
50-32-8	benzo (a) pyrene	10.0	U
193-39-5	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3	dibenz (a,h) anthracene	10.0	U
191-24-2	benzo (g,h,i) perylene	10.0	U

110

DATA VALIDATION
CITY

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762132

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER Lab Sample ID: 9902807-27

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y113

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 500.0

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	3000		
108-88-3-----	toluene	8860	B	= F01, F08
100-41-4-----	ethylbenzene	890	J	
75-71-8-----	xylene (total)	4470	B	= F01, F08

FORM I VOA

OLM03.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762132

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-27
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I520
 Level: (low/med) LOW Date Received: 02/19/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
91-20-3	-----naphthalene	392	137 B D
91-58-7	-----2-chloronaphthalene	10.0	U
208-96-8	-----acenaphthylene	10.0	U
83-32-9	-----acenaphthene	10.0	U
86-73-7	-----fluorene	2.0	J
85-01-8	-----phenanthrene	4.6	J
120-12-7	-----anthracene	0.83	J
206-44-0	-----fluoranthene	3.1	J
129-00-0	-----pyrene	3.7	J
56-55-3	-----benzo (a) anthracene	10.0	U
218-01-9	-----chrysene	10.0	U
205-99-2	-----benzo (b) fluoranthene	10.0	U
207-08-9	-----benzo (k) fluoranthene	10.0	U
50-32-8	-----benzo (a) pyrene	10.0	U
193-39-5	-----indeno (1,2,3-cd) pyrene	10.0	U
53-70-3	-----dibenz (a,h) anthracene	10.0	U
191-24-2	-----benzo (g,h,i) perylene	10.0	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762142

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER Lab Sample ID: 9902807-28

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y114

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

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		11000		
108-88-3-----toluene		13700	27700	ED B = F01, F08
100-41-4-----ethylbenzene			2650	= F01, F08
75-71-8-----xylenes (total)			13300	B = F01, F08

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USP

FORM I VOA

OLM03.0

15
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762142

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-28
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I521
 Level: (low/med) LOW Date Received: 02/19/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

USO

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L			
91-20-3	-----naphthalene	393	~~134~~	~~2~~	~~D~~
91-58-7	-----2-chloronaphthalene		10.0	U	
208-96-8	-----acenaphthylene		10.0	U	
83-32-9	-----acenaphthene		10.0	U	
86-73-7	-----fluorene	<i>MAAP</i>	2.0	J	
85-01-8	-----phenanthrene	<i>4/9/99</i>	4.7	J	
120-12-7	-----anthracene		0.79	J	
206-44-0	-----fluoranthene		2.9	J	
129-00-0	-----pyrene		4.2	J	
56-55-3	-----benzo (a) anthracene		10.0	U	
218-01-9	-----chrysene		10.0	U	
205-99-2	-----benzo (b) fluoranthene		10.0	U	
207-08-9	-----benzo (k) fluoranthene		10.0	U	
50-32-8	-----benzo (a) pyrene		10.0	U	
193-39-5	-----indeno (1,2,3-cd) pyrene		10.0	U	
53-70-3	-----dibenz (a,h) anthracene		10.0	U	
191-24-2	-----benzo (g,h,i) perylene		10.0	U	

11
46
11

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762152

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) WATER Lab Sample ID: 9902807-24

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y109

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: not dec. Date Analyzed: 03/01/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

71-43-2-----	benzene	181		
108-88-3-----	toluene	535	B	= F01, F08
100-41-4-----	ethylbenzene	64.6		
75-71-8-----	xlenes (total)	324	B	= F01, F08

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762152

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA03W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902807-24

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 2I515

Level: (low/med) LOW Date Received: 02/19/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 02/22/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 02/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	16.7	
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo(a)anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo(b)fluoranthene	10.0	U
207-08-9-----	benzo(k)fluoranthene	10.0	U
50-32-8-----	benzo(a)pyrene	10.0	U
193-39-5-----	indeno(1,2,3-cd)pyrene	10.0	U
53-70-3-----	dibenz(a,h)anthracene	10.0	U
191-24-2-----	benzo(g,h,i)perylene	10.0	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA07W

Matrix: (soil/water) WATER Lab Sample ID: 9902817-03

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Y410

Level: (low/med) LOW Date Received: 02/21/99

% Moisture: not dec. Date Analyzed: 03/04/99

GC Column: DB-624 ID: 0.53 (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	28.2	
108-88-3-----toluene	4.9	
100-41-4-----ethylbenzene	3.0	
75-71-8-----xylenes (total)	16.5	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSA07W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9902817-12

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 8K117

Level: (low/med) LOW Date Received: 02/21/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/08/99

Concentrated Extract Volume: 1.00 mL Date Analyzed: 03/09/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	naphthalene	0.74 J	J A01
91-58-7-----	2-chloronaphthalene	10.2 U	UJ ↓
208-96-8-----	acenaphthylene	10.2 U	UJ ↓
83-32-9-----	acenaphthene	10.2 U	UJ P02, A01
86-73-7-----	fluorene	10.2 U	UJ A01
85-01-8-----	phenanthrene	10.2 U	
120-12-7-----	anthracene	10.2 U	
206-44-0-----	fluoranthene	10.2 U	
129-00-0-----	pyrene	10.2 U	
56-55-3-----	benzo (a) anthracene	10.2 U	
218-01-9-----	chrysene	10.2 U	
205-99-2-----	benzo (b) fluoranthene	10.2 U	
207-08-9-----	benzo (k) fluoranthene	10.2 U	
50-32-8-----	benzo (a) pyrene	10.2 U	
193-39-5-----	indeno (1,2,3-cd) pyrene	10.2 U	
53-70-3-----	dibenz (a,h) anthracene	10.2 U	
191-24-2-----	benzo (g,h,i) perylene	10.2 U	

FORM I SV-1

OLM03.0

.1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

762312

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-08

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A313

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/17/99

GC Column: DB-624 ID: 0.53 (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	46.5	
108-88-3-----toluene	6.2	
100-41-4-----ethylbenzene	2.9	
1330-20-7-----xylenes (total)	4.7	

F04, F08

F04, F08

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

752312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903354-08

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: 5L316

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/11/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

91-20-3-----	naphthalene	2.1	J
91-58-7-----	2-chloronaphthalene	10.5	U
208-96-8-----	acenaphthylene	10.5	U
83-32-9-----	acenaphthene	10.5	U
86-73-7-----	fluorene	10.5	U
85-01-8-----	phenanthrene	10.5	U
120-12-7-----	anthracene	10.5	U
206-44-0-----	fluoranthene	10.5	U
129-00-0-----	pyrene	10.5	U
56-55-3-----	benzo (a) anthracene	10.5	U
218-01-9-----	chrysene	10.5	U
205-99-2-----	benzo (b) fluoranthene	10.5	U
207-08-9-----	benzo (k) fluoranthene	10.5	U
50-32-8-----	benzo (a) pyrene	10.5	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.5	U
53-70-3-----	dibenz (a,h) anthracene	10.5	U
191-24-2-----	benzo (g,h,i) perylene	10.5	U

J
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FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB10W

Method Type: Total Diss

DATA VALIDATION

Sample ID: 9903354-08

Client ID: 762312

COPY

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	3390	µg/L	=		P	4.6	TJA61 Trace ICPAES	990315-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762412

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB10W

Matrix: (soil/water) WATER Lab Sample ID: 9903354-09

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 7A406

Level: (low/med) LOW Date Received: 03/09/99

% Moisture: not dec. Date Analyzed: 03/18/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 50.0

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	697	
108-88-3	toluene	3180	
100-41-4	ethylbenzene	716	
1330-20-7	xylenes (total)	4220	

F04, F08

F01, F08

FORM I VOA

OLM03.0

18

752412

Lab Code: NA

Case No. : NA

SAS No. : NA

SDG No.: FSB10W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9903354-09

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 5L317

Level: (low/med) LOW

Date Received: 03/09/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted:03/11/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 03/17/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

152 ~~89.9~~

WAP
4/6/98

5 ADL
U
U
US POZ
U

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

COPY

SDG No.: FSB10W

Method Type: Total Metals

Sample ID: 9903354-09

Client ID: 762412

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/9/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	15000	µg/L	=		P	4.6	TJA61 Trace ICPAES	9903L5-1

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762512

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A514

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/19/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	2500
108-88-3	toluene	0.51	J	
100-41-4	ethylbenzene	2.0	U	
75-71-8	xylene (total)	3.0	U	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762512RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-06

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: 7M311

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	10.2	U
91-58-7-----	2-chloronaphthalene	10.2	U
208-96-8-----	acenaphthylene	10.2	U
83-32-9-----	acenaphthene	10.2	U
86-73-7-----	fluorene	10.2	U
85-01-8-----	phenanthrene	10.2	U
120-12-7-----	anthracene	10.2	U
206-44-0-----	fluoranthene	10.2	U
129-00-0-----	pyrene	10.2	U
56-55-3-----	benzo (a) anthracene	10.2	U
218-01-9-----	chrysene	10.2	U
205-99-2-----	benzo (b) fluoranthene	10.2	U
207-08-9-----	benzo (k) fluoranthene	10.2	U
50-32-8-----	benzo (a) pyrene	10.2	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.2	U
53-70-3-----	dibenz (a,h) anthracene	10.2	U
191-24-2-----	benzo (g,h,i) perylene	10.2	U

USE ADI

↓ ↓

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-01

Client ID: 762512

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	7300	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762612

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-12

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1B109

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/22/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	C ↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
75-71-8-----	xylene (total)	3.0	U	

DATE RECEIVED
COPY

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762612RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-02
 Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 7M307
 Level: (low/med) LOW Date Received: 03/11/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
91-20-3	-----naphthalene	10.6	U
91-58-7	-----2-chloronaphthalene	10.6	U
208-96-8	-----acenaphthylene	10.6	U
83-32-9	-----acenaphthene	10.6	U
86-73-7	-----fluorene	10.6	U
85-01-8	-----phenanthrene	10.6	U
120-12-7	-----anthracene	10.6	U
206-44-0	-----fluoranthene	10.6	U
129-00-0	-----pyrene	10.6	U
56-55-3	-----benzo(a)anthracene	10.6	U
218-01-9	-----chrysene	10.6	U
205-99-2	-----benzo(b)fluoranthene	10.6	U
207-08-9	-----benzo(k)fluoranthene	10.6	U
50-32-8	-----benzo(a)pyrene	10.6	U
193-39-5	-----indeno(1,2,3-cd)pyrene	10.6	U
53-70-3	-----dibenz(a,h)anthracene	10.6	U
191-24-2	-----benzo(g,h,i)perylene	10.6	U

US ADI

FORM I SV-1

OLM03.0

SDG No.: FSB13W

Form 1: Inorganic Analyses Data Sheet

Method Type: Total Metals

Sample ID: 9903450-12

Client ID: 762612

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	2260	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762712

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-02

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1A515

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/19/99

GC Column: DB-624 ID: 0.53 (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	2.0 U	↓
108-88-3-----	toluene	2.0 U	
100-41-4-----	ethylbenzene	2.0 U	
75-71-8-----	xylene (total)	3.0 U	

DATA VALIDATION
COPY

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762712RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA

Case No.: NA

SAS No.: NA

SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9903448-05

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: 7M310

Level: (low/med) LOW

Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 03/19/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 03/24/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

USE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	-----naphthalene	10.2 U	15 15 A01 , GO.
91-58-7	-----2-chloronaphthalene	10.2 U	
208-96-8	-----acenaphthylene	10.2 U	
83-32-9	-----acenaphthene	10.2 U	
86-73-7	-----fluorene	10.2 U	
85-01-8	-----phenanthrene	10.2 U	
120-12-7	-----anthracene	10.2 U	
206-44-0	-----fluoranthene	10.2 U	
129-00-0	-----pyrene	10.2 U	
56-55-3	-----benzo(a)anthracene	0.74 J	
218-01-9	-----chrysene	10.2 U	
205-99-2	-----benzo(b)fluoranthene	10.2 U	
207-08-9	-----benzo(k)fluoranthene	10.2 U	
50-32-8	-----benzo(a)pyrene	10.2 U	
193-39-5	-----indeno(1,2,3-cd)pyrene	10.2 U	
53-70-3	-----dibenz(a,h)anthracene	10.2 U	
191-24-2	-----benzo(g,h,i)perylene	10.2 U	

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-02

Client ID: 762712

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	1360	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

DATA VALIDATION
COPY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762812

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB13W

Matrix: (soil/water) WATER Lab Sample ID: 9903450-11

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1B206

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: not dec. Date Analyzed: 03/23/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 500.0

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	1010	
108-88-3	toluene	5650	
100-41-4	ethylbenzene	1670	
75-71-8	xylenes (total)	11800	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762812RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSB11W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9903448-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 7M313

Level: (low/med) LOW Date Received: 03/11/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 03/19/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 03/24/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	254	233	ED	JAD1
91-58-7-----	2-chloronaphthalene	10.0	U		
208-96-8-----	acenaphthylene	10.0	U		
83-32-9-----	acenaphthene	10.0	U		
86-73-7-----	fluorene	10.0	U		
85-01-8-----	phenanthrene	10.0	U		
120-12-7-----	anthracene	10.0	U		
206-44-0-----	fluoranthene	10.0	U		
129-00-0-----	pyrene	10.0	U		
56-55-3-----	benzo(a)anthracene	10.0	U		
218-01-9-----	chrysene	10.0	U		
205-99-2-----	benzo(b)fluoranthene	10.0	U		
207-08-9-----	benzo(k)fluoranthene	10.0	U		
50-32-8-----	benzo(a)pyrene	10.0	U		
193-39-5-----	indeno(1,2,3-cd)pyrene	10.0	U		
53-70-3-----	dibenz(a,h)anthracene	10.0	U		
191-24-2-----	benzo(g,h,i)perylene	10.0	U		

FORM I SV-1

OLM03.0

Form 1: Inorganic Analyses Data Sheet

SDG No.: FSB13W

Method Type: Total Metals

Sample ID: 9903450-11

Client ID: 762812

Contract: SAIC00299

Lab Code: GEL

Case No.:

SAS No.:

Matrix: WATER

Date Received: 3/11/99

Level: LOW

% Solids: 0.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-89-6	Iron	6180	µg/L	=		P	4.6	TJA61 Trace ICPAES	990325-2

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

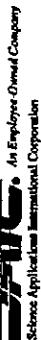
Comments:

CHA F CUSTODY RECORD

CHA F CUSTODY RECORD

COC NO.: DO 503

PROJECT NAME: CAP-Part B UST Investigations				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory													
PROJECT NUMBER: 01-0331-04-1593-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417													
PROJECT MANAGER: Patty Stoll																PHONE NO: (803) 556-8171													
Sampler (Signature) <i>Laura Lumley</i>				(Printed Name) Laura Lumley												OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS													
Sample ID				Date Collected		Time Collected		Matrix		PAH, DRO, Lead, TOC				PAH, TPH, Lead, TOC				Discolored Iron				No. of Bottles/Vials				OVA SCREENING			
761921				2/17/99		1115		Soil		1				1				1				3						9902752-14	
761323				2/17/99		1715		1		1				1				1				3						-15	
421211				2/17/99		1515		1		1				1				1				3						-16	
762423				2/17/99		1515		1		1				1				1				3						-17	
141311				2/17/99		1353		1		1				1				1				2						-18	
141313				2/17/99		1353		1		1				1				1				2						-19	
141411				2/17/99		1510		1		1				1				1				2						-20	
141321				2/17/99		1355		1		1				1				1				2						9902753-01	
141421				2/17/99		1521		1		1				1				1				2						9902754-01	
6205612				2/17/99		1230		water		2				2				2				2						-02	
840912				2/17/99		1040		1		2				2				2				2						9902754-01	
841212				2/17/99		1700		1		2				2				2				2						-03	
841025				2/17/99		1730		1		2				2				2				2						-04	
RELINQUISHED BY: <i>Laura Lumley</i>				Date/Time 2/18/99		RECEIVED BY: <i>[Signature]</i>		Date/Time 2/18/99		TOTAL NUMBER OF CONTAINERS: Cooler ID: # 6075				Cooler Temperature: 4°C				FEDEX NUMBER:											
COMPANY NAME: SAC				1145		COMPANY NAME: [Signature]		1730																					
RECEIVED BY: <i>[Signature]</i>				Date/Time 2/18/99		RELINQUISHED BY:		Date/Time																					
COMPANY NAME: [Signature]				1145		COMPANY NAME:																							
RECEIVED BY: <i>[Signature]</i>				Date/Time 2/18/99		RELINQUISHED BY:		Date/Time																					
COMPANY NAME: [Signature]				1730		COMPANY NAME:																							



CHAIN OF CUSTODY RECORD

COC NO.: D03504

CHAIN OF CUSTODY RECORD

VIII-82



CHAIN OF CUSTODY RECORD

COC NO.: DO3509

VIII-83



CHAIN OF CUSTODY RECORD

COC NO.: D03514

VIII-84



CHAIN OF CUSTODY RECORD

COC NO.: 103517

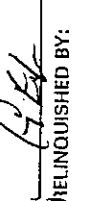
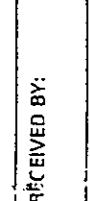
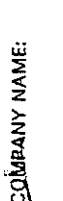
CHAIN OF CUSTODY RECORD

VIII-85

9903354.1/

COC NO.: D03515

CHAIN OF CUSTODY RECORD

PROJECT NAME: CAP-Part B UST Investigations				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-0331-04-1593-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417	
PROJECT MANAGER: Patty Stoll																PHONE NO: (803) 556-8171	
Sampler (Signature) <i>Laura Lumley</i>				(Printed Name) Laura Lumley												OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	PAH	GRO	PAH, DRO	PAH, DRO, Lead, TOC	PAH, TPH	Disolved Iron							OVA SCREENING	
76141Z	3/8/99	1334	water	Z													
76231Z	3/8/99	955	1	Z													
76241Z	3/8/99	1132	1	Z													
76131Z	3/8/99	1710	1	Z													
76151Z	3/8/99	1630	1	Z													
76161Z	3/8/99	1120	1	Z													
76171Z	3/8/99	1246	1	Z													
76181Z	3/8/99	1455	1	Z													
761516	3/8/99	1615	1	Z													
761516	3/8/99	745	1	Z													
				 RECEIVED BY: Patty Stoll COMPANY NAME: General Engineering Laboratory												Cooler Temperature: 4°C	
				 RECEIVED BY: Laura Lumley COMPANY NAME: General Engineering Laboratory												Cooler ID: #393	
				 RECEIVED BY: Patty Stoll COMPANY NAME: General Engineering Laboratory												Cooler ID: #393	
				 RECEIVED BY: Laura Lumley COMPANY NAME: General Engineering Laboratory												Cooler ID: #393	



CHAIN OF CUSTODY RECORD

COC NO.: DO-3517

VIII-87



CHAIN OF CUSTODY RECORD

COC NO.: D03'5148

CHAIN OF CUSTODY RECORD

VIII-88



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An Employee-Owned Company
Science Applications International Corporation
800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 491-4600

1063

COC NO.: D035ZZ

CHAIN OF CUSTODY RECORD

PROJECT NAME: CAP-Part B UST Investigations				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory							
PROJECT NUMBER: 01-0331-04-1593-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417							
PROJECT MANAGER: Patty Stoll																PHONE NO: (803) 566-8171							
Donna Underwood (Signature)				Laura Lumley (Printed Name)												OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS							
Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	GRO	PAH, DRO	PAH, DRO, Lead, TOC	PAH, TPH	PAH, TPH, Lead, TOC	Dissolved Iron										No. of Bottles/ Vials:	OVA SCREENING	
931012	3/10/99	1530	water	2																	2		9903449-10
762512	3/9/99	1037		2																	3		9903450-01
762712	3/9/99	910		2																	3		-02
762012	3/9/99	1130		2																	3		03
762112	3/9/99	1415		2																	3		04
790612	3/9/99	1715		2																	3		05
761912	3/9/99	1210		2																	3		06
761112	3/9/99	928		2																	3		07
790712	3/9/99	1715		2																	3		08
761114	3/9/99	928		2																	3		09
761212	3/9/99	1143		2																	3		10
762812	3/9/99	1450		2																	3		11
762612	3/9/99	1405	↓	2																	3		12
RELINQUISHED BY: Donna Underwood				Date/Time 3/11/99		RECEIVED BY: Laura Lumley		Date/Time 3/11/99		TOTAL NUMBER OF CONTAINERS: Cooler ID: # 18-8												Cooler Temperature: 4°C	
COMPANY NAME: SAIC				1030		COMPANY NAME: SAIC		1520														FEDEX NUMBER:	
RECEIVED BY: Patty Stoll				Date/Time 3/11/99		RELINQUISHED BY:		Date/Time															
COMPANY NAME: SAIC				1030		COMPANY NAME:																	
RELINQUISHED BY: Patty Stoll				Date/Time 3/11/99		RECEIVED BY:		Date/Time															
COMPANY NAME: SAIC				1520		COMPANY NAME:																	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762912

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS3A04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-10

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D134

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/04/99

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	2.0	U
108-88-3-----toluene	2.0	U
100-41-4-----ethylbenzene	2.0	U
1330-20-7-----xylenes (total)	6.0	U

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

762912

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA08W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909749-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 40407

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo(a)anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo(b)fluoranthene	10.0	U
207-08-9-----	benzo(k)fluoranthene	10.0	U
50-32-8-----	benzo(a)pyrene	10.0	U
193-39-5-----	indeno(1,2,3-cd)pyrene	10.0	U
53-70-3-----	dibenz(a,h)anthracene	10.0	U
191-24-2-----	benzo(g,h,i)perylene	10.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION
11/17

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762914

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D115

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. Date Analyzed: 10/04/99

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	2.0	U	U ↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylene (total)	6.0	U	

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE
EPA SAMPLE NO.

762914

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA08W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909749-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 40320

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

91-20-3-----	naphthalene	10.0 U	
91-58-7-----	2-chloronaphthalene	10.0 U	
208-96-8-----	acenaphthylene	10.0 U	
83-32-9-----	acenaphthene	10.0 U	
86-73-7-----	fluorene	10.0 U	
85-01-8-----	phenanthrene	10.0 U	
120-12-7-----	anthracene	10.0 U	
206-44-0-----	fluoranthene	10.0 U	
129-00-0-----	pyrene	10.0 U	
56-55-3-----	benzo (a) anthracene	10.0 U	
218-01-9-----	chrysene	10.0 U	
205-99-2-----	benzo (b) fluoranthene	10.0 U	
207-08-9-----	benzo (k) fluoranthene	10.0 U	
50-32-8-----	benzo (a) pyrene	10.0 U	
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0 U	
53-70-3-----	dibenz (a,h) anthracene	10.0 U	
191-24-2-----	benzo (g,h,i) perylene	10.0 U	

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763012

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: FSBA12W

Matrix: (soil/water) WATER Lab Sample ID: 9909941-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1E118

Level: (low/med) LOW Date Received: 09/30/99

% Moisture: not dec. _____ Date Analyzed: 10/11/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	benzene	2.0	U	u ↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylene (total)	6.0	U	

FORM I VOA

OLM03.0

EPA SAMPLE NO.

763012

SDG No.: FSBA12W

Lab Sample ID: 9909941-01

Lab File ID: 79121

Date Received: 09/30/99

Date Extracted:10/06/99

Date Analyzed: 10/11/99

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA05W

Matrix: (soil/water) WATER Lab Sample ID: 9909746-09

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1D119

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/04/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	0.51	J	

OK

FORM I VOA

OLM03.0

VIII-96

DATE RECEIVED
CONF

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763112

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FSBA07W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909748-12
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 40512
 Level: (low/med) LOW Date Received: 09/25/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/08/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	naphthalene	10.0	U
91-58-7	2-chloronaphthalene	10.0	U
208-96-8	acenaphthylene	10.0	U
83-32-9	acenaphthene	10.0	U
86-73-7	fluorene	10.0	U
85-01-8	phenanthrene	10.0	U
120-12-7	anthracene	10.0	U
206-44-0	fluoranthene	10.0	U
129-00-0	pyrene	10.0	U
56-55-3	benzo(a)anthracene	10.0	U
218-01-9	chrysene	10.0	U
205-99-2	benzo(b)fluoranthene	10.0	U
207-08-9	benzo(k)fluoranthene	10.0	U
50-32-8	benzo(a)pyrene	10.0	U
193-39-5	indeno(1,2,3-cd)pyrene	10.0	U
53-70-3	dibenz(a,h)anthracene	10.0	U
191-24-2	benzo(g,h,i)perylene	10.0	U

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA05W

Matrix: (soil/water) WATER Lab Sample ID: 9909746-04

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1D208

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 50.0

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	1540		
108-88-3-----toluene	3120		
100-41-4-----ethylbenzene	1770		
1330-20-7-----xylenes (total)	7430		

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763212

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FSBA07W
 Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909748-16
 Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 40505
 Level: (low/med) LOW Date Received: 09/25/99
 % Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99
 Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/08/99
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	USE
91-20-3	-----naphthalene	156	131	20	11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 144

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-03

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D130

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. Date Analyzed: 10/04/99

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	benzene		963	
108-88-3-----	toluene		1270	
100-41-4-----	ethylbenzene		767	
1330-20-7-----	xlenes (total)		3230	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763312

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA07W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9909748-19

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: 40509

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 10/08/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	0.56	J
91-58-7-----	2-chloronaphthalene	10.2	U
208-96-8-----	acenaphthylene	10.2	U
83-32-9-----	acenaphthene	10.2	U
86-73-7-----	fluorene	0.72	J
85-01-8-----	phenanthrene	10.2	U
120-12-7-----	anthracene	10.2	U
206-44-0-----	fluoranthene	10.2	U
129-00-0-----	pyrene	10.2	U
56-55-3-----	benzo (a) anthracene	10.2	U
218-01-9-----	chrysene	10.2	U
205-99-2-----	benzo (b) fluoranthene	10.2	U
207-08-9-----	benzo (k) fluoranthene	10.2	U
50-32-8-----	benzo (a) pyrene	10.2	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.2	U
53-70-3-----	dibenz (a,h) anthracene	10.2	U
191-24-2-----	benzo (g,h,i) perylene	10.2	U

2.5

FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763412

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-08

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D132

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/04/99

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	51.9	
108-88-3-----	toluene	19.7	
100-41-4-----	ethylbenzene	71.7	
1330-20-7-----	xylene (total)	164	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763412RE

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA08W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909749-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 4P206

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 10/08/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/12/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

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CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3	naphthalene	29.9	
91-58-7	2-chloronaphthalene	10.0	U
208-96-8	acenaphthylene	10.0	U
83-32-9	acenaphthene	10.0	U
86-73-7	fluorene	10.0	U
85-01-8	phenanthrene	3.1	J
120-12-7	anthracene	10.0	U
206-44-0	fluoranthene	3.3	J
129-00-0	pyrene	6.8	J
56-55-3	benzo(a)anthracene	1.8	J
218-01-9	chrysene	2.3	J
205-99-2	benzo(b)fluoranthene	4.0	J
207-08-9	benzo(k)fluoranthene	10.0	U
50-32-8	benzo(a)pyrene	1.8	J
193-39-5	indeno(1,2,3-cd)pyrene	1.4	J
53-70-3	dibenz(a,h)anthracene	10.0	U
191-24-2	benzo(g,h,i)perylene	2.5	J

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763512

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA05W

Matrix: (soil/water) WATER Lab Sample ID: 9909746-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1D114

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. Date Analyzed: 10/04/99

GC Column: DB-624 ID: 0.53 (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	2.0	U
108-88-3-----	toluene	2.0	U
100-41-4-----	ethylbenzene	2.0	U
1330-20-7-----	xylene (total)	6.0	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763512

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA08W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909749-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 40405

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/07/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

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FORM I SV-1

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763612

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBAC4W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-04

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D128

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. Date Analyzed: 10/04/99

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	J
108-88-3-----	toluene	2.1	J
100-41-4-----	ethylbenzene	1.0	J
1330-20-7-----	xylene (total)	2.9	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763612

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA08W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909749-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 40311

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/06/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	46.7	
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	1.2	J
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	1.3	J

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763712

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-05

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D129

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

71-43-2-----benzene	4.6		
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	6.0	U	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763712

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA07W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9909748-17

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 40506

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 10/08/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

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FORM I SV-1

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763812

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA05W

Matrix: (soil/water) WATER Lab Sample ID: 9909746-05

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1D206

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. Date Analyzed: 10/05/99

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

71-43-2-----	benzene	212	=
108-88-3-----	toluene	19.1	UF04, F07
100-41-4-----	ethylbenzene	102	=
1330-20-7-----	xylene (total)	716	=

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

RPA SAMPLE NO.

763812

Lab Name: Contract: Lab Code: Case No.: SAS No.: SDG No.: FSBA07W
Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9909748-06
Sample wt/vol: 960.0 (g/mL) ML Lab File ID: 40418
Level: (low/med) LOW Date Received: 09/25/99
% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 09/27/99
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 10/08/99
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	8.9	J
91-58-7-----	2-chloronaphthalene	10.4	U
208-96-8-----	acenaphthylene	10.4	U
83-32-9-----	acenaphthene	10.4	U
86-73-7-----	fluorene	10.4	U
85-01-8-----	phenanthrene	10.4	U
120-12-7-----	anthracene	10.4	U
206-44-0-----	fluoranthene	10.4	U
129-00-0-----	pyrene	10.4	U
56-55-3-----	benzo (a) anthracene	10.4	U
218-01-9-----	chrysene	10.4	U
205-99-2-----	benzo (b) fluoranthene	10.4	U
207-08-9-----	benzo (k) fluoranthene	10.4	U
50-32-8-----	benzo (a) pyrene	10.4	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.4	U
53-70-3-----	dibenz (a,h) anthracene	10.4	U
191-24-2-----	benzo (g,h,i) perylene	10.4	U

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FORM I SV-1

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763912

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA04W

Matrix: (soil/water) WATER Lab Sample ID: 9909745-18

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2D142

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/05/99

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	3.5		
108-88-3-----toluene	0.66	J	
100-41-4-----ethylbenzene	0.51	J	
1330-20-7-----xylenes (total)	1.9	J	

FORM I VOA

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

763912

Lab Name:

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: FSBA07W

Matrix: (soil/water) GROUNDH2O

Lab Sample ID: 9909748-15

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: 40504

Level: (low/med) LOW

Date Received: 09/25/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 09/27/99

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 10/08/99

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	-----naphthalene	10.2	U
91-58-7	-----2-chloronaphthalene	10.2	U
208-96-8	-----acenaphthylene	10.2	U
83-32-9	-----acenaphthene	10.2	U
86-73-7	-----fluorene	10.2	U
85-01-8	-----phenanthrene	10.2	U
120-12-7	-----anthracene	10.2	U
206-44-0	-----fluoranthene	0.88	J
129-00-0	-----pyrene	1.9	J
56-55-3	-----benzo (a) anthracene	0.62	J
218-01-9	-----chrysene	1.2	J
205-99-2	-----benzo (b) fluoranthene	10.2	U
207-08-9	-----benzo (k) fluoranthene	0.94	J
50-32-8	-----benzo (a) pyrene	0.79	J
193-39-5	-----indeno (1,2,3-cd) pyrene	10.2	U
53-70-3	-----dibenz (a,h) anthracene	10.2	U
191-24-2	-----benzo (g,h,i) perylene	0.80	J

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FORM I SV-1

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764012

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA05W

Matrix: (soil/water) WATER Lab Sample ID: 9909746-03

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1D116

Level: (low/med) LOW Date Received: 09/25/99

% Moisture: not dec. _____ Date Analyzed: 10/04/99

GC Column: DB-624 ID: 0.53 (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	2.0	U	U ↓
108-88-3-----toluene	2.0	U	
100-41-4-----ethylbenzene	2.0	U	
1330-20-7-----xylenes (total)	6.0	U	

EPA SAMPLE NO.

764012

SDG No.: FSBA08W

Lab Sample ID: 9909749-13

Lab File ID: 40406

Date Received: 09/25/99

Date Extracted:09/27/99

Date Analyzed: 10/07/99

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

91-20-3-----naphthalene	11.3	U
91-58-7-----2-chloronaphthalene	11.3	U
208-96-8-----acenaphthylene	11.3	U
83-32-9-----acenaphthene	11.3	U
86-73-7-----fluorene	11.3	U
85-01-8-----phenanthrene	11.3	U
120-12-7-----anthracene	11.3	U
206-44-0-----fluoranthene	11.3	U
129-00-0-----pyrene	2.4	J
56-55-3-----benzo (a) anthracene	11.3	U
218-01-9-----chrysene	11.3	U
205-99-2-----benzo (b) fluoranthene	2.3	J
207-08-9-----benzo (k) fluoranthene	11.3	U
50-32-8-----benzo (a) pyrene	11.3	U
193-39-5-----indeno (1,2,3-cd) pyrene	1.4	J
53-70-3-----dibenz (a,h) anthracene	11.3	U
191-24-2-----benzo (g,h,i) perylene	2.3	J

OLM03.0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) WATER Lab Sample ID: 9911038-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2H409

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: not dec. Date Analyzed: 11/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

71-43-2-----benzene	8.2		
108-88-3-----toluene	1.3	J	
100-41-4-----ethylbenzene	5.2		
1330-20-7-----xylenes (total)	21.6		

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9911038-01

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: 8S312

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 11/02/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 11/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

91-20-3-----	naphthalene	0.78	J
91-58-7-----	2-chloronaphthalene	10.3	U
208-96-8-----	acenaphthylene	10.3	U
83-32-9-----	acenaphthene	10.3	U
86-73-7-----	fluorene	10.3	U
85-01-8-----	phenanthrene	10.3	U
120-12-7-----	anthracene	10.3	U
206-44-0-----	fluoranthene	10.3	U
129-00-0-----	pyrene	10.3	U
56-55-3-----	benzo (a) anthracene	10.3	U
218-01-9-----	chrysene	10.3	U
205-99-2-----	benzo (b) fluoranthene	10.3	U
207-08-9-----	benzo (k) fluoranthene	10.3	U
50-32-8-----	benzo (a) pyrene	10.3	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.3	U
53-70-3-----	dibenz (a,h) anthracene	10.3	U
191-24-2-----	benzo (g,h,i) perylene	10.3	U

FORM I SV-1

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) WATER Lab Sample ID: 9911038-02

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2H410

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: not dec. _____ Date Analyzed: 11/04/99

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	benzene	2.0	U	↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylenes (total)	6.0	U	

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9911038-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8S313

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 11/02/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 11/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) WATER Lab Sample ID: 9911038-03

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 2H411

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: not dec. Date Analyzed: 11/04/99

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	2.0	U	0 ↓
108-88-3-----	toluene	2.0	U	
100-41-4-----	ethylbenzene	2.0	U	
1330-20-7-----	xylene (total)	6.0	U	

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DATA VALIDATION
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

764312

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FSBA15W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9911038-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 8S314

Level: (low/med) LOW Date Received: 11/01/99

% Moisture: _____ decanted: (Y/N) _____ Date Extracted: 11/02/99

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 11/03/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

91-20-3-----	naphthalene	10.0	U
91-58-7-----	2-chloronaphthalene	10.0	U
208-96-8-----	acenaphthylene	10.0	U
83-32-9-----	acenaphthene	10.0	U
86-73-7-----	fluorene	10.0	U
85-01-8-----	phenanthrene	10.0	U
120-12-7-----	anthracene	10.0	U
206-44-0-----	fluoranthene	10.0	U
129-00-0-----	pyrene	10.0	U
56-55-3-----	benzo (a) anthracene	10.0	U
218-01-9-----	chrysene	10.0	U
205-99-2-----	benzo (b) fluoranthene	10.0	U
207-08-9-----	benzo (k) fluoranthene	10.0	U
50-32-8-----	benzo (a) pyrene	10.0	U
193-39-5-----	indeno (1,2,3-cd) pyrene	10.0	U
53-70-3-----	dibenz (a,h) anthracene	10.0	U
191-24-2-----	benzo (g,h,i) perylene	10.0	U

FORM I SV-1

DATA VALIDATION
COPY

OLM03.0



SAIC is an Equal Opportunity Employer
Minority Applicants Encouraged

600 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 461-6000

CHAIN OF CUSTODY RECORD

COC NO.: 003527

PROJECT NAME: D. O. 35, CAP 8		REQUESTED PARAMETERS										LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-0331-04-1583-210												LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll												PHONE NO: (843) 556-8171	
Sample (Signature) <i>Laura Lumley</i>												OBSERVATIONS COMMENTS: SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	STR	PE	GPO	PAH, DRO, Lead	BTEX, GPO	PAH, DRO	No. of Bottles/Vials	OVA SCREENING		
763912	9/23/99	1745	water	✓	✓	✓	✓	✓	✓	2	9909749-15		
763212	9/24/99	1215	↓	✓	✓	✓	✓	✓	✓	2	-16		
763712	9/24/99	0945	↓	✓	✓	✓	✓	✓	✓	2	-17		
037712	9/24/99	1500	↓	✓	✓	✓	✓	✓	✓	2	-18		
763312	9/24/99	1145	↓	✓	✓	✓	✓	✓	✓	2	-19		
031912	9/24/99	1545	↓	✓	✓	✓	✓	✓	✓	2	-20		
763612	9/24/99	1730	↓	✓	✓	✓	✓	✓	✓	2	9909749-01		
REINQUISHED BY: <i>Laura Lumley</i>		Date/Time 9/28/99	RECEIVED BY: <i>SAIC</i>		Date/Time 9/25/99	TOTAL NUMBER OF CONTAINERS: 14		Cooler Temperature: 4°C		FEDEX NUMBER:			
COMPANY NAME: SAIC		Date/Time 10:45	COMPANY NAME: SAIC		Date/Time 10:45	Cooler ID: #859							
RECEIVED BY: <i>Army C. Jones</i>		Date/Time 9/25/99	RELINQUISHED BY:		Date/Time								
COMPANY NAME: GEL		Date/Time 10:45	COMPANY NAME:		Date/Time								
REINQUISHED BY: <i>Army C. Jones</i>		Date/Time 9/25/99	RECEIVED BY:		Date/Time								
COMPANY NAME: GEL		Date/Time 1415	COMPANY NAME:		Date/Time								

COC NO.: D03528

CHAIN OF CUSTODY RECORD

SAIL An Engineering-Driven Company
Science Applications International Corporation

900 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4500

PROJECT NAME: D. O. 35, CAP B		PROJECT NUMBER: 01-0331-04-1693-210		PROJECT MANAGER: Patty Stoll		Sample (Signature) <i>Laura Lumley</i> Printed Name: Laura Lumley			
Sample ID	Date Collected	Time Collected	Matrix	BTX	PAH	GRO	PAH, DRO, Lead	BTX, GNO	PAH, DRO
031612	9/24/99	1600	water						
763412	9/24/99	1414							
932112	9/24/99	1025							
932012	9/24/99	1115							
932215	9/24/99	0945							
931812	9/24/99	1310							
931912	9/24/99	1225							

REQUESTED PARAMETERS		LABORATORY NAME: General Engineering Laboratory	
LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407		PHONE NO: (843) 556-8171	
OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
2	9909149-02		
2	7-03		
2	84		
2	05		
2	06		
2	07		
2	08		

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 10:45
RELINQUISHED BY: <i>Laura Lumley</i> COMPANY NAME: SAE		Date/Time 9/25/99 1415

RECEIVED BY: <	

CHAIN OF CUSTODY RECORD

PROJECT NAME: D. O. 35, CAP B PROJECT NUMBER: 01-0331-04-1553-210 PROJECT MANAGER: Patty Stoll		LABORATORY NAME: General Engineering Laboratory LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407 PHONE NO.: (843) 556 8171		REQUESTED PARAMETERS (Printed Name) Laura Lumsley		LABORATORY COMMENTS: SPECIAL INSTRUCTIONS 9909749-09 -10 -11 -12 -13 -14 -15	
Sample ID: 932014 762914 031512 763512 764012 762912 932212		Date Collected: 9/24/99 9/24/99 9/24/99 9/24/99 9/24/99 9/24/99 9/24/99		Time Collected: 1115 0947 1600 1745 1930 0947 0930		Match: water ↓ ↓ ↓ ↓ ↓ ↓	
PAH, DRO, Lead PAH, DRO BTEX, DRO PAH, DRO		PAH, DRO, Lead PAH, DRO BTEX, DRO PAH, DRO		PAH, DRO, Lead PAH, DRO BTEX, DRO PAH, DRO		PAH, DRO, Lead PAH, DRO BTEX, DRO PAH, DRO	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45		RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE/TIME: 9/25/99 10:45	
RECEIVED BY: Laura Lumsley COMPANY NAME: GEL		DATE					



800 Oak Ridge Turnpike, Oak Ridge, TN 37827 (423) 461-4000

PROJECT NAME: D. O. 36, CAP B

PROJECT NUMBER: 01-0331-04-1893-210

PROJECT MANAGER: Patty Stoll

Signature (Signature) (Printed Name)

David Sundry Laura Lumley

Sample ID	Date Collected	Time Collected	Material
763715	9/24/99	0850	water
931511	9/23/99	1035	Soil
931411	9/23/99	1135	
763811	9/23/99	1340	
931611	9/23/99	0940	
763711	9/24/99	0925	
763211	9/24/99	1145	
932411	9/23/99	1645	
932611	9/23/99	1500	
931311	9/23/99	1300	
932511	9/23/99	1545	
763911	9/23/99	1615	
931211	9/23/99	1400	

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 9/25/99 Date/Time: 9/25/99

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 10:55 Date/Time: 10:55

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 9/25/99 Date/Time: 9/25/99

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 14/5 Date/Time: 14/5

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 14/5 Date/Time: 14/5

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

Date/Time: 14/5 Date/Time: 14/5

RELINQUISHED BY: *David Sundry* RECEIVED BY: *David Sundry*

COMPANY NAME: SAIC COMPANY NAME: SAIC

CHAIN OF CUSTODY RECORD

COC NO.: D03530

REQUESTED PARAMETERS

PARAM	GRO	PAH DRO, Lead	BTXK, GRO	PAH, DRO	No. of Bottles/Vials
BTXK	1	1	1	3	3
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2
PAH	1	1	1	1	2
GRO	1	1	1	1	2
PAH DRO, Lead	1	1	1	1	2
BTXK, GRO	1	1	1	1	2
PAH, DRO	1	1	1	1	2
BTXK	1	1	1	1	2</



679 Oak Ridge Turnpike, O.R. Ridge, TN 37891 (423) 481-4500
Sellers: (Applicable International Organizations)
As Suppliers (On and Off-site)

2085

CHAIN OF CUSTODY RECORD

COC NO.: D03531

PROJECT NAME: D. O. 38, CAP 8				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-0331-04-1693-210																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Petty Staff																PHONE NO: (843) 556-8171	
Sponsor (Signature) <i>Lauren Lumsley</i>																OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS 9909144-14 -15 -16 -17 -18 -19 9909145-01 -02 -03 -04 -05 -06 -07	
Sample ID	Date Collected	Time Collected	Matrix	PAH	GRO	PAH, DRO, Lead	STEX, GRO	PAH, DRO	No. of Bottles/Vials				OVA SCREENING				
931611	9/23/99	0940	Soil	1													
932311	9/23/99	1745		1													
763911	9/23/99	1615		1													
763913	9/23/99	1615		1													
763211	9/24/99	1145		1													
763711	9/24/99	0925		1													
762914	9/24/99	0947	Water	2													
932112	9/24/99	1025		2													
763312	9/24/99	1145		2													
763612	9/24/99	1730		2													
763712	9/24/99	0945		2													
932212	9/24/99	0730		2													
932012	9/24/99	1115		2													
RELINQUISHED BY: <i>Lauren Lumsley</i>				RECEIVED BY: <i>Lauren Lumsley</i>				Date/Time 9/25/99				TOTAL NUMBER OF CONTAINERS: Cooler ID: 619				Cooler Temperature: 4°C	
COMPANY NAME: SAFC				COMPANY NAME: SAFC				Date/Time 11:22								FEDEX NUMBER:	
RECEIVED BY: <i>Lauren Lumsley</i>				RELINQUISHED BY:				Date/Time 9/25/99									
COMPANY NAME: SAFC				COMPANY NAME:				Date/Time 11:22									
RECEIVED BY: <i>Lauren Lumsley</i>				RELINQUISHED BY:				Date/Time 9/25/99									
COMPANY NAME: SAFC				COMPANY NAME:				Date/Time 1715									

3015

CHAIN OF CUSTODY RECORD

800 Oak Ridge Turnpike, Oak Ridge, TN 37831 603-261-6800

PROJECT NAME: D. O. 35, CAP 8

PROJECT NUMBER: 01-0331-06-1693-210

PROJECT MANAGER: Patty Stoll

Sample (Signature) *Dana Lumber Lumley* (Printed Name)

Sample ID	Date Collected	Time Collected	Media
763412	9/24/99	1414	Water
031012	9/24/99	1608	
762912	9/24/99	0747	
932312	9/23/99	1800	
031912	9/24/99	1545	
932215	9/24/99	0945	
TR8024	9/24/99	0745	
931912	9/24/99	1225	
932014	9/24/99	1115	
934812	9/24/99	1310	
763715	9/24/99	0850	
7603912	9/23/99	1745	
031712	9/24/99	1500	

RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99	RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99
COMPANY NAME: SAIC	11:23	COMPANY NAME: SAIC	11:23
RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99	RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99
COMPANY NAME: SAIC	11:23	COMPANY NAME: SAIC	11:23
RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99	RECEIVED BY: <i>Dana Lumber Lumley</i>	DATE/TIME: 9/25/99
COMPANY NAME: SAIC	11:23	COMPANY NAME: SAIC	11:23

REQUESTED PARAMETERS

PARAMETER	TEST METHOD	DATE/TIME
PAH, DRO	2	9/25/99
BTX, DRO	2	1415
PAH, DRO, Lead	2	
GRO	2	
PAH	2	
BTX	2	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: # 619

Cooler Temperature: 4°C

FEDEX NUMBER:

LABORATORY NAME:
General Engineering Laboratory

LABORATORY ADDRESS:
2040 Savage Road
Charleston, SC 29407

PHONE NO: (843) 558-8171

OVA SCREENING

OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS

9909145-08	2	
289	2	
-10	2	
-11	2	
-12	2	
-13	2	
-14	2	
15220	2	
1515	2	
-16	2	
17	2	
18	2	
19	2	

500 Oak Ridge Township, Oak Ridge, TN 37831 642.51.461-4000

PROJECT MANAGER: PATTY STOL

UNRECORDED BY:	DATE/TIME	RECEIVED BY:
Amey C. J...	9/25/99	
COMPANY NAME:		COMPANY NAME:
1000	14/5	

5

71-	✓
91-	✓
51-	✓
41-97115016	

EEDEX NUMBER.

COC NO.: D03531



COC NO.: D03534

CHAIN OF CUSTODY RECORD

PROJECT NAME: D. O. 36, CAP #				REQUESTED PARAMETERS				LABORATORY NAME: General Engineering Laboratory							
PROJECT NUMBER: 01-0337-04-1583-210								LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407							
PROJECT MANAGER: Petty Slog								PHONE NO: (843) 566-8171							
Server (Signature) <i>Donna Dumbler</i>				Printed Name) Donna Dumbler				OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS 9909941-01 990989-04 → -02							
Sample ID	Date Collected	Time Collected	Media	BTX	7-2	GRO	PAM, DRO, Laid	BTX, GRO	PAM, DRO	No. of Bottles/Vials					
7103017	9/24/99	1205	water	2						4					
7103011	9/24/99	1115	soil	1						3					
7103027	9/29/99	0800	water	2						2					
RELINQUISHED BY: <i>Donna Dumbler</i> COMPANY NAME: SAFR RECEIVED BY: <i>Donna Dumbler</i> COMPANY NAME: SAFR RELINQUISHED BY: <i>Donna Dumbler</i> COMPANY NAME: SAFR RECEIVED BY: <i>Donna Dumbler</i> COMPANY NAME: SAFR															
RELINQUISHED BY: <i>Donna Dumbler</i>				RECEIVED BY: <i>Donna Dumbler</i>				TOTAL NUMBER OF CONTAINERS: 9				Cooler Temperature: FEDEX NUMBER:			
COMPANY NAME: SAFR				COMPANY NAME: SAFR				Date/Time: 9/30/99 1309				Cooler ID: 4747			
RELINQUISHED BY: <i>Donna Dumbler</i>				RECEIVED BY: <i>Donna Dumbler</i>				Date/Time: 9/30/99 1515							
COMPANY NAME: SAFR				COMPANY NAME: SAFR				Date/Time: 9/30/99 1515							
RELINQUISHED BY: <i>Donna Dumbler</i>				RECEIVED BY: <i>Donna Dumbler</i>				Date/Time: 9/30/99 1515							
COMPANY NAME: SAFR				COMPANY NAME: SAFR				Date/Time: 9/30/99 1515							

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

CHAIN OF CUSTODY RECORD

COC NO.: D03537

PROJECT NAME: D. O. 36, CAP B		REQUESTED PARAMETERS										LABORATORY NAME: General Engineering Laboratory					
PROJECT NUMBER: 01-0331-04-1593-210												LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407					
PROJECT MANAGER: Patty Stoll												PHONE NO: (843) 558-8171					
Sampler (Signature) <i>David Sunday</i>		(Printed Name) Laura Lumley										OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS 9911038-01 -02 -03 04			
Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	GRO	PAH, DRO, Lead	BTEX, GRO	PAH, DRO	No. of Bottles/Vials							
76411Z	10/30/99	1745	water	ZZ						7							
76421Z	10/30/99	1830		ZZ						7							
76431Z	10/30/99	1700		ZZ						7							
TBB026	10/30/99	1200		Z						2							
 11/1/99														TOTAL NUMBER OF CONTAINERS: 14		Cooler Temperature: 4°C	
														RECEIVED BY: <i>Shoreco</i>		Cooler ID: #100	
														COMPANY NAME: <i>Shoreco</i>			
														RELINQUISHED BY: <i>David Sunday</i>			
COMPANY NAME: <i>SATC</i>		Date/Time: 11/1/99	1200	RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	COMPANY NAME: <i>G.E.L.</i>									
RECEIVED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	COMPANY NAME: <i>G.E.L.</i>									
COMPANY NAME: <i>G.E.L.</i>		Date/Time: 11/1/99	1200	RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	COMPANY NAME: <i>G.E.L.</i>									
RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	COMPANY NAME: <i>G.E.L.</i>									
COMPANY NAME: <i>G.E.L.</i>		Date/Time: 11/1/99	1200	RELINQUISHED BY: <i>David Sunday</i>		Date/Time: 11/1/99	1200	COMPANY NAME: <i>G.E.L.</i>									

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APPENDIX IX
CONTAMINATED SOIL DISPOSAL

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During UST removal and excavation activities in 1993 and 1996, all contaminated soil removed during the entire project (i.e., all USTs removed under contract with ACE, to include clean and nonclean closures) was tested in accordance with disposal facility requirements and transported to Kedesh, Inc., Highway 84, Ludowici, GA 31316.

The Closure Report for USTs 257-260 was not submitted to GA EPD in 1993 because review of the closure analytical data indicated that a CAP-Part A would be required (i.e., per requirements of GUST-9, Item 15, page 12, dated August 1995). However, the analytical data presented in the closure report is summarized in Table 1 of this CAP-Part B Report. The records regarding the excavation of contaminated soil at the site are insufficient to determine the quantity of soil removed. All soil excavated under Fort Stewart's 1993 UST removal contract (USTs 54 & 55, USTs 63 & 64, USTs 248 & 249, USTs 255 & 256, USTs 257-260) was stockpiled at a central location and transported to Kedesh, Inc., at the end of the project. Disposal manifests for the USTs 257-260 project have been archived and can be made available upon request.

The Closure Report for UST 261 was not submitted to GA EPD in 1996 because the review of closure analytical data indicated that a CAP-Part A would be required (i.e., per requirements of GUST-9, Item 15, page 12, dated August 1995). However, the analytical data presented in the closure report is summarized in Table 1 of this CAP-Part B Report. Disposal manifests for the UST 261 site were submitted to GA EPD USTMP in September 1998 with the UST 207A (Facility ID#9-089039) Closure Report response to comment correspondence (Perez 1998). Approximately 17.3 tons of contaminated soil were excavated from the UST 261 site.

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APPENDIX X
SITE RANKING FORM

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SITE RANKING FORM

Facility Name: USTs 257 - 261, Building 430

Ranked by: S. Stoller

County: Liberty Facility ID #: 9-089118

Date Ranked: 12/03/99

SOIL CONTAMINATION (CAP-Part A&B 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

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

C. Depth to Groundwater
(bls = below land surface)

- ☐ >50' bls = 1
- ☐ >25' - 50' bls = 2
- ☐ >10' - 25' bls = 5
- ☒ $\leq 10'$ bls = 10

Fill in the blanks: (A. 50) + (B. 50) = (100) x (C. 10) = (D. 1000)

GROUNDWATER CONTAMINATION (CAP-Part B 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" - 1ft. = 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 $\mu\text{g/L}$ = 0
- ☐ >5 - 100 $\mu\text{g/L}$ = 5
- ☐ >100 - 1,000 $\mu\text{g/L}$ = 50
- ☐ >1,000 - 10,000 $\mu\text{g/L}$ = 100
- ☒ >10,000 $\mu\text{g/L}$ = 250

Fill in the blanks: (E. 250) + (F. 250) = (G. 500)

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 = 2000
☐ <500' = 500
☐ >500' - 1/4 mi = 25
☐ 1/4 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 = 1000
☐ <100' = 500
☐ >100' - 500' = 25
☐ >500' - 1/4 mi = 5
☐ >1/4 - 1/2 mi = 2
☒ >1/2 mi = 0
For lower susceptibility areas only:
☐ >1/4 mi = 0

Note: If site is in lower susceptibility area, do not use the shaded areas.

* For justification that withdrawal point is not hydraulically connected, see page X-5.

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' = 1

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. 500) + (K. 0) = L. 500

(G. 500) x (L. 500) = M. 250,000

(M. 250000) + (D. 1000) = N. 251,000

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. 251,000) x (P. 1) = (251,000) + (Q. 0)

= 251,000 (based on CAP A&B soil data and CAP B groundwater data)

ENVIRONMENTAL SENSITIVITY SCORE

OTHER GEOLOGIC AND HYDROLOGIC DATA

The following information is presented to provide supplemental information to Section II.D.5 of the CAP-Part A form and provides detailed information relating to the geologic and hydrogeologic conditions at Fort Stewart to support determinations of groundwater flow pathway(s) or direction(s) and contaminant transport.

1.0 REGIONAL AND LOCAL GEOLOGY

Fort Stewart is located within the coastal plain physiographic province. This province is typified by nine southeastward dipping strata that increase in thickness from zero feet at the fall line located approximately 150 miles inland from the Atlantic coast, to approximately 4,200 feet at the coast. State geologic records describe a probable petroleum exploration well (the No. 1 Jelks-Rogers) located in the region as encountering crystalline basement rocks at a depth of 4254 feet BGS. This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata in the region.

The Cretaceous section was found to be approximately 1,970 feet thick and dominated by clastics. The Tertiary section was found to be approximately 2,170 feet thick and dominated by limestone with a 175-foot thick cap of dark green phosphatic clay. This clay is regionally extensive and is known as the Hawthorn Group. The interval from approximately 110 feet to the surface is Quaternary in age and composed primarily of sand with interbeds of clay or silt. This section is undifferentiated into separate formations (Herrick and Vochis 1963).

State geologic records contain information regarding a well drilled in October 1942, 1.8 miles north of Flemington at Liberty Field of Camp Stewart (now known as Fort Stewart). This well is believed to be an artesian well located approximately one-quarter mile north of the runway at Wright Army Airfield within the Fort Stewart Military Reservation. The log for this well describes a 410-foot section, the lowermost 110 feet of which consisted predominantly of limestone sediments, above which 245 feet of dark green phosphatic clay typical of the Hawthorn Group was encountered. The uppermost portion of the section was found to be Quaternary age interbedded sands and clays. The top 15 feet of these sediments were described as sandy clay (Herrick and Vochis 1963).

The surface soil located throughout the Fort Stewart garrison area consists of Stilson loamy sand. The surface layer of this soil is typically dark grayish brown loamy sand measuring approximately 6 inches in depth. The surface layer is underlain by material consisting of pale yellow loamy sand and extends to a depth of approximately 29 inches. The subsoil is predominantly sandy clay loam and extends to a depth of 72 inches or more (Herrick and Vochis 1963).

2.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of Fort Stewart is dominated by two aquifers referred to as the Principal Artesian and the surficial aquifers. 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 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 to 10 feet BGS (Geraghty and Miller 1993). 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 40 to 50 feet

BGS, thus the effective aquifer thickness would be approximately 35 to 45 feet. Soil surveys for Liberty and Long Counties describe the occurrence of a perched water table within the Stilson loamy sands present within Fort Stewart (Looper 1980).

The confining layer for the Principal Artesian aquifer is the phosphatic clay of the Hawthorn Group and ranges in thickness from 15 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: Cooswhatchie Formation, Markshead Formation, and the 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 Marshead Formation is approximately 70 feet thick in the Savannah Georgia area and consists of light colored phosphatic, slightly dolomitic, argillaceous sand to fine-grained sandy clay with scattered beds of dolostone, limestone, and siliceous, and dolomitic and less calcareous.

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.

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.

APPENDIX XI
PUBLIC NOTIFICATION

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STATE OF GEORGIA
CHATHAM COUNTY

Affidavit of Publication
Savannah Morning News
Savannah Evening Press

Personnally appeared before me, Lynnette Tuck, to me known, who being sworn, deposes and says:

That he is the Class. Inside Sales Mgr. of Southeastern Newspapers Corporation, a Georgia corporation, doing business in Chatham County, Georgia, under the trade name of Savannah Morning News/Savannah Evening Press, a daily newspaper published in said county;

That 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 he has reviewed the regular editions of the Savannah Morning News/Savannah Evening Press, published on 11-21, 1999, 1-28, 1999, , 1999, , 1999, and finds that the following Advertisement, to-wit:

*** PUBLIC NOTICE ***
Notification of Corrective Action Plan, Underground Storage Tank Release, Fort Stewart, Georgia
The Georgia EPD (GEPD) has required Fort Stewart Directorate of Public Works to prepare Corrective Action Plans Part-B to investigate and/or clear up contamination at the underground storage tank sites listed at the end of this notification. These plans will be submitted to the GEPD on or before March 15, 1999. If you want to examine a copy of one or more of the plans, please contact: Commander, 3rd Infantry Division (Mechanized) and Fort Stewart, attn: DPW ENRD ENV Br. (T. Rutland), 1557 Frank Cochran, Fort Stewart, Ga. 31214-9228.
A copy will be mailed at a nominal fee.
Comments to the plan will be accepted until March 31, 2000, and should be directed to GEPD at 404-368-2887. Following is the mailing address:
GEPD USTMP, 4244 International Parkway, Suite 104, Atlanta, Ga. 30354
Fort Stewart - Part B Underground Storage Tank Sites UST; Facility ID# Building
48 and 49, 9-089054, 1175
255 and 256, 9-089087, 16012
257-260, 9-089037, 430
261, 9-089118, 430

appeared in each of said editions.

Sworn to and subscribed before me this 29 day of Nov, 1999.

Lynnette Tuck
(Deponent)

Lillie D. Lang
Notary Public, Chatham County, Georgia

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ATTACHMENT A
HYDROGEOLOGIC DATA

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ATTACHMENT A.1

Soil Geotechnical Data

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SUMMARY TABLE OF RESULTS FOR CAP Part B UST INVESTIGATIONS, FORT STEWART

SAMPLE NO.	MOISTURE CONTENT (%)	ATTERBERG LIMITS FINES CLASSIFICATION			SIEVE ANALYSIS (% PASSING)												
		LL	PL	PI	3"	2"	1 1/2"	3/4"	3/8"	#4	#10	#20	#40	#60	#140	#200	
141331	19.4	NONPLASTIC			100	100	100	100	100	100	100	98	67.5	24.8	5.5	5.4	
141431	16.4	NONPLASTIC			100	100	100	100	100	100	99.9	90.6	63.9	40.3	5.2	4.9	
421131	11.6	NONPLASTIC			100	100	100	100	100	99.7	99.2	97.1	81.7	57.8	14.5	12.7	
421231	22.3	NONPLASTIC			100	100	100	100	100	100	100	99.9	93.5	69.6	3.0	2.0	
761131	27.5	NONPLASTIC			100	100	100	100	100	100	99.77	93.6	75.0	71.4	5.0	2.4	
761231	24.1	NONPLASTIC			100	100	100	100	100	100	99.97	95.4	68.6	64.5	3.7	2.3	
761331	14.5	NONPLASTIC			100	100	100	100	100	100	100	99.8	87.1	70.8	4.5	3.6	
761431	29.8	NONPLASTIC			100	100	100	100	100	100	100	99.2	91.2	80.0	5.2	4.1	
761531	33.2	NONPLASTIC			100	100	100	100	100	100	100	99.4	89.9	75.6	4.9	3.9	
761631	31.1	NONPLASTIC			100	100	100	100	100	100	99.95	96.2	73.1	61.4	4.8	4.1	
761731	40.1	NONPLASTIC			100	100	100	100	100	100	100	99.8	93.9	84.6	10.0	8.0	
761831	31.5	NONPLASTIC			100	100	100	100	100	100	100	99.8	91.6	81.3	5.8	4.6	
761931	25.4	NONPLASTIC			100	100	100	100	100	100	100	99.3	79.7	70.3	1.9	0.6	
762031	26.9	NONPLASTIC			100	100	100	100	100	100	100	99.6	83.0	65.1	6.9	6.0	
762331	24.1	NONPLASTIC			100	100	100	100	100	100	99.7	97.5	72.6	57.9	5.6	4.9	
762431	24.0	NONPLASTIC			100	100	100	100	100	100	100	99.6	80.7	61.9	3.9	2.2	
762531	23.5	NONPLASTIC			100	100	100	100	100	100	99.9	96.1	75.4	64.0	4.0	3.1	
762631	25.1	NONPLASTIC			100	100	100	100	100	100	100	100	98.4	87.7	9.0	7.6	
762731	16.2	NONPLASTIC			100	100	100	100	100	100	99.8	99.6	93.6	81.5	9.0	8.2	
762831	25.6	NONPLASTIC			100	100	100	100	100	100	100	99.8	95.6	87.4	5.6	4.8	
790631	16.9	NONPLASTIC			100	100	100	100	100	99.34	90.3	53.6	42.5	40.2	4.0	3.0	
790731	18.5	NONPLASTIC			100	100	100	100	100	99.67	92.8	60.9	54.7	48.5	3.5	2.9	
790831	21.8	NONPLASTIC			100	100	100	100	100	99.08	93.5	81.8	58.2	4.2	2.0	1.9	
790931	20.2	NONPLASTIC			100	100	100	100	99.43	93.9	54.4	43.7	33.0	2.3	1.8	1.3	
791031	18.8	NONPLASTIC			100	100	100	100	100	96.66	77.5	41.3	28.4	18.9	2.4	2.1	
791131	18.6	NONPLASTIC			100	100	100	100	100	100	95.5	78.1	72.6	63.8	1.9	1.2	
930831	23.2	NONPLASTIC			100	100	100	100	100	100	100	99.5	90.7	72.4	12.0	7.1	
930931	25.1	CL	31.5	21.2	10.3					100	100	100	99.7	99.0	22.8	16.5	
931031	30.5	MI	21.2	17.5	3.67					100	100	100	99.1	95.4	14.8	9.9	
931131	18.0	CL	32.0	18.9	13.1					100	100	99.8	98.2	93.3	26.5	22.5	

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761131
Sample Description:	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A43	Mw	Ms	w%	Mws	Ms
33.77	33.67	15.34	0.10	18.33	0.5	200.71	199.62

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.46	0.23	0.23	99.77
20	0.841	12.24	6.13	6.36	93.64
40	0.42	37.23	18.65	25.01	74.99
60	0.25	7.23	3.62	28.63	71.37
140	0.106	132.56	66.41	95.04	4.96
200	0.074	5.2	2.60	97.65	2.35
pan	---	0.22	0.11	97.76	2.24
total		195.14			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761231
Sample Description: Dark Gray Silty Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/5/99

Mcws	Mcds	Mc : A11	Mw	Ms	w%	Mws	Ms
19.19	18.94	10.90	0.25	8.04	3.1	194.50	188.63

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.05	0.03	0.03	99.97
20	0.841	8.58	4.55	4.57	95.43
40	0.42	50.7	26.88	31.45	68.55
60	0.25	7.59	4.02	35.48	64.52
140	0.106	114.7	60.81	96.28	3.72
200	0.074	2.71	1.44	97.72	2.28
pan	---	0.62	0.33	98.05	1.95
total		184.95			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761331
Sample Description: Olive Gray Silty Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/5/99

Mcws	Mcds	Mc : A15	Mw	Ms	w%	Mws	Ms
19.36	19.31	11.24	0.05	8.07	0.6	200.04	198.81

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	0.32	0.16	0.16	99.84
40	0.42	25.38	12.77	12.93	87.07
60	0.25	32.28	16.24	29.16	70.84
140	0.106	131.86	66.33	95.49	4.51
200	0.074	1.73	0.87	96.36	3.64
pan	---	0.34	0.17	96.53	3.47
total		191.91			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.: 99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761431
Sample Description: Olive Gray Silty Sand	Sample Depth:
	Boring No.:
Tested By:FB/CA	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A36	Mw	Ms	w%	Mws	Ms
27.53	27.36	10.98	0.17	16.38	1.0	200.17	198.11

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.03	0.02	0.02	99.98
20	0.841	1.62	0.82	0.83	99.17
40	0.42	15.73	7.94	8.77	91.23
60	0.25	22.18	11.20	19.97	80.03
140	0.106	148.33	74.87	94.84	5.16
200	0.074	2.03	1.02	95.86	4.14
pan	---	0.4	0.20	96.07	3.93
total		190.32			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761531
Sample Description: Light Brown Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A5	Mw	Ms	w%	Mws	Ms
25.89	25.73	15.00	0.16	10.73	1.5	200.13	197.19

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	1.27	0.64	0.64	99.36
40	0.42	18.71	9.49	10.13	89.87
60	0.25	28.18	14.29	24.42	75.58
140	0.106	139.43	70.71	95.13	4.87
200	0.074	1.99	1.01	96.14	3.86
pan	---	0.94	0.48	96.62	3.38
total		190.52			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761631
Sample Description: Light Brown Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A55	Mw	Ms	w%	Mws	Ms
33.64	33.48	15.03	0.16	18.45	0.9	200.80	199.07

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.09	0.05	0.05	99.95
20	0.841	7.39	3.71	3.76	96.24
40	0.42	46.15	23.18	26.94	73.06
60	0.25	23.25	11.68	38.62	61.38
140	0.106	112.63	56.58	95.20	4.80
200	0.074	1.5	0.75	95.95	4.05
pan	---	0.46	0.23	96.18	3.82
total		191.47			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761731
Sample Description: Light Brown Silty Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/17/99

Mcws	Mcds	Mc : A9	Mw	Ms	w%	Mws	Ms
34.64	34.06	15.43	0.58	18.63	3.1	200.07	194.03

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	0.34	0.18	0.18	99.82
40	0.42	11.41	5.88	6.06	93.94
60	0.25	18.16	9.36	15.42	84.58
140	0.106	144.8	74.63	90.04	9.96
200	0.074	3.85	1.98	92.03	7.97
pan	---	1.69	0.87	92.90	7.10
total		180.25			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761831
Sample Description: Dark Brown Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A53	Mw	Ms	w%	Mws	Ms
29.84	29.70	14.94	0.14	14.76	0.9	200.80	198.91

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	0.37	0.19	0.19	99.81
40	0.42	16.4	8.24	8.43	91.57
60	0.25	20.5	10.31	18.74	81.26
140	0.106	150.03	75.42	94.16	5.84
200	0.074	2.47	1.24	95.40	4.60
pan	---	0.29	0.15	95.55	4.45
total		190.06			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 761931
Sample Description: Dark Gray Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/5/99

Mcws	Mcds	Mc : A28	Mw	Ms	w%	Mws	Ms
22.88	22.43	11.28	0.45	11.15	4.0	200.17	192.40

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.06	0.03	0.03	99.97
20	0.841	1.31	0.68	0.71	99.29
40	0.42	37.77	19.63	20.34	79.66
60	0.25	17.92	9.31	29.66	70.34
140	0.106	131.66	68.43	98.08	1.92
200	0.074	2.61	1.36	99.44	0.56
pan	---	0.69	0.36	99.80	0.20
total		192.02			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762031
Sample Description:Dark Gray Sand With Silt	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/17/99

Mcws	Mcds	Mc : A31	Mw	Ms	w%	Mws	Ms
24.39	24.26	11.15	0.13	13.11	1.0	200.89	198.92

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.06	0.03	0.03	99.97
20	0.841	0.65	0.33	0.36	99.64
40	0.42	33.18	16.68	17.04	82.96
60	0.25	35.64	17.92	34.95	65.05
140	0.106	115.73	58.18	93.13	6.87
200	0.074	1.77	0.89	94.02	5.98
pan	---	0.45	0.23	94.25	5.75
total		187.48			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.: 99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762331
Sample Description: Light Brown Well-graded Sand	Sample Depth:
	Boring No.:
Tested By:FB/CA	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A34	Mw	Ms	w%	Mws	Ms
33.44	33.24	15.31	0.20	17.93	1.1	200.50	198.29

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.6	0.30	0.30	99.70
20	0.841	4.33	2.18	2.49	97.51
40	0.42	49.37	24.90	27.38	72.62
60	0.25	29.27	14.76	42.15	57.85
140	0.106	103.61	52.25	94.40	5.60
200	0.074	1.37	0.69	95.09	4.91
pan	---	0.36	0.18	95.27	4.73
total		188.91			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762431
Sample Description: Olive Gray Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/5/99

Mcws	Mcds	Mc : A16	Mw	Ms	w%	Mws	Ms
20.74	20.35	11.09	0.39	9.26	4.2	200.22	192.13

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.1	0.05	0.05	99.95
20	0.841	0.69	0.36	0.41	99.59
40	0.42	36.24	18.86	19.27	80.73
60	0.25	36.12	18.80	38.07	61.93
140	0.106	111.59	58.08	96.15	3.85
200	0.074	3.24	1.69	97.84	2.16
pan	---	0.91	0.47	98.31	1.69
total		188.89			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.:99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762531
Sample Description: Light Brown Sand	Sample Depth:
	Boring No.:
Tested By: CA/BV	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A5	Mw	Ms	w%	Mws	Ms
32.14	32.01	10.92	0.13	21.09	0.6	200.26	199.03

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.18	0.09	0.09	99.91
20	0.841	7.6	3.82	3.91	96.09
40	0.42	41.25	20.73	24.63	75.37
60	0.25	22.72	11.42	36.05	63.95
140	0.106	119.41	60.00	96.04	3.96
200	0.074	1.79	0.90	96.94	3.06
pan	---	0.2	0.10	97.04	2.96
total		193.15			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.: 99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762631
Sample Description: Light Brown Sand With Silt	Sample Depth:
	Boring No.:
Tested By: FB/CA	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A21	Mw	Ms	w%	Mws	Ms
35.77	35.49	15.42	0.28	20.07	1.4	200.15	197.40

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	0.05	0.03	0.03	99.97
40	0.42	3.07	1.56	1.58	98.42
60	0.25	21.21	10.74	12.33	87.67
140	0.106	155.27	78.66	90.98	9.02
200	0.074	2.83	1.43	92.42	7.58
pan	---	1.19	0.60	93.02	6.98
total		183.62			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.: 99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762731
Sample Description: Light Brown Sand With Silt	Sample Depth:
	Boring No.:
Tested By: FB/CA	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A33	Mw	Ms	w%	Mws	Ms
41.72	41.43	15.32	0.29	26.11	1.1	200.28	198.08

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.31	0.16	0.16	99.84
20	0.841	0.57	0.29	0.44	99.56
40	0.42	11.72	5.92	6.36	93.64
60	0.25	24.1	12.17	18.53	81.47
140	0.106	143.47	72.43	90.96	9.04
200	0.074	1.68	0.85	91.81	8.19
pan	---	0.24	0.12	91.93	8.07
total		182.09			

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: Fort Stewart	Job No.: 99028
Project Location: CAP Part B UST INVESTIGATIONS	Sample No.: 762831
Sample Description: Dark Brown Sand	Sample Depth:
	Boring No.:
Tested By: FB/CA	Date of Testing: 3/16/99

Mcws	Mcds	Mc : A16	Mw	Ms	w%	Mws	Ms
32.51	32.34	11.10	0.17	21.24	0.8	200.09	198.50

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0	0.00	0.00	100.00
20	0.841	0.5	0.25	0.25	99.75
40	0.42	8.19	4.13	4.38	95.62
60	0.25	16.38	8.25	12.63	87.37
140	0.106	162.29	81.76	94.39	5.61
200	0.074	1.53	0.77	95.16	4.84
pan	---	0.23	0.12	95.27	4.73
total		189.12			

Summary Table of Results for CAP-Part B UST Investigations

Sample	764131	764231	932931	933031
Moisture Content, %	31.17	23.62	25.69	22.86
Atterberg Limits	NP	NP	NP	NP

	Grain Size - Sieve Analysis (% passing)			
3" to 3/4"	100	100	100	100
3/8"	100	100	100	100
#4	99.81	100	100	100
#10	99.45	99.81	99.95	99.86
#20	98.92	97.39	98.09	96.09
#40	92.38	90.59	86.48	78.06
#60	76.69	78.46	68.68	48.07
#140	8.19	7.37	14.96	9.64
#200	7.61	6.61	10.58	8.11

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: CAP-Part B UST Investigations	Job No.: 99218
Project Location:	Sample No.: 764131
Sample Description: Black Silty Sand	Sample Depth:
	Boring No.:
Tested By: FB	Date of Testing: 11/2/99

Mcws	Mcds	Mc : A6	Mw	Ms	w%	Mws	Ms
21.85	21.79	11.29	0.06	10.50	0.57	200.00	198.86

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0.37	0.19	0.19	99.81
10	2.00	0.73	0.37	0.55	99.45
20	0.841	1.05	0.53	1.08	98.92
40	0.42	13.00	6.54	7.62	92.38
60	0.25	31.21	15.69	23.31	76.69
140	0.106	136.21	68.49	91.81	8.19
200	0.074	1.16	0.58	92.39	7.61
pan	—	0	0.00	92.39	7.61

GRAIN SIZE ANALYSIS-SIEVE (ASTM D422)

Project: CAP-Part B UST Investigations	Job No.: 99128
Project Location:	Sample No.: 764231
Sample Description: Dark Brown Sand	Sample Depth:
	Boring No.:
Tested By: FB	Date of Testing: 11/2/99

M _{ows}	M _{ods}	M _c : A31	M _w	M _s	w%	M _{ws}	M _s
18.80	18.78	11.13	0.02	7.65	0.26	200.07	199.55

Sieve No.	Diam. (mm)	Wt. retained	% retained	E % retained	% passing
3	76.2	0	0.00	0.00	100.00
2	50.8	0	0.00	0.00	100.00
1 1/2	25.4	0	0.00	0.00	100.00
3/4	19.05	0	0.00	0.00	100.00
3/8	9.51	0	0.00	0.00	100.00
4	4.76	0	0.00	0.00	100.00
10	2.00	0.38	0.19	0.19	99.81
20	0.841	4.82	2.42	2.61	97.39
40	0.42	13.57	6.80	9.41	90.59
60	0.25	24.22	12.14	21.54	78.46
140	0.106	141.86	71.09	92.63	7.37
200	0.074	1.51	0.76	93.39	6.61
pan	—	0.00	0.00	93.39	6.61

*CATLIN Engineers and Scientists
Geotechnical Laboratories*

ATTACHMENT A.2

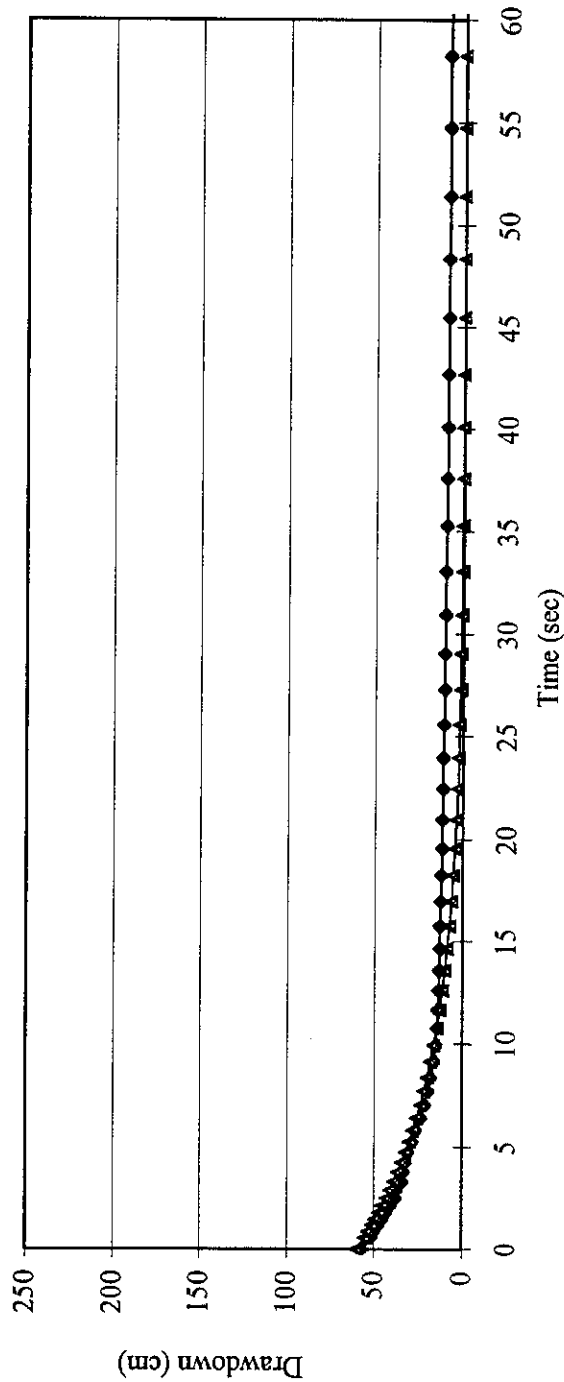
Slug Test Data

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Slug Test Hydraulic Conductivity (K) Calculation

Well ID	76-28	Test Date	11/02/1999
Test Type	Rising Head	Evaluation Method	Bouwer & Rice
			
Calculation Parameters			
Borehole Parameters			
Pretest water level	6.92 ft bgs	Radius of casing (rc^2)	6.45 cm
Casing inside diameter	2.00 in	Radius of borehole (rw)	11.43 cm
Borehole diameter	9.00 in	Effective radius of investigation (Re)	304.80 cm
Saturated thickness (H)	33.08 ft	Length of screen (Le)	304.80 cm
Screen length (Le)	10.00 ft	Distance from static water level (Yo)	60.00 cm
Saturated penetration (Lw)	8.08 ft	Hydraulic conductivity (K)	2.50E-03 cm/sec
		In R/rw	1.79

76-28



76-28 Rising Head Slug Test Hydraulic Conductivity Worksheet

Elapsed Time (min)	y=ft	Time(sec)	tadjust=0 (sec)	Yt (cm)	$\frac{(2*Le*K*t)}{(rc^2*ln(Re/rw))}$	Ycalc (cm)
0.000	1.871	0.00	0.00	57.0281	0.0000	6.00E+01
0.010	1.693	0.60	0.60	51.6026	0.0790	5.54E+01
0.015	1.640	0.90	0.90	49.9872	0.1185	5.33E+01
0.020	1.566	1.20	1.20	47.7317	0.1580	5.12E+01
0.025	1.488	1.50	1.50	45.3542	0.1975	4.92E+01
0.030	1.416	1.80	1.80	43.1597	0.2369	4.73E+01
0.036	1.326	2.15	2.15	40.4165	0.2828	4.52E+01
0.042	1.229	2.52	2.52	37.4599	0.3317	4.31E+01
0.049	1.220	2.91	2.91	37.1856	0.3831	4.09E+01
0.056	1.114	3.33	3.33	33.9547	0.4383	3.87E+01
0.063	1.093	3.77	3.77	33.3146	0.4960	3.65E+01
0.071	1.056	4.24	4.24	32.1869	0.5584	3.43E+01
0.079	0.999	4.74	4.74	30.4495	0.6240	3.21E+01
0.088	0.934	5.27	5.27	28.4683	0.6935	3.00E+01
0.097	0.867	5.83	5.83	26.4262	0.7677	2.78E+01
0.107	0.773	6.42	6.42	23.5610	0.8451	2.58E+01
0.118	0.704	7.05	7.05	21.4579	0.9280	2.37E+01
0.129	0.644	7.71	7.71	19.6291	1.0149	2.17E+01
0.140	0.597	8.41	8.41	18.1966	1.1073	1.98E+01
0.153	0.535	9.16	9.16	16.3068	1.2060	1.80E+01
0.166	0.498	9.95	9.95	15.1790	1.3095	1.62E+01
0.180	0.477	10.79	10.79	14.5390	1.4201	1.45E+01
0.195	0.464	11.68	11.68	14.1427	1.5378	1.29E+01
0.210	0.447	12.62	12.62	13.6246	1.6610	1.14E+01
0.227	0.436	13.62	13.62	13.2893	1.7929	9.99E+00
0.245	0.424	14.68	14.68	12.9235	1.9327	8.69E+00
0.263	0.418	15.80	15.80	12.7406	2.0796	7.50E+00
0.283	0.406	16.99	16.99	12.3749	2.2368	6.41E+00
0.304	0.399	18.25	18.25	12.1615	2.4026	5.43E+00
0.326	0.390	19.58	19.58	11.8872	2.5772	4.56E+00
0.350	0.383	20.99	20.99	11.6738	2.7628	3.79E+00

76-28 Rising Head Slug Test Hydraulic Conductivity Worksheet

Elapsed Time (min)	y=ft	Time(sec)	tadjust=0 (sec)	Yt (cm)	$(2 * L * e * K * t) / (r^2 * \ln(Re/rw))$	Ycalc (cm)
0.375	0.376	22.48	22.48	11.4605	2.9594	3.11E+00
0.400	0.369	23.98	23.98	11.2471	3.1569	2.55E+00
0.426	0.362	25.58	25.58	11.0338	3.3670	2.07E+00
0.455	0.355	27.28	27.28	10.8204	3.5913	1.65E+00
0.485	0.348	29.08	29.08	10.6070	3.8282	1.30E+00
0.516	0.341	30.98	30.98	10.3937	4.0778	1.02E+00
0.551	0.334	33.08	33.08	10.1803	4.3542	7.71E-01
0.588	0.330	35.28	35.28	10.0584	4.6441	5.77E-01
0.626	0.323	37.58	37.58	9.8450	4.9466	4.26E-01
0.668	0.316	40.08	40.08	9.6317	5.2760	3.07E-01
0.711	0.314	42.68	42.68	9.5707	5.6179	2.18E-01
0.758	0.307	45.48	45.48	9.3574	5.9868	1.51E-01
0.806	0.300	48.38	48.38	9.1440	6.3683	1.03E-01
0.858	0.295	51.48	51.48	8.9916	6.7766	6.84E-02
0.913	0.291	54.78	54.78	8.8697	7.2110	4.43E-02
0.971	0.286	58.28	58.28	8.7173	7.6715	2.80E-02
1.033	0.279	61.98	61.98	8.5039	8.1588	1.72E-02
1.098	0.274	65.88	65.88	8.3515	8.6722	1.03E-02
1.168	0.270	70.08	70.08	8.2296	9.2250	5.91E-03
1.241	0.263	74.48	74.48	8.0162	9.8040	3.31E-03
1.320	0.258	79.18	79.18	7.8638	10.4232	1.78E-03
1.403	0.254	84.18	84.18	7.7419	11.0811	9.24E-04
1.491	0.249	89.48	89.48	7.5895	11.7785	4.60E-04
1.585	0.242	95.08	95.08	7.3762	12.5162	2.20E-04
1.683	0.238	100.98	100.98	7.2542	13.2926	1.01E-04

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ATTACHMENT B
FATE AND TRANSPORT MODELING RESULTS

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**Table B.1. Natural Attenuation Modeling Results (Concentration vs. Distance)
for the USTs 257-261 Site**

Distance from the source (ft)	Distance from the source (m)	Predicted Maximum Concentration In Groundwater ($\mu\text{g/L}$)	Distance from the source (ft)	Distance from the source (m)	Predicted Maximum Concentration In Groundwater ($\mu\text{g/L}$)
0.0	0.0	36700	262.5	80.0	1180
16.4	5.0	28700	328.1	100.0	566
32.8	10.0	22100	393.7	120.0	274
49.2	15.0	17200	492.1	150.0	94.5
65.6	20.0	13500	656.2	200.0	16.4
98.4	30.0	8590	820.2	250.0	2.93
131.2	40.0	5610	984.3	300.0	0.529
164.0	50.0	3740	1000.0	304.8	0.5
196.9	60.0	2530	1148.3	350.0	0.097
229.7	70.0	1720	1312.3	400.0	0.018

**Table B.2. Natural Attenuation Modeling Results (Concentration vs. Time)
for the USTs 257-261 Site**

Time (year)	Predicted Maximum Concentration In Groundwater (µg/L)	Time (year)	Predicted Maximum Concentration In Groundwater (µg/L)
0.0	36700	19.0	11
1.0	25800	20.0	7.22
2.0	16900	21.0	4.76
3.0	10800	22.0	3.14
4.0	6920	23.0	2.07
5.0	4430	24.0	1.37
6.0	2840	25.0	0.903
7.0	1830	26.0	0.597
8.0	1180	27.0	0.395
9.0	766	28.0	0.261
10.0	497	29.0	0.173
11.0	324	30.0	0.115
12.0	211	31.0	0.0759
13.0	138	32.0	0.0503
14.0	90	33.0	0.0334
15.0	59	34.0	0.0221
16.0	38.7	35.0	0.0147
17.0	25.4	36.0	0.00975
18.0	16.7		

Predicted maximum concentrations in groundwater were based on the maximum observed soil concentration (267 µg/L) below the water table, which when converted to a groundwater concentration exceeded the maximum observed concentration.

Figure B-1. AT123D modeled maximum concentration of benzene in the groundwater versus downgradient distance from the source (USTs 257-261)

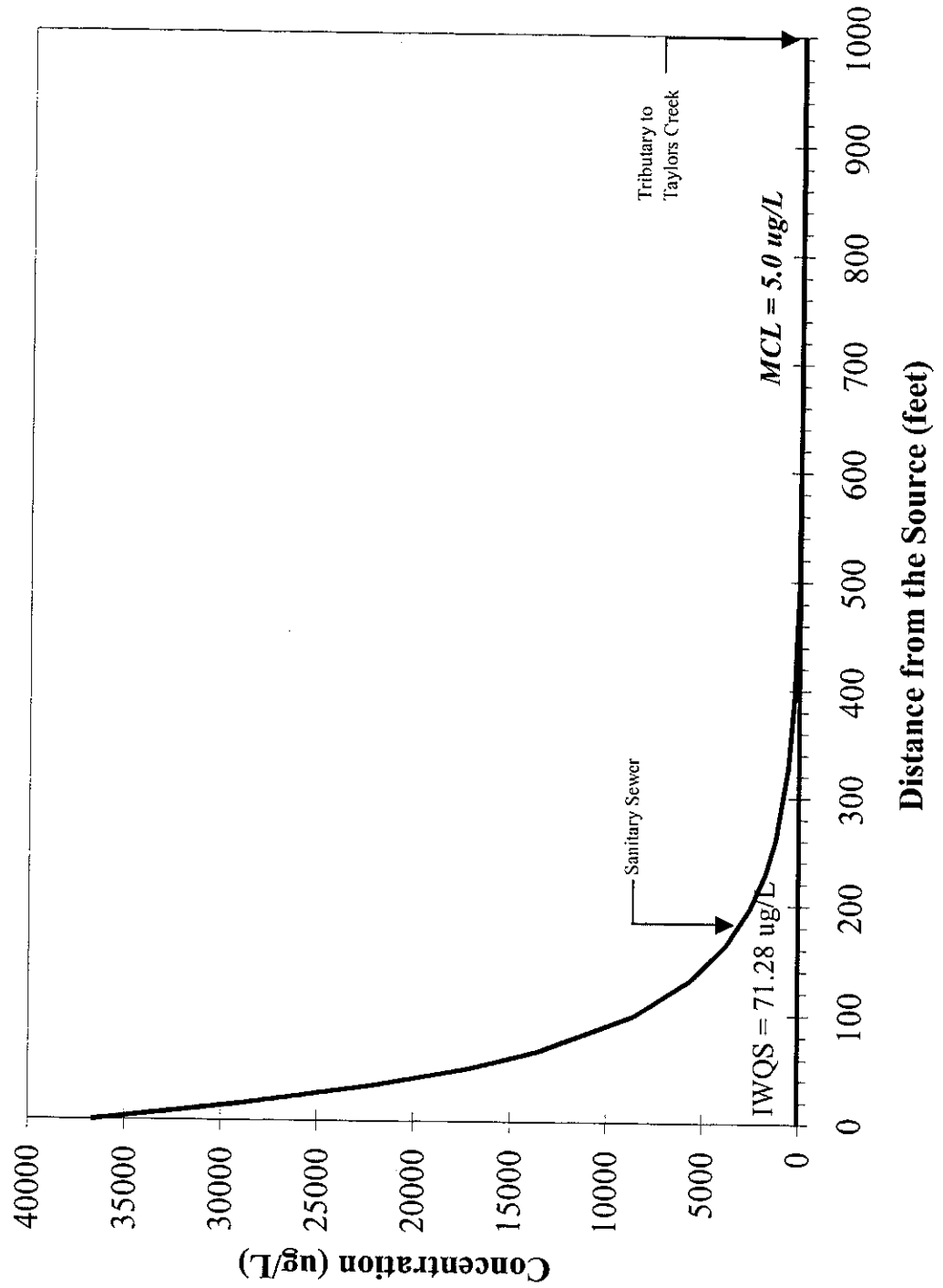
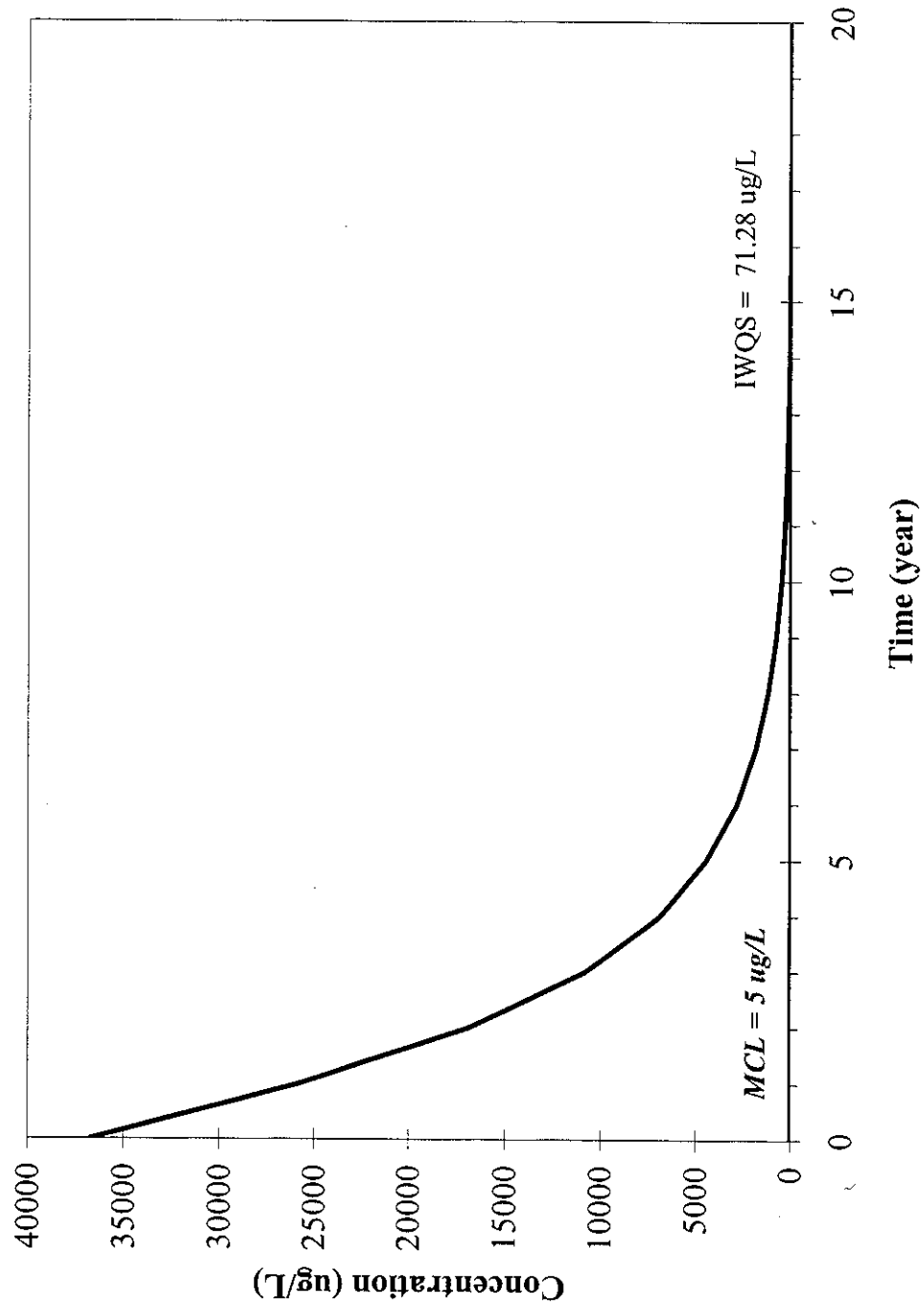


Figure B-2. AT123D modeled maximum concentration of benzene in the groundwater at the source (USTs 257-261)



Ft Stewart USTs 257-261: Benzene

NO. OF POINTS IN X-DIRECTION	13
NO. OF POINTS IN Y-DIRECTION	3
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	220
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) ...	0.1070E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ...	0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS)	-0.4877E+02
END POINT OF X-SOURCE LOCATION (METERS)	0.0000E+00
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.1220E+02
END POINT OF Y-SOURCE LOCATION (METERS)	0.1220E+02
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.6100E+01
POROSITY	0.2000E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.9000E-01
HYDRAULIC GRADIENT	0.1030E-01
LONGITUDINAL DISPERSIVITY (METER)	0.3000E+02
LATERAL DISPERSIVITY (METER)	0.1000E+02
VERTICAL DISPERSIVITY (METER)	0.3000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.7695E-03
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)	0.4015E-04
BULK DENSITY OF THE SOIL (KG/M**3)	0.1670E+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) ..	0.6380E-01
RETARDATION FACTOR	0.7425E+01
RETARDED DARCY VELOCITY (M/HR)	0.6242E-03
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) ..	0.1873E-01
RETARDED LATERAL DISPERSION COEFFICIENT (M**2/HR) ..	0.6245E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR) ..	0.1875E-02

[illegible]

-0.3928E-02	-0.1177E-01	0.9018E-02	0.7753E-02	-0.1232E-01	-0.2331E-02	0.1324E-01	-0.3449E-02	-0.1164E-01	0.8486E-02
-0.7855E-02	-0.1184E-01	-0.2642E-02	0.1290E-01	-0.2992E-02	-0.1150E-01	0.7975E-02	0.7944E-02	-0.1137E-01	-0.2935E-02
0.1257E-01	-0.2556E-02	-0.1136E-01	0.7483E-02	0.8022E-02	-0.1092E-01	-0.3211E-02	0.1224E-01	-0.2140E-02	-0.1122E-01
-0.7009E-02	0.8090E-02	-0.1048E-01	-0.3470E-02	0.1192E-01	-0.1742E-02	-0.1108E-01	0.6553E-02	0.8147E-02	-0.1005E-01
-0.3714E-02	0.1160E-01	-0.1363E-02	-0.1093E-01	0.6112E-02	0.8195E-02	-0.9639E-02	-0.3943E-02	0.1129E-01	-0.9993E-03
-0.1078E-01	0.5687E-02	0.8234E-02	-0.9235E-02	-0.4159E-02	0.1099E-01	-0.6519E-03	-0.1063E-01	0.5277E-02	0.8265E-02
-0.8841E-02	-0.4361E-02	0.1068E-01	-0.3191E-03	-0.1048E-01	0.4880E-02	0.8286E-02	-0.8458E-02	-0.4551E-02	0.1039E-01
-0.4139E-06	-0.1032E-01	0.4496E-02	0.8300E-02	-0.8083E-02	-0.4729E-02	0.1009E-01	0.3041E-03	-0.1016E-01	0.4124E-02
-0.8306E-02	-0.7717E-02	0.4895E-02	0.9803E-02	0.5962E-03	-0.1000E-01	0.3765E-02	0.8306E-02	-0.7361E-02	-0.5050E-02
0.9517E-02	0.8753E-03	-0.9843E-02	0.3417E-02	0.8297E-02	-0.7012E-02	-0.5195E-02	0.9235E-02	0.1143E-02	-0.9680E-02
-0.3080E-02	0.8283E-02	-0.6671E-02	-0.5330E-02	0.8955E-02	0.1399E-02	-0.9515E-02	0.2754E-02	0.8262E-02	-0.6338E-02
-0.5455E-02	0.8679E-02	0.1644E-02	-0.9348E-02	0.2438E-02	0.8235E-02	-0.6012E-02	-0.5571E-02	0.8407E-02	0.1878E-02
-0.9179E-02	0.2132E-02	0.8202E-02	-0.5693E-02	-0.5677E-02	0.8137E-02	0.2102E-02	-0.9009E-02	0.1835E-02	0.8163E-02
-0.5382E-02	-0.5775E-02	0.7870E-02	0.2316E-02	-0.8838E-02	0.1547E-02	0.8118E-02	-0.5076E-02	-0.5864E-02	0.7606E-02
0.2520E-02	-0.8665E-02	0.1268E-02	0.8069E-02	-0.4778E-02	-0.5946E-02	0.7345E-02	0.2716E-02	-0.8491E-02	0.9985E-03

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.0000E+00 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	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
2.	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
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

CONTINUE

Y	120.	150.	305.
3.	0.000E+00	0.000E+00	0.000E+00
2.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+04 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.189E+02	0.124E+02	0.745E+01	0.242E+01	0.659E+00	0.147E+00	0.262E-01	0.367E-02	0.334E-04	0.321E-07
2.	0.191E+02	0.125E+02	0.756E+01	0.246E+01	0.670E+00	0.149E+00	0.266E-01	0.373E-02	0.339E-04	0.325E-07
0.	0.193E+02	0.127E+02	0.765E+01	0.249E+01	0.678E+00	0.151E+00	0.269E-01	0.377E-02	0.343E-04	0.329E-07

CONTINUE

Y	120.	150.	305.
3.	0.000E+00	0.000E+00	0.000E+00
2.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1752E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.269E+02	0.194E+02	0.133E+02	0.613E+01	0.266E+01	0.107E+01	0.396E+00	0.132E+00	0.106E-01	0.524E-03
2.	0.273E+02	0.196E+02	0.135E+02	0.621E+01	0.269E+01	0.108E+01	0.400E+00	0.134E+00	0.107E-01	0.530E-03
0.	0.275E+02	0.198E+02	0.137E+02	0.628E+01	0.272E+01	0.109E+01	0.404E+00	0.135E+00	0.108E-01	0.534E-03

CONTINUE X

Y	120.	150.	305.
3.	0.153E-04	0.000E+00	0.000E+00
2.	0.154E-04	0.000E+00	0.000E+00
0.	0.156E-04	0.000E+00	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.2628E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.309E+02	0.231E+02	0.167E+02	0.874E+01	0.449E+01	0.223E+01	0.106E+01	0.479E+00	0.801E-01	0.100E-01
2.	0.312E+02	0.234E+02	0.169E+02	0.884E+01	0.453E+01	0.225E+01	0.107E+01	0.483E+00	0.807E-01	0.101E-01
0.	0.315E+02	0.236E+02	0.171E+02	0.892E+01	0.457E+01	0.227E+01	0.108E+01	0.486E+00	0.812E-01	0.101E-01

CONTINUE X

Y	120.	150.	305.
3.	0.905E-03	0.128E-04	0.000E+00
2.	0.912E-03	0.129E-04	0.000E+00
0.	0.917E-03	0.129E-04	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.3504E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.330E+02	0.251E+02	0.187E+02	0.104E+02	0.584E+01	0.323E+01	0.175E+01	0.916E+00	0.222E+00	0.440E-01
2.	0.334E+02	0.254E+02	0.189E+02	0.105E+02	0.589E+01	0.326E+01	0.176E+01	0.922E+00	0.223E+00	0.443E-01
0.	0.337E+02	0.257E+02	0.191E+02	0.106E+02	0.594E+01	0.328E+01	0.177E+01	0.927E+00	0.224E+00	0.445E-01

CONTINUE X

Y	120.	150.	305.
3.	0.699E-02	0.279E-03	0.000E+00
2.	0.703E-02	0.281E-03	0.000E+00
0.	0.706E-02	0.282E-03	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.4380E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.342E+02	0.263E+02	0.199E+02	0.115E+02	0.676E+01	0.398E+01	0.232E+01	0.133E+01	0.400E+00	0.105E+00
2.	0.346E+02	0.266E+02	0.201E+02	0.116E+02	0.682E+01	0.401E+01	0.234E+01	0.134E+01	0.402E+00	0.105E+00
0.	0.349E+02	0.269E+02	0.203E+02	0.117E+02	0.687E+01	0.404E+01	0.235E+01	0.134E+01	0.404E+00	0.106E+00

CONTINUE X

Y	120.	150.	305.
3.	0.232E-01	0.172E-02	0.000E+00
2.	0.233E-01	0.172E-02	0.000E+00
0.	0.234E-01	0.173E-02	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.5256E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.349E+02	0.271E+02	0.206E+02	0.122E+02	0.737E+01	0.451E+01	0.275E+01	0.166E+01	0.577E+00	0.180E+00
2.	0.353E+02	0.274E+02	0.208E+02	0.123E+02	0.743E+01	0.454E+01	0.277E+01	0.167E+01	0.579E+00	0.181E+00
0.	0.356E+02	0.276E+02	0.210E+02	0.124E+02	0.748E+01	0.457E+01	0.278E+01	0.168E+01	0.582E+00	0.182E+00

CONTINUE X

Y	120.	150.	305.
3.	0.499E-01	0.553E-02	0.000E+00
2.	0.501E-01	0.555E-02	0.000E+00
0.	0.502E-01	0.557E-02	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.6132E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.353E+02	0.275E+02	0.210E+02	0.126E+02	0.777E+01	0.486E+01	0.306E+01	0.192E+01	0.730E+00	0.258E+00
2.	0.357E+02	0.278E+02	0.212E+02	0.127E+02	0.783E+01	0.490E+01	0.308E+01	0.193E+01	0.734E+00	0.259E+00
0.	0.360E+02	0.280E+02	0.214E+02	0.128E+02	0.788E+01	0.493E+01	0.309E+01	0.194E+01	0.736E+00	0.260E+00

CONTINUE X

Y	120.	150.	305.
3.	0.831E-01	0.122E-01	0.000E+00
2.	0.834E-01	0.123E-01	0.000E+00
0.	0.837E-01	0.123E-01	0.000E+00

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7008E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.356E+02	0.277E+02	0.213E+02	0.129E+02	0.802E+01	0.510E+01	0.327E+01	0.210E+01	0.853E+00	0.329E+00
2.	0.360E+02	0.280E+02	0.215E+02	0.130E+02	0.809E+01	0.514E+01	0.329E+01	0.212E+01	0.857E+00	0.330E+00
0.	0.363E+02	0.283E+02	0.217E+02	0.131E+02	0.814E+01	0.516E+01	0.331E+01	0.212E+01	0.860E+00	0.331E+00

CONTINUE

X

Y	120.	150.	305.
3.	0.118E+00	0.214E-01	0.306E-07
2.	0.119E+00	0.215E-01	0.307E-07
0.	0.119E+00	0.215E-01	0.308E-07

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.7884E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.358E+02	0.279E+02	0.214E+02	0.130E+02	0.819E+01	0.526E+01	0.342E+01	0.223E+01	0.947E+00	0.389E+00
2.	0.361E+02	0.282E+02	0.216E+02	0.131E+02	0.825E+01	0.529E+01	0.344E+01	0.225E+01	0.951E+00	0.390E+00
0.	0.365E+02	0.285E+02	0.218E+02	0.132E+02	0.830E+01	0.532E+01	0.345E+01	0.225E+01	0.954E+00	0.391E+00

CONTINUE

X

Y	120.	150.	305.
3.	0.151E+00	0.320E-01	0.271E-06
2.	0.151E+00	0.320E-01	0.271E-06
0.	0.152E+00	0.321E-01	0.272E-06

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.8760E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
					X					
3.	0.358E+02	0.280E+02	0.215E+02	0.131E+02	0.829E+01	0.536E+01	0.352E+01	0.232E+01	0.102E+01	0.436E+00
2.	0.362E+02	0.283E+02	0.217E+02	0.133E+02	0.836E+01	0.540E+01	0.354E+01	0.233E+01	0.102E+01	0.437E+00
0.	0.365E+02	0.285E+02	0.219E+02	0.134E+02	0.841E+01	0.542E+01	0.355E+01	0.234E+01	0.102E+01	0.438E+00

CONTINUE

X

Y	120.	150.	305.
3.	0.180E+00	0.427E-01	0.121E-05
2.	0.180E+00	0.429E-01	0.121E-05
0.	0.181E+00	0.430E-01	0.122E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.9636E+05 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.359E+02	0.281E+02	0.216E+02	0.132E+02	0.836E+01	0.543E+01	0.358E+01	0.238E+01	0.107E+01	0.472E+00
2.	0.363E+02	0.284E+02	0.218E+02	0.133E+02	0.842E+01	0.546E+01	0.360E+01	0.239E+01	0.107E+01	0.473E+00
0.	0.366E+02	0.286E+02	0.220E+02	0.134E+02	0.847E+01	0.549E+01	0.362E+01	0.240E+01	0.107E+01	0.475E+00

CONTINUE

Y	120.	150.	305.
3.	0.203E+00	0.529E-01	0.380E-05
2.	0.204E+00	0.530E-01	0.381E-05
0.	0.204E+00	0.531E-01	0.382E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1051E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.359E+02	0.281E+02	0.216E+02	0.132E+02	0.840E+01	0.547E+01	0.362E+01	0.242E+01	0.110E+01	0.498E+00
2.	0.363E+02	0.284E+02	0.219E+02	0.134E+02	0.847E+01	0.551E+01	0.364E+01	0.244E+01	0.110E+01	0.500E+00
0.	0.366E+02	0.286E+02	0.220E+02	0.135E+02	0.852E+01	0.553E+01	0.366E+01	0.245E+01	0.111E+01	0.501E+00

CONTINUE

Y	120.	150.	305.
3.	0.222E+00	0.618E-01	0.941E-05
2.	0.222E+00	0.620E-01	0.943E-05
0.	0.223E+00	0.621E-01	0.945E-05

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1139E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.281E+02	0.216E+02	0.133E+02	0.843E+01	0.550E+01	0.365E+01	0.245E+01	0.112E+01	0.518E+00
2.	0.364E+02	0.284E+02	0.219E+02	0.134E+02	0.849E+01	0.553E+01	0.367E+01	0.246E+01	0.113E+01	0.519E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.855E+01	0.556E+01	0.369E+01	0.247E+01	0.113E+01	0.521E+00

CONTINUE

Y	120.	150.	305.
3.	0.236E+00	0.694E-01	0.195E-04
2.	0.237E+00	0.696E-01	0.195E-04
0.	0.237E+00	0.697E-01	0.196E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1226E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.281E+02	0.217E+02	0.133E+02	0.845E+01	0.552E+01	0.367E+01	0.247E+01	0.114E+01	0.532E+00
2.	0.364E+02	0.284E+02	0.219E+02	0.134E+02	0.851E+01	0.555E+01	0.369E+01	0.248E+01	0.114E+01	0.533E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.856E+01	0.558E+01	0.371E+01	0.249E+01	0.115E+01	0.535E+00

CONTINUE

Y	120.	150.	305.

3.	0.247E+00	0.755E-01	0.352E-04
2.	0.247E+00	0.757E-01	0.353E-04
0.	0.248E+00	0.758E-01	0.353E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1314E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.281E+02	0.217E+02	0.133E+02	0.846E+01	0.553E+01	0.368E+01	0.248E+01	0.115E+01	0.541E+00
2.	0.364E+02	0.284E+02	0.219E+02	0.134E+02	0.852E+01	0.556E+01	0.370E+01	0.249E+01	0.116E+01	0.543E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.857E+01	0.559E+01	0.372E+01	0.250E+01	0.116E+01	0.545E+00

CONTINUE

Y	120.	150.	305.

3.	0.254E+00	0.803E-01	0.570E-04
2.	0.255E+00	0.805E-01	0.571E-04
0.	0.256E+00	0.807E-01	0.572E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1402E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.281E+02	0.217E+02	0.133E+02	0.846E+01	0.554E+01	0.369E+01	0.249E+01	0.116E+01	0.548E+00
2.	0.364E+02	0.285E+02	0.219E+02	0.134E+02	0.853E+01	0.557E+01	0.371E+01	0.250E+01	0.116E+01	0.550E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.858E+01	0.560E+01	0.373E+01	0.251E+01	0.117E+01	0.551E+00

CONTINUE

Y	120.	150.	305.

3.	0.260E+00	0.840E-01	0.845E-04
2.	0.261E+00	0.842E-01	0.846E-04
0.	0.261E+00	0.844E-01	0.847E-04

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1489E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.282E+02	0.217E+02	0.133E+02	0.847E+01	0.554E+01	0.369E+01	0.249E+01	0.116E+01	0.553E+00
2.	0.364E+02	0.285E+02	0.219E+02	0.134E+02	0.853E+01	0.558E+01	0.371E+01	0.251E+01	0.117E+01	0.555E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.859E+01	0.560E+01	0.373E+01	0.252E+01	0.117E+01	0.556E+00

CONTINUE

Y	120.	150.	305.

3.	0.264E+00	0.868E-01	0.117E-03
2.	0.265E+00	0.870E-01	0.117E-03
0.	0.265E+00	0.872E-01	0.117E-03

STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF DISSOLVED CHEMICALS IN PPM AT 0.1577E+06 HRS
(ADSORBED CHEMICAL CONC. = 0.7695E+00 * DISSOLVED CHEMICAL CONC.)
Z = 0.00

Y	0.	5.	10.	20.	30.	40.	50.	60.	80.	100.
3.	0.360E+02	0.282E+02	0.217E+02	0.133E+02	0.847E+01	0.554E+01	0.370E+01	0.250E+01	0.117E+01	0.556E+00
2.	0.364E+02	0.285E+02	0.219E+02	0.134E+02	0.854E+01	0.558E+01	0.372E+01	0.251E+01	0.117E+01	0.558E+00
0.	0.367E+02	0.287E+02	0.221E+02	0.135E+02	0.859E+01	0.561E+01	0.373E+01	0.252E+01	0.118E+01	0.559E+00

CONTINUE

Y	120.	150.	305.

3.	0.267E+00	0.889E-01	0.152E-03
2.	0.268E+00	0.891E-01	0.152E-03
0.	0.268E+00	0.892E-01	0.152E-03