

**FINAL**



**IMA**

# **SECOND ANNUAL MONITORING AND FREE PRODUCT REMOVAL REPORT**



**3d Inf Div (Mech)**

Former Underground Storage Tank 117  
Building 7009  
Bulk Fuel Facility (HAA-09)  
Facility ID #9-025113\*2  
Hunter Army Airfield, Georgia

**Prepared for**



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

Contract No. DACA21-02-D-0004  
Delivery Order 0044

**December 2005**



**FINAL**

**SECOND ANNUAL MONITORING AND FREE PRODUCT  
REMOVAL REPORT  
FOR  
FORMER UNDERGROUND STORAGE TANK 117  
BUILDING 7009  
BULK FUEL FACILITY (HAA-09)  
FACILITY ID #9-025113\*2  
HUNTER ARMY AIRFIELD, GEORGIA**

**Prepared for**

**U. S. Army Corps of Engineers, Savannah District  
and  
Fort Stewart Directorate of Public Works  
Under Contract Number DACA21-02-D-0004  
Delivery Order 0044**

**Prepared by**

**Science Applications International Corporation  
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Oak Ridge, TN 37831**

**December 2005**

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List of Abbreviations and Acronyms

ACL	alternate concentration limit
AST	aboveground storage tank
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
EPA	U. S. Environmental Protection Agency
GA EPD	Georgia Environmental Protection Division
IWQS	In-Stream Water Quality Standard
MCL	maximum contaminant level
PAH	polynuclear aromatic hydrocarbon
SAIC	Science Applications International Corporation
UST	underground storage tank



## MONITORING AND FREE PRODUCT REMOVAL REPORT

Submittal Date: November 2005 Monitoring Report Number: 2nd Annual

For Period Covering: July 2004 to January 2005

Facility Name: Former UST 117 Street Address: Bulk Fuel Facility, Building 7002

Facility ID: 9-025113\*2 City: Savannah County: Chatham Zip Code: 31409

Latitude: 32°01'43" Longitude: 81°08'37"

Submitted by UST Owner/Operator:

Name: Thomas C. Fry/Environmental Branch  
Company: U. S. Army/HQ 3d, Inf. Div. (Mech)  
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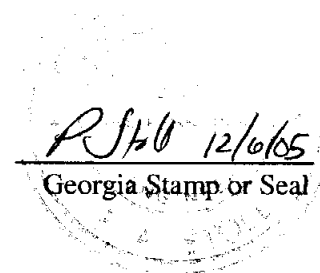
### I. REGISTERED PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST CERTIFICATION

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

Name: Patricia A. Stoll

Signature: *Patricia A. Stoll*

Date: 12/6/05



## II. PROJECT SUMMARY

*(Appendix I, Figure 1: Site Location Map)*

*Provide a brief description or explanation of the site and a brief chronology of environmental events leading up to this report.*

Former Underground Storage Tank (UST) 117, Facility ID #9-025113\*1, was located near Building 7002 at the Bulk Fuel Facility at Hunter Army Airfield, Georgia. The Bulk Fuel Facility is approximately 600 by 1,200 ft and covers an area of approximately 16.5 acres. Currently, the facility contains three aboveground storage tanks (ASTs) for the storage of jet propellant (JP)-8 with capacities of approximately 500,000 gal each, aboveground and underground piping, and off-loader and pump stations for the distribution of fuel to and from the tanks. The tank was removed and the piping abandoned in place on September 30, 1996. Science Applications International Corporation (SAIC) performed a soil gas survey in January 1999 to identify areas of significant contaminant concentrations (SAIC 1999). SAIC conducted a Corrective Action Plan (CAP)–Part A investigation in December 1999 and January 2000 and a CAP–Part B investigation from November 2000 to March 2001 to determine the extent of petroleum contamination at the site. Thirty-four monitoring wells, seven soil borings, and six vertical-profile borings were installed during these investigations, and surface water and sediment samples were collected from Lamar Canal. The CAP–Part B Report (SAIC 2001) was submitted to the Georgia Environmental Protection Division (GA EPD) UST Management Program in July 2001. The report recommended that a well be installed to replace BF-MW-21, which had been destroyed, and that seven monitoring wells (i.e., BF-MW-19, BF-MW-20, BF-MW-21R, BF-MW-22, BF-MW-32, BF-MW-33, and BF-MW-34) be sampled on a semiannual basis for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polynuclear aromatic hydrocarbons (PAHs) because benzene and naphthalene were selected as constituents of potential concern in groundwater. The fate and transport modeling performed as part of the CAP–Part B Report reflected a continuous source of contamination. The results are summarized in Attachment A of this document.

In July 2002 and January 2003, free product was observed in well BF-MW-E5, which is located in the vicinity of AST 7009. This tank is approximately 500 ft northeast of AST 7003, which is where the groundwater plume is being monitored. Free product was not observed in this well during the CAP–Part B investigation. During that investigation, the BTEX and PAH constituents detected in the well were below the maximum contaminant level (MCL), the In-Stream Water Quality Standard (IWQS), and the alternate concentration limit (ACL); therefore, groundwater monitoring of this area was not warranted.

It was apparent that there were two separate releases at the Bulk Fuel Facility. For clarification, Release #1 is associated with the groundwater plume in the vicinity of AST 7003 where the original semiannual monitoring only program was conducted. GA EPD granted no further action for Release #1 in correspondence dated October 6, 2003 (Lewis 2003). Release #2 is associated with the free product observed in well BF-MW-E5, which is in the vicinity of AST 7009 and has been assigned Facility ID #9-025113\*2.

As recommended in the First Annual Monitoring Only Report (SAIC 2003), three additional wells were installed around the perimeter of the bermed area in the vicinity of AST 7009 to confirm that free product in BF-MW-E5 was not from an upgradient source or migrating downgradient of the AST containment area. Well construction diagrams are provided in Attachment D. Due to the construction of the containment area around the AST, the “E” series of monitoring wells could not be overdrilled and screened across the water table. Also, additional wells could not be installed within the containment area do to accessibility issues.

The purpose of the semiannual monitoring, summarized in this report, was to confirm that natural attenuation is taking place at the site and to document the free product removal activities at the site. In accordance with recommendations made in the First Annual Monitoring Only Report (SAIC 2003), ACLs will be developed for any constituent exceeding its respective IWQS by conducting fate and transport modeling specifically for Release #2. During the year of semiannual monitoring associated with Release #2, none of the constituents exceeded its respective IWQS, thus ACLs were not developed at this time. The monitoring only plan for Release #2 will be terminated if contaminant concentrations are less than their respective IWQS or ACL and if free product is less than 1/8-in. The monitoring only program may be terminated regardless of the site ranking score.

### III. ACTIVITIES AND ASSESSMENT OF EXISTING CONDITIONS

#### A. Potentiometric Data:

*(Appendix I, Figure 2: Potentiometric Surface Map)*

*(Appendix II, Table 1: Groundwater Elevations)*

*Discuss groundwater flow at this site and implications for this project.*

During the water level measurement activities at the site during the semiannual monitoring for Release #1, free product was identified in well BF-MW-E5 (i.e., Release #2). This well is located within the containment system of active AST 7009 and is approximately 500 ft northeast of AST 7003 and Release #1. During the CAP-Part B investigation, free product was not observed in well BF-MW-E5. In June 2004, three additional wells were installed around the perimeter of the containment area associated with AST 7009 to confirm that free product was not migrating beyond the perimeter of the containment area and that free product was not coming from an upgradient source. Well BF-MW-E5 is the only well at the site that contains free product.

At various times throughout the year, the water level in BF-MW-E5 is above the screened interval, thus free product is being removed by aggressively pumping the well on a bi-monthly basis with absorbent socks placed in the well in between pumping events when the presence of free product warrants absorbent sock placement. This alternative ensures the active AST system for the Army's Southeastern Power Projection Platform stays operational and that the integrity of the associated system remains intact. The free product removal activities were initiated in June 2004, when there was 3.14 ft of free product present in BF-MW-E5. The free product thickness has continued to decrease since June 2004 with the bi-monthly pumping events. Absorbent socks have not been placed in the well since July 2004. Since October 2004, the maximum free product thickness was 0.01 ft in February 2005. In the other monthly measurements, there has either been a sheen or no product present. A summary of free product removal activities is provided in Table 4.

During the third semiannual monitoring event in July 2004, groundwater elevations were measured in the site monitoring wells to determine the groundwater flow direction (Table 1). In July 2004, the groundwater flow direction ranged from the south to the southeast toward Lamar Canal, and the average groundwater gradient was approximately 0.008 ft/ft. Free product was observed in well BF-MW-E5, which is associated with Release #2.

During the fourth semiannual monitoring event in January 2005, groundwater elevations were measured in the site monitoring wells to determine the groundwater flow direction (Table 1). In January 2005, the groundwater flow direction was to the southeast toward Lamar Canal, and the average groundwater gradient was approximately 0.007 ft/ft. A sheen was observed in well BF-MW-E5, which is associated with Release #2.

**B. Analytical Data:**

*(Appendix I, Figure 3: Groundwater Quality Map)*

*(Appendix I, Figure 4: Trend of Contaminant Concentrations)*

*(Appendix II, Table 2: Groundwater Analytical Results)*

*(Appendix II, Table 3: Soil Analytical Results)*

*(Appendix III: Laboratory Analytical Results)*

*Discuss groundwater analysis results, trend of contaminant concentrations, and implications for this project.*

During the third semiannual sampling event in July 2004, which is associated with Release #2, monitoring wells BF-MW-E1, BF-MW-E2, BF-MW-E3, BF-MW-E4, BF-MW-E5, BF-MW-E6, BF-MW-04, BF-MW-25, BF-MW-26, BF-MW-27, BF-MW-35, BF-MW-36, and BF-MW-37 were sampled for BTEX using U. S. Environmental Protection Agency (EPA) Method 8021B/8260B and PAHs using EPA Method 8270C. Analytical results from the sampling event are summarized below.

- Benzene was detected in 1 of 13 groundwater samples at a concentration of 2.0 µg/L. The concentration did not exceed the IWQS of 71.28 µg/L or the ACL of 634 µg/L associated with Release #1.
- Toluene was not detected in any of the groundwater samples.
- Ethylbenzene was detected in 1 of 13 groundwater samples at a concentration of 17.3 µg/L. The concentration did not exceed the IWQS of 28,718 µg/L.
- Total xylenes were detected in 1 of 13 groundwater samples at a concentration of 42.7 µg/L. There is no ACL or IWQS for total xylenes; however, the concentration did not exceed the MCL of 10,000 µg/L.
- 2-Methylnaphthalene was detected in 4 of 13 groundwater samples at concentrations ranging from 0.6J to 8.4 µg/L. There is no ACL or IWQS for 2-methylnaphthalene.
- Acenaphthene was detected in 2 of 13 groundwater samples at concentrations of 1.6 and 2.8 µg/L. There is no ACL or IWQS for acenaphthene.
- Fluorene was detected in 2 of 13 groundwater samples at concentrations of 2.6 and 5.7 µg/L. The concentrations did not exceed the IWQS of 14,000 µg/L.
- Naphthalene was detected in 4 of 13 groundwater samples at concentrations ranging from 0.49J to 17.3 µg/L. There is no IWQS for naphthalene; however, the concentrations did not exceed the ACL of 820 µg/L associated with Release #1.
- Phenanthrene was detected in 2 of 13 groundwater samples at concentrations of 0.57J and 5.28 µg/L. There is no ACL or IWQS for phenanthrene.

None of the constituents exceeded its respective IWQS or ACLs calculated for Release #1. Since none of the constituents associated with Release #2 exceed their respective IWQS, the development of ACLs for Release #2 is not necessary. Figure 4 shows the trend in benzene concentrations in groundwater for the wells in the monitoring only program for Release #2.

During the fourth semiannual sampling event in January 2005, which is associated with Release #2, monitoring wells BF-MW-E1, BF-MW-E2, BF-MW-E3, BF-MW-E4, BF-MW-E5, BF-MW-E6, BF-MW-04, BF-MW-25, BF-MW-26, BF-MW-27, BF-MW-35, BF-MW-36, and BF-MW-37 were sampled for BTEX using EPA Method 8021B/8260B and PAHs using EPA Method 8270C. Analytical results from the sampling event are summarized below.

- Benzene was not detected in any of the groundwater samples.
- Toluene was detected in 2 of 13 groundwater samples at concentrations of 0.43J and 0.47J µg/L. The concentrations did not exceed the IWQS of 200,000 µg/L.
- Ethylbenzene was detected in 1 of 13 groundwater samples at a concentration of 10.4 µg/L. The concentration did not exceed the IWQS of 28,718 µg/L.
- Total xylenes were detected in 2 of 13 groundwater samples at concentration of 0.9J and 34.9 µg/L. There is no ACL or IWQS for total xylenes; however, the concentration did not exceed the MCL of 10,000 µg/L.
- 2-Methylnaphthalene was detected in 3 of 13 groundwater samples at concentrations ranging from 1.4 and 43.2 µg/L. There is no ACL or IWQS for 2-methylnaphthalene.
- Acenaphthene was detected in 2 of 13 groundwater samples at concentrations of 1.6 and 5.4 µg/L. There is no ACL or IWQS for acenaphthene.
- Fluorene was detected in 2 of 13 groundwater samples at concentrations of 3.1 and 10.3 µg/L. The concentrations did not exceed the IWQS of 14,000 µg/L.
- Naphthalene was detected in 3 of 12 groundwater samples at concentrations ranging from 0.31J to 32.9 µg/L. There is no IWQS for naphthalene; however, the concentrations did not exceed the ACL of 820 µg/L associated with Release #1.
- Phenanthrene was detected in 2 of 12 groundwater samples at concentrations of 1.2 and 10.7 µg/L. There is no ACL or IWQS for phenanthrene.
- Pyrene was detected in 1 of 13 groundwater samples at a concentration of 2.4 µg/L. The concentration did not exceed the IWQS of 11,000 µg/L.

None of the constituents exceeded its respective IWQS or ACLs calculated for Release #1. Since none of the constituents associated with Release #2 exceed their respective IWQS, the development of ACLs for Release #2 is not necessary. Figure 4 shows the trend in benzene concentrations in groundwater for the wells in the monitoring only program for Release #2.

**IV. SITE RANKING (Note: Re-rank site after each monitoring event.)**  
(Appendix IV: Site Ranking Form)

<i>Environmental Site Sensitivity Score:</i>	<u>Release #1</u>
<i>(April 1999 version of the Site Ranking Form</i>	3,250 (CAP–Part B Report)
<i>was used for all scores.)</i>	3,250 (July 2002 – First semiannual sampling event)
	3,250 (Jan. 2003 – Second semiannual sampling event)
	<u>Release #2</u>
	65,250 (July 2004 – Third semiannual sampling event)
	12,750 (Jan. 2005 – Fourth semiannual sampling event)

**V. CONCLUSIONS/RECOMMENDATIONS**

*Provide justification of no-further-action-required recommendation or briefly discuss future monitoring plans for this site.*

The Monitoring Only Plan for the plume in the vicinity of BF-MW-21 (i.e., Release #1) was conducted in accordance with Section III.D of the CAP–Part B Report (SAIC 2001). Termination conditions in the CAP–Part B Report were achieved and GA EPD granted no further action for Release #1 in correspondence dated October 6, 2003 (Lewis 2003).

The Monitoring Only Plan for the plume in the vicinity of BF-MW-E5 (i.e., Release #2) is being conducted in accordance with the technical approach provided in the First Annual Monitoring Only Report (SAIC 2003). Termination for Release #2 will be requested once the measured contaminants remain below their respective IWQS or ACL for 1 year and the free product thickness is less than 1/8-in. The Monitoring Only Plan may be terminated regardless of the site ranking score if the above conditions are met.

During the last year of the monitoring program, a free-product mixture has been pumped from well BF-MW-E5 on a bi-monthly basis. Free product has measured between 0 and 0.1 ft since September 20, 2004. Because BTEX and PAH concentrations associated with Release #2 have not exceeded their respective IWQS and ACLs since the CAP–Part B Investigation (Release #2) – 2000, it is recommended that semiannual groundwater sampling of the site be discontinued. Due to the presence of a sporadic sheen, the pumping of well BF-MW-05 will be continued on a bi-monthly basis for 1 year, with product levels measured prior to each pumping event. The results of the free product removal and final confirmatory sampling will be documented in the Third Annual Monitoring Report, which will be submitted to GA EPD in May 2006.

**VI. REIMBURSEMENT**

Attached \_\_\_\_\_ N/A  X

(Appendix V: Reimbursement Application)

Fort Stewart is a federally owned facility and has funded the investigation for the former UST 117 site, Facility ID #9-025113\*2, using U. S. Department of Defense Environmental Restoration Account Funds. Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.

## **APPENDIX I**

### **REPORT FIGURES**

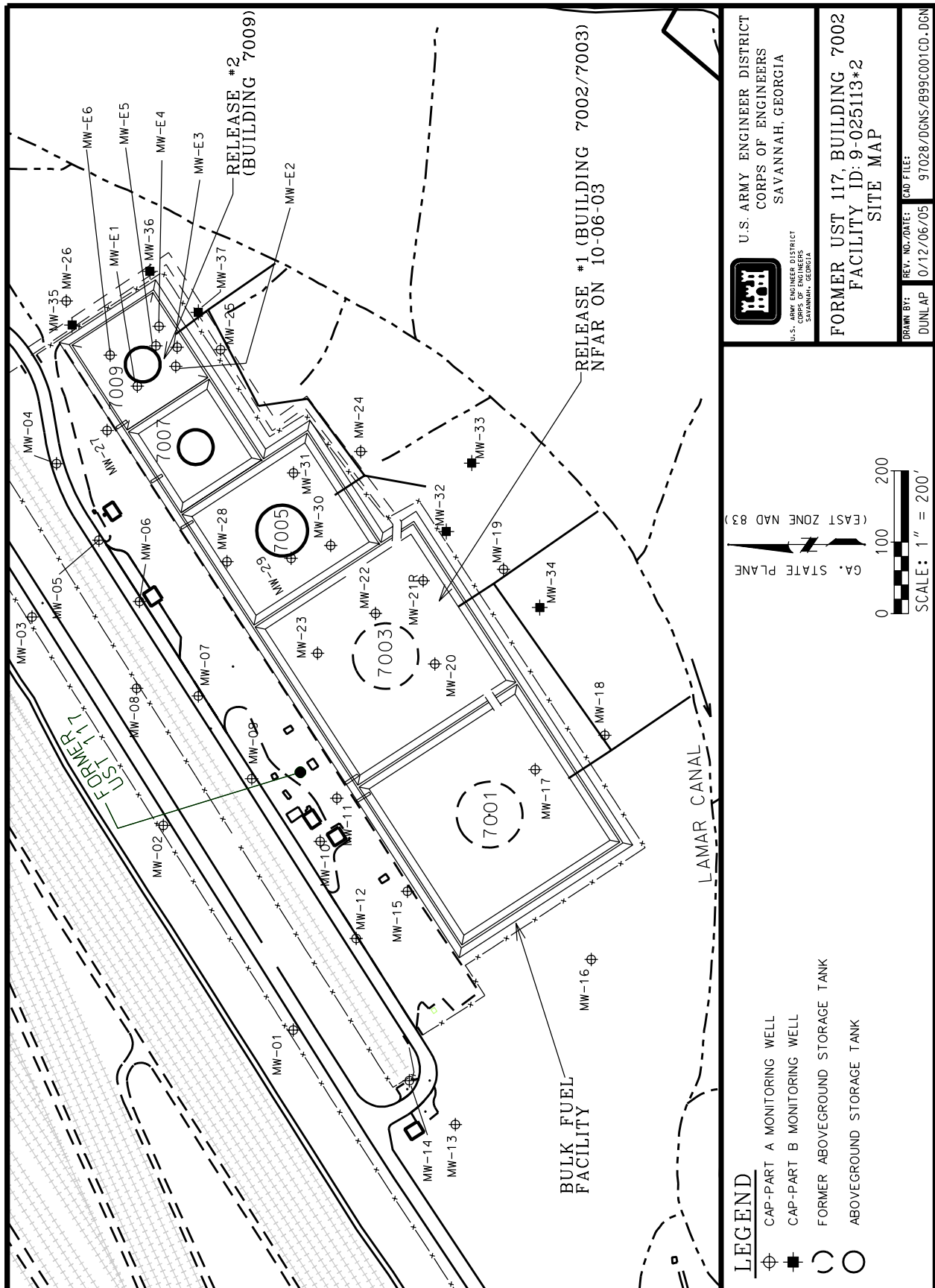
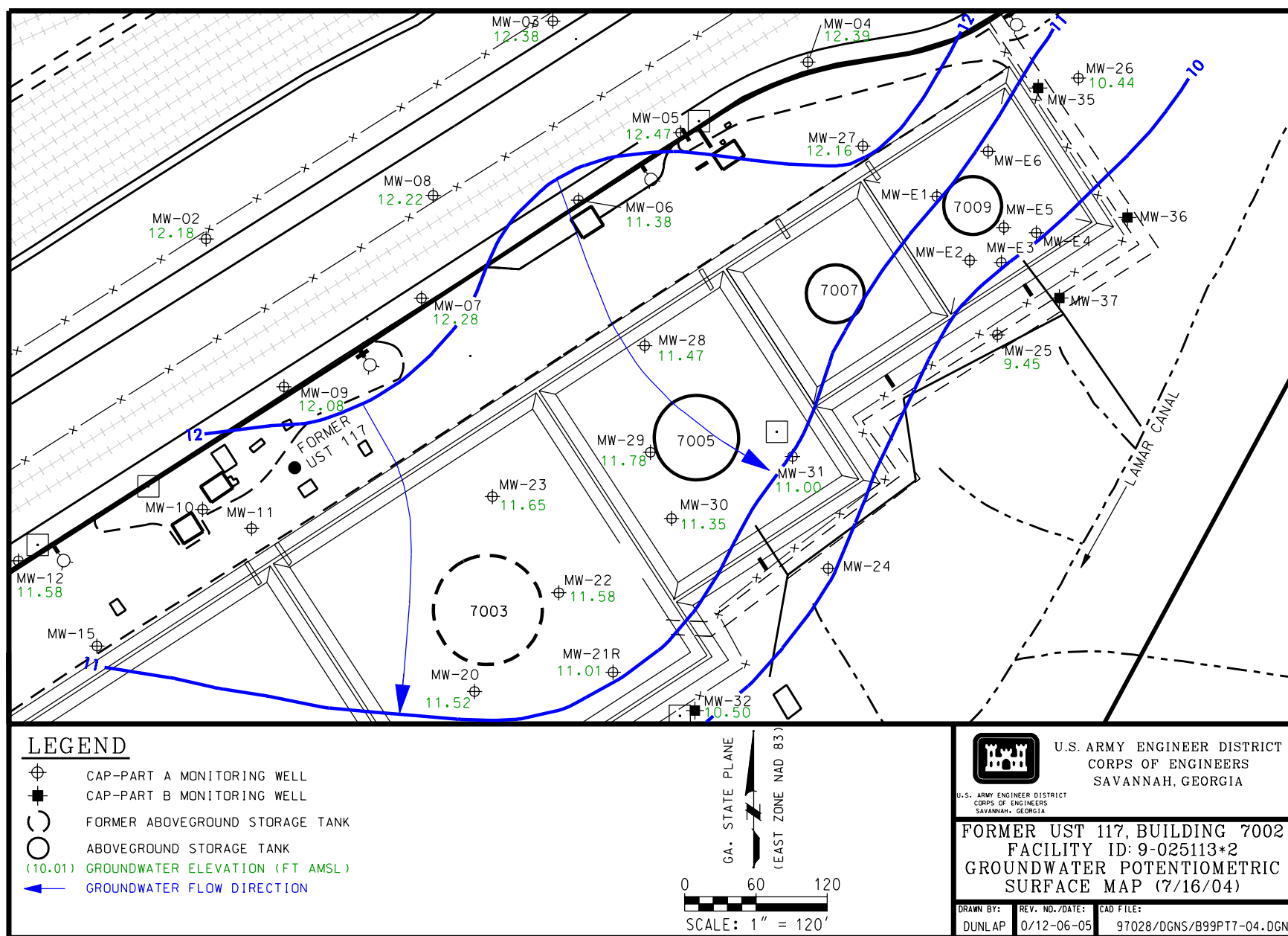


Figure 1. Location Map of the Former UST 117 (Bulk Fuel Facility), Hunter Army Airfield, Georgia





**Figure 2a. Potentiometric Surface Map of the Former UST 117 Site (July 2004)**

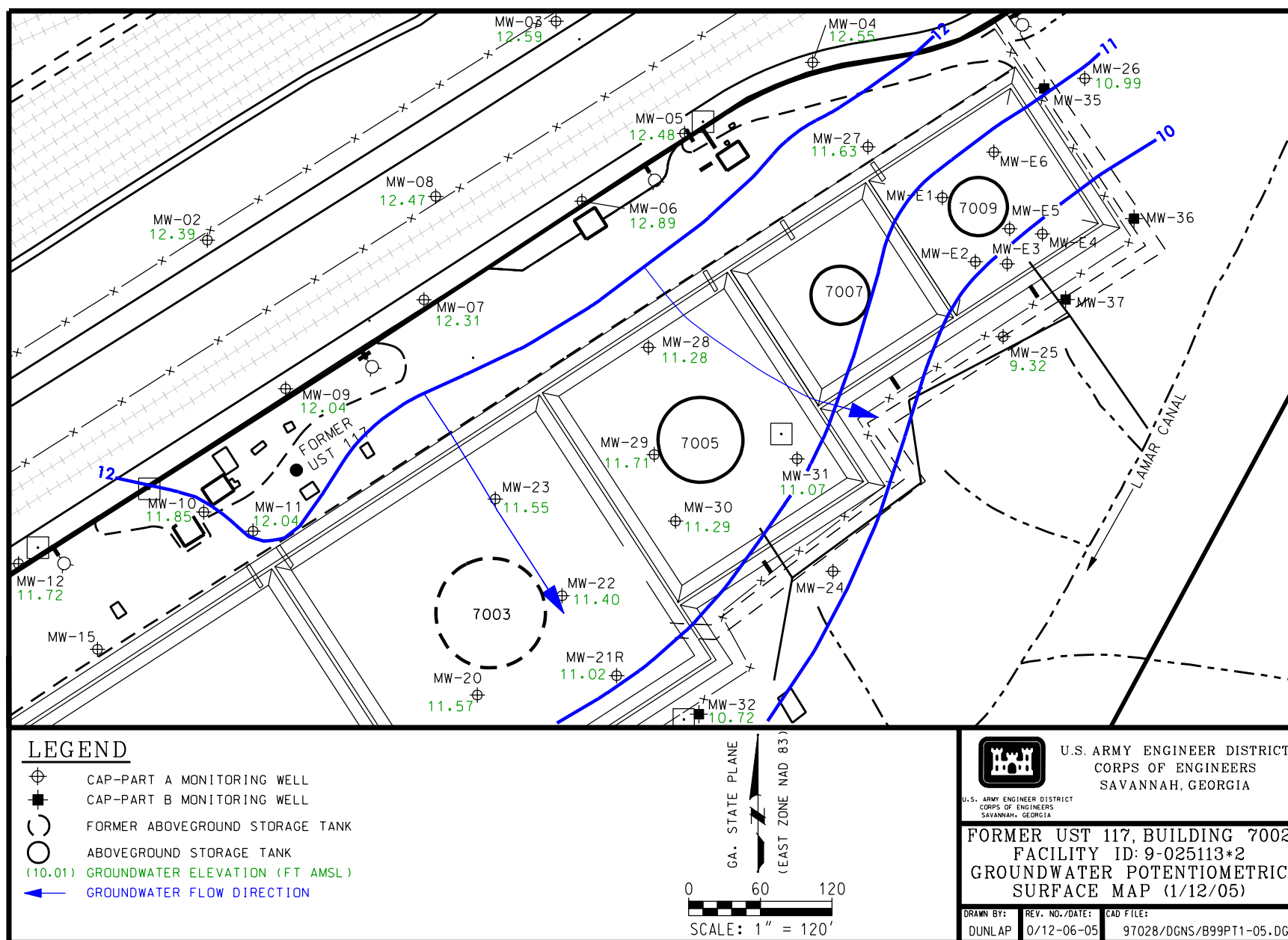


Figure 2b. Potentiometric Surface Map of the Former UST 117 Site (January 2005)

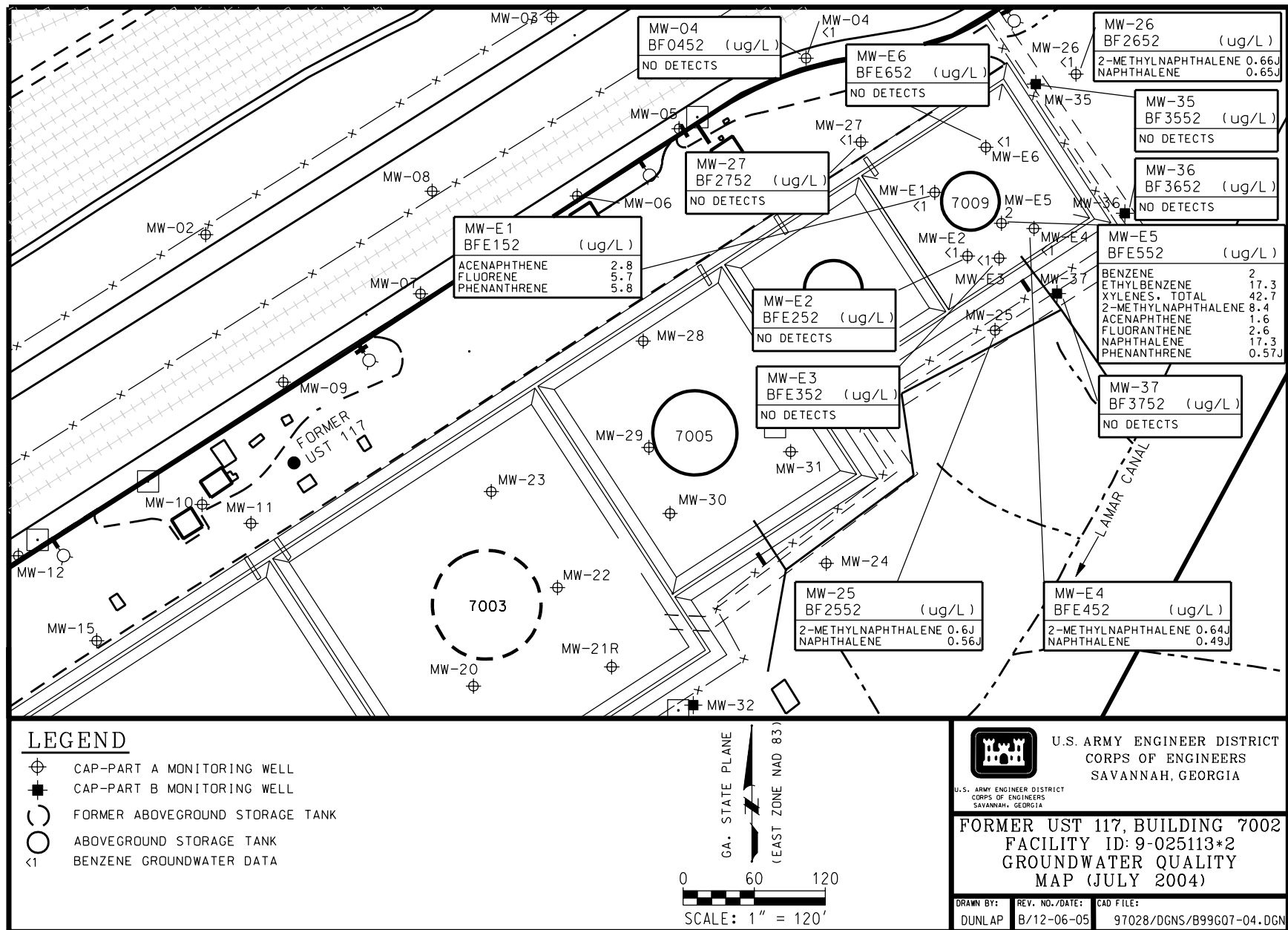
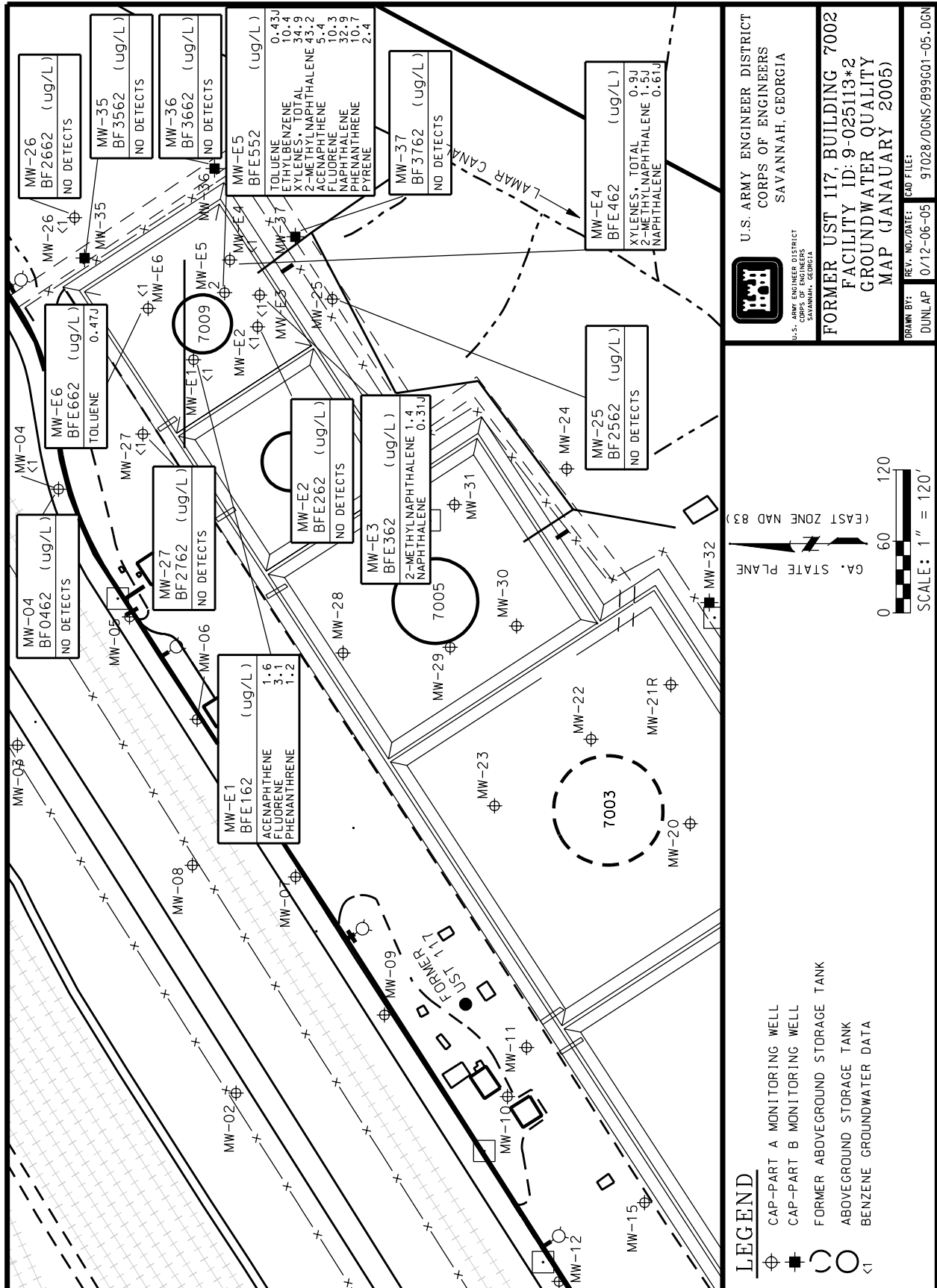
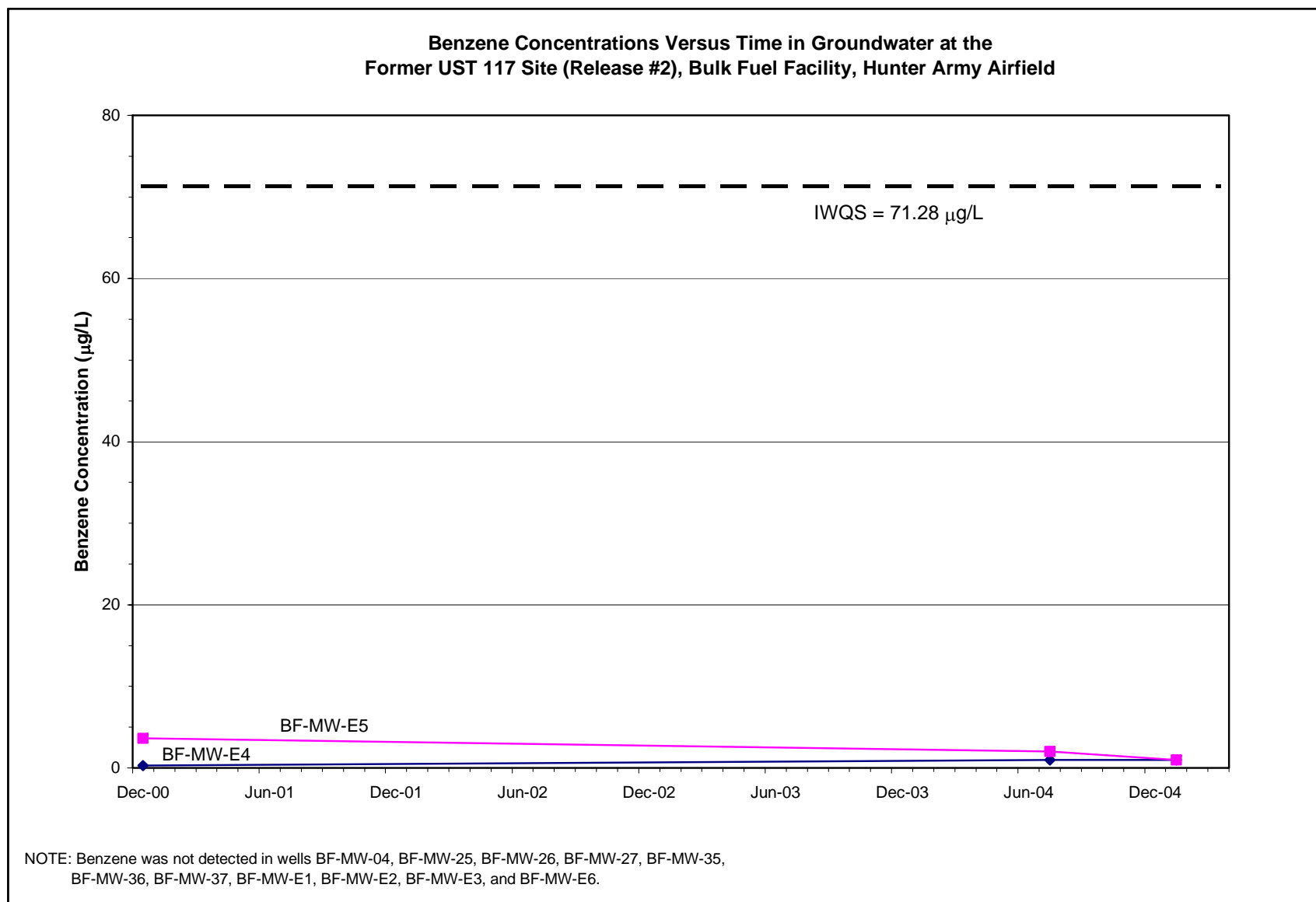


Figure 3a. Groundwater Quality Map of the Former UST 117 Site, Release #2 (July 2004)

**Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2**



**Figure 3b. Groundwater Quality Map of the Former UST 117 Site, Release #2 (January 2005)**



**Figure 4. Trend of Benzene Concentrations for the Former UST 117 Site**

## **APPENDIX II**

### **REPORT TABLES**

Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

**Table 1. Groundwater Elevations**

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation <sup>a</sup> (ft AMSL)
<i>First Semiannual Monitoring Event – July 2002</i>							
BF-MW-01	07/11/02	15.47	3.5 – 12.5	—	4.04	0	11.43
BF-MW-02	07/11/02	16.24	3.5 – 13.0	—	3.88	0	12.36
BF-MW-03	07/11/02	16.39	3.6 – 13.1	—	3.88	0	12.51
BF-MW-04	07/11/02	17.11	2.8 – 12.3	—	4.63	0	12.48
BF-MW-05	07/11/02	16.99	2.9 – 12.4	—	4.40	0	12.59
BF-MW-06	07/11/02	16.80	2.7 – 12.2	—	4.26	0	12.54
BF-MW-07	07/11/02	16.74	2.9 – 12.4	—	4.44	0	12.30
BF-MW-08	07/11/02	16.40	2.3 – 11.8	—	4.00	0	12.40
BF-MW-09	07/11/02	16.60	2.9 – 12.4	—	4.62	0	11.98
BF-MW-10	07/11/02	15.33	2.3 – 11.8	—	3.56	0	11.77
BF-MW-11	07/11/02	15.42	2.3 – 11.8	—	3.52	0	11.90
BF-MW-12	07/11/02	16.35	3.0 – 12.5	—	4.79	0	11.56
BF-MW-13	07/11/02	13.72	2.3 – 11.8	—	4.84	0	8.88
BF-MW-14	07/11/02	15.26	2.8 – 12.3	—	5.04	0	10.22
BF-MW-15	07/11/02	15.01	2.5 – 12.0	—	3.56	0	11.45
BF-MW-16	07/11/02	12.61	2.7 – 12.2	—	4.74	0	7.87
BF-MW-17	07/11/02	13.15	3.0 – 12.5	—	3.08	0	10.07
BF-MW-18	07/11/02	12.99	3.4 – 12.9	—	3.80	0	9.19
BF-MW-19	07/11/02	13.88	2.0 – 11.5	—	3.61	0	10.27
BF-MW-20	07/11/02	14.79	2.2 – 11.7	—	3.38	0	11.41
BF-MW-21R	07/11/02	14.57	4.8 – 14.8	—	3.55	0	11.02
BF-MW-22	07/11/02	14.60	2.4 – 11.9	—	3.19	0	11.41
BF-MW-23	07/11/02	14.74	2.7 – 12.2	—	3.13	0	11.61
BF-MW-25	07/11/02	13.60	3.6 – 13.1	—	3.90	0	9.70
BF-MW-27	07/11/02	14.90	2.5 – 12.0	—	2.72	0	12.18
BF-MW-28	07/11/02	15.49	2.0 – 11.5	—	4.07	0	11.42
BF-MW-29	07/11/02	14.49	2.0 – 11.5	—	2.82	0	11.67
BF-MW-30	07/11/02	14.19	1.9 – 11.4	—	2.85	0	11.34
BF-MW-31	07/11/02	14.46	1.5 – 11.0	—	3.53	0	10.93
BF-MW-32	07/11/02	15.74	1.4 – 11.2	—	5.12	0	10.62
BF-MW-33	07/11/02	13.95	1.6 – 11.4	—	4.75	0	9.20
BF-MW-34	07/11/02	14.87	3.1 – 13.1	—	5.24	0	9.63
BF-MW-E1	07/11/02	14.00	4.6 – 14.6	—	3.77	0	10.23
BF-MW-E2	07/11/02	13.76	3.94 – 13.94	—	3.91	0	9.85
BF-MW-E3	07/11/02	13.99	4.4 – 14.4	—	4.31	0	9.68

NOTES:

<sup>a</sup> Corrected groundwater elevation based on a product density of 880 kg/m<sup>3</sup>.

AMSL Above mean sea level.

BGS Below ground surface.

BTOC Below top of casing.

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Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

**Table 1. Groundwater Elevations (continued)**

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation <sup>a</sup> (ft AMSL)
BF-MW-E4	07/11/02	13.88	4.6 – 14.6	—	4.42	0	9.46
BF-MW-E5	07/11/02	14.00	4.8 – 14.8	4.34	4.41	0.07	9.65 <sup>a</sup>
BF-MW-E6	07/11/02	13.76	3.7 – 13.7	—	3.69	0	10.07
<b><i>Second Semiannual Monitoring Event – January 2003</i></b>							
BF-MW-01	01/27/03	15.47	3.5 – 12.5	—	3.71	0	11.76
BF-MW-03	01/27/03	16.39	3.6 – 13.1	—	3.79	0	12.60
BF-MW-09	01/27/03	16.60	2.9 – 12.4	—	4.29	0	12.31
BF-MW-12	01/27/03	16.35	3.0 – 12.5	—	4.39	0	11.96
BF-MW-17	01/27/03	13.15	3.0 – 12.5	—	2.47	0	10.68
BF-MW-18	01/27/03	12.99	3.4 – 12.9	—	3.32	0	9.67
BF-MW-19	01/27/03	13.88	2.0 – 11.5	—	3.38	0	10.50
BF-MW-20	01/27/03	14.79	2.2 – 11.7	—	3.08	0	11.71
BF-MW-21R	01/27/03	14.57	4.8 – 14.8	—	3.45	0	11.12
BF-MW-22	01/27/03	14.60	2.4 – 11.9	—	3.05	0	11.55
BF-MW-23	01/27/03	14.74	2.7 – 12.2	—	3.12	0	11.62
BF-MW-25	01/27/03	13.60	3.6 – 13.1	—	3.72	0	9.88
BF-MW-26	01/27/03	13.62	2.4 – 11.9	—	2.01	0	11.61
BF-MW-28	01/27/03	15.49	2.0 – 11.5	—	4.02	0	11.47
BF-MW-32	01/27/03	15.74	1.4 – 11.2	—	4.88	0	10.86
BF-MW-33	01/27/03	13.95	1.6 – 11.4	—	4.54	0	9.41
BF-MW-E1	01/27/03	14.00	4.6 – 14.6	—	3.99	0	10.01
BF-MW-E2	01/27/03	13.76	3.94 – 13.94	—	4.02	0	9.74
BF-MW-E3	01/27/03	13.99	4.4 – 14.4	—	4.38	0	9.61
BF-MW-E4	01/27/03	13.88	4.6 – 14.6	—	4.22	0	9.66
BF-MW-E5	01/27/03	14.00	4.8 – 14.8	4.44	4.54	0.1	9.55 <sup>a</sup>
BF-MW-E6	01/27/03	13.76	3.7 – 13.7	—	3.87	0	9.89
<b><i>Third Semiannual Monitoring Event – July 2004</i></b>							
BF-MW-01	07/16/04	15.47	3.5 – 12.5	—	4.42	0	11.05
BF-MW-02	07/16/04	16.24	3.5 – 13.0	—	4.06	0	12.18
BF-MW-03	07/16/04	16.39	3.6 – 13.1	—	4.01	0	12.38
BF-MW-04	07/16/04	17.11	2.8 – 12.3	—	4.72	0	12.39
BF-MW-05	07/16/04	16.99	2.9 – 12.4	—	4.52	0	12.47
BF-MW-06	07/16/04	16.80	2.7 – 12.2	—	5.42	0	11.38
BF-MW-07	07/16/04	16.74	2.9 – 12.4	—	4.46	0	12.28
BF-MW-08	07/16/04	16.40	2.3 – 11.8	—	4.18	0	12.22
BF-MW-09	07/16/04	16.60	2.9 – 12.4	—	4.52	0	12.08

NOTES:

<sup>a</sup> Corrected groundwater elevation based on a product density of 880 kg/m<sup>3</sup>.

AMSL Above mean sea level.

BGS Below ground surface.

BTOC Below top of casing.



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**Table 1. Groundwater Elevations (continued)**

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation <sup>a</sup> (ft AMSL)
BF-MW-10	07/16/04	15.33	2.3 – 11.8	—	3.53	0	11.80
BF-MW-11	07/16/04	15.42	2.3 – 11.8	—	3.32	0	12.10
BF-MW-12	07/16/04	16.35	3.0 – 12.5	—	4.77	0	11.58
BF-MW-13	07/16/04	13.72	2.3 – 11.8	—	5.00	0	8.72
BF-MW-14	07/16/04	15.26	28 – 12.3	—	5.14	0	10.12
BF-MW-15	07/16/04	15.01	2.5 – 12.0	NM	NM	NM	NM
BF-MW-16	07/16/04	12.61	2.7 – 12.2	NM	NM	NM	NM
BF-MW-17	07/16/04	13.15	3.0 – 12.5	—	3.14	0	10.01
BF-MW-18	07/16/04	12.99	3.4 – 12.9	—	4.02	0	8.97
BF-MW-19	07/16/04	13.88	2.0 – 11.5	—	3.98	0	9.90
BF-MW-20	07/16/04	14.79	2.2 – 11.7	—	3.27	0	11.52
BF-MW-21R	07/16/04	14.57	4.8 – 14.8	—	3.56	0	11.01
BF-MW-22	07/16/04	14.60	2.4 – 11.9	—	3.02	0	11.58
BF-MW-23	07/16/04	14.74	2.7 – 12.2	—	3.09	0	11.65
BF-MW-25	07/16/04	13.60	3.6 – 13.1	NM	NM	NM	NM
BF-MW-27	07/16/04	14.90	2.5 – 12.0	—	2.74	0	12.16
BF-MW-28	07/16/04	15.49	2.0 – 11.5	—	4.02	0	11.47
BF-MW-29	07/16/04	14.49	2.0 – 11.5	—	2.71	0	11.78
BF-MW-30	07/16/04	14.19	1.9 – 11.4	—	2.84	0	11.35
BF-MW-31	07/16/04	14.46	1.5 – 11.0	—	3.46	0	11.00
BF-MW-32	07/16/04	15.74	1.4 – 11.2	—	5.24	0	10.50
BF-MW-33	07/16/04	13.95	1.6 – 11.4	—	4.88	0	9.07
BF-MW-34	07/16/04	14.87	3.1 – 13.1	—	4.92	0	9.95
BF-MW-35	07/16/04	14.94	2.4 – 12.4	—	3.91	0	11.03
BF-MW-36	07/16/04	15.16	2.6 – 12.6	—	5.90	0	9.26
BF-MW-37	07/16/04	16.07	2.3 – 12.3	—	5.07	0	11.00
BF-MW-E1	07/16/04	14.00	4.6 – 14.6	—	3.92	0	10.08
BF-MW-E2	07/16/04	13.76	3.94 – 13.94	—	4.64	0	9.12
BF-MW-E3	07/16/04	13.99	4.4 – 14.4	—	4.64	0	9.35
BF-MW-E4	07/16/04	13.88	4.6 – 14.6	—	4.80	0	9.08
BF-MW-E5	07/16/04	14.00	4.8 – 14.8	4.48	5.71	1.23	9.37 <sup>a</sup>
BF-MW-E6	07/16/04	13.76	3.7 – 13.7	—	3.87	0	9.89
<b><i>Fourth Semiannual Monitoring Event – January 2005</i></b>							
BF-MW-01	01/12/05	15.47	3.5 – 12.5	—	3.90	0	11.57
BF-MW-02	01/12/05	16.24	3.5 – 13.0	—	3.85	0	12.39
BF-MW-03	01/12/05	16.39	3.6 – 13.1	—	3.80	0	12.59
BF-MW-04	01/12/05	17.11	2.8 – 12.3	—	4.56	0	12.55
BF-MW-05	01/12/05	16.99	2.9 – 12.4	—	4.51	0	12.48
BF-MW-06	01/12/05	16.80	2.7 – 12.2	—	3.91	0	12.89

NOTES:

<sup>a</sup> Corrected groundwater elevation based on a product density of 880 kg/m<sup>3</sup>.

AMSL Above mean sea level.

BGS Below ground surface.

BTOC Below top of casing.

NM Not measured.

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**Table 1. Groundwater Elevations (continued)**

Well Number	Date Measured	Top of Casing Elevation (ft AMSL)	Depth of Screened Interval (ft BGS)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Corrected Groundwater Elevation <sup>a</sup> (ft AMSL)
BF-MW-07	01/12/05	16.74	2.9 – 12.4	—	4.43	0	12.31
BF-MW-08	01/12/05	16.40	2.3 – 11.8	—	3.93	0	12.47
BF-MW-09	01/12/05	16.60	2.9 – 12.4	—	4.56	0	12.04
BF-MW-10	01/12/05	15.33	2.3 – 11.8	—	3.48	0	11.85
BF-MW-11	01/12/05	15.42	2.3 – 11.8	—	3.38	0	12.04
BF-MW-12	01/12/05	16.35	3.0 – 12.5	—	4.63	0	11.72
BF-MW-13	01/12/05	13.72	2.3 – 11.8	—	3.49	0	10.23
BF-MW-14	01/12/05	15.26	28 – 12.3	—	4.41	0	10.85
BF-MW-15	01/12/05	15.01	2.5 – 12.0	NM	NM	NM	NM
BF-MW-16	01/12/05	12.61	2.7 – 12.2	NM	NM	NM	NM
BF-MW-17	01/12/05	13.15	3.0 – 12.5	—	3.07	0	10.08
BF-MW-18	01/12/05	12.99	3.4 – 12.9	—	3.83	0	9.16
BF-MW-19	01/12/05	13.88	2.0 – 11.5	—	3.85	0	10.03
BF-MW-20	01/12/05	14.79	2.2 – 11.7	—	3.22	0	11.57
BF-MW-21R	01/12/05	14.57	4.8 – 14.8	—	3.55	0	11.02
BF-MW-22	01/12/05	14.60	2.4 – 11.9	—	3.20	0	11.40
BF-MW-23	01/12/05	14.74	2.7 – 12.2	—	3.19	0	11.55
BF-MW-25	01/12/05	13.60	3.6 – 13.1	—	4.28	0	9.32
BF-MW-27	01/12/05	14.90	2.5 – 12.0	—	3.27	0	11.63
BF-MW-28	01/12/05	15.49	2.0 – 11.5	—	4.21	0	11.28
BF-MW-29	01/12/05	14.49	2.0 – 11.5	—	2.78	0	11.71
BF-MW-30	01/12/05	14.19	1.9 – 11.4	—	2.90	0	11.29
BF-MW-31	01/12/05	14.46	1.5 – 11.0	—	3.39	0	11.07
BF-MW-32	01/12/05	15.74	1.4 – 11.2	—	5.02	0	10.72
BF-MW-33	01/12/05	13.95	1.6 – 11.4	NM	NM	NM	NM
BF-MW-34	01/12/05	14.87	3.1 – 13.1	—	4.95	0	9.92
BF-MW-35	01/12/05	14.94	2.4 – 12.4	—	3.76	0	11.18
BF-MW-36	01/12/05	15.16	2.6 – 12.6	—	5.69	0	9.47
BF-MW-37	01/12/05	16.07	2.3 – 12.3	—	4.87	0	11.20
BF-MW-E1	01/12/05	14.00	4.6 – 14.6	—	4.09	0	9.91
BF-MW-E2	01/12/05	13.76	3.94 – 13.94	—	4.28	0	9.48
BF-MW-E3	01/12/05	13.99	4.4 – 14.4	—	4.72	0	9.27
BF-MW-E4	01/12/05	13.88	4.6 – 14.6	—	5.18	0	8.70
BF-MW-E5	01/12/05	14.00	4.8 – 14.8	sheen	4.90	sheen	9.10
BF-MW-E6	01/12/05	13.76	3.7 – 13.7	—	3.99	0	9.77

NOTES:

<sup>a</sup> Corrected groundwater elevation based on a product density of 880 kg/m<sup>3</sup>.

AMSL Above mean sea level.

BGS Below ground surface.

BTOC Below top of casing.

NM Not measured.

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**Table 2a. Groundwater Analytical Results (Volatile Organic Compounds)**

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
<i>Corrective Action Plan–Part B Investigation (Release #1) – 2000</i>							
BF-MW-19	BF1922	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-20	BF2022	12/03/00	3.1 =	1 U	2.1 =	7.3 =	12.5
BF-MW-21	BF2122	12/02/00	<b>251</b> =	1.3 =	17.4 =	734 =	1,003.7
BF-MW-22	BF2222	12/02/00	<b>174</b> =	5.7 =	128 =	662 =	969.7
BF-MW-32	BF3222	12/01/00	<b>109 J</b>	0.65 J	1.1 =	115 =	225.75
BF-MW-33	BF3322	12/01/00	1 =	1 U	1 U	3 U	1
BF-MW-34	BF3422	12/01/00	1 U	1 U	1 U	0.36 J	0.36
<i>First Semiannual Sampling Event (Release #1) – July 2002</i>							
BF-MW-19	BF1932	07/11/02	1 U	1 U	1 U	3 U	ND
BF-MW-20	BF2032	07/11/02	2.5 =	6 =	32.1 =	136 =	176.6
BF-MW-21R	BF2132	07/11/02	<b>178</b> =	1.2 =	11.6 =	356 =	546.8
BF-MW-22	BF2232	07/11/02	45 =	2.5 =	207 =	911 =	1,165.5
BF-MW-32	BF3232	07/11/02	1.7 =	1 U	20.7 =	103 =	125.4
BF-MW-33	BF3332	07/11/02	0.99 J	1 U	1 U	3 U	0.99
BF-MW-34	BF3432	07/11/02	1 U	1 U	1 U	3 U	ND
<i>Second Semiannual Sampling Event (Release #1) – January 2003</i>							
BF-MW-19	BF1942	01/24/03	1 U	1 U	1 U	1 U	ND
BF-MW-20	BF2042	01/24/03	3.6 =	1 U	20.4 =	130 =	154
BF-MW-21R	BF2142	01/24/03	<b>183</b> =	1.2 =	9.9 =	296 =	490
BF-MW-22	BF2242	01/24/03	47 =	1 J	105 =	328 =	481
BF-MW-32	BF3242	01/24/03	1 U	1 U	1 U	1 U	ND
BF-MW-33	BF3342	01/24/03	1.8 =	0.56 J	1 U	1 U	2.36
BF-MW-34	BF3442	01/24/03	1 U	1 U	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:

**Bold** values exceed In-Stream Water Quality Standards.

BTEX Benzene, toluene, ethylbenzene, and xylenes.

ND Not detected.

NRC No regulatory criteria.

Data Qualifiers

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

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

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

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**Table 2a. Groundwater Analytical Results (Volatile Organic Compounds) (continued)**

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
<i><b>CAP-Part B Investigation (Release #2) – 2000</b></i>							
BF-MW-04	BF0422	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-25	BF2522	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-26	BF2622	12/02/00	1 U	1 U	1 U	3 U	ND
BF-MW-27	BF2722	12/03/00	1 U	1 U	1 U	3 U	ND
BF-MW-E1	BFE122	12/01/00	1 U	1 U	0.99 J	0.45 J	1.44
BF-MW-E2	BFE222	12/02/00	1 U	0.3 J	1 U	3 U	0.3
BF-MW-E3	BFE322	12/02/00	1 U	0.48 J	1 U	0.3 J	0.78
BF-MW-E4	BFE422	12/02/00	0.29 J	0.27 J	0.28 J	0.36 J	1.2
BF-MW-E5	BFE522	12/02/00	3.6 =	1 =	17.2 =	19 =	40.8
BF-MW-E6	BFE622	12/01/00	1 U	1 U	1 U	3 U	ND
<i><b>Third Semiannual Sampling Event (Release #2) – July 2004</b></i>							
BF-MW-04	BF0452	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-25	BF2552	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-26	BF2652	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-27	BF2752	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-35	BF3552	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-36	BF3652	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-37	BF3752	07/17/04	1 U	1 U	1 U	1 U	ND
BF-MW-E1	BFE152	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E2	BFE252	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E3	BFE352	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E4	BFE452	07/16/04	1 U	1 U	1 U	1 U	ND
BF-MW-E5	BFE552	07/16/04	2 =	1 U	17.3 =	42.7 =	62.0
BF-MW-E6	BFE652	07/16/04	1 U	1 U	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:

BTEX Benzene, toluene, ethylbenzene, and xylenes.  
 ND Not detected.  
 NRC No regulatory criteria.

Data Qualifiers

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

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**Table 2a. Groundwater Analytical Results (Volatile Organic Compounds) (continued)**

Sample Location	Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
<i>Fourth Semiannual Sampling Event (Release #2) – January 2005</i>							
BF-MW-04	BF0462	01/12/05	1 U	1 U	1 U	1 U	ND
BF-MW-25	BF2562	01/12/05	1 U	1 U	1 U	1 U	ND
BF-MW-26	BF2662	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-27	BF2762	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-35	BF3562	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-36	BF3662	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-37	BF3762	01/14/05	1 U	1 U	1 U	1 U	ND
BF-MW-E1	BFE162	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E2	BFE262	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E3	BFE362	01/13/05	1 U	1 U	1 U	1 U	ND
BF-MW-E4	BFE462	01/13/05	1 U	1 U	1 U	0.9 J	0.9
BF-MW-E5	BFE562	01/13/05	1 U	0.43 J	10.4 =	34.9 =	45.73
BF-MW-E6	BFE662	01/13/05	1 U	0.47 J	1 U	1 U	ND
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			71.28	200,000	28,718	NRC	NRC
Alternate Concentration Limits			634	—	—	—	—

NOTES:

BTEX Benzene, toluene, ethylbenzene, and xylenes.  
 ND Not detected.  
 NRC No regulatory criteria.

Data Qualifiers

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

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**Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds)**

Sample Location	Sample ID	Date Sampled	Detected Compounds				
			2-Methylnaphthalene (µg/L)	2-Choronaphthalene (µg/L)	Acenaphthylene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)
Corrective Action Plan–Part B Investigation (Release #1) – 2000							
BF-MW-19	BF1922	12/02/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-20	BF2022	12/03/00	0.99 U	0.99 U	0.99 U	0.99 U	7.8 =
BF-MW-21	BF2122	12/02/00	1 U	1 U	1 U	1 U	22 =
BF-MW-22	BF2222	12/02/00	19 U	19 U	19 U	19 U	528 =
BF-MW-32	BF3222	12/01/00	1.1 U	1.1 U	1.1 U	1.1 U	2 =
BF-MW-33	BF3322	12/01/00	1 U	1 U	1 U	1 U	1 U
BF-MW-34	BF3422	12/01/00	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
First Semiannual Sampling Event (Release #1) – July 2002							
BF-MW-19	BF1932	07/11/02	0.98 U	0.98 U	0.98 U	0.98 U	1 =
BF-MW-20	BF2032	07/11/02	11.2 =	0.98 U	0.98 U	0.98 U	19.9 =
BF-MW-21R	BF2132	07/11/02	1.8 =	41.5 =	1.8 =	5.9 =	19 =
BF-MW-22	BF2232	07/11/02	133 =	9.8 U	9.8 U	9.8 U	168 =
BF-MW-32	BF3232	07/11/02	2.2 =	0.98 U	0.98 U	0.98 U	7.1 =
BF-MW-33	BF3332	07/11/02	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-34	BF3432	07/11/02	2.6 =	0.98 U	0.98 U	0.98 U	5.8 =
Second Semiannual Sampling Event (Release #1) – January 2003							
BF-MW-19	BF1942	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-20	BF2042	01/24/03	32 =	0.98 U	0.98 U	0.98 U	40.5 =
BF-MW-21R	BF2142	01/24/03	2.4 =	0.99 U	0.99 U	0.99 U	37.9 =
BF-MW-22	BF2242	01/24/03	42 =	0.99 U	0.99 U	0.99 U	110 =
BF-MW-32	BF3242	01/24/03	0.99 U	0.99 U	0.99 U	0.99 U	0.78 J
BF-MW-33	BF3342	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	0.22 J
BF-MW-34	BF3442	01/24/03	0.98 U	0.98 U	0.98 U	0.98 U	1.1 =
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	NRC	14,000	NRC
Alternate Concentration Limits			—	—	—	—	820

NOTES:

NRC No regulatory criteria.

Data Qualifiers

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

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

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

**Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds) (continued)**

Sample Location	Sample ID	Date Sampled	Detected Compounds				
			2-Methylnaphthalene (µg/L)	Acenaphthene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)
CAP-Part B Investigation (Release #2) – 2000							
BF-MW-04	BF0422	12/2/00	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
BF-MW-25	BF2522	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-26	BF2622	12/2/00	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
BF-MW-27	BF2722	12/3/00	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE122	12/1/00	1 U	2.2 =	4 =	9.1 =	1 U
BF-MW-E2	BFE222	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-E3	BFE322	12/2/00	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
BF-MW-E4	BFE422	12/2/00	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-E5	BFE522	12/2/00	NA	0.55 J	1 =	16.6 =	0.73 J
BF-MW-E6	BFE622	12/1/00	1 U	1 U	1 U	1 U	1 U
Third Semiannual Sampling Event (Release #2) – July 2004							
BF-MW-04	BF0452	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-25	BF2552	7/16/04	0.6 J	0.99 U	0.99 U	0.56 J	0.99 U
BF-MW-26	BF2652	7/16/04	0.66 J	1.1 U	1.1 U	0.65 J	1.1 U
BF-MW-27	BF2752	7/16/04	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
BF-MW-35	BF3552	7/17/04	1 U	1 U	1 U	1 U	1 U
BF-MW-36	BF3652	7/17/04	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
BF-MW-37	BF3752	7/17/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE152	7/16/04	1 U	2.8 =	5.7 =	1 U	5.8 =
BF-MW-E2	BFE252	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E3	BFE352	7/16/04	1 U	1 U	1 U	1 U	1 U
BF-MW-E4	BFE452	7/16/04	0.64 J	0.97 U	0.97 U	0.49 J	0.97 U
BF-MW-E5	BFE552	7/16/04	8.4 =	1.6 =	2.6 =	17.3 =	0.57 J
BF-MW-E6	BFE652	7/16/04	1 U	1 U	1 U	1 U	1 U
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	14,000	NRC	NRC
Alternate Concentration Limits			—	—	—	—	820

**NOTES:**

NA Not analyzed.  
NRC No regulatory criteria.

**Data Qualifiers**

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

**Table 2b. Groundwater Analytical Results (Polynuclear Aromatic Compounds) (continued)**

Sample Location	Sample ID	Date Sampled	Detected Compounds					
			2-Methylnaphthalene (µg/L)	Acenaphthene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
Fourth Semiannual Sampling Event (Release #2) – January 2005								
BF-MW-04	BF0462	01/12/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-25	BF2562	01/12/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-26	BF2662	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-27	BF2762	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-35	BF3562	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-36	BF3662	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-37	BF3762	01/14/05	1 U	1 U	1 U	1 U	1 U	1 U
BF-MW-E1	BFE162	01/13/05	1 U	1.6 =	3.1 =	1 U	1.2 =	1 U
BF-MW-E2	BFE262	01/13/05	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
BF-MW-E3	BFE362	01/13/05	1.4 =	1 U	1 U	0.31 J	1 U	1 U
BF-MW-E4	BFE462	01/13/05	1.5 J	1 U	1 U	0.61 J	1 U	1 U
BF-MW-E5	BFE562	01/13/05	43.2 =	5.4 =	10.3 =	32.9 =	10.7 =	2.4 =
BF-MW-E6	BFE662	01/13/05	1 U	1 U	1 U	1 U	1 U	1 U
In-Stream Water Quality Standards (Georgia Rule 391-3-6)			NRC	NRC	14,000	NRC	NRC	11,000
Alternate Concentration Limits			—	—	—	—	820	—

NOTES:

NRC No regulatory criteria.

Data Qualifiers

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

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

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



Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

**Table 3. Well Construction Details**

Boring/Well Number	Date Installed	Boring Depth (ft BGS)	Screened Interval (ft BGS)	Type of Completion	Coordinates (NAD83)		Elevation (NAVD88)	
					Northing	Easting	Ground Surface	Top of Casing
Additional Well Installation – June 2002								
BF-MW-21R	06/21/02	15.0	4.8 – 14.8	2-in. PVC	739331.22	973250.78	14.7	14.57
Additional Well Installation – June 2004								
BR-MW-35	06/22/04	13.0	2.4 – 12.4	2-in. PVC	739834.57	973604.28	15.14	14.94
BR-MW-36	06/23/04	13.0	2.6 – 12.6	2-in. PVC	739725.51	973679.39	15.45	15.16
BR-MW-37	06/23/04	13.0	2.3 – 12.3	2-in. PVC	739657.72	973622.11	16.10	16.07

NOTES:

BGS Below ground surface.  
NAD North American Datum.  
PVC Polyvinyl chloride.

Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

**Table 4. Free Product Removal Activities**

Well Number	Date	Depth of Screened Interval (ft BTOC)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Description
BF-MW-E5	06/18/04	4.7 – 14.7	4.51	7.65	3.14	40 gal of water/product mixture pumped from well. An absorbent sock was placed in the well upon completion of pumping
BF-MW-E5	07/16/04	4.7 – 14.7	4.48	5.71	1.23	2 gal of water/product mixture pumped from well prior to sampling. Absorbent socks were not placed in the well because the free product was removed during well purging
BF-MW-E5	08/23/04	4.7 – 14.7	4.57	<b>4.64</b>	0.07	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because the free product was removed during pumping
BF-MW-E5	09/20/04	4.7 – 14.7	—	<b>4.09</b>	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present
BF-MW-E5	10/18/04	4.7 – 14.7	—	<b>4.07</b>	0	50 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was not present
BF-MW-E5	11/19/04	4.7 – 14.7	sheen	5.08	sheen	No pumping of the well was conducted. Absorbent socks were not placed in the well because only a sheen of free product was present
BF-MW-E5	12/16/04	4.7 – 14.7	sheen	5.11	sheen	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because only a sheen of free product was present
BF-MW-E5	01/13/05	4.7 – 14.7	—	4.81	0	1 gal of water/product mixture pumped from well prior to sampling. Absorbent socks were not placed in the well because free product was not present
BF-MW-E5	02/16/05	4.7 – 14.7	4.54	<b>4.55</b>	0.01	40 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping
BF-MW-E5	03/16/05	4.7 – 14.7	sheen	<b>3.92</b>	sheen	No pumping of the well was conducted. Absorbent socks were not placed in the well because only a sheen of free product was present
BF-MW-E5	04/28/05	4.7 – 14.7	4.06	<b>4.13</b>	0.07	~35 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping
BF-MW-E5	05/16/05	4.7 – 14.7	—	<b>3.95</b>	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present

NOTES:

**Bold** indicates the water table is above the screened interval.

BTOC Below top of casing.

Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

**Table 4. Free Product Removal Activities (continued)**

Well Number	Date	Depth of Screened Interval (ft BTOC)	Depth to Free Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Description
BF-MW-E5	06/16/05	4.7 – 14.7	3.68	<b>3.70</b>	0.02	45 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping
BF-MW-E5	07/19/05	4.7 – 14.7	—	<b>4.09</b>	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present
BF-MW-E5	Aug. 2005	4.7 – 14.7	—			No free product pumping or measurements were conducted due to activities taking place at the site
BF-MW-E6	09/20/05	4.7 – 14.7	—	4.98	0	No pumping of the well was conducted. Absorbent socks were not placed in the well because free product was not present
BF-MW-E7	10/13/05	4.7 – 14.7	—	3.71	0	30 gal of water/product mixture pumped from well. Absorbent socks were not placed in the well because free product was removed during pumping

NOTES:

**Bold** indicates the water table is above the screened interval.

BTOC Below top of casing.

**APPENDIX III**

**LABORATORY ANALYTICAL RESULTS**

**ANALYTICAL LABORATORY INFORMATION  
AND  
DATA VALIDATION CODES**

**STATE OF GEORGIA  
ENVIRONMENTAL LABORATORY ACCREDITATION**

Name of Laboratory:	<b>General Engineering Laboratories, Inc.</b>
Address:	P.O. Box 30712 2040 Savage Road Charleston, SC 29407
Contact:	Wendy Dimmick
Telephone number:	(843) 556-8171
Fax number:	(843) 766-1178
#1	Accrediting Authority: <b>State of South Carolina</b>
	Accreditation Number: SC-10120001
	Effective Date: Extension granted while recertification in process; January 27, 2003
	Expiration Date: March 26, 2006
	Accreditation Scope: SDWA, CWA, RCRA, CERCLA
#2	Accrediting Authority: <b>State of Florida</b>
	Accreditation Number: E-87156
	Effective Date: July 1, 2001 (initial and reaccredited on July 1 each year thereafter)
	Expiration Date: June 30, 2006
	Accreditation Scope: SDWA, CWA, RCRA, CERCLA

### DATA VALIDATION REASON CODES

#### *Organic, Inorganic, and Radiological Analytical Data*

<b>Holding Times</b> A01 Extraction holding times were exceeded. A02 Extraction holding times were grossly exceeded. A03 Analysis holding times were exceeded. A04 Analysis holding times were grossly exceeded. A05 Samples were not preserved properly. A06 Professional judgment was used to qualify the data.	<b>GC/MS Tuning</b> B01 Mass calibration was in error, even after applying expanded criteria. B02 Mass calibration was not performed every 12 hours. B03 Mass calibration did not meet ion abundance criteria. B04 Professional judgment was used to qualify the data.
<b>Initial/Continuing Calibration – Organics</b> C01 Initial calibration RRF was <0.05. C02 Initial calibration RDS was >30%. C03 Initial calibration sequence was not followed as required. C04 Continuing calibration RRF was <0.05. C05 Continuing calibration %D was >25%. C06 Continuing calibration was not performed at the required frequency. C07 Resolution criteria were not met. C08 RPD criteria were not met. C09 RDS criteria were not met. C10 Retention time of compounds was outside windows. C11 Compounds were not adequately resolved. C12 Breakdown of endrin or DDT was >30%. C13 Combined breakdown of endrin/DDT was >30%. C14 Professional judgment was used to qualify the data.	<b>Initial/Continuing Calibration – Inorganics</b> D01 ICV or CCV was not performed for every analyte. D02 ICV recovery was above the upper control limit. D03 ICV recovery was below the lower control limit. D04 CCV recovery was above the upper control limit. D05 CCV recovery was below the lower control limit. D06 Standard curve was not established with the minimum number of standards. D07 Instrument was not calibrated daily or each time the instrument was set up. D08 Correlation coefficient was <0.995. D09 Mid-range cyanide standard was not distilled. D10 Professional judgment was used to qualify the data.
<b>ICP and Furnace Requirements</b> E01 Interference check sample recovery was outside the control limit. E02 Duplicate injections were outside the control limit. E03 Post-digestion spike recovery was outside the control limit. E04 MSA was required but not performed. E05 MSA correlation coefficient was <0.995. E06 MSA spikes were not at the correct concentration. E07 Serial dilution criteria were not met. E08 Professional judgment was used to qualify the data.	<b>Blanks</b> F01 Sample data were qualified as a result of the method blank. F02 Sample data were qualified as a result of the field blank. F03 Sample data were qualified as a result of the equipment rinse. F04 Sample data were qualified as a result of the trip blank. F05 Gross contamination exists. F06 Concentration of the contaminant was detected at a level below the CRQL. F07 Concentration of the contaminant was detected at a level less than the action limit, but greater than the CRQL. F08 Concentration of the contaminant was detected at a level that exceeds the action level. F09 No laboratory blanks were analyzed. F10 Blank had a negative value >2 times the IDL. F11 Blanks were not analyzed at required frequency. F12 Professional judgment was used to qualify the data.
<b>Surrogate/Radiological Chemical Recovery</b> G01 Surrogate/radiological chemical recovery was above the upper control limit. G02 Surrogate/radiological chemical recovery was below the lower control limit. G03 Surrogate recovery was <10%. G04 Surrogate recovery was zero. G05 Surrogate/radiological chemical recovery data was not present. G06 Professional judgment was used to qualify the data. G07 Radiological chemical recovery was <20%. G08 Radiological chemical recovery was >150%.	<b>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</b> H01 MS/MSD recovery was above the upper control limit. H02 MS/MSD recovery was below the lower control limit. H03 MD/MSD recovery was <10%. H04 MS/MSD pairs exceeded the RPD limit. H05 No action was taken on MS/MSD limit. H06 Professional judgment was used to qualify the data. H07 Radiological MS/MSD recovery was <20%. H08 Radiological MS/MSD recovery was >160%. H09 Radiological MS/MSD samples were not analyzed at the required frequency.
<b>Matrix Spike</b> I01 MS recovery was above the upper control limit. I02 MS recovery was below the lower control limit. I03 MS recovery was <30%. I04 No action was taken on MS data. I05 Professional judgment was used to qualify the data.	<b>Laboratory Duplicate</b> J01 Duplicate RPD/radiological duplicate error ratio (DER) was outside the control limit. J02 Duplicate sample results were >5 times the CRDL. J03 Duplicate sample results were <5 times the CRDL. J04 Professional judgment was used to qualify the data. J05 Duplicate was not analyzed at the required frequency.

**DATA VALIDATION REASON CODES (continued)**

*Organic, Inorganic, and Radiological Analytical Data*

<b>Internal Area Summary</b> K01 Area counts were outside the control limits. K02 Extremely low area counts or performance was exhibited by a major drop-off. K03 IS retention time varied by more than 30 sec. K04 Professional judgment was used to qualify the data.	<b>Pesticide Cleanup Checks</b> L01 10% recovery was obtained during either check. L02 Recoveries during either check were >120%. L03 GPC cleanup recoveries were outside the control limits. L04 Florisil cartridge cleanup recoveries were outside the control limits. L05 Professional judgment was used to qualify the data.
<b>Target Compound Identification</b> M01 Incorrect identifications were made. M02 Qualitative criteria were not met. M03 Cross contamination occurred. M04 Confirmatory analysis was not performed. M05 No results were provided. M06 Analysis occurred outside 12-hour GC/MS window. M07 Professional judgment was used to qualify the data. M08 The %D between the two pesticide/PCB column checks was >25%.	<b>Compound Quantitation and Reported CRQLs</b> N01 Quantitation limits were affected by large off-scale peaks. N02 MDLs reported by the laboratory exceeded corresponding CRQLs. N03 Professional judgment used to qualify the data.
<b>Tentatively Identified Compounds (TICs)</b> O01 Compound was suspected laboratory contaminant and was not detected in the blank. O02 TIC result was not above 10 times the level found in the blank. O03 Professional judgment was used to qualify analytical data.	<b>Laboratory Control Samples (LCSs)</b> P01 LCS recovery was above upper control limit. P02 LCS recovery was below lower control limit. P03 LCS recovery was <50%. P04 No action was taken on the LCS data. P05 LCS was not analyzed at required frequency. P06 Radiological LCS recovery was <50% for aqueous samples, <40% for solid samples. P07 Radiological LCS recovery was >150% for aqueous samples, >160% for solid samples. P08 Professional judgment was used to qualify the data.
<b>Field Duplicate</b> Q01 Field duplicate RPDs were >30% for waters and/or >50% for soils. Q02 Radiological field duplicate error ratio (DER) was outside the control limit. Q03 Duplicate sample results were >5 times the CRDL. Q04 Duplicate sample results were <5 times the CRDL.	<b>Radiological Calibration</b> R01 Efficiency calibration criteria were not met. R02 Energy calibration criteria were not met. R03 Resolution calibration criteria were not met. R04 Background determination criteria were not met. R05 Quench curve criteria were not met. R06 Absorption curve criteria were not met. R07 Plateau curve criteria were not met. R08 Professional judgment was used to qualify the data.
<b>Radiological Calibration Verification</b> S01 Efficiency verification criteria were not met. S02 Energy verification criteria were not met. S03 Resolution verification criteria were not met. S04 Background verification criteria were not met. S05 Cross-talk verification criteria were not met. S06 Professional judgment was used to qualify the data.	



**THIRD SEMIANNUAL SAMPLING EVENT**  
**JULY 2004**

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0452

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167014

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U437

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	U
108-88-3-----Toluene	1.0	J
100-41-4-----Ethylbenzene	1.0	U
1330-20-7-----Xylenes (total)	1.0	U

U  
U F04, F06  
U  
U

DATA VALIDATION  
COPY

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III-7

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0452

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167014

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S2G2122

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	1.0	U	U
91-57-6-----	2-Methylnaphthalene	1.0	U	
91-58-7-----	2-Chloronaphthalene	1.0	U	
208-96-8-----	Acenaphthylene	1.0	U	
83-32-9-----	Acenaphthene	1.0	U	
86-73-7-----	Fluorene	1.0	U	
85-01-8-----	Phenanthrene	1.0	U	
120-12-7-----	Anthracene	1.0	U	
206-44-0-----	Fluoranthene	1.0	U	
129-00-0-----	Pyrene	1.0	U	
56-55-3-----	Benzo(a)anthracene	1.0	U	
205-99-2-----	Benzo(b)fluoranthene	1.0	U	
207-08-9-----	Benzo(k)fluoranthene	1.0	U	
50-32-8-----	Benzo(a)pyrene	1.0	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U	
191-24-2-----	Benzo(ghi)perylene	1.0	U	

DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2552

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167013

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U436

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	U	4
108-88-3-----Toluene	1.0	J	U F04, F06
100-41-4-----Ethylbenzene	1.0	U	U
1330-20-7-----Xylenes (total)	1.0	U	U

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III-9

44

DATA VALIDATION  
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18  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2552

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167013

Sample wt/vol: 1010 (g/mL) ML

Lab File ID: S2G2121

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	0.56	J
91-57-6-----	2-Methylnaphthalene	0.60	J
91-58-7-----	2-Chloronaphthalene	0.99	U
208-96-8-----	Acenaphthylene	0.99	U
83-32-9-----	Acenaphthene	0.99	U
86-73-7-----	Fluorene	0.99	U
85-01-8-----	Phenanthrene	0.99	U
120-12-7-----	Anthracene	0.99	U
206-44-0-----	Fluoranthene	0.99	U
129-00-0-----	Pyrene	0.99	U
56-55-3-----	Benzo (a) anthracene	0.99	U
205-99-2-----	Benzo (b) fluoranthene	0.99	U
207-08-9-----	Benzo (k) fluoranthene	0.99	U
50-32-8-----	Benzo (a) pyrene	0.99	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	0.99	U
53-70-3-----	Dibenzo (a,h) anthracene	0.99	U
191-24-2-----	Benzo (ghi) perylene	0.99	U

DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167012

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U435

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	1.0	U
108-88-3-----	Toluene	1.0	<del>0.47</del>	J
100-41-4-----	Ethylbenzene		1.0	U
1330-20-7-----	Xylenes (total)		1.0	U

U  
U F04, F06  
U  
U

FORM I VOA

OLM03.0

III-11

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167012

Sample wt/vol: 940.0 (g/mL) ML

Lab File ID: S2G2120

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	0.65	J	152
91-57-6-----	2-Methylnaphthalene	0.66	J	
91-58-7-----	2-Chloronaphthalene	1.1	U	
208-96-8-----	Acenaphthylene	1.1	U	
83-32-9-----	Acenaphthene	1.1	U	
86-73-7-----	Fluorene	1.1	U	
85-01-8-----	Phenanthrene	1.1	U	
120-12-7-----	Anthracene	1.1	U	
206-44-0-----	Fluoranthene	1.1	U	
129-00-0-----	Pyrene	1.1	U	
56-55-3-----	Benzo (a) anthracene	1.1	U	
205-99-2-----	Benzo (b) fluoranthene	1.1	U	
207-08-9-----	Benzo (k) fluoranthene	1.1	U	
50-32-8-----	Benzo (a) pyrene	1.1	U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	1.1	U	
53-70-3-----	Dibenzo (a,h) anthracene	1.1	U	
191-24-2-----	Benzo (ghi) perylene	1.1	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-12

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2656

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167003

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U433

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	U	4
108-88-3-----Toluene	1.0 0.53	J	U F04, F06
100-41-4-----Ethylbenzene	1.0	U	4
1330-20-7-----Xylenes (total)	1.0	U	4

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

III-13



1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2656

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167003

Sample wt/vol: 1030 (g/mL) ML

Lab File ID: S2G2111

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	0.97	U	u
91-57-6-----	2-Methylnaphthalene	0.97	U	
91-58-7-----	2-Chloronaphthalene	0.97	U	
208-96-8-----	Acenaphthylene	0.97	U	
83-32-9-----	Acenaphthene	0.97	U	
86-73-7-----	Fluorene	0.97	U	
85-01-8-----	Phenanthrene	0.97	U	
120-12-7-----	Anthracene	0.97	U	
206-44-0-----	Fluoranthene	0.97	U	
129-00-0-----	Pyrene	0.97	U	
56-55-3-----	Benzo (a) anthracene	0.97	U	
205-99-2-----	Benzo (b) fluoranthene	0.97	U	
207-08-9-----	Benzo (k) fluoranthene	0.97	U	
50-32-8-----	Benzo (a) pyrene	0.97	U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	0.97	U	
53-70-3-----	Dibenzo (a,h) anthracene	0.97	U	
191-24-2-----	Benzo (ghi) perylene	0.97	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-14

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2752

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167002

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U432

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	U	u
108-88-3-----Toluene	1.0	J	u F04, F06
100-41-4-----Ethylbenzene	1.0	U	u
1330-20-7-----Xylenes (total)	1.0	U	u

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

III-15

18  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2752

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167002

Sample wt/vol: 1040 (g/mL) ML

Lab File ID: S2G2110

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	0.96	U	u
91-57-6	2-Methylnaphthalene	0.96	U	
91-58-7	2-Chloronaphthalene	0.96	U	
208-96-8	Acenaphthylene	0.96	U	
83-32-9	Acenaphthene	0.96	U	
86-73-7	Fluorene	0.96	U	
85-01-8	Phenanthrene	0.96	U	
120-12-7	Anthracene	0.96	U	
206-44-0	Fluoranthene	0.96	U	
129-00-0	Pyrene	0.96	U	
56-55-3	Benzo (a) anthracene	0.96	U	
205-99-2	Benzo (b) fluoranthene	0.96	U	
207-08-9	Benzo (k) fluoranthene	0.96	U	
50-32-8	Benzo (a) pyrene	0.96	U	
193-39-5	Indeno (1,2,3-cd) pyrene	0.96	U	
53-70-3	Dibenzo (a,h) anthracene	0.96	U	
191-24-2	Benzo (ghi) perylene	0.96	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-16

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3552

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167015

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U438

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----	Benzene	1.0	U
108-88-3-----	Toluene	1.0	J
100-41-4-----	Ethylbenzene	1.0	U
1330-20-7-----	Xylenes (total)	1.0	U

u  
u F04, F06  
u  
u

FORM I VOA

OLM03.0

III-17

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3552

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167015

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S2G2123

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/L
91-20-3-----	Naphthalene	1.0	U
91-57-6-----	2-Methylnaphthalene	1.0	U
91-58-7-----	2-Chloronaphthalene	1.0	U
208-96-8-----	Acenaphthylene	1.0	U
83-32-9-----	Acenaphthene	1.0	U
86-73-7-----	Fluorene	1.0	U
85-01-8-----	Phenanthrene	1.0	U
120-12-7-----	Anthracene	1.0	U
206-44-0-----	Fluoranthene	1.0	U
129-00-0-----	Pyrene	1.0	U
56-55-3-----	Benzo (a) anthracene	1.0	U
205-99-2-----	Benzo (b) fluoranthene	1.0	U
207-08-9-----	Benzo (k) fluoranthene	1.0	U
50-32-8-----	Benzo (a) pyrene	1.0	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	1.0	U
53-70-3-----	Dibenzo (a,h) anthracene	1.0	U
191-24-2-----	Benzo (ghi) perylene	1.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-18

246

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167001

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U431

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene_____	1.0	U
108-88-3-----Toluene_____	1.0 <del>0.49</del>	J
100-41-4-----Ethylbenzene_____	1.0	U
1330-20-7-----Xylenes (total)_____	1.0	U

4  
4 F04, F06  
4  
4

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

III-19

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167001

Sample wt/vol: 1020 (g/mL) ML

Lab File ID: S2G2107

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	0.98	U	U
91-57-6-----	2-Methylnaphthalene	0.98	U	
91-58-7-----	2-Chloronaphthalene	0.98	U	
208-96-8-----	Acenaphthylene	0.98	U	
83-32-9-----	Acenaphthene	0.98	U	
86-73-7-----	Fluorene	0.98	U	
85-01-8-----	Phenanthrene	0.98	U	
120-12-7-----	Anthracene	0.98	U	
206-44-0-----	Fluoranthene	0.98	U	
129-00-0-----	Pyrene	0.98	U	
56-55-3-----	Benzo (a) anthracene	0.98	U	
205-99-2-----	Benzo (b) fluoranthene	0.98	U	
207-08-9-----	Benzo (k) fluoranthene	0.98	U	
50-32-8-----	Benzo (a) pyrene	0.98	U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	0.98	U	
53-70-3-----	Dibenzo (a,h) anthracene	0.98	U	
191-24-2-----	Benzo (ghi) perylene	0.98	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-20

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3752

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167004

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U434

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	u ↓
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

III-21



1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3752

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167004

Sample wt/vol: 970.0 (g/mL) ML

Lab File ID: S2G2112

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0 U	U
91-57-6	2-Methylnaphthalene	1.0 U	
91-58-7	2-Chloronaphthalene	1.0 U	
208-96-8	Acenaphthylene	1.0 U	
83-32-9	Acenaphthene	1.0 U	
86-73-7	Fluorene	1.0 U	
85-01-8	Phenanthrene	1.0 U	
120-12-7	Anthracene	1.0 U	
206-44-0	Fluoranthene	1.0 U	
129-00-0	Pyrene	1.0 U	
56-55-3	Benzo (a) anthracene	1.0 U	
205-99-2	Benzo (b) fluoranthene	1.0 U	
207-08-9	Benzo (k) fluoranthene	1.0 U	
50-32-8	Benzo (a) pyrene	1.0 U	
193-39-5	Indeno (1,2,3-cd) pyrene	1.0 U	
53-70-3	Dibenzo (a,h) anthracene	1.0 U	
191-24-2	Benzo (ghi) perylene	1.0 U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-22

250

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE152

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167011

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U517

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	1.0	U	4
108-88-3-----Toluene	1.0	0.62	J	U F04, F06
100-41-4-----Ethylbenzene		1.0	U	U
1330-20-7-----Xylenes (total)		1.0	U	U

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

18  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE152

Lab Name: GEL, LLC. Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 117167  
Matrix: (soil/water) WATER Lab Sample ID: 117167011  
Sample wt/vol: 980.0 (g/mL) ML Lab File ID: S2G2119  
Level: (low/med) LOW Date Received: 07/19/04  
% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 07/20/04  
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 07/21/04  
Injection Volume: 0.5 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.0 U	2 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
91-57-6-----	2-Methylnaphthalene	1.0 U	
91-58-7-----	2-Chloronaphthalene	1.0 U	
208-96-8-----	Acenaphthylene	1.0 U	
83-32-9-----	Acenaphthene	2.8	
86-73-7-----	Fluorene	5.7	
85-01-8-----	Phenanthrene	5.8	
120-12-7-----	Anthracene	1.0 U	
206-44-0-----	Fluoranthene	1.0 U	
129-00-0-----	Pyrene	1.0 U	
56-55-3-----	Benzo (a) anthracene	1.0 U	
205-99-2-----	Benzo (b) fluoranthene	1.0 U	
207-08-9-----	Benzo (k) fluoranthene	1.0 U	
50-32-8-----	Benzo (a) pyrene	1.0 U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	1.0 U	
53-70-3-----	Dibenzo (a,h) anthracene	1.0 U	
191-24-2-----	Benzo (ghi) perylene	1.0 U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-24

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE252

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167010

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U423

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/29/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	4
108-88-3-----	Toluene	1.0	J	U F04, F06
100-41-4-----	Ethylbenzene	1.0	U	4
1330-20-7-----	Xylenes (total)	1.0	U	4

FORM I VOA

OLM03.0

III-25

60

DATA VALIDATION  
COPY

1B  
SVQA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE252

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167010

Sample wt/vol: 970.0 (g/mL) ML

Lab File ID: S2G2118

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	1.0	U	4
91-57-6	2-Methylnaphthalene	1.0	U	
91-58-7	2-Chloronaphthalene	1.0	U	
208-96-8	Acenaphthylene	1.0	U	
83-32-9	Acenaphthene	1.0	U	
86-73-7	Fluorene	1.0	U	
85-01-8	Phenanthrene	1.0	U	
120-12-7	Anthracene	1.0	U	
206-44-0	Fluoranthene	1.0	U	
129-00-0	Pyrene	1.0	U	
56-55-3	Benzo (a) anthracene	1.0	U	
205-99-2	Benzo (b) fluoranthene	1.0	U	
207-08-9	Benzo (k) fluoranthene	1.0	U	
50-32-8	Benzo (a) pyrene	1.0	U	
193-39-5	Indeno (1,2,3-cd) pyrene	1.0	U	
53-70-3	Dibenzo (a,h) anthracene	1.0	U	
191-24-2	Benzo (ghi) perylene	1.0	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE254

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167009

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U422

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/29/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----	Benzene	1.0	U
108-88-3-----	Toluene	1.0	J
100-41-4-----	Ethylbenzene	1.0	U
1330-20-7-----	Xylenes (total)	1.0	U

4  
U F04, F06  
4  
U

FORM I VOA

OLM03.0

DATA VALIDATION

III-27

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE254

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167009

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S2G2117

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	1.0	U	u ↓
91-57-6-----	2-Methylnaphthalene	1.0	U	
91-58-7-----	2-Chloronaphthalene	1.0	U	
208-96-8-----	Acenaphthylene	1.0	U	
83-32-9-----	Acenaphthene	1.0	U	
86-73-7-----	Fluorene	1.0	U	
85-01-8-----	Phenanthrene	1.0	U	
120-12-7-----	Anthracene	1.0	U	
206-44-0-----	Fluoranthene	1.0	U	
129-00-0-----	Pyrene	1.0	U	
56-55-3-----	Benzo(a)anthracene	1.0	U	
205-99-2-----	Benzo(b)fluoranthene	1.0	U	
207-08-9-----	Benzo(k)fluoranthene	1.0	U	
50-32-8-----	Benzo(a)pyrene	1.0	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U	
191-24-2-----	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-28

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE352

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167007

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U516

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	4
108-88-3-----	Toluene	1.0	J	U F04, F06
100-41-4-----	Ethylbenzene	1.0	U	4
1330-20-7-----	Xylenes (total)	1.0	U	U

FORM I VOA

OLM03.0

III-29

DATA VALIDATION  
COPY



1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE352

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167007

Sample wt/vol: 970.0 (g/mL) ML

Lab File ID: S2G2115

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0 U	u
91-57-6	2-Methylnaphthalene	1.0 U	
91-58-7	2-Chloronaphthalene	1.0 U	
208-96-8	Acenaphthylene	1.0 U	
83-32-9	Acenaphthene	1.0 U	
86-73-7	Fluorene	1.0 U	
85-01-8	Phenanthrene	1.0 U	
120-12-7	Anthracene	1.0 U	
206-44-0	Fluoranthene	1.0 U	
129-00-0	Pyrene	1.0 U	
56-55-3	Benzo(a)anthracene	1.0 U	
205-99-2	Benzo(b)fluoranthene	1.0 U	
207-08-9	Benzo(k)fluoranthene	1.0 U	
50-32-8	Benzo(a)pyrene	1.0 U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U	
53-70-3	Dibenzo(a,h)anthracene	1.0 U	
191-24-2	Benzo(ghi)perylene	1.0 U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

III-30

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE452

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167005

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U418

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/29/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	U
108-88-3-----	Toluene	1.0	J	U F04, F06
100-41-4-----	Ethylbenzene	1.0	U	U
1330-20-7-----	Xylenes (total)	1.0	U	U

FORM I VOA

OLM03.0

III-31

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DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE452

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167005

Sample wt/vol: 1030 (g/mL) ML

Lab File ID: S2G2113

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	0.49	J	J J u ↓
91-57-6-----	2-Methylnaphthalene	0.64	J	
91-58-7-----	2-Chloronaphthalene	0.97	U	
208-96-8-----	Acenaphthylene	0.97	U	
83-32-9-----	Acenaphthene	0.97	U	
86-73-7-----	Fluorene	0.97	U	
85-01-8-----	Phenanthrene	0.97	U	
120-12-7-----	Anthracene	0.97	U	
206-44-0-----	Fluoranthene	0.97	U	
129-00-0-----	Pyrene	0.97	U	
56-55-3-----	Benzo (a) anthracene	0.97	U	
205-99-2-----	Benzo (b) fluoranthene	0.97	U	
207-08-9-----	Benzo (k) fluoranthene	0.97	U	
50-32-8-----	Benzo (a) pyrene	0.97	U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	0.97	U	
53-70-3-----	Dibenzo (a,h) anthracene	0.97	U	
191-24-2-----	Benzo (ghi) perylene	0.97	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE552

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U419

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/29/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	2.0		11 2 11
108-88-3-----Toluene	1.0	U	
100-41-4-----Ethylbenzene	17.3		
1330-20-7-----Xylenes (total)	42.7		

FORM I VOA

OLM03.0

III-33

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFES52

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167006

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: S2G2114

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	17.3	
91-57-6-----	2-Methylnaphthalene	8.4	
91-58-7-----	2-Chloronaphthalene	1.0	U
208-96-8-----	Acenaphthylene	1.0	U
83-32-9-----	Acenaphthene	1.6	
86-73-7-----	Fluorene	2.6	
85-01-8-----	Phenanthrene	0.57	J
120-12-7-----	Anthracene	1.0	U
206-44-0-----	Fluoranthene	1.0	U
129-00-0-----	Pyrene	1.0	U
56-55-3-----	Benzo(a)anthracene	1.0	U
205-99-2-----	Benzo(b)fluoranthene	1.0	U
207-08-9-----	Benzo(k)fluoranthene	1.0	U
50-32-8-----	Benzo(a)pyrene	1.0	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U
191-24-2-----	Benzo(ghi)perylene	1.0	U

117167006

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167008

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U421

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/29/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

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

71-43-2-----Benzene	1.0	U
108-88-3-----Toluene	1.0	J
100-41-4-----Ethylbenzene	1.0	U
1330-20-7-----Xylenes (total)	1.0	U

U  
U F04, F06  
U

FORM I VOA

OLM03.0

III-35

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE652

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167

Matrix: (soil/water) WATER

Lab Sample ID: 117167008

Sample wt/vol: 980.0 (g/mL) ML

Lab File ID: S2G2116

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 07/20/04

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 07/21/04

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	1.0	U
91-57-6-----	2-Methylnaphthalene	1.0	U
91-58-7-----	2-Chloronaphthalene	1.0	U
208-96-8-----	Acenaphthylene	1.0	U
83-32-9-----	Acenaphthene	1.0	U
86-73-7-----	Fluorene	1.0	U
85-01-8-----	Phenanthrene	1.0	U
120-12-7-----	Anthracene	1.0	U
206-44-0-----	Fluoranthene	1.0	U
129-00-0-----	Pyrene	1.0	U
56-55-3-----	Benzo (a) anthracene	1.0	U
205-99-2-----	Benzo (b) fluoranthene	1.0	U
207-08-9-----	Benzo (k) fluoranthene	1.0	U
50-32-8-----	Benzo (a) pyrene	1.0	U
193-39-5-----	Indeno (1,2,3-cd) pyrene	1.0	U
53-70-3-----	Dibenzo (a,h) anthracene	1.0	U
191-24-2-----	Benzo (ghi) perylene	1.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TH0401

*TRIP*

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117167-1

Matrix: (soil/water) WATER

Lab Sample ID: 117169001

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 7U439

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/30/04

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg) UG/L		
71-43-2-----	Benzene	1.0	U	
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TH0402

*TH0402*

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 117157-1

Matrix: (soil/water) WATER

Lab Sample ID: 117169011

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U604

Level: (low/med) LOW

Date Received: 07/19/04

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 07/31/04

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
71-43-2-----	Benzene	1.0	U	ccyc
108-88-3-----	Toluene	0.80	J	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
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III-38



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Science Applications International Corporation

PO Box 2501, 151 Lafayette Dr., Tennessee 37830 (423) 481-4600

# CHAIN OF CUSTODY RECORD

COC NO.: **HLTM46**

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8981-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: <del>Ratty Stoll</del> Sharon Stollen																PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patricia A. Stollen</i> (Printed Name) PATRICIA A. STOLLEN																OVA SCREENING	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH							No. of Bottles/Vials				
BF2552	7/16/04	1456	water			2								2			
BF0452		1225				2								2			
BF2652		1410				2								2			
BFE252		1400				2								2			
BFE652	↓	1125				2								2			
BF3552	7/17/04	931	↓			2								2			
<i>7/19/04</i> <i>7/19/04</i>																	
RELINQUISHED BY: <i>Patricia A. Stollen</i>		Date/Time: 7/19/04	RECEIVED BY: <i>D. Chaudhry</i>		Date/Time: 7/19/04	TOTAL NUMBER OF CONTAINERS: 12		Cooler Temperature: 4°C									
COMPANY NAME: SAIC		1140	COMPANY NAME: GEL		1430	Cooler ID: 303		FEDEX NUMBER: N/A									
RECEIVED BY: <i>Patricia A. Stollen</i>		Date/Time: 7/19/04	RELINQUISHED BY:		Date/Time:												
COMPANY NAME: GEL		1140	COMPANY NAME:														
RELINQUISHED BY: <i>Patricia A. Stollen</i>		Date/Time: 7/19/04	RECEIVED BY:		Date/Time:												
COMPANY NAME: GEL		1430	COMPANY NAME:														

# CHAIN OF CUSTODY RECORD

COC NO.: **HLTM 41**

PROJECT NAME: <b>HAAF Long Term Monitoring, D.O. 44</b>				REQUESTED PARAMETERS																LABORATORY NAME: <b>General Engineering Laboratory</b>	
PROJECT NUMBER: <b>01-1055-04-8991-200</b>																				LABORATORY ADDRESS: <b>2040 Savage Road Charleston, SC 29407</b>	
PROJECT MANAGER: <b>Patty Stoll Sheron Stoller</b>																				PHONE NO: <b>(843) 556-8171</b>	
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <b>PATRICIA A. STOLL</b>																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH											No. of Bottles/Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
<b>1FE254</b>	<b>7/16/04</b>	<b>1400</b>	<b>water</b>			<b>2</b>											<b>2</b>				
<b>1FE352</b>	<b>7/16/04</b>	<b>1310</b>				<b>2</b>											<b>2</b>				
<b>1FE3752</b>	<b>7/17/04</b>	<b>1000</b>				<b>2</b>											<b>2</b>				
<b>1FE552</b>	<b>7/16/04</b>	<b>1540</b>				<b>2</b>											<b>2</b>				
<b>1FE452</b>	<b>7/16/04</b>	<b>1215</b>				<b>2</b>											<b>2</b>				
<b>1FE152</b>	<b>7/16/04</b>	<b>1500</b>	<b>V</b>			<b>2</b>											<b>2</b>				
<i>P. Stoll 7/19/04</i>																					
RELINQUISHED BY: <i>[Signature]</i>				Date/Time: <b>7/19/04 1140</b>		RECEIVED BY: <i>[Signature]</i>				Date/Time: <b>7/19/04 1430</b>		TOTAL NUMBER OF CONTAINERS: <b>12</b>				Cooler Temperature: <b>4°C</b>					
COMPANY NAME: <b>SAIC</b>						COMPANY NAME: <b>GEL</b>						Cooler ID: <b>22</b>				FEDEX NUMBER: <b>N/A</b>					
RECEIVED BY: <i>[Signature]</i>				Date/Time: <b>7/19/04 1140</b>		RELINQUISHED BY:				Date/Time:											
COMPANY NAME: <b>GEL</b>						COMPANY NAME:															
RELINQUISHED BY: <i>[Signature]</i>				Date/Time: <b>7/19/04 1430</b>		RECEIVED BY:				Date/Time:											
COMPANY NAME: <b>GEL</b>						COMPANY NAME:															

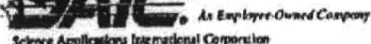
117167, 117169

pg 1 of 2

# CHAIN OF CUSTODY RECORD

COC NO.: HLTm42

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: <del>Patty Stoll</del> Sharon Stollen																				PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <i>PATRICIA A. STOLL</i>																				OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH											No. of Bottles/Vials						
BF3652	7/17/04	1030	water	2	2												4						
BF2752	7/16/04	1005		2	2												4						
BF2656	7/16/04	1336		2	2												2						
BF3752	7/17/04	1000		2													2						
BF452	7/16/04	1215		2													2						
BF5552	7/16/04	1540		2													2						
BF5352	7/16/04	1310		2													2						
BF652	7/16/04	1125		2													2						
BF254	7/16/04	1400		2													2						
BF252	7/16/04	1400		2													2						
BF6152	7/16/04	1500		2													2						
BF2652	7/16/04	1410		2													2						
BF2552	7/16/04	1456		2													2						
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time: 7/19/04 1140	RECEIVED BY: <i>Sharon Stollen</i>		Date/Time: 7/19/04 1430	TOTAL NUMBER OF CONTAINERS: 50		Cooler Temperature: 4°C															
COMPANY NAME: SAIC			COMPANY NAME: GEC			Cooler ID: 3		FEDEX NUMBER: N/A															
RECEIVED BY: <i>Sharon Stollen</i>		Date/Time: 7/19/04 1140	RELINQUISHED BY:		Date/Time:																		
COMPANY NAME: GEC			COMPANY NAME:																				
RELINQUISHED BY: <i>Sharon Stollen</i>		Date/Time: 7/19/04 1430	RECEIVED BY:		Date/Time:																		
COMPANY NAME: GEC			COMPANY NAME:																				



## CHAIN OF CUSTODY RECORD

COC NO.: HLTMA2

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																		LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8981-200																						LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stott Sharon Stollen																						PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patty Stott</i>		(Printed Name) PATRICIA A STOTT																				OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH													No. of Bottles/Vials:				
BF0452	7/16/04	1225	water	2															2				
BF3552	7/17/04	931		2															2				
TH0401	7/16/04	0745		2															2				
AN1864	7/17/04	1353		2															2				
AN0262	7/17/04	1515		2															2				
AN2362	7/17/04	1435		2															2				
AN2762	7/17/04	1400		2															2				
AK0562	7/17/04	1330		2															2				
AK0662	7/17/04	1225		2															2				
AN1862	7/17/04	1350		2															2				
AN0162	7/17/04	1457		2															2				
AN1962	7/17/04	1310		2															2				
TH0402	7/17/04	0745		2															2				
RELINQUISHED BY: <i>Patty Stott</i>		Date/Time 7/19/04 1140	RECEIVED BY: <i>[Signature]</i>		Date/Time 7/19/04 1430	TOTAL NUMBER OF CONTAINERS: 50														Cooler Temperature: 4°C	Cooler ID: 3		FEDEX NUMBER: N/A
COMPANY NAME: SAIC			COMPANY NAME: GEC																				
RECEIVED BY: <i>[Signature]</i>		Date/Time 7/19/04 1140	RELINQUISHED BY:		Date/Time																		
COMPANY NAME: GEC			COMPANY NAME:																				
RELINQUISHED BY: <i>[Signature]</i>		Date/Time 7-19-04 1430	RECEIVED BY:		Date/Time																		
COMPANY NAME: GEC			COMPANY NAME:																				

III-42

**FOURTH SEMIANNUAL SAMPLING EVENT**  
**JANUARY 2005**



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0462

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001011

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U119

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2-----	Benzene_____	1.0	U
108-88-3-----	Toluene_____	1.0	U
100-41-4-----	Ethylbenzene_____	1.0	U
1330-20-7-----	Xylenes (total)_____	1.0	U

71-43-2-----Benzene\_\_\_\_\_ 1.0 U

108-88-3-----Toluene\_\_\_\_\_ 1.0 U

100-41-4-----Ethylbenzene\_\_\_\_\_ 1.0 U

1330-20-7-----Xylenes (total)\_\_\_\_\_ 1.0 U

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF0462

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001011

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2023

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	1.0 U	U
91-57-6-----	2-Methylnaphthalene	1.0 U	
91-58-7-----	2-Chloronaphthalene	1.0 U	
208-96-8-----	Acenaphthylene	1.0 U	
83-32-9-----	Acenaphthene	1.0 U	
86-73-7-----	Fluorene	1.0 U	
85-01-8-----	Phenanthrene	1.0 U	
120-12-7-----	Anthracene	1.0 U	
206-44-0-----	Fluoranthene	1.0 U	
129-00-0-----	Pyrene	1.0 U	
56-55-3-----	Benzo(a)anthracene	1.0 U	
205-99-2-----	Benzo(b)fluoranthene	1.0 U	
207-08-9-----	Benzo(k)fluoranthene	1.0 U	
50-32-8-----	Benzo(a)pyrene	1.0 U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0 U	
53-70-3-----	Dibenzo(a,h)anthracene	1.0 U	
191-24-2-----	Benzo(ghi)perylene	1.0 U	

FORM I SV-1

OLM03.0



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2562

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001012

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U120

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L		
71-43-2-----	Benzene	1.0	U	u
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2562

Lab Name: GEL, LLC. Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 129001  
Matrix: (soil/water) WATER Lab Sample ID: 129001012  
Sample wt/vol: 1000 (g/mL) ML Lab File ID: S7A2024  
Level: (low/med) LOW Date Received: 01/17/05  
% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 01/19/05  
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 01/20/05  
Injection Volume: 0.5 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	1.0	U	U
91-57-6-----	2-Methylnaphthalene	1.0	U	
91-58-7-----	2-Chloronaphthalene	1.0	U	
208-96-8-----	Acenaphthylene	1.0	U	
83-32-9-----	Acenaphthene	1.0	U	
86-73-7-----	Fluorene	1.0	U	
85-01-8-----	Phenanthrene	1.0	U	
120-12-7-----	Anthracene	1.0	U	
206-44-0-----	Fluoranthene	1.0	U	
129-00-0-----	Pyrene	1.0	U	
56-55-3-----	Benzo(a)anthracene	1.0	U	
205-99-2-----	Benzo(b)fluoranthene	1.0	U	
207-08-9-----	Benzo(k)fluoranthene	1.0	U	
50-32-8-----	Benzo(a)pyrene	1.0	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U	+
191-24-2-----	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001003

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U111

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
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1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001003

Sample wt/vol: 995.0 (g/mL) ML

Lab File ID: S7A2015

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	1.0	U	4
91-57-6	2-Methylnaphthalene	1.0	U	
91-58-7	2-Chloronaphthalene	1.0	U	
208-96-8	Acenaphthylene	1.0	U	
83-32-9	Acenaphthene	1.0	U	
86-73-7	Fluorene	1.0	U	
85-01-8	Phenanthrene	1.0	U	
120-12-7	Anthracene	1.0	U	
206-44-0	Fluoranthene	1.0	U	
129-00-0	Pyrene	1.0	U	
56-55-3	Benzo(a)anthracene	1.0	U	
205-99-2	Benzo(b)fluoranthene	1.0	U	
207-08-9	Benzo(k)fluoranthene	1.0	U	
50-32-8	Benzo(a)pyrene	1.0	U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3	Dibenzo(a,h)anthracene	1.0	U	
191-24-2	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

RINSATE

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2666

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001001

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U109

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	u
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

18  
SVOA ORGANICS ANALYSIS DATA SHEET

RINSATE  
EPA SAMPLE NO.

BF2666

Lab Name: GEL, LLC. Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 129001  
Matrix: (soil/water) WATER Lab Sample ID: 129001001  
Sample wt/vol: 990.0 (g/mL) ML Lab File ID: S7A2013  
Level: (low/med) LOW Date Received: 01/17/05  
% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 01/19/05  
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 01/20/05  
Injection Volume: 0.5 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	1.0 U	4
91-57-6	2-Methylnaphthalene	1.0 U	
91-58-7	2-Chloronaphthalene	1.0 U	
208-96-8	Acenaphthylene	1.0 U	
83-32-9	Acenaphthene	1.0 U	
86-73-7	Fluorene	1.0 U	
85-01-8	Phenanthrene	1.0 U	
120-12-7	Anthracene	1.0 U	
206-44-0	Fluoranthene	1.0 U	
129-00-0	Pyrene	1.0 U	
56-55-3	Benzo(a)anthracene	1.0 U	
205-99-2	Benzo(b)fluoranthene	1.0 U	
207-08-9	Benzo(k)fluoranthene	1.0 U	
50-32-8	Benzo(a)pyrene	1.0 U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0 U	
53-70-3	Dibenzo(a,h)anthracene	1.0 U	
191-24-2	Benzo(ghi)perylene	1.0 U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2762

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001015

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U123

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	u
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF2762

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001015

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2027

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3	Naphthalene	1.0	U
91-57-6	2-Methylnaphthalene	1.0	U
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenzo(a,h)anthracene	1.0	U
191-24-2	Benzo(ghi)perylene	1.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3562

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001007

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U115

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	u ↓
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3562

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001007

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2019

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	1.0	U
91-57-6-----	2-Methylnaphthalene	1.0	U
91-58-7-----	2-Chloronaphthalene	1.0	U
208-96-8-----	Acenaphthylene	1.0	U
83-32-9-----	Acenaphthene	1.0	U
86-73-7-----	Fluorene	1.0	U
85-01-8-----	Phenanthrene	1.0	U
120-12-7-----	Anthracene	1.0	U
206-44-0-----	Fluoranthene	1.0	U
129-00-0-----	Pyrene	1.0	U
56-55-3-----	Benzo(a)anthracene	1.0	U
205-99-2-----	Benzo(b)fluoranthene	1.0	U
207-08-9-----	Benzo(k)fluoranthene	1.0	U
50-32-8-----	Benzo(a)pyrene	1.0	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U
191-24-2-----	Benzo(ghi)perylene	1.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001006

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U114

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene_____	1.0	U	u
108-88-3-----	Toluene_____	1.0	U	
100-41-4-----	Ethylbenzene_____	1.0	U	
1330-20-7-----	Xylenes (total)_____	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001006

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S7A2018

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

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

91-20-3-----	Naphthalene	1.0	U
91-57-6-----	2-Methylnaphthalene	1.0	U
91-58-7-----	2-Chloronaphthalene	1.0	U
208-96-8-----	Acenaphthylene	1.0	U
83-32-9-----	Acenaphthene	1.0	U
86-73-7-----	Fluorene	1.0	U
85-01-8-----	Phenanthrene	1.0	U
120-12-7-----	Anthracene	1.0	U
206-44-0-----	Fluoranthene	1.0	U
129-00-0-----	Pyrene	1.0	U
56-55-3-----	Benzo(a)anthracene	1.0	U
205-99-2-----	Benzo(b)fluoranthene	1.0	U
207-08-9-----	Benzo(k)fluoranthene	1.0	U
50-32-8-----	Benzo(a)pyrene	1.0	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U
191-24-2-----	Benzo(ghi)perylene	1.0	U

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FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3762

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001008

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U116

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L		
71-43-2-----	Benzene	1.0	U	u ↓
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

13  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BF3762

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001008

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S7A2020

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	1.0	U	U
91-57-6	2-Methylnaphthalene	1.0	U	
91-58-7	2-Chloronaphthalene	1.0	U	
208-96-8	Acenaphthylene	1.0	U	
83-32-9	Acenaphthene	1.0	U	
86-73-7	Fluorene	1.0	U	
85-01-8	Phenanthrene	1.0	U	
120-12-7	Anthracene	1.0	U	
206-44-0	Fluoranthene	1.0	U	
129-00-0	Pyrene	1.0	U	
56-55-3	Benzo(a)anthracene	1.0	U	
205-99-2	Benzo(b)fluoranthene	1.0	U	
207-08-9	Benzo(k)fluoranthene	1.0	U	
50-32-8	Benzo(a)pyrene	1.0	U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3	Dibenzo(a,h)anthracene	1.0	U	
191-24-2	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

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DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE162

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001009

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U117

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L		
71-43-2-----	Benzene	1.0	U	
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE162

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001009

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2021

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3-----	Naphthalene	1.0	U	2
91-57-6-----	2-Methylnaphthalene	1.0	U	
91-58-7-----	2-Chloronaphthalene	1.0	U	
208-96-8-----	Acenaphthylene	1.0	U	
83-32-9-----	Acenaphthene	1.6		
86-73-7-----	Fluorene	3.1		
85-01-8-----	Phenanthrene	1.2		
120-12-7-----	Anthracene	1.0	U	
206-44-0-----	Fluoranthene	1.0	U	
129-00-0-----	Pyrene	1.0	U	
56-55-3-----	Benzo(a)anthracene	1.0	U	
205-99-2-----	Benzo(b)fluoranthene	1.0	U	
207-08-9-----	Benzo(k)fluoranthene	1.0	U	
50-32-8-----	Benzo(a)pyrene	1.0	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3-----	Dibenzo(a,h)anthracene	1.0	U	
191-24-2-----	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE262

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001002

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U110

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

		CONCENTRATION UNITS:		
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
71-43-2-----	Benzene_____	1.0	U	U ↓
108-88-3-----	Toluene_____	1.0	U	
100-41-4-----	Ethylbenzene_____	1.0	U	
1330-20-7-----	Xylenes (total)_____	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE262

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001002

Sample wt/vol: 1010 (g/mL) ML

Lab File ID: S7A2014

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	0.99	U	u
91-57-6	2-Methylnaphthalene	0.99	U	
91-58-7	2-Chloronaphthalene	0.99	U	
208-96-8	Acenaphthylene	0.99	U	
83-32-9	Acenaphthene	0.99	U	
86-73-7	Fluorene	0.99	U	
85-01-8	Phenanthrene	0.99	U	
120-12-7	Anthracene	0.99	U	
206-44-0	Fluoranthene	0.99	U	
129-00-0	Pyrene	0.99	U	
56-55-3	Benzo(a)anthracene	0.99	U	
205-99-2	Benzo(b)fluoranthene	0.99	U	
207-08-9	Benzo(k)fluoranthene	0.99	U	
50-32-8	Benzo(a)pyrene	0.99	U	
193-39-5	Indeno(1,2,3-cd)pyrene	0.99	U	
53-70-3	Dibenzo(a,h)anthracene	0.99	U	
191-24-2	Benzo(ghi)perylene	0.99	U	

FORM I SV-1

OLM03.0

REPLICATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE

EPA SAMPLE NO.

BFE264

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001004

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U112

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	u
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DUPLICATE

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE264

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001004

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2016

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	1.0	U	u
91-57-6	2-Methylnaphthalene	1.0	U	
91-58-7	2-Chloronaphthalene	1.0	U	
208-96-8	Acenaphthylene	1.0	U	
83-32-9	Acenaphthene	1.0	U	
86-73-7	Fluorene	1.0	U	
85-01-8	Phenanthrene	1.0	U	
120-12-7	Anthracene	1.0	U	
206-44-0	Fluoranthene	1.0	U	
129-00-0	Pyrene	1.0	U	
56-55-3	Benzo(a)anthracene	1.0	U	
205-99-2	Benzo(b)fluoranthene	1.0	U	
207-08-9	Benzo(k)fluoranthene	1.0	U	
50-32-8	Benzo(a)pyrene	1.0	U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3	Dibenzo(a,h)anthracene	1.0	U	
191-24-2	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

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DATA VALIDATION  
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SFE362

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001005

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U113

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene_____	1.0	U	u ↓
108-88-3-----	Toluene_____	1.0	U	
100-41-4-----	Ethylbenzene_____	1.0	U	
1330-20-7-----	Xylenes (total)_____	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
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1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE362

Lab Name: GEL, LLC. Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 129001  
Matrix: (soil/water) WATER Lab Sample ID: 129001005  
Sample wt/vol: 1000 (g/mL) ML Lab File ID: S7A2017  
Level: (low/med) LOW Date Received: 01/17/05  
% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 01/19/05  
Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 01/20/05  
Injection Volume: 0.5 (uL) Dilution Factor: 1.0  
GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.31	J
91-57-6	2-Methylnaphthalene	1.4	
91-58-7	2-Chloronaphthalene	1.0	U
208-96-8	Acenaphthylene	1.0	U
83-32-9	Acenaphthene	1.0	U
86-73-7	Fluorene	1.0	U
85-01-8	Phenanthrene	1.0	U
120-12-7	Anthracene	1.0	U
206-44-0	Fluoranthene	1.0	U
129-00-0	Pyrene	1.0	U
56-55-3	Benzo(a)anthracene	1.0	U
205-99-2	Benzo(b)fluoranthene	1.0	U
207-08-9	Benzo(k)fluoranthene	1.0	U
50-32-8	Benzo(a)pyrene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U
53-70-3	Dibenzo(a,h)anthracene	1.0	U
191-24-2	Benzo(ghi)perylene	1.0	U

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE462

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001014

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U122

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	u ↓ J
108-88-3-----	Toluene	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	0.90	J	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE462

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001014

Sample wt/vol: 990.0 (g/mL) ML

Lab File ID: S7A2026

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

*USE*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3-----	Naphthalene	0.61 J	
91-57-6-----	2-Methylnaphthalene	1.5	
91-58-7-----	2-Chloronaphthalene	1.0 U	
208-96-8-----	Acenaphthylene	1.0 U	
83-32-9-----	Acenaphthene	1.0 U	
86-73-7-----	Fluorene	1.0 U	
85-01-8-----	Phenanthrene	1.0 U	
120-12-7-----	Anthracene	1.0 U	
206-44-0-----	Fluoranthene	1.0 U	
129-00-0-----	Pyrene	1.0 U	
56-55-3-----	Benzo (a) anthracene	1.0 U	
205-99-2-----	Benzo (b) fluoranthene	1.0 U	
207-08-9-----	Benzo (k) fluoranthene	1.0 U	
50-32-8-----	Benzo (a) pyrene	1.0 U	
193-39-5-----	Indeno (1,2,3-cd) pyrene	1.0 U	
53-70-3-----	Dibenzo (a,h) anthracene	1.0 U	
191-24-2-----	Benzo (ghi) perylene	1.0 U	

*J*  
*5*  
*5*  
*Go2*

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE562

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001010

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U118

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

GC Column: RTX-VOLATILES ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2-----	Benzene	1.0	U	1142
108-88-3-----	Toluene	0.43	J	
100-41-4-----	Ethylbenzene	10.4		
1330-20-7-----	Xylenes (total)	34.9		

FORM I VOA

OLM03.0

DATA VALIDATION  
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## EPA SAMPLE NO.

BFE562

Contract: N/A

SDG No.: 129001

Lab Sample ID: 129001010

Lab File ID: S7A2022

Date Received: 01/17/05

Date Extracted:01/19/05

Date Analyzed: 01/20/05

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NO.

COMPOUND

Q

91-20-3-----Naphthalene	32.9	
91-57-6-----2-Methylnaphthalene	43.2	
91-58-7-----2-Chloronaphthalene	1.0	U
208-96-8-----Acenaphthylene	1.0	U
83-32-9-----Acenaphthene	5.4	
86-73-7-----Fluorene	10.3	
85-01-8-----Phenanthrene	10.7	
120-12-7-----Anthracene	1.0	U
206-44-0-----Fluoranthene	1.0	U
129-00-0-----Pyrene	2.4	
56-55-3-----Benzo (a) anthracene	1.0	U
205-99-2-----Benzo (b) fluoranthene	1.0	U
207-08-9-----Benzo (k) fluoranthene	1.0	U
50-32-8-----Benzo (a) pyrene	1.0	U
193-39-5-----Indeno (1, 2, 3-cd) pyrene	1.0	U
53-70-3-----Dibenzo (a, h) anthracene	1.0	U
191-24-2-----Benzo (ghi) perylene	1.0	U

OLM03.0

NO VALIDATION  
COPY

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001013

Sample wt/vol: 5.000 (g/ml) ML

Lab File ID: 9U121

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 01/25/05

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/L	
71-43-2-----	Benzene	1.0	U	2/5/2
108-88-3-----	Toluene	0.47	J	
100-41-4-----	Ethylbenzene	1.0	U	
1330-20-7-----	Xylenes (total)	1.0	U	

FORM I VOA

OLM03.0

DATA VALIDATION  
COPY

1B  
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BFE662

Lab Name: GEL, LLC.

Contract: N/A

Lab Code: N/A

Case No.: N/A

SAS No.: N/A

SDG No.: 129001

Matrix: (soil/water) WATER

Lab Sample ID: 129001013

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: S7A2025

Level: (low/med) LOW

Date Received: 01/17/05

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 01/19/05

Concentrated Extract Volume: 1.00 (mL)

Date Analyzed: 01/20/05

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
91-20-3	Naphthalene	1.0	U	u
91-57-6	2-Methylnaphthalene	1.0	U	
91-58-7	2-Chloronaphthalene	1.0	U	
208-96-8	Acenaphthylene	1.0	U	
83-32-9	Acenaphthene	1.0	U	
86-73-7	Fluorene	1.0	U	
85-01-8	Phenanthrene	1.0	U	
120-12-7	Anthracene	1.0	U	
206-44-0	Fluoranthene	1.0	U	
129-00-0	Pyrene	1.0	U	
56-55-3	Benzo(a)anthracene	1.0	U	
205-99-2	Benzo(b)fluoranthene	1.0	U	
207-08-9	Benzo(k)fluoranthene	1.0	U	
50-32-8	Benzo(a)pyrene	1.0	U	
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	U	
53-70-3	Dibenzo(a,h)anthracene	1.0	U	
191-24-2	Benzo(ghi)perylene	1.0	U	

FORM I SV-1

OLM03.0

DATA VALIDATION  
COPY

# CHAIN OF CUSTODY RECORD

COC NO.: 447MS1

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory					
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407					
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 556-8171					
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <b>PATRICIA A. STOLL</b>																									
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC																	No. of Bottles/Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
BF2666	1/13/05	0955	water	2	✓																	2		12900/001	
BFE262		1505		2	✓																	2		002	
BF2662		0955		2	✓																	2		003	
BFE264		1505		2	✓																	2		004	
BFE362	↓	1550		2	✓																	2		005	
BF3662	1/14/05	1120		2	✓																	2		006	
BF3562	↓	1020		2	✓																	2		007	
BF3762	↓	1100		2	✓																	2		008	
BFE162	1/13/05	1420		2	✓																	2		009	
BFE562	↓	1655		2	✓																	2		010	
BFB462	1/12/05	1555		2	✓																	2		011	
BF2562	↓	1645		2	✓																	2		012	
BFE662	1/13/05	1735	✓	2	✓																	2		013	
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time 1/17/05 1150	RECEIVED BY: <i>T. Stoll</i>		Date/Time 1.175 1455	TOTAL NUMBER OF CONTAINERS: 44012		Cooler ID: 176										Cooler Temperature: 4°C		FEDEX NUMBER: N/A					
COMPANY NAME: SAIC			COMPANY NAME: GEL																						
RECEIVED BY: <i>Ben Watters</i>		Date/Time 1/17/05 1150	RELINQUISHED BY:		Date/Time																				
COMPANY NAME: GEL			COMPANY NAME:																						
RELINQUISHED BY: <i>Ben Watters</i>		Date/Time 1/17/05 1455	RECEIVED BY:		Date/Time																				
COMPANY NAME: GEL			COMPANY NAME:																						

# CHAIN OF CUSTODY RECORD

COC NO.: HLTMS1

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory				
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407				
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 556-8171				
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <i>PATRICIA A. STOLL</i>																								
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC																	No. of Bottles/Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF-EA602	4/13/05	1625	water	2																		2		129501014
TH0407	4/12/05	0800		2																		2		129002001
TH0408	4/14/05	0800		2																		2		129403002
TH0416	4/16/05	0815			2																	2		129005012
TH0409	4/15/05	0830		2																		2		129003003
AF02C6	4/13/05	1500		2																		2		0.1
AF02C2		1520		2																		2		0.1
AF05C2		1445		2																		2		0.1
AF12C2		1325		2																		2		0.1
AF07C2	↓	1415		2																		2		0.1
AN2272	4/14/05	1545		2																		2		0.1
AK0572	↓	1440		2																		2		0.1
AK0574	↓	1440	↓	2																		2		0.1
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time: 4/17/05 1150	RECEIVED BY: <i>T. Br...</i>		Date/Time: 4/17/05 1455	TOTAL NUMBER OF CONTAINERS: 140/112																Cooler Temperature: 4°C		
COMPANY NAME: SAIC			COMPANY NAME: GEL			Cooler ID: 176																FEDEX NUMBER: N/A		
RECEIVED BY: <i>Ben W...</i>		Date/Time: 4/17/05 1150	RELINQUISHED BY:		Date/Time:																			
COMPANY NAME: GEL			COMPANY NAME:																					
RELINQUISHED BY: <i>Ben W...</i>		Date/Time: 4/17/05 1455	RECEIVED BY:		Date/Time:																			
COMPANY NAME: GEL			COMPANY NAME:																					

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# CHAIN OF CUSTODY RECORD

COC NO.: HLTMSI

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS												LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: Patty Stoll																PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <b>PATRICIA A. Stoll</b>																OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC													No. of Bottles/Vials	
AS0422	1/16/05	1100	water	2	2													2	
AS0822	↓	1210	↓	2	2													2	
AS1422	↓	1020	↓	2	2													2	
BF2762	1/13/05	1140	water	2	2													2	
<i>Full</i> <i>1/16/05</i>																			
RELINQUISHED BY: <i>Patty Stoll</i>				Date/Time: 1/17/05 1150		RECEIVED BY: <i>[Signature]</i>				Date/Time: 1.17.5 1455		TOTAL NUMBER OF CONTAINERS: 1340/112				Cooler Temperature: 4°C			
COMPANY NAME: SAIC						COMPANY NAME: GEL						Cooler ID: 176				FEDEX NUMBER: N/A			
RECEIVED BY: <i>Ben Watten</i>				Date/Time: 1/17/05 1150		RELINQUISHED BY:				Date/Time:									
COMPANY NAME: GEL						COMPANY NAME:													
RELINQUISHED BY: <i>Ben Watten</i>				Date/Time: 1/17/05 1455		RECEIVED BY:				Date/Time:									
COMPANY NAME: GEL						COMPANY NAME:													



# CHAIN OF CUSTODY RECORD

COC NO.: **HLTM52**

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <b>PATRICIA A. STOLL</b>																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	SVOC	PAH											No. of Bottles/Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
BF2666	1/13/05	0955	Water			2												2			
BF3662	1/14/05	1120				2												2			
BFE362	1/13/05	1550				2												2			
BF3762	1/14/05	1100				2												2			
BF3562	1/14/05	1020				2												2			
BFE264	1/13/05	1505	↓			2												2			
<i>Patty Stoll</i> 1/17/05																					
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time 1/17/05 1150		RECEIVED BY: <i>[Signature]</i>		Date/Time 1/17/05 1455		TOTAL NUMBER OF CONTAINERS: 12								Cooler Temperature: 4°C					
COMPANY NAME: SAIC				COMPANY NAME: GEL				Cooler ID: 109								FEDEX NUMBER: N/A					
RECEIVED BY: <i>Ben Williams</i>		Date/Time 1/17/05 1150		RELINQUISHED BY:		Date/Time															
COMPANY NAME: GEL				COMPANY NAME:																	
RELINQUISHED BY: <i>Ben Williams</i>		Date/Time 1/17/05 1455		RECEIVED BY:		Date/Time															
COMPANY NAME: GEL				COMPANY NAME:																	



# CHAIN OF CUSTODY RECORD

COC NO.: *HLTM53*

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 558-8171	
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <i>PATRICIA A. Stoll</i>																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	HAH											No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
BF2562	1/12/05	1645	water		2												2				
BFG562	1/13/05	1655			2												2				
BFE462	1/13/05	1625			2												2				
BFE262	1/13/05	1505			2												2				
BFE162	1/13/05	1420			2												2				
BF2662	1/13/05	0955	✓		2												2				
<i>P. Stoll</i> <i>1/17/05</i>																					
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time: 1/17/05 1150		RECEIVED BY: <i>GEL</i>		Date/Time: 1.17.5 1455		TOTAL NUMBER OF CONTAINERS: 12				Cooler Temperature: 4°C									
COMPANY NAME: SAIC				COMPANY NAME: GEL				Cooler ID: 103				FEDEX NUMBER: N/A									
RECEIVED BY: <i>Ben Watkins</i>		Date/Time: 1/17/05 1150		RELINQUISHED BY:		Date/Time:															
COMPANY NAME: GEL				COMPANY NAME:																	
RELINQUISHED BY: <i>Ben Watkins</i>		Date/Time: 1/17/05 1455		RECEIVED BY:		Date/Time:															
COMPANY NAME: GEL				COMPANY NAME:																	



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# CHAIN OF CUSTODY RECORD

COC NO.: HLTMS4

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS														LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8991-200				<div style="display: flex; justify-content: space-between;"> <div> <p>BTEX</p> <p>VOC</p> <p>PAH</p> <p>Oil + Grease</p> <p>PCBs</p> <p>pH</p> </div> <div> <p>No. of Bottles/Vials:</p> </div> </div>														LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll																		PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <b>PATRICIA A. STOLL</b>																		OVA SCREENING	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH	Oil + Grease	PCBs	pH						No. of Bottles/Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
BF0462	4/12/05	1555	water			2									2				
BF0602	4/13/05	1735	↓			2									2				
1DW06B	4/17/05	1045	↓		2	2	2	1							7	129004			
BF2762	4/13/05	1140	water			2									2				
<div style="transform: rotate(-30deg);"> <i>P. Stoll</i> 4/17/05         </div>																			
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time: 4/17/05	RECEIVED BY: <i>[Signature]</i>		Date/Time: 4/17/05	TOTAL NUMBER OF CONTAINERS: 13/13				Cooler Temperature: 4°C									
COMPANY NAME: SMC		1150	COMPANY NAME: GEL		1455	Cooler ID: 793				FEDEX NUMBER: N/A									
RECEIVED BY: <i>Ben Watson</i>		Date/Time: 4/17/05	RELINQUISHED BY:		Date/Time:														
COMPANY NAME: GEL		1130	COMPANY NAME:																
RELINQUISHED BY: <i>Ben Watson</i>		Date/Time: 4/17/05	RECEIVED BY:		Date/Time:														
COMPANY NAME: GEL		1455	COMPANY NAME:																

**APPENDIX IV**  
**SITE RANKING FORM**

**THIRD SEMIANNUAL SAMPLING EVENT**  
**JULY 2004**

## SITE RANKING FORM

Facility Name: Former UST 117, Building 7002

Ranked by: S. Stoller

County: Chatham Facility ID #: 9-025113\*2

Date Ranked: 9/20/04

### SOIL CONTAMINATION

A. Total PAHs –  
Maximum Concentration found on the site  
(Assume <0.660 mg/kg if only gasoline  
was stored on-site.)

- ☐ ≤0.660 mg/kg = 0
- ☐ >0.66 - 1 mg/kg = 10
- \* ☒ >1 - 10 mg/kg = 25
- ☐ >10 mg/kg = 50
- \* CAP-Part B sample from Well MW-E5 (Release #2)

B. Total Benzene -  
Maximum Concentration found on the site

- \* ☒ ≤0.005 mg/kg = 0
- ☐ >0.005 - .05 mg/kg = 1
- ☐ >0.05 - 1 mg/kg = 10
- ☐ >1 - 10 mg/kg = 25
- ☐ >10 - 50 mg/kg = 40
- ☐ >50 mg/kg = 50
- \* CAP-Part B sample from Well MW-E5 (Release #2)

C. Depth to Groundwater  
(bls = below land surface)

- ☐ >50' bls = 1
- ☐ >25' - 50' bls = 2
- ☐ >10' - 25' bls = 5
- ☒ ≤10' bls = 10

Fill in the blanks: (A. 25) + (B. 0) = (25) x (C. 10) = (D. 250)

### GROUNDWATER CONTAMINATION

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 + 300
- \* 1.23 ft (14.76 in) observed in BF-MW-E5 (AST 7009)

F. Dissolved Benzene -  
Maximum Concentration at the site  
(One well must be located at the source  
of the release.)

- \* ☒ ≤5 µg/L = 0
- ☐ >5 - 100 µg/L = 5
- ☐ >100 - 1,000 µg/L = 50
- ☐ >1,000 - 10,000 µg/L = 500
- ☐ >10,000 µg/L = 1500
- \* Sample BFE552 (July 2004)

Fill in the blanks: (E. 1300) + (F. 0) = (G. 1300)

Facility Name: Former UST 117, Building 7002 County: Chatham Facility ID #: 9-025113\*2

**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' - ¼ mi = 25  
☐ ¼ mi - 1 mi = 10  
☐ >1 mi - 2 mi = 2

\* ☒ > 2 mi = 0

For lower susceptibility areas only:

- ☐ >1 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 attached text.

I. Non-Public Water Supply

- ☐ Impacted = 1000  
☐ ≤100' = 500  
☐ >100' - 500' = 25  
☐ >500' - ¼ mi = 5  
☐ >¼ - ½ mi = 2

☒ >½ mi = 0

For lower susceptibility areas only:

- ☐ >¼ mi = 0

J. Distance from nearest Contaminant Plume boundary to downgradient Surface Waters **OR UTILITY TRENCHES & VAULTS** (A utility trench may be omitted from ranking if its invert elevation is more than 5 feet above the water table.)

- ☐ Impacted = 500  
☒ ≤500' = 50  
☐ >500' - 1,000' = 5  
☐ >1,000' = 2

K. Distance from any Free Product to basements and crawl spaces

- ☐ Impacted = 500  
☐ <500' = 50  
☐ >500' - 1,000' = 5  
☒ >1,000' or no free product. = 0

Fill in the blanks: (H. 0) + (I. 0) + (J. 50) + (K. 0) = L. 50

(G. 1300) x (L. 50) = M. 65000

(M. 65000) + (D. 250) = N. 65250

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. 65250) x (P. 1) = ( 65250 ) + (Q. 0 )

= 65250 (July 2004 – Third Semiannual Monitoring Event; associated with  
the plume in the vicinity of BF-MW-E5, AST 7009)

**ENVIRONMENTAL SENSITIVITY SCORE**

**FOURTH SEMIANNUAL SAMPLING EVENT**  
**JANUARY 2005**

### SITE RANKING FORM

Facility Name: Former UST 117, Building 7002

Ranked by: S. Stoller

County: Chatham Facility ID #: 9-025113\*2

Date Ranked: 3/18/05

#### SOIL CONTAMINATION

A. Total PAHs –  
Maximum Concentration found on the site  
(Assume <0.660 mg/kg if only gasoline  
was stored on-site.)

- ☐ ≤0.660 mg/kg = 0
- ☐ >0.66 - 1 mg/kg = 10
- \* ☒ >1 - 10 mg/kg = 25
- ☐ >10 mg/kg = 50
- \* CAP-Part B sample from Well MW-E5 (Release #2)

B. Total Benzene -  
Maximum Concentration found on the site

- \* ☒ ≤0.005 mg/kg = 0
- ☐ >0.005 - .05 mg/kg = 1
- ☐ >0.05 - 1 mg/kg = 10
- ☐ >1 - 10 mg/kg = 25
- ☐ >10 - 50 mg/kg = 40
- ☐ >50 mg/kg = 50
- \* CAP-Part B sample from Well MW-E5 (Release #2)

C. Depth to Groundwater  
(bls = below land surface)

- ☐ >50' bls = 1
- ☐ >25' - 50' bls = 2
- ☐ >10' - 25' bls = 5
- ☒ ≤10' bls = 10

Fill in the blanks: (A. 25) + (B. 0) = (25) x (C. 10) = (D. 250)

#### GROUNDWATER CONTAMINATION

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 + 300
- \* Sheen observed in BF-MW-E5 (AST 7009)

F. Dissolved Benzene -  
Maximum Concentration at the site  
(One well must be located at the source  
of the release.)

- \* ☒ ≤5 µg/L = 0
- ☐ >5 - 100 µg/L = 5
- ☐ >100 - 1,000 µg/L = 50
- ☐ >1,000 - 10,000 µg/L = 500
- ☐ >10,000 µg/L = 1500
- \* Sample BFE562 (January 2005)

Fill in the blanks: (E. 250) + (F. 0) = (G. 250)



Facility Name: Former UST 117, Building 7002 County: Chatham Facility ID #: 9-025113\*2

**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' - ¼ mi = 25  
☐ ¼ mi - 1 mi = 10  
☐ >1 mi - 2 mi = 2

\* ☒ > 2 mi = 0

For lower susceptibility areas only:

- ☐ >1 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 attached text.

I. Non-Public Water Supply

- ☐ Impacted = 1000  
☐ ≤100' = 500  
☐ >100' - 500' = 25  
☐ >500' - ¼ mi = 5  
☐ >¼ - ½ mi = 2

☒ >½ mi = 0

For lower susceptibility areas only:

- ☐ >¼ mi = 0

J. Distance from nearest Contaminant Plume boundary to downgradient Surface Waters **OR UTILITY TRENCHES & VAULTS** (A utility trench may be omitted from ranking if its invert elevation is more than 5 feet above the water table.)

- ☐ Impacted = 500  
☒ ≤500' = 50  
☐ >500' - 1,000' = 5  
☐ >1,000' = 2

K. Distance from any Free Product to basements and crawl spaces

- ☐ Impacted = 500  
☐ <500' = 50  
☐ >500' - 1,000' = 5  
☒ >1,000' or no free product. = 0

Fill in the blanks: (H. 0) + (I. 0) + (J. 50) + (K. 0) = L. 50

(G. 250) x (L. 50) = M. 12500

(M. 12500) + (D. 250) = N. 12750

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. 12750) x (P. 1) = ( 12750 ) + (Q. 0 )

= 12750 (January 2005 – Fourth Semiannual Monitoring Event; associated with the plume in the vicinity of BF-MW-E5, AST 7009)

**ENVIRONMENTAL SENSITIVITY SCORE**

## ADDITIONAL GEOLOGIC AND HYDROGEOLOGIC DATA

The following is presented to provide supplemental information to Item H of the Site Ranking Form and details relating to the geologic and hydrogeologic conditions at Hunter Army Airfield (HAAF), which support HAAF's determination that the water withdrawal points located at the airfield cannot be hydraulically connected to the surficial aquifer.

### 1.0 REGIONAL GEOLOGY

Southeast Georgia is located within the coastal plain physiographic province of the southeast United States (Clark and Zisa 1976). In this region, the thickness of the southeastward-dipping subsurface strata ranges from 0 ft at the fall line, located approximately 350 miles inland from the Atlantic coast, to approximately 4,200 ft below ground surface (BGS) at the coast. Herrick (1961) provides detailed lithologic descriptions of the stratigraphic units encountered during the installation of water and petroleum exploration wells in Chatham County. The well log of GGS Well 125, located on White Bluff Road, 700 ft west and 0.3 mile north of Buckhalter Road, Savannah, Georgia, provides one of the more complete lithologic descriptions of upper Eocene, Miocene, and Pliocene to Recent sedimentary strata in Chatham County.

The upper Eocene (Ocala Limestone) section of GGS Well 125 is approximately 225 ft thick and dominated by light gray to white fossiliferous limestone. The Miocene section is approximately 250 ft thick and consists of limestone, with a 160-ft-thick cap of dark green phosphatic clay. This clay is regionally extensive and is known to occupy the Coosawatchie Formation of the Hawthorn Group (Furlow 1969; Arora 1984; Huddlestun 1988). The interval from approximately 80 ft to the surface is Pliocene to Recent in age and composed primarily of sand interbedded with clay and silt. This section is occupied by the Satilla and Cypresshead Formations (Huddlestun 1988).

### 2.0 LOCAL GEOLOGY

HAAF is located within the barrier island sequence district of the coastal plain physiographic province of the southeast United States (Clark and Zisa 1976). The barrier island sequence district in Chatham and Bryan Counties is characterized by the existence of several marine terraces (step-like topographic surfaces that decrease in elevation toward the coast). These marine terraces, and their associated deposits, are the result of sea-level fluctuations that occurred during the Pleistocene epoch. The surficial (Quaternary) deposits in Chatham and Bryan Counties, in decreasing elevation and age, are part of the Okefenokee, Wicomico, Penholoway, Pamlico, and Silver Bluff Terrace Complexes (Wilkes et al. 1974; GA DNR 1976; Huddlestun 1988).

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

Based on the coring and sampling of unconsolidated strata at HAAF during the Corrective Action Plan—Part A investigations, it was concluded that all former underground storage tanks (USTs) were buried within the Satilla Formation, which is overlain by various soil types. Soil groups at HAAF include the Chipley, Leon, Ellabelle, Kershaw, Pelham, Albany, Wahee, and Ogeechee (Wilkes et al. 1974).

### 3.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of HAAF is mostly influenced by two aquifer systems. These are referred to as the Principal Artesian (Floridan) Aquifer and the surficial aquifer (Miller 1990). The Principal Artesian Aquifer is the lowermost hydrologic unit and is regionally extensive from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer, approximately 800 ft in total thickness, is composed primarily of Tertiary-age limestone, including the Bug Island Formation, Ocala Group, and Suwannee Limestone. Groundwater from the Floridan is used primarily for drinking water (Arora 1984). According to Miller (1990), one of the largest cones of depression produced in the Upper Floridan Aquifer exists directly beneath Savannah, Georgia. Net water-level decline in the Floridan system between the predevelopment period and 1980 exceeded 80 ft beneath Savannah. In addition, according to 1980 estimates, more than 500 million gal of water per day were withdrawn from the Floridan for public and industrial use in southeast Georgia, more than in any other region.

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

The surficial aquifer consists of widely varying amounts of sand and clay, ranging from 55 to 150 ft in thickness, and is composed primarily of the Satilla and Cypresshead Formations in the Savannah vicinity (Arora 1984). This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges from approximately 2 to 10 ft BGS (Miller 1990). Groundwater in the surficial aquifer system is under unconfined, or water table, conditions. Locally, however, thin clay beds create confined or semiconfined conditions, as is the case at HAAF where thin, surficial clay beds are present in the western quadrant (GA DNR 1976).

Groundwater encountered at all the UST investigation sites is part of the surficial aquifer system. Based on the fact that all public and nonpublic water supply wells draw water from the Principal Artesian (Floridan) Aquifer and that the Hawthorn confining unit separates the Principal Artesian 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 HAAF.

### 4.0 REFERENCES

- Arora, Ram 1984. *Hydrologic Evaluation for Underground Injection Control in the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey.
- Clark, W.Z., Jr. and A.C. Zisa 1976. *Physiographic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1988).
- Furlow, J.W. 1969. *Stratigraphy and Economic Geology of the Eastern Chatham County Phosphate Deposit*, Department of Mines and Mining, Division of Conservation, Georgia Geologic Survey, Bulletin 82.
- GA DNR (Georgia Department of Natural Resources) 1976. *Geologic Map of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey (reprinted 1997).

- Herrick, S.M. 1961. *Well Logs of the Coastal Plain of Georgia*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey.
- Huddleston, P.F. 1988. *A Revision of the Lithostratigraphic Units of the Coastal Plain of Georgia, The Miocene through Holocene*, Department of Natural Resources, Environmental Protection Division, Georgia Geologic Survey, Bulletin 104.
- Miller, James A. 1990. *Groundwater Atlas of the United States*, U. S. Department of the Interior, U. S. Geological Survey, Hydrologic Inventory Atlas 730G.
- Wilkes, R.L., J.H. Johnson, H.T. Stoner, and D.D. Bacon 1974. *Soil Survey of Bryan and Chatham Counties, Georgia*, U. S. Department of Agriculture Soil Conservation Service.

**APPENDIX V**  
**REIMBURSEMENT APPLICATION**

Second Annual Monitoring and Free Product Removal Report  
Former UST 117, Bulk Fuel Facility (HAA-09), Facility ID #9-025113\*2

Hunter Army Airfield is a federally owned facility and has funded the investigation for the former Underground Storage Tank (UST) 117 site, Facility ID #9-025113\*2, using U. S. Department of Defense Environmental Restoration Account Funds. Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.

**ATTACHMENT A**

**SUMMARY OF FATE AND TRANSPORT MODELING**

## **A.1. FATE AND TRANSPORT MODELING**

The Seasonal Soil Compartment Model was used to simulate the vertical transport of contaminants from the source area down through the vadose zone to the shallow groundwater table. The Analytical Transient 1-, 2-, 3-Dimensional Model was used to model contaminant migration to a potential downgradient receptor, an underground storm drain located approximately 120 ft southwest of the site. Benzene and naphthalene were the only two constituents to exceed their respective In-Stream Water Quality Standards (IWQSs) or risk-based screening levels during the Corrective Action Plan (CAP)–Parts A and B investigations. A steady-state source for each constituent was assumed for conservatism, and the source was shut off after a steady-state condition had been achieved.

### **A.1 SUMMARY OF THE CORRECTIVE ACTION PLAN–PART B REPORT FATE AND TRANSPORT MODELING RESULTS FOR BENZENE**

The fate and transport modeling that was conducted as part of the CAP–Part B Report (SAIC 2001) was based on the analytical data collected during the CAP–Parts A and B investigations. The assumption of a continuous source of contamination of infinite duration at the site was based on the maximum observed benzene concentration in groundwater at Release #1 (i.e., 553 µg/L in well BF-MW-22 in December 1999) during the CAP–Parts A and B investigations. The modeling was performed to develop alternate concentration limits (ACLs) for the site. Because benzene was the only volatile organic compound at the site that exceeded its IWQS, an ACL of 634 µg/L was developed for benzene based on a dilution attenuation factor (DAF) of 8.9.

No fate and transport modeling of benzene was performed with respect to Release #2 because it did not exist during the CAP–Parts A and Part B investigations.

### **A.2 SUMMARY OF THE CORRECTIVE ACTION PLAN–PART B REPORT FATE AND TRANSPORT MODELING RESULTS FOR NAPHTHALENE**

The fate and transport modeling that was conducted as part of the CAP–Part B Report (SAIC 2001) was based on the analytical data collected during the CAP–Parts A and B investigations. The assumption of a continuous source of contamination of infinite duration at the site was based on the maximum observed naphthalene concentration in groundwater at Release #1 (i.e., 528 µg/L in well BF-MW-22 in December 2000) during the CAP–Parts A and B investigations. The modeling was performed to develop ACLs for the site. Because naphthalene was the only polynuclear aromatic hydrocarbon at the site that exceeded its risk-based screening level, an ACL of 820 µg/L was developed for naphthalene based on a DAF of 126.3.

No fate and transport modeling of benzene was performed with respect to Release #2 because it did not exist during the CAP–Parts A and Part B investigations.



### A.3 CONCLUSIONS BASED ON FATE AND TRANSPORT MODELING RESULTS

The conclusions below are based on fate and transport modeling of analytical data collected during the CAP–Parts A and B investigations and assuming a steady-state source at the site. The fate and transport modeling results associated with Release #1 are applicable to Release #2 because of the similar proximity of the closest receptor and the concentrations for Release #1 are much higher than Release #2.

- Benzene concentrations in groundwater associated with Release #2 did not exceed the benzene ACL of 624 µg/L or the IW QS of 71.28 µg/L in July 2004 or January 2005, respectively.
- Naphthalene concentrations in groundwater associated with Release #2 did not exceed the naphthalene ACL of 820 µg/L in July 2004 or January 2005.
- Fate and transport modeling for Release #2 has not been performed due to the very low benzene and naphthalene concentrations.

### A.4 REFERENCES

SAIC (Science Applications International Corporation) 2001. *Corrective Action Plan–Part B Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113\*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, July.

**ATTACHMENT B**

**REFERENCES**

## REFERENCES

- Lewis, Lisa L. 2003. Letter Thomas C. Fry (Fort Stewart Directorate of Public Works Environmental Branch), October 6.
- SAIC (Science Applications International Corporation) 1999. *Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09) at Hunter Army Airfield, Georgia*, November.
- SAIC 2000. *Corrective Action Plan--Part A Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113\*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, June.
- SAIC 2001. *Corrective Action Plan--Part B Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113\*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, July.
- SAIC 2003. *First Annual Monitoring Only Report for Former Underground Storage Tank 117, Building 7002, Facility ID 9-025113\*1, Bulk Fuel Facility (HAA-09), Hunter Army Airfield, Georgia*, July.

**ATTACHMENT C**

**CERTIFICATES OF ANALYSIS**

# GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF0452  
Sample ID: 117167014  
Matrix: Water  
Collect Date: 16-JUL-04 12:25  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.404	1.01	ug/L	1	JWF	07/21/04	2224	350446	1
2-Methylnaphthalene	U	ND	0.505	1.01	ug/L	1					
Acenaphthene	U	ND	0.505	1.01	ug/L	1					
Acenaphthylene	U	ND	0.505	1.01	ug/L	1					
Anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene	U	ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene	U	ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.505	1.01	ug/L	1					
Fluoranthene	U	ND	0.505	1.01	ug/L	1					
Fluorene	U	ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.505	1.01	ug/L	1					
Naphthalene	U	ND	0.111	1.01	ug/L	1					
Phenanthrene	U	ND	0.505	1.01	ug/L	1					
Pyrene	U	ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0341	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.642	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	70	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	81	(47%-110%)

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Address : 151 Lafayette Drive  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF0452  
Sample ID: 117167014

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			69	(56%-133%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			86	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			102	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			90	(80%-116%)					

Notes:

The Qualifiers in this report are defined as follows :

- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.



Reviewed by

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## Certificate of Analysis

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Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF2552  
Sample ID: 117167013  
Matrix: Water  
Collect Date: 16-JUL-04 14:56  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.396	0.990	ug/L	1	JWF	07/21/04	2201	350446	1
2-Methylnaphthalene	J	0.597	0.495	0.990	ug/L	1					
Acenaphthene	U	ND	0.495	0.990	ug/L	1					
Acenaphthylene	U	ND	0.495	0.990	ug/L	1					
Anthracene	U	ND	0.495	0.990	ug/L	1					
Benzo(a)anthracene	U	ND	0.495	0.990	ug/L	1					
Benzo(a)pyrene	U	ND	0.495	0.990	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.495	0.990	ug/L	1					
Benzo(ghi)perylene	U	ND	0.495	0.990	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.495	0.990	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.495	0.990	ug/L	1					
Fluoranthene	U	ND	0.495	0.990	ug/L	1					
Fluorene	U	ND	0.495	0.990	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.495	0.990	ug/L	1					
Naphthalene	J	0.557	0.109	0.990	ug/L	1					
Phenanthrene	U	ND	0.495	0.990	ug/L	1					
Pyrene	U	ND	0.495	0.990	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0314	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.601	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	64	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	71	(47%-110%)

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF2552  
Sample ID: 117167013

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			69	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			87	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			101	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			94	(80%-116%)					

### Notes:


The Qualifiers in this report are defined as follows :

- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.



Reviewed by



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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF2652  
Sample ID: 117167012  
Matrix: Water  
Collect Date: 16-JUL-04 14:10  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.426	1.06	ug/L	1	JWF	07/21/04	2139	350446	1
2-Methylnaphthalene	J	0.658	0.532	1.06	ug/L	1					
Acenaphthene	U	ND	0.532	1.06	ug/L	1					
Acenaphthylene	U	ND	0.532	1.06	ug/L	1					
Anthracene	U	ND	0.532	1.06	ug/L	1					
Benzo(a)anthracene	U	ND	0.532	1.06	ug/L	1					
Benzo(a)pyrene	U	ND	0.532	1.06	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.532	1.06	ug/L	1					
Benzo(ghi)perylene	U	ND	0.532	1.06	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.532	1.06	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.532	1.06	ug/L	1					
Fluoranthene	U	ND	0.532	1.06	ug/L	1					
Fluorene	U	ND	0.532	1.06	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.532	1.06	ug/L	1					
Naphthalene	J	0.654	0.117	1.06	ug/L	1					
Phenanthrene	U	ND	0.532	1.06	ug/L	1					
Pyrene	U	ND	0.532	1.06	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0247	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.467	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	61	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	68	(47%-110%)

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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF2652  
Sample ID: 117167012

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			91	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			84	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			98	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			91	(80%-116%)					

### Notes:

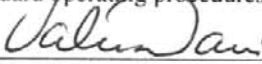
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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# GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF2656  
Sample ID: 117167003  
Matrix: Water  
Collect Date: 16-JUL-04 13:36  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.388	0.971	ug/L	1	JWF	07/21/04	1821	350446	1
2-Methylnaphthalene	U	ND	0.485	0.971	ug/L	1					
Acenaphthene	U	ND	0.485	0.971	ug/L	1					
Acenaphthylene	U	ND	0.485	0.971	ug/L	1					
Anthracene	U	ND	0.485	0.971	ug/L	1					
Benzo(a)anthracene	U	ND	0.485	0.971	ug/L	1					
Benzo(a)pyrene	U	ND	0.485	0.971	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.485	0.971	ug/L	1					
Benzo(ghi)perylene	U	ND	0.485	0.971	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.485	0.971	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.485	0.971	ug/L	1					
Fluoranthene	U	ND	0.485	0.971	ug/L	1					
Fluorene	U	ND	0.485	0.971	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.485	0.971	ug/L	1					
Naphthalene	U	ND	0.107	0.971	ug/L	1					
Phenanthrene	U	ND	0.485	0.971	ug/L	1					
Pyrene	U	ND	0.485	0.971	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0153	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.531	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	72	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	85	(47%-110%)

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF2656  
Sample ID: 117167003

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14		3510/8270 PAH Extend list Liquid			95	(56%-133%)					
Bromofluorobenzene		5035/8260B BTEX in Liquid Federal			90	(76%-115%)					
Dibromofluoromethane		5035/8260B BTEX in Liquid Federal			99	(72%-136%)					
Toluene-d8		5035/8260B BTEX in Liquid Federal			94	(80%-116%)					

### Notes:

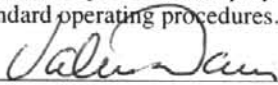
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- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF2752  
Sample ID: 117167002  
Matrix: Water  
Collect Date: 16-JUL-04 10:05  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.385	0.962	ug/L	1	JWF	07/21/04	1759	350446	1
2-Methylnaphthalene	U	ND	0.481	0.962	ug/L	1					
Acenaphthene	U	ND	0.481	0.962	ug/L	1					
Acenaphthylene	U	ND	0.481	0.962	ug/L	1					
Anthracene	U	ND	0.481	0.962	ug/L	1					
Benzo(a)anthracene	U	ND	0.481	0.962	ug/L	1					
Benzo(a)pyrene	U	ND	0.481	0.962	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.481	0.962	ug/L	1					
Benzo(ghi)perylene	U	ND	0.481	0.962	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.481	0.962	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.481	0.962	ug/L	1					
Fluoranthene	U	ND	0.481	0.962	ug/L	1					
Fluorene	U	ND	0.481	0.962	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.481	0.962	ug/L	1					
Naphthalene	U	ND	0.106	0.962	ug/L	1					
Phenanthrene	U	ND	0.481	0.962	ug/L	1					
Pyrene	U	ND	0.481	0.962	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0126	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.439	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	63	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	72	(47%-110%)

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: August 30, 2004

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Client Sample ID: BF2752  
Sample ID: 117167002

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			57	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			92	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			104	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			95	(80%-116%)					

### Notes:

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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF3552  
Sample ID: 117167015  
Matrix: Water  
Collect Date: 17-JUL-04 09:31  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.404	1.01	ug/L	1	JWF	07/21/04	2246	350446	1
2-Methylnaphthalene	U	ND	0.505	1.01	ug/L	1					
Acenaphthene	U	ND	0.505	1.01	ug/L	1					
Acenaphthylene	U	ND	0.505	1.01	ug/L	1					
Anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene	U	ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene	U	ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.505	1.01	ug/L	1					
Fluoranthene	U	ND	0.505	1.01	ug/L	1					
Fluorene	U	ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.505	1.01	ug/L	1					
Naphthalene	U	ND	0.111	1.01	ug/L	1					
Phenanthrene	U	ND	0.505	1.01	ug/L	1					
Pyrene	U	ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0407	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.592	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	73	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	83	(47%-110%)

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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF3552  
Sample ID: 117167015

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			69	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			83	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			102	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			93	(80%-116%)					

### Notes:

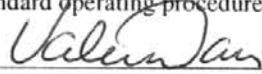
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- H Analytical holding time exceeded.
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- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF3652  
Sample ID: 117167001  
Matrix: Water  
Collect Date: 17-JUL-04 10:30  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.392	0.980	ug/L	1	JWF	07/21/04	1652	350446	1
2-Methylnaphthalene	U	ND	0.490	0.980	ug/L	1					
Acenaphthene	U	ND	0.490	0.980	ug/L	1					
Acenaphthylene	U	ND	0.490	0.980	ug/L	1					
Anthracene	U	ND	0.490	0.980	ug/L	1					
Benzo(a)anthracene	U	ND	0.490	0.980	ug/L	1					
Benzo(a)pyrene	U	ND	0.490	0.980	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.490	0.980	ug/L	1					
Benzo(ghi)perylene	U	ND	0.490	0.980	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.490	0.980	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.490	0.980	ug/L	1					
Fluoranthene	U	ND	0.490	0.980	ug/L	1					
Fluorene	U	ND	0.490	0.980	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.490	0.980	ug/L	1					
Naphthalene	U	ND	0.108	0.980	ug/L	1					
Phenanthrene	U	ND	0.490	0.980	ug/L	1					
Pyrene	U	ND	0.490	0.980	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0059	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.487	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	76	(46%-97%)

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Report Date: August 30, 2004

Page 2 of 2

Client Sample ID: BF3652  
Sample ID: 117167001

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270	PAH Extend list Liquid			92	(47%-110%)					
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			74	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			89	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			104	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			95	(80%-116%)					

### Notes:

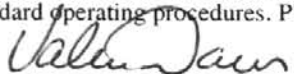
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

Page 1 of 2

Client Sample ID: BF3752  
Sample ID: 117167004  
Matrix: Water  
Collect Date: 17-JUL-04 10:00  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.412	1.03	ug/L	1	JWF	07/21/04	1843	350446	1
2-Methylnaphthalene	U	ND	0.515	1.03	ug/L	1					
Acenaphthene	U	ND	0.515	1.03	ug/L	1					
Acenaphthylene	U	ND	0.515	1.03	ug/L	1					
Anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)pyrene	U	ND	0.515	1.03	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Benzo(ghi)perylene	U	ND	0.515	1.03	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.515	1.03	ug/L	1					
Fluoranthene	U	ND	0.515	1.03	ug/L	1					
Fluorene	U	ND	0.515	1.03	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.515	1.03	ug/L	1					
Naphthalene	U	ND	0.113	1.03	ug/L	1					
Phenanthrene	U	ND	0.515	1.03	ug/L	1					
Pyrene	U	ND	0.515	1.03	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0220	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	76	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	92	(47%-110%)

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## Certificate of Analysis

Company : SAIC  
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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

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Client Sample ID: BF3752  
Sample ID: 117167004

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			75	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			91	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			102	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			89	(80%-116%)					

### Notes:

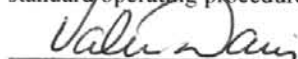
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- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

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Client Sample ID: BFE152  
Sample ID: 117167011  
Matrix: Water  
Collect Date: 16-JUL-04 15:00  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.408	1.02	ug/L	1	JWF	07/21/04	2117	350446	1
2-Methylnaphthalene	U	ND	0.510	1.02	ug/L	1					
Acenaphthene		2.75	0.510	1.02	ug/L	1					
Acenaphthylene	U	ND	0.510	1.02	ug/L	1					
Anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)pyrene	U	ND	0.510	1.02	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Benzo(ghi)perylene	U	ND	0.510	1.02	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.510	1.02	ug/L	1					
Fluoranthene	U	ND	0.510	1.02	ug/L	1					
Fluorene		5.66	0.510	1.02	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.510	1.02	ug/L	1					
Naphthalene	U	ND	0.112	1.02	ug/L	1					
Phenanthrene		5.76	0.510	1.02	ug/L	1					
Pyrene	U	ND	0.510	1.02	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	SHJ	07/30/04	1859	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.617	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	78	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	89	(47%-110%)

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Client Sample ID: BFE152  
Sample ID: 117167011

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			74	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			100	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			98	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			107	(80%-116%)					

### Notes:

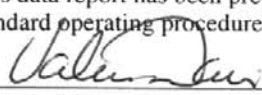
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

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Client Sample ID: BFE252  
Sample ID: 117167010  
Matrix: Water  
Collect Date: 16-JUL-04 14:00  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.412	1.03	ug/L	1	JWF	07/21/04	2055	350446	1
2-Methylnaphthalene	U	ND	0.515	1.03	ug/L	1					
Acenaphthene	U	ND	0.515	1.03	ug/L	1					
Acenaphthylene	U	ND	0.515	1.03	ug/L	1					
Anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)pyrene	U	ND	0.515	1.03	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Benzo(ghi)perylene	U	ND	0.515	1.03	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.515	1.03	ug/L	1					
Fluoranthene	U	ND	0.515	1.03	ug/L	1					
Fluorene	U	ND	0.515	1.03	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.515	1.03	ug/L	1					
Naphthalene	U	ND	0.113	1.03	ug/L	1					
Phenanthrene	U	ND	0.515	1.03	ug/L	1					
Pyrene	U	ND	0.515	1.03	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/29/04	2122	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.551	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	83	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	96	(47%-110%)

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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE252  
Sample ID: 117167010

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			85	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			90	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			101	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			91	(80%-116%)					

### Notes:

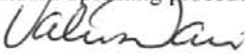
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Client Sample ID: BFE254  
Sample ID: 117167009  
Matrix: Water  
Collect Date: 16-JUL-04 14:00  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.404	1.01	ug/L	1	JWF	07/21/04	2033	350446	1
2-Methylnaphthalene	U	ND	0.505	1.01	ug/L	1					
Acenaphthene	U	ND	0.505	1.01	ug/L	1					
Acenaphthylene	U	ND	0.505	1.01	ug/L	1					
Anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene	U	ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene	U	ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene	U	ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.505	1.01	ug/L	1					
Fluoranthene	U	ND	0.505	1.01	ug/L	1					
Fluorene	U	ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.505	1.01	ug/L	1					
Naphthalene	U	ND	0.111	1.01	ug/L	1					
Phenanthrene	U	ND	0.505	1.01	ug/L	1					
Pyrene	U	ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/29/04	2055	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.496	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	72	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	83	(47%-110%)

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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE254  
Sample ID: 117167009

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			76	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			94	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			96	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			94	(80%-116%)					

### Notes:

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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Client Sample ID: BFE352  
Sample ID: 117167007  
Matrix: Water  
Collect Date: 16-JUL-04 13:10  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.412	1.03	ug/L	1	JWF	07/21/04	1949	350446	1
2-Methylnaphthalene	U	ND	0.515	1.03	ug/L	1					
Acenaphthene	U	ND	0.515	1.03	ug/L	1					
Acenaphthylene	U	ND	0.515	1.03	ug/L	1					
Anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)anthracene	U	ND	0.515	1.03	ug/L	1					
Benzo(a)pyrene	U	ND	0.515	1.03	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Benzo(ghi)perylene	U	ND	0.515	1.03	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.515	1.03	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.515	1.03	ug/L	1					
Fluoranthene	U	ND	0.515	1.03	ug/L	1					
Fluorene	U	ND	0.515	1.03	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.515	1.03	ug/L	1					
Naphthalene	U	ND	0.113	1.03	ug/L	1					
Phenanthrene	U	ND	0.515	1.03	ug/L	1					
Pyrene	U	ND	0.515	1.03	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	SHJ	07/30/04	1831	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.596	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	81	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	95	(47%-110%)

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Client Sample ID: BFE352  
Sample ID: 117167007

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			95	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			96	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			97	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			101	(80%-116%)					

### Notes:

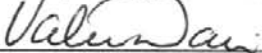
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

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Client Sample ID: BFE452  
Sample ID: 117167005  
Matrix: Water  
Collect Date: 16-JUL-04 12:15  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.388	0.971	ug/L	1	JWF	07/21/04	1905	350446	1
2-Methylnaphthalene	J	0.640	0.485	0.971	ug/L	1					
Acenaphthene	U	ND	0.485	0.971	ug/L	1					
Acenaphthylene	U	ND	0.485	0.971	ug/L	1					
Anthracene	U	ND	0.485	0.971	ug/L	1					
Benzo(a)anthracene	U	ND	0.485	0.971	ug/L	1					
Benzo(a)pyrene	U	ND	0.485	0.971	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.485	0.971	ug/L	1					
Benzo(ghi)perylene	U	ND	0.485	0.971	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.485	0.971	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.485	0.971	ug/L	1					
Fluoranthene	U	ND	0.485	0.971	ug/L	1					
Fluorene	U	ND	0.485	0.971	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.485	0.971	ug/L	1					
Naphthalene	J	0.490	0.107	0.971	ug/L	1					
Phenanthrene	U	ND	0.485	0.971	ug/L	1					
Pyrene	U	ND	0.485	0.971	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/29/04	1908	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.480	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	71	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	80	(47%-110%)

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**Certificate of Analysis**

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Report Date: August 30, 2004

Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Page 2 of 2

Client Sample ID: BFE452  
Sample ID: 117167005

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			83	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			87	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			100	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			93	(80%-116%)					

Notes:

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- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

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This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

  
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Project: Hunter Army Airfield LTM

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Client Sample ID: BFE552  
Sample ID: 117167006  
Matrix: Water  
Collect Date: 16-JUL-04 15:40  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.408	1.02	ug/L	1	JWF	07/21/04	1927	350446	1
2-Methylnaphthalene		8.42	0.510	1.02	ug/L	1					
Acenaphthene		1.64	0.510	1.02	ug/L	1					
Acenaphthylene	U	ND	0.510	1.02	ug/L	1					
Anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)pyrene	U	ND	0.510	1.02	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Benzo(ghi)perylene	U	ND	0.510	1.02	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.510	1.02	ug/L	1					
Fluoranthene	U	ND	0.510	1.02	ug/L	1					
Fluorene		2.56	0.510	1.02	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.510	1.02	ug/L	1					
Naphthalene		17.3	0.112	1.02	ug/L	1					
Phenanthrene	J	0.574	0.510	1.02	ug/L	1					
Pyrene	U	ND	0.510	1.02	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene		1.98	0.330	1.00	ug/L	1	DLS	07/29/04	1935	353417	2
Ethylbenzene		17.3	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)		42.7	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	70	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	83	(47%-110%)

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE552  
Sample ID: 117167006

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14		3510/8270 PAH Extend list Liquid			67	(56%-133%)					
Bromofluorobenzene		5035/8260B BTEX in Liquid Federal			83	(76%-115%)					
Dibromofluoromethane		5035/8260B BTEX in Liquid Federal			105	(72%-136%)					
Toluene-d8		5035/8260B BTEX in Liquid Federal			94	(80%-116%)					

Notes:

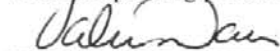
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

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Client Sample ID: BFE652  
Sample ID: 117167008  
Matrix: Water  
Collect Date: 16-JUL-04 11:25  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene	U	ND	0.408	1.02	ug/L	1	JWF	07/21/04	2011	350446	1
2-Methylnaphthalene	U	ND	0.510	1.02	ug/L	1					
Acenaphthene	U	ND	0.510	1.02	ug/L	1					
Acenaphthylene	U	ND	0.510	1.02	ug/L	1					
Anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)anthracene	U	ND	0.510	1.02	ug/L	1					
Benzo(a)pyrene	U	ND	0.510	1.02	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Benzo(ghi)perylene	U	ND	0.510	1.02	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.510	1.02	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.510	1.02	ug/L	1					
Fluoranthene	U	ND	0.510	1.02	ug/L	1					
Fluorene	U	ND	0.510	1.02	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.510	1.02	ug/L	1					
Naphthalene	U	ND	0.112	1.02	ug/L	1					
Phenanthrene	U	ND	0.510	1.02	ug/L	1					
Pyrene	U	ND	0.510	1.02	ug/L	1					

### **Volatile Organics Federal**

#### *5035/8260B BTEX in Liquid Federal*

Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/29/04	2028	353417	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.663	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### **The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	JPB	07/20/04	1457	350445

### **The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	74	(46%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	83	(47%-110%)

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Project: Hunter Army Airfield LTM

Report Date: August 30, 2004

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Client Sample ID: BFE652  
Sample ID: 117167008

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
p-Terphenyl-d14	3510/8270	PAH Extend list Liquid			70	(56%-133%)					
Bromofluorobenzene	5035/8260B	BTEX in Liquid Federal			87	(76%-115%)					
Dibromofluoromethane	5035/8260B	BTEX in Liquid Federal			102	(72%-136%)					
Toluene-d8	5035/8260B	BTEX in Liquid Federal			97	(80%-116%)					

### Notes:

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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Client Sample ID: TH0401  
Sample ID: 117169001  
Matrix: Water  
Collect Date: 16-JUL-04 07:45  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/30/04	0434	353426	1
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Bromofluorobenzene	5035/8260B BTEX in Liquid Federal	91	(76%-115%)
Dibromofluoromethane	5035/8260B BTEX in Liquid Federal	103	(72%-136%)
Toluene-d8	5035/8260B BTEX in Liquid Federal	89	(80%-116%)

### Notes:

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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Page 2 of 2


Client Sample ID: TH0401  
Sample ID: 117169001

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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Project: Hunter Army Airfield LTM

Page 1 of 2

Client Sample ID: TH0402  
Sample ID: 117169011  
Matrix: Water  
Collect Date: 17-JUL-04 07:45  
Receive Date: 19-JUL-04  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	DLS	07/31/04	1119	353426	1
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.802	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Bromofluorobenzene	5035/8260B BTEX in Liquid Federal	98	(76%-115%)
Dibromofluoromethane	5035/8260B BTEX in Liquid Federal	98	(72%-136%)
Toluene-d8	5035/8260B BTEX in Liquid Federal	101	(80%-116%)

### Notes:

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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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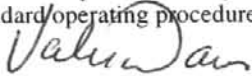
Client Sample ID: TH0402  
Sample ID: 117169011

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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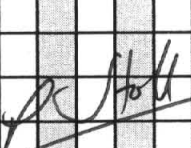
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.



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# CHAIN OF CUSTODY RECORD

COC NO.: **HLTM46**

<b>PROJECT NAME: HAAF Long Term Monitoring, D.O. 44</b>				<b>REQUESTED PARAMETERS</b>																<b>LABORATORY NAME:</b> General Engineering Laboratory	
<b>PROJECT NUMBER: 01-1055-04-8991-200</b>																				<b>LABORATORY ADDRESS:</b> 2040 Savage Road Charleston, SC 29407	
<b>PROJECT MANAGER: <del>Patty Stoll</del> Sharon Stollen</b>																				<b>PHONE NO: (843) 556-8171</b>	
<b>Sampler (Signature) (Printed Name)</b> <i>Patty Stoll</i> <b>PATRICIA A. STOLL</b>																					
<b>Sample ID</b>	<b>Date Collected</b>	<b>Time Collected</b>	<b>Matrix</b>																	<b>BTEX</b>	<b>VOC</b>
BF2552	7/16/04	1456	water			2													2		
BF0452		1225				2													2		
BF2652		1410				2													2		
BFE252		1400				2													2		
BFE652	↓	1125				2													2		
BF3552	7/17/04	931	↓			2													2		
				<div style="text-align: center;">   7/19/04 </div>																	
<b>RELINQUISHED BY:</b> <i>Patty Stoll</i>		<b>Date/Time</b> 7/19/04 1140	<b>RECEIVED BY:</b> <i>D. Chandra</i>		<b>Date/Time</b> 7/19/04 1430	<b>TOTAL NUMBER OF CONTAINERS:</b> 12		<b>Cooler Temperature:</b> 4°C													
<b>COMPANY NAME:</b> SAIC			<b>COMPANY NAME:</b> CEL			<b>Cooler ID:</b> 303		<b>FEDEX NUMBER:</b> N/A													
<b>RECEIVED BY:</b> <i>Patty Stoll</i>		<b>Date/Time</b> 7/19/04 1140	<b>RELINQUISHED BY:</b>		<b>Date/Time</b>																
<b>COMPANY NAME:</b> CEL			<b>COMPANY NAME:</b>																		
<b>RELINQUISHED BY:</b> <i>Patty Stoll</i>		<b>Date/Time</b> 7/19/04 1430	<b>RECEIVED BY:</b>		<b>Date/Time</b>																
<b>COMPANY NAME:</b> CEL			<b>COMPANY NAME:</b>																		



## CHAIN OF CUSTODY RECORD

COC NO.: HLTm 41

[illegible]





117167, 117169

pg 1 of 2

COC NO.: HLTm42

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																		LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																						LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: <del>Patty Stoll</del> Sharon Stollen																						PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patty Stoll</i>		(Printed Name) PATTY A. STOLL																				OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH															No. of Bottles/Vials				
BF3652	7/17/04	1030	water	2	2																4				
BF2752	7/16/04	1005		2	2																4				
BF2056	7/16/04	1336		2	2																4				
BF3752	7/17/04	1000		2																	2				
BFE452	7/16/04	1215		2																	2				
BFE552	7/16/04	1540		2																	2				
BFE352	7/16/04	1310		2																	2				
BFE652	7/16/04	1125		2																	2				
BFE254	7/16/04	1400		2																	2				
BFE252	7/16/04	1400		2																	2				
BFE152	7/16/04	1500		2																	2				
BF2652	7/16/04	1410		2																	2				
BF2552	7/16/04	1456	↓	2																	2				
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time 7/19/04	RECEIVED BY: <i>Sharon Stollen</i>		Date/Time 7/19/04	TOTAL NUMBER OF CONTAINERS: 50																		Cooler Temperature: 4°C	
COMPANY NAME: GAC		1140	COMPANY NAME: GAC		1430	Cooler ID: 3																		FEDEX NUMBER: N/A	
RELINQUISHED BY: <i>Sharon Stollen</i>		Date/Time 7/19/04	RELINQUISHED BY:		Date/Time																				
COMPANY NAME: GAC		1140	COMPANY NAME:																						
RELINQUISHED BY: <i>Sharon Stollen</i>		Date/Time 7/19/04	RECEIVED BY:		Date/Time																				
COMPANY NAME: GAC		1430	COMPANY NAME:																						

# CHAIN OF CUSTODY RECORD

COC NO.: **HLTM42**

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: <del>Patty Stoll</del> Sharon Stoll																				PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patricia A. Stoll</i>		(Printed Name) PATRICIA A. STOLL																		OVA SCREENING		OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH															No. of Bottles/Vials		
014 BF0452	7/16/04	1225	Water	2																	2		
015 BF3552	7/17/04	931		2																	2		
001 TH0401	7/16/04	0745		2																	2		
002 AN1864	7/17/04	1353		2																	2		
003 AN0262	7/17/04	1515		2																	2		
004 AN2362	7/17/04	1435		2																	2		
005 AN2262	7/17/04	1400		2																	2		
006 AK0562	7/17/04	1330		2																	2		
007 AK0562	7/17/04	1225		2																	2		
008 AN1862	7/17/04	1350		2																	2		
009 AN0162	7/17/04	1457		2																	2		
010 AN1962	7/17/04	1310		2																	2		
011 TH0402	7/17/04	0745		2																	2		
RELINQUISHED BY: <i>Patricia A. Stoll</i>		Date/Time 7/19/04	RECEIVED BY: <i>[Signature]</i>		Date/Time 7/19/04	TOTAL NUMBER OF CONTAINERS: 50																Cooler Temperature: 4°C	
COMPANY NAME: SAIC		1140	COMPANY NAME: GEL		1430	Cooler ID: 3																FEDEX NUMBER: N/A	
RECEIVED BY: <i>[Signature]</i>		Date/Time 7/19/04	RELINQUISHED BY:		Date/Time																		
COMPANY NAME: GEL		1140	COMPANY NAME:																				
RELINQUISHED BY: <i>[Signature]</i>		Date/Time 7-19-04	RECEIVED BY:		Date/Time																		
COMPANY NAME: GEL		1430	COMPANY NAME:																				

117169

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**Certificate of Analysis**

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Report Date: March 8, 2005

Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Page 1 of 2

Client Sample ID: BF0462  
Sample ID: 129001011  
Matrix: Water  
Collect Date: 12-JAN-05 15:55  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1803	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0512	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	74	(37%-97%)

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## Certificate of Analysis

Company : SAIC  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BF0462  
Sample ID: 129001011

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5		3510/8270 PAH Extend list Liquid			71	(43%-101%)					
p-Terphenyl-d14		3510/8270 PAH Extend list Liquid			99	(49%-126%)					
Bromofluorobenzene		5035/8260B BTEX in Liquid Federal			107	(76%-115%)					
Dibromofluoromethane		5035/8260B BTEX in Liquid Federal			96	(72%-136%)					
Toluene-d8		5035/8260B BTEX in Liquid Federal			111	(80%-116%)					

### Notes:

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- \*\* Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.



Reviewed by

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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BF2562  
Sample ID: 129001012  
Matrix: Water  
Collect Date: 12-JAN-05 16:45  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1822	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0540	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	61	(37%-97%)

## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BF2562  
Sample ID: 129001012

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			64	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			76	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			107	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			96	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			109	(80%-116%)					

### Notes:

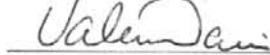
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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**Certificate of Analysis**

Company : SAIC  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BF2662  
Sample ID: 129001003  
Matrix: Water  
Collect Date: 13-JAN-05 09:55  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.402	1.01	ug/L	1	RMB	01/20/05	1525	395114	1
2-Methylnaphthalene		ND	0.503	1.01	ug/L	1					
Acenaphthene		ND	0.503	1.01	ug/L	1					
Acenaphthylene		ND	0.503	1.01	ug/L	1					
Anthracene		ND	0.503	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.503	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.503	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.503	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.503	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.503	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.503	1.01	ug/L	1					
Fluoranthene		ND	0.503	1.01	ug/L	1					
Fluorene		ND	0.503	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.503	1.01	ug/L	1					
Naphthalene		ND	0.111	1.01	ug/L	1					
Phenanthrene		ND	0.503	1.01	ug/L	1					
Pyrene		ND	0.503	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0131	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	73	(37%-97%)



## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BF2662  
Sample ID: 129001003

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			69	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			73	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			107	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			99	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			110	(80%-116%)					

### Notes:

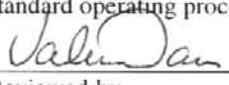
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Reviewed by



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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BF2666  
Sample ID: 129001001  
Matrix: Water  
Collect Date: 13-JAN-05 09:55  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.404	1.01	ug/L	1	RMB	01/20/05	1445	395114	1
2-Methylnaphthalene		ND	0.505	1.01	ug/L	1					
Acenaphthene		ND	0.505	1.01	ug/L	1					
Acenaphthylene		ND	0.505	1.01	ug/L	1					
Anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.505	1.01	ug/L	1					
Fluoranthene		ND	0.505	1.01	ug/L	1					
Fluorene		ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.505	1.01	ug/L	1					
Naphthalene		ND	0.111	1.01	ug/L	1					
Phenanthrene		ND	0.505	1.01	ug/L	1					
Pyrene		ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0036	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	72	(37%-97%)

# GENERAL ENGINEERING LABORATORIES, LLC

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## Certificate of Analysis

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Address : 151 Lafayette Drive  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BF2666  
Sample ID: 129001001

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			65	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			103	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			106	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			100	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			113	(80%-116%)					

### Notes:

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- \*\* Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BF2762  
Sample ID: 129001015  
Matrix: Water  
Collect Date: 13-JAN-05 11:40  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1922	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0702	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	73	(37%-97%)

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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

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Client Sample ID: BF2762  
Sample ID: 129001015

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			69	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			85	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			107	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			95	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			108	(80%-116%)					

### Notes:

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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

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Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

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Client Sample ID: BF3562  
Sample ID: 129001007  
Matrix: Water  
Collect Date: 14-JAN-05 10:20  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1643	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0321	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	70	(37%-97%)

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Client Sample ID: BF3562  
Sample ID: 129001007

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			62	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			89	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			109	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			101	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			109	(80%-116%)					

### Notes:


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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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## Certificate of Analysis

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

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Client Sample ID: BF3662  
Sample ID: 129001006  
Matrix: Water  
Collect Date: 14-JAN-05 11:20  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.404	1.01	ug/L	1	RMB	01/20/05	1624	395114	1
2-Methylnaphthalene		ND	0.505	1.01	ug/L	1					
Acenaphthene		ND	0.505	1.01	ug/L	1					
Acenaphthylene		ND	0.505	1.01	ug/L	1					
Anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.505	1.01	ug/L	1					
Fluoranthene		ND	0.505	1.01	ug/L	1					
Fluorene		ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.505	1.01	ug/L	1					
Naphthalene		ND	0.111	1.01	ug/L	1					
Phenanthrene		ND	0.505	1.01	ug/L	1					
Pyrene		ND	0.505	1.01	ug/L	1					
2-Chloronaphthalene	Uh	ND	0.404	1.01	ug/L	1	RMB	01/25/05	1115	396095	2
2-Methylnaphthalene	Uh	ND	0.505	1.01	ug/L	1					
Acenaphthene	Uh	ND	0.505	1.01	ug/L	1					
Acenaphthylene	Uh	ND	0.505	1.01	ug/L	1					
Anthracene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene	Uh	ND	0.505	1.01	ug/L	1					
Fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Fluorene	Uh	ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene	Uh	ND	0.505	1.01	ug/L	1					
Naphthalene	Uh	ND	0.111	1.01	ug/L	1					
Phenanthrene	Uh	ND	0.505	1.01	ug/L	1					
Pyrene	Uh	ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0253	396607	3
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					

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Client Sample ID: BF3662		Project: SAIC05900									
Sample ID: 129001006		Client ID: SAIC059									
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Volatile Organics Federal											
5035/8260B BTEX in Liquid Federal											
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	NSM	01/24/05	1000	396094
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8270C	
3	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	43	(37%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	37 *	(43%-101%)
p-Terphenyl-d14	3510/8270 PAH Extend list Liquid	57	(49%-126%)
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	78	(37%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	77	(43%-101%)
p-Terphenyl-d14	3510/8270 PAH Extend list Liquid	64	(49%-126%)
Bromofluorobenzene	5035/8260B BTEX in Liquid Federal	108	(76%-115%)
Dibromofluoromethane	5035/8260B BTEX in Liquid Federal	101	(72%-136%)
Toluene-d8	5035/8260B BTEX in Liquid Federal	111	(80%-116%)

**Notes:**

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- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.



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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

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Client Sample ID: BF3662  
Sample ID: 129001006

Project: SAIC05900  
Client ID: SAIC059

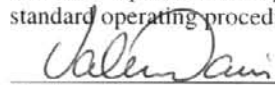
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.  
Y QC Samples were not spiked with this compound.  
h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BF3762  
Sample ID: 129001008  
Matrix: Water  
Collect Date: 14-JAN-05 11:00  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.404	1.01	ug/L	1	RMB	01/20/05	1703	395114	1
2-Methylnaphthalene		ND	0.505	1.01	ug/L	1					
Acenaphthene		ND	0.505	1.01	ug/L	1					
Acenaphthylene		ND	0.505	1.01	ug/L	1					
Anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.505	1.01	ug/L	1					
Fluoranthene		ND	0.505	1.01	ug/L	1					
Fluorene		ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.505	1.01	ug/L	1					
Naphthalene		ND	0.111	1.01	ug/L	1					
Phenanthrene		ND	0.505	1.01	ug/L	1					
Pyrene		ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0349	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	77	(37%-97%)

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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BF3762  
Sample ID: 129001008

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			68	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			90	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			107	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			100	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			110	(80%-116%)					

### Notes:

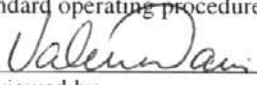
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

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Client Sample ID: BFE162  
Sample ID: 129001009  
Matrix: Water  
Collect Date: 13-JAN-05 14:20  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1723	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		1.63	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		3.14	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		1.24	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0417	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXMI	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	82	(37%-97%)

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## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

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Client Sample ID: BFE162  
Sample ID: 129001009

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5		3510/8270 PAH Extend list Liquid			76	(43%-101%)					
p-Terphenyl-d14		3510/8270 PAH Extend list Liquid			82	(49%-126%)					
Bromofluorobenzene		5035/8260B BTEX in Liquid Federal			106	(76%-115%)					
Dibromofluoromethane		5035/8260B BTEX in Liquid Federal			99	(72%-136%)					
Toluene-d8		5035/8260B BTEX in Liquid Federal			112	(80%-116%)					

### Notes:

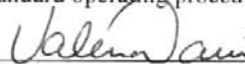
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- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE262  
Sample ID: 129001002  
Matrix: Water  
Collect Date: 13-JAN-05 15:05  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.396	0.990	ug/L	1	RMB	01/20/05	1505	395114	1
2-Methylnaphthalene		ND	0.495	0.990	ug/L	1					
Acenaphthene		ND	0.495	0.990	ug/L	1					
Acenaphthylene		ND	0.495	0.990	ug/L	1					
Anthracene		ND	0.495	0.990	ug/L	1					
Benzo(a)anthracene		ND	0.495	0.990	ug/L	1					
Benzo(a)pyrene		ND	0.495	0.990	ug/L	1					
Benzo(h)fluoranthene		ND	0.495	0.990	ug/L	1					
Benzo(ghi)perylene		ND	0.495	0.990	ug/L	1					
Benzo(k)fluoranthene		ND	0.495	0.990	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.495	0.990	ug/L	1					
Fluoranthene		ND	0.495	0.990	ug/L	1					
Fluorene		ND	0.495	0.990	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.495	0.990	ug/L	1					
Naphthalene		ND	0.109	0.990	ug/L	1					
Phenanthrene		ND	0.495	0.990	ug/L	1					
Pyrene		ND	0.495	0.990	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0103	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	76	(37%-97%)

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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE262  
Sample ID: 129001002

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			69	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			83	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			107	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			98	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			111	(80%-116%)					

### Notes:

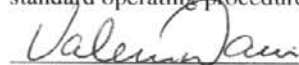
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- H Analytical holding time exceeded.
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- R Sample results are rejected due to sample preservation with HCl.
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- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

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Client Sample ID: BFE264  
Sample ID: 129001004  
Matrix: Water  
Collect Date: 13-JAN-05 15:05  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1544	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0158	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	78	(37%-97%)



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Project: **Hunter Army Airfield LTM**

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Client Sample ID: BFE264  
Sample ID: 129001004

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			69	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			92	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			105	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			97	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			111	(80%-116%)					

### Notes:

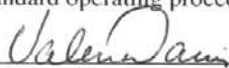
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

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Client Sample ID: BFE362  
Sample ID: 129001005  
Matrix: Water  
Collect Date: 13-JAN-05 15:50  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1604	395114	1
2-Methylnaphthalene		1.38	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		0.313	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0226	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	57	(37%-97%)

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Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

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Client Sample ID: BFE362  
Sample ID: 129001005

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			56	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			61	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			106	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			97	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			114	(80%-116%)					

### Notes:

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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

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Client Sample ID: BFE462  
Sample ID: 129001014  
Matrix: Water  
Collect Date: 13-JAN-05 16:25  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.404	1.01	ug/L	1	RMB	01/20/05	1902	395114	1
2-Methylnaphthalene		1.47	0.505	1.01	ug/L	1					
Acenaphthene		ND	0.505	1.01	ug/L	1					
Acenaphthylene		ND	0.505	1.01	ug/L	1					
Anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.505	1.01	ug/L	1					
Fluoranthene		ND	0.505	1.01	ug/L	1					
Fluorene		ND	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.505	1.01	ug/L	1					
Naphthalene		0.607	0.111	1.01	ug/L	1					
Phenanthrene		ND	0.505	1.01	ug/L	1					
Pyrene		ND	0.505	1.01	ug/L	1					
2-Chloronaphthalene	Uh	ND	0.404	1.01	ug/L	1	RMB	01/25/05	1135	396095	2
2-Methylnaphthalene	h	4.85	0.505	1.01	ug/L	1					
Acenaphthene	Uh	ND	0.505	1.01	ug/L	1					
Acenaphthylene	Uh	ND	0.505	1.01	ug/L	1					
Anthracene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene	Uh	ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene	Uh	ND	0.505	1.01	ug/L	1					
Fluoranthene	Uh	ND	0.505	1.01	ug/L	1					
Fluorene	Jh	0.669	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene	Uh	ND	0.505	1.01	ug/L	1					
Naphthalene	h	1.99	0.111	1.01	ug/L	1					
Phenanthrene	Jh	0.825	0.505	1.01	ug/L	1					
Pyrene	Uh	ND	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0635	396607	3
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					

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Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

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Client Sample ID: BFE462  
Sample ID: 129001014

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Toluene	U	ND	0.390	1.00	ug/L	1					
Xylenes (total)	J	0.897	0.250	1.00	ug/L	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	NSM	01/24/05	1000	396094
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8270C	
3	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	26 *	(37%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	44	(43%-101%)
p-Terphenyl-d14	3510/8270 PAH Extend list Liquid	28 *	(49%-126%)
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	77	(37%-97%)
Nitrobenzene-d5	3510/8270 PAH Extend list Liquid	75	(43%-101%)
p-Terphenyl-d14	3510/8270 PAH Extend list Liquid	68	(49%-126%)
Bromofluorobenzene	5035/8260B BTEX in Liquid Federal	104	(76%-115%)
Dibromofluoromethane	5035/8260B BTEX in Liquid Federal	95	(72%-136%)
Toluene-d8	5035/8260B BTEX in Liquid Federal	112	(80%-116%)

**Notes:**

The Qualifiers in this report are defined as follows :

- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.

**GENERAL ENGINEERING LABORATORIES, LLC**  
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Certificate of Analysis**

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831  
  
Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 3 of 3

Client Sample ID: BFE462  
Sample ID: 129001014

Project: SAIC05900  
Client ID: SAIC059

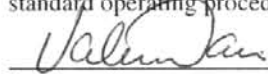
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	--------

- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.  
Y QC Samples were not spiked with this compound.  
h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.



Reviewed by

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## Certificate of Analysis

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Oak Ridge, Tennessee 37831

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 1 of 2

Client Sample ID: BFE562  
Sample ID: 129001010  
Matrix: Water  
Collect Date: 13-JAN-05 16:55  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.404	1.01	ug/L	1	RMB	01/20/05	1743	395114	1
2-Methylnaphthalene		43.2	0.505	1.01	ug/L	1					
Acenaphthene		5.42	0.505	1.01	ug/L	1					
Acenaphthylene		ND	0.505	1.01	ug/L	1					
Anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)anthracene		ND	0.505	1.01	ug/L	1					
Benzo(a)pyrene		ND	0.505	1.01	ug/L	1					
Benzo(b)fluoranthene		ND	0.505	1.01	ug/L	1					
Benzo(ghi)perylene		ND	0.505	1.01	ug/L	1					
Benzo(k)fluoranthene		ND	0.505	1.01	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.505	1.01	ug/L	1					
Fluoranthene		ND	0.505	1.01	ug/L	1					
Fluorene		10.3	0.505	1.01	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.505	1.01	ug/L	1					
Naphthalene		32.9	0.111	1.01	ug/L	1					
Phenanthrene		10.7	0.505	1.01	ug/L	1					
Pyrene		2.37	0.505	1.01	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0444	396607	2
Ethylbenzene		10.4	0.210	1.00	ug/L	1					
Toluene	J	0.429	0.390	1.00	ug/L	1					
Xylenes (total)		34.9	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	84	(37%-97%)

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## Certificate of Analysis

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Contact: Ms. Leslie Barbour  
Project: **Hunter Army Airfield LTM**

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BFE562  
Sample ID: 129001010

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			75	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			95	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			103	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			96	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			109	(80%-116%)					

### Notes:

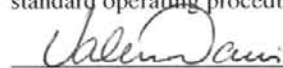
The Qualifiers in this report are defined as follows :

- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

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## Certificate of Analysis

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Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831

Report Date: March 8, 2005

Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

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Client Sample ID: BFE662  
Sample ID: 129001013  
Matrix: Water  
Collect Date: 13-JAN-05 17:35  
Receive Date: 17-JAN-05  
Collector: Client

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-volatile Mass spec Organics Federal</b>											
<i>3510/8270 PAH Extend list Liquid</i>											
2-Chloronaphthalene		ND	0.400	1.00	ug/L	1	RMB	01/20/05	1842	395114	1
2-Methylnaphthalene		ND	0.500	1.00	ug/L	1					
Acenaphthene		ND	0.500	1.00	ug/L	1					
Acenaphthylene		ND	0.500	1.00	ug/L	1					
Anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)anthracene		ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene		ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene		ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene		ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene		ND	0.500	1.00	ug/L	1					
Dibenzo(a,h)anthracene		ND	0.500	1.00	ug/L	1					
Fluoranthene		ND	0.500	1.00	ug/L	1					
Fluorene		ND	0.500	1.00	ug/L	1					
Indeno(1,2,3-cd)pyrene		ND	0.500	1.00	ug/L	1					
Naphthalene		ND	0.110	1.00	ug/L	1					
Phenanthrene		ND	0.500	1.00	ug/L	1					
Pyrene		ND	0.500	1.00	ug/L	1					
<b>Volatile Organics Federal</b>											
<i>5035/8260B BTEX in Liquid Federal</i>											
Benzene	U	ND	0.330	1.00	ug/L	1	GRB2	01/25/05	0607	396607	2
Ethylbenzene	U	ND	0.210	1.00	ug/L	1					
Toluene	J	0.470	0.390	1.00	ug/L	1					
Xylenes (total)	U	ND	0.250	1.00	ug/L	1					

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C BNA Liq. Prep-8270C Analysis Fed	RXM1	01/19/05	1609	395113

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	
2	SW846 8260B	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
2-Fluorobiphenyl	3510/8270 PAH Extend list Liquid	61	(37%-97%)

## Certificate of Analysis

Company : SAIC  
Address : 151 Lafayette Drive  
Oak Ridge, Tennessee 37831  
  
Contact: Ms. Leslie Barbour  
Project: Hunter Army Airfield LTM

Report Date: March 8, 2005

Page 2 of 2

Client Sample ID: BFE662  
Sample ID: 129001013

Project: SAIC05900  
Client ID: SAIC059

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Nitrobenzene-d5	3510/8270 PAH Extend list	Liquid			63	(43%-101%)					
p-Terphenyl-d14	3510/8270 PAH Extend list	Liquid			73	(49%-126%)					
Bromofluorobenzene	5035/8260B BTEX in Liquid	Federal			106	(76%-115%)					
Dibromofluoromethane	5035/8260B BTEX in Liquid	Federal			99	(72%-136%)					
Toluene-d8	5035/8260B BTEX in Liquid	Federal			107	(80%-116%)					

### Notes:

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- \*\* Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

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page 1 of 5

COC NO.: 44TMS1

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																				LABORATORY NAME: General Engineering Laboratory								
PROJECT NUMBER: 01-1055-04-8991-200																								LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407								
PROJECT MANAGER: Patty Stoll																								PHONE NO: (843) 556-8171								
Sampler (Signature) <i>Patty Stoll</i>		(Printed Name) PATRICIA A. STOLL																														
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH																								No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF2666	1/13/05	0955	water	2	2																							2		129001 001		
BFE262		1505		2	2																							2		002		
BF2662		0955		2	2																							2		003		
BFE264		1505		2	2																							2		004		
BFE362		1550		2	2																							2		005		
BF3662	1/14/05	1120		2	2																							2		006		
BF3562		1020		2	2																							2		007		
BF3762		1100		2	2																							2		008		
BFE162	1/13/05	1420		2	2																							2		009		
BFE562		1655		2	2																							2		010		
BF4662	1/12/05	1555		2	2																							2		011		
BF2562		1645		2	2																							2		012		
BFE662	1/13/05	1735		2	2																							2		013		

RELINQUISHED BY: <i>Patty Stoll</i>	Date/Time 1/17/05 1150	RECEIVED BY: <i>T. Stoll</i>	Date/Time 1.17.5 1455	TOTAL NUMBER OF CONTAINERS: <i>911012</i>	Cooler Temperature: <i>4°C</i>
COMPANY NAME: <i>SAC</i>		COMPANY NAME: <i>GEI</i>		Cooler ID: <i>176</i>	FEDEX NUMBER: <i>N/A</i>

RECEIVED BY: <i>Ben Watters</i>	Date/Time 1/17/05 1150	RELINQUISHED BY:	Date/Time	
COMPANY NAME: <i>GEI</i>		COMPANY NAME:		
RELINQUISHED BY: <i>Ben Watters</i>	Date/Time 1/17/05 1455	RECEIVED BY:	Date/Time	
COMPANY NAME: <i>GEI</i>		COMPANY NAME:		



COC NO.: HLTMS1

page 2 of 5

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																		LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8991-200																						LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll																						PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patty Stoll</i>		(Printed Name) PATRICIA A. STOLL																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH													No. of Bottles/ Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
BFE402	4/13/05	1625	water	2		2													2		129001014		
TH0407	4/12/05	0800		2															2		129003001		
TH0408	4/14/05	0800		2															2		129003002		
TH0410	4/16/05	0815			2														2		129005012		
TH0409	4/15/05	0830		2															2		129003003		
AF02C6	4/13/05	1500		2															2		004		
AF02C2		1520		2															2		005		
AF05C2		1445		2															2		006		
AF12C2		1325		2															2		007		
AF07C2		1415		2															2		008		
AN2272	4/14/05	1545		2															2		009		
AK0572		1440		2															2		010		
AK0574		1440		2															2		011		
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time 4/17/05 1150	RECEIVED BY: <i>T. Br...</i>		Date/Time 4/17/05 1455	TOTAL NUMBER OF CONTAINERS: 040112													Cooler Temperature: 4°C				
COMPANY NAME: SAIC			COMPANY NAME: GEL			Cooler ID: 176													FEDEX NUMBER: N/A				
RECEIVED BY: <i>Ben W...</i>		Date/Time 4/17/05 1150	RELINQUISHED BY:		Date/Time																		
COMPANY NAME: GEL			COMPANY NAME:																				
RELINQUISHED BY: <i>Ben W...</i>		Date/Time 4/17/05 1455	RECEIVED BY:		Date/Time																		
COMPANY NAME: GEL			COMPANY NAME:																				

# CHAIN OF CUSTODY RECORD

COC NO.: *HLTM51*

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory	
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407	
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 556-8171	
Sampler (Signature) <i>Patty Stoll</i> (Printed Name) <i>PATRICIA A. Stoll</i>																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH											No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS		
AS0422	1/16/05	1100	water		2												2				
AS0822	↓	1210	↓		2												2				
AS1422	↓	1020	↓		2												2				
BF2762	1/13/05	1140	water	2	8												2		12900105		
<i>Relinquished by SAIC 1/16/05</i>																					
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time: 1/17/05 1150	RECEIVED BY: <i>T. Stoll</i>		Date/Time: 1.17.5 1455	TOTAL NUMBER OF CONTAINERS: 1340/12		Cooler Temperature: 4°C													
COMPANY NAME: SAIC			COMPANY NAME: GEL			Cooler ID: 176		FEDEX NUMBER: N/A													
RECEIVED BY: <i>Ben Watten</i>		Date/Time: 1/17/05 1150	RELINQUISHED BY:		Date/Time:																
COMPANY NAME: GEL			COMPANY NAME:																		
RELINQUISHED BY: <i>Ben Watten</i>		Date/Time: 1/17/05 1455	RECEIVED BY:		Date/Time:																
COMPANY NAME: GEL			COMPANY NAME:																		

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## CHAIN OF CUSTODY RECORD

COC NO.: HLTM52

[illegible]



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## CHAIN OF CUSTODY RECORD

COC NO.: HLTM53

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407			
PROJECT MANAGER: Patty Stoll																				PHONE NO: (843) 556-8171			
Sampler (Signature) <i>Patty Stoll</i>																				(Printed Name) PATRICIA A. STOLL			
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH															No. of Bottles/ Vials	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
BF2562	1/12/05	1645	water		2																2		
BFE562	1/13/05	1655			2																2		
BFE462	1/13/05	1625			2																2		
BFE262	1/13/05	1505			2																2		
BFE162	1/13/05	1420			2																2		
BF2662	1/13/05	0955			2																2		
				<i>Patty Stoll</i> 1/17/05																			
RELINQUISHED BY: <i>Patty Stoll</i>		Date/Time 1/17/05 1150	RECEIVED BY: <i>P. Stoll</i>		Date/Time 1.17.5 1455	TOTAL NUMBER OF CONTAINERS: 12		Cooler Temperature: 4°C															
COMPANY NAME: SATIC			COMPANY NAME: GEL			Cooler ID: 103		FEDEX NUMBER: N/A															
RECEIVED BY: <i>Ben Watkins</i>		Date/Time 1/17/05 1150	RELINQUISHED BY:		Date/Time																		
COMPANY NAME: GEL			COMPANY NAME:																				
RELINQUISHED BY: <i>Ben Watkins</i>		Date/Time 1/17/05 1455	RECEIVED BY:		Date/Time																		
COMPANY NAME: GEL			COMPANY NAME:																				

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# CHAIN OF CUSTODY RECORD

COC NO.: **HLTMS4**

PROJECT NAME: HAAF Long Term Monitoring, D.O. 44				REQUESTED PARAMETERS																		LABORATORY NAME: General Engineering Laboratory			
PROJECT NUMBER: 01-1055-04-8991-200																									
PROJECT MANAGER: Patty Stoll																									
Sampler (Signature) <i>Patty A. Stoll</i> (Printed Name) <b>PATRICIA A. STOLL</b>																									
				LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29407  PHONE NO: (843) 556-8171																					
Sample ID	Date Collected	Time Collected	Matrix	BTEX	VOC	PAH	Oil + Grease	Phenols	pH											No. of Bottles/Vials:	OVA SCREENING	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS			
BFE0462	4/12/05	1555	water			2														2					
BFE662	4/13/05	1735	↓			2														2					
IDW068	4/17/05	1045	↓		2	2	2	1												7		129004			
BFE2762	4/13/05	1140	water			2														2					
<i>P. Stoll 4/17/05</i>																									
RELINQUISHED BY: <i>Patty A. Stoll</i>				Date/Time: 4/17/05 1150		RECEIVED BY: <i>[Signature]</i>				Date/Time: 4/17/05 1455		TOTAL NUMBER OF CONTAINERS: <b>13</b>						Cooler Temperature: <b>4°C</b>							
COMPANY NAME: <b>SAIC</b>						COMPANY NAME: <b>GEL</b>						Cooler ID: <b>793</b>						FEDEX NUMBER: <b>N/A</b>							
RECEIVED BY: <i>Ben Watt</i>				Date/Time: 4/17/05 1130		RELINQUISHED BY:				Date/Time:															
COMPANY NAME: <b>GEL</b>						COMPANY NAME:																			
RELINQUISHED BY: <i>Ben Watt</i>				Date/Time: 4/17/05 1455		RECEIVED BY:				Date/Time:															
COMPANY NAME: <b>GEL</b>						COMPANY NAME:																			

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**ATTACHMENT D**

**WELL CONSTRUCTION DIAGRAMS**

10

# MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0044

WELL NUMBER: BF-MW-35

BEGIN: 6/22/04

END: 6/22/04

COORDINATES: N: 739834.57  
E: 973604.28

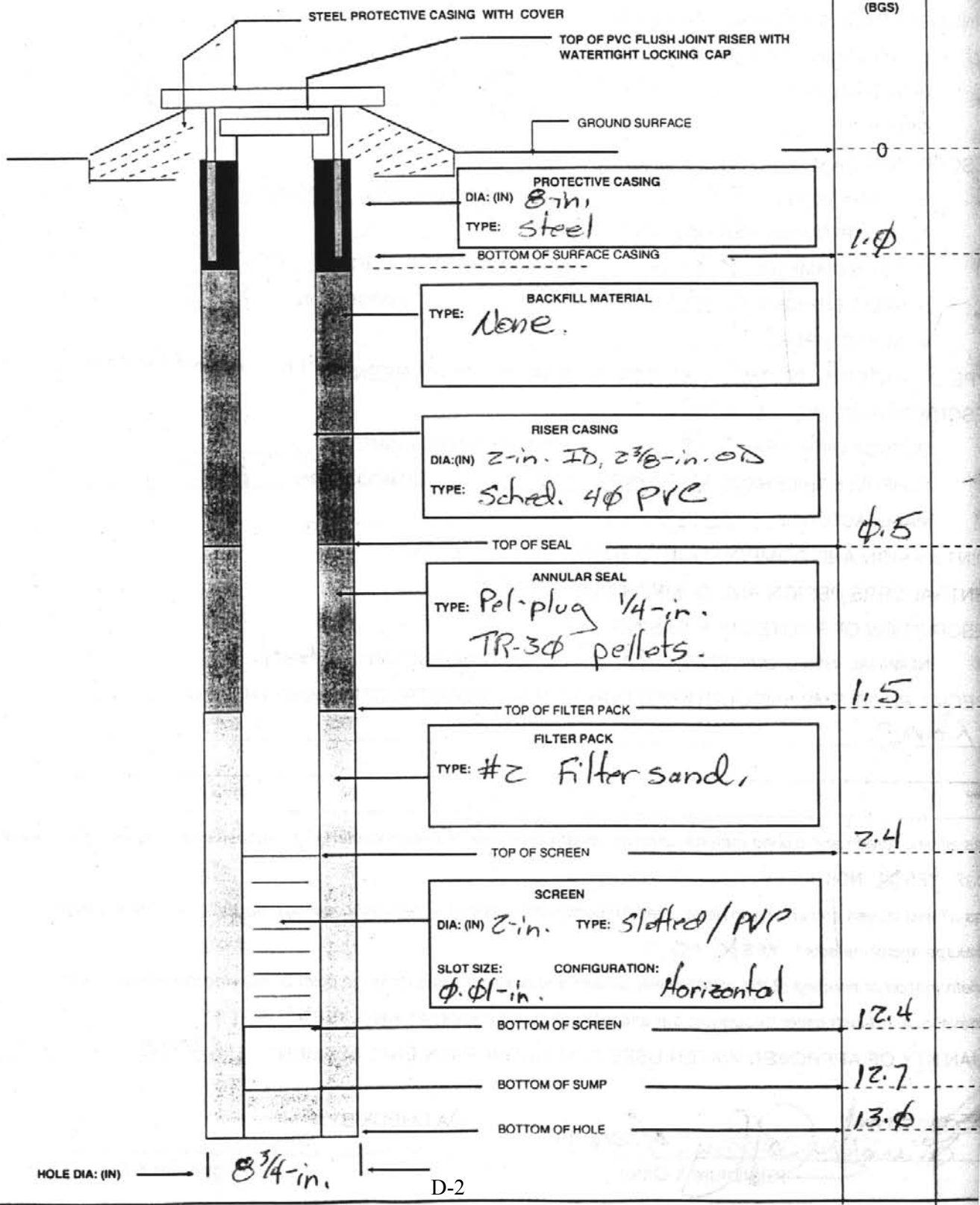
REFERENCE POINT: ELEVATION: DATUM/UNITS:

DATUM/UNITS: NAD83/FT

TOC

14.94

NAD83/FT



21

# MONITORING WELL

PROJECT: Bulk Fuel Facility

DELIVERY ORDER NO: 0044

WELL NUMBER: BF-MW-36

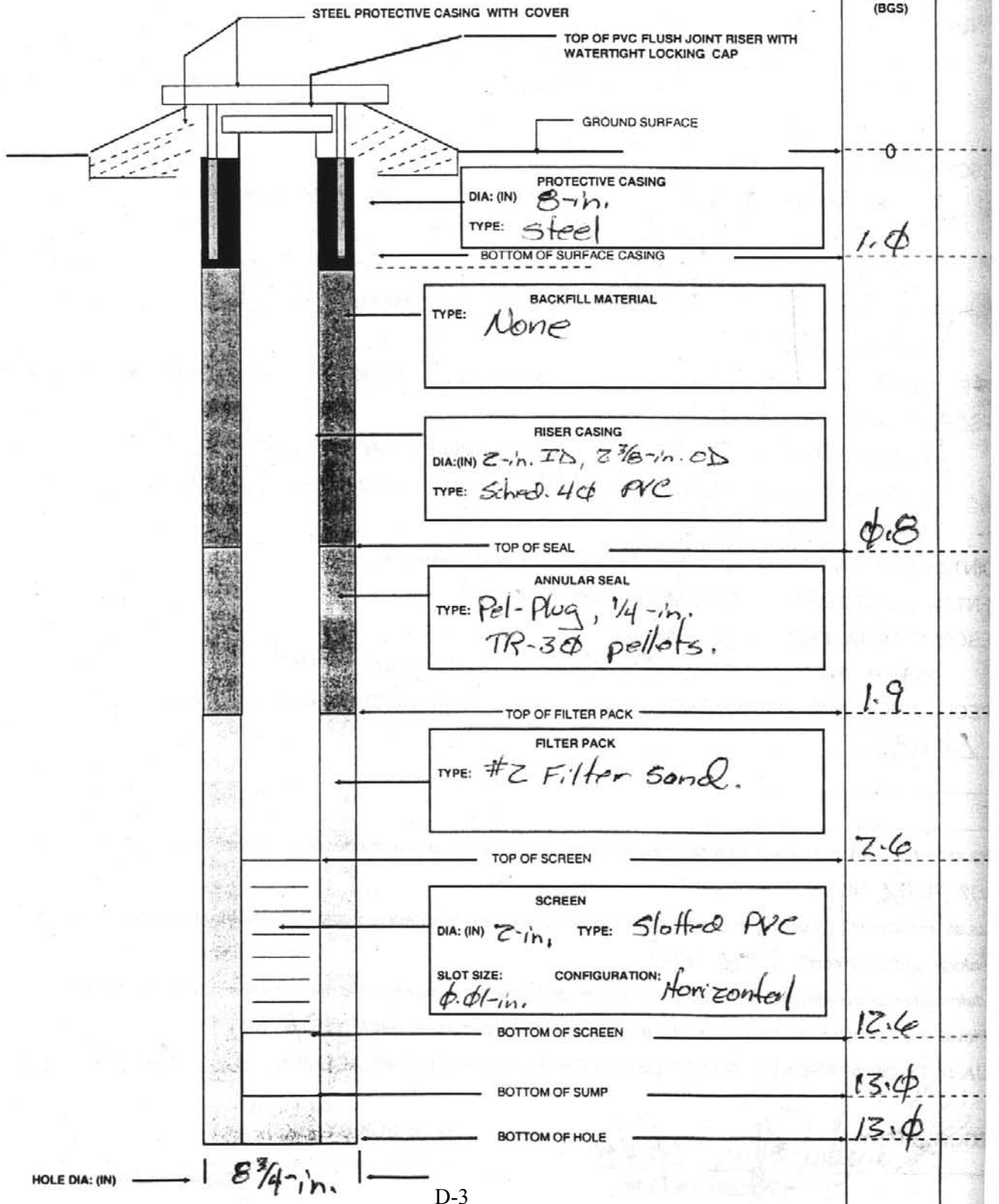
BEGIN: 6/23/04

END: 6/23/04

COORDINATES: N: 739725.51  
E: 973679.39

REFERENCE POINT: TOC ELEVATION: 15.16 DATUM/UNITS: NAVD83/FT

DATUM/UNITS: NAVD83/FT



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MONITORING WELL		DELIVERY ORDER NO: 0044	
PROJECT: Bulk Fuel Facility			
WELL NUMBER: BF-MW-37	BEGIN: 6/23/04	END: 6/23/04	
COORDINATES: N: 739657.72 E: 973622.11	REFERENCE POINT: TOC	ELEVATION: 16.07	DATUM/UNITS: NAD83/FT
DATUM/UNITS: NAD83/FT			

		DEPTH (BGS)	ELEV
STEEL PROTECTIVE CASING WITH COVER			
TOP OF PVC FLUSH JOINT RISER WITH WATERTIGHT LOCKING CAP			
GROUND SURFACE		0	
PROTECTIVE CASING DIA: (IN) 8-in. TYPE: Steel flush-mount		1.0	
BOTTOM OF SURFACE CASING			
BACKFILL MATERIAL TYPE: None			
RISER CASING DIA: (IN) 2-in. ID, 2 3/8-in. OD TYPE: Sched. 40 PVC		4.5	
TOP OF SEAL			
ANNULAR SEAL TYPE: Pel-plug, 1/4-in. TR-30		1.5	
TOP OF FILTER PACK			
FILTER PACK TYPE: #2 Filter sand.		2.3	
TOP OF SCREEN			
SCREEN DIA: (IN) 2-in. TYPE: Slotless/PVC SLOT SIZE: 0.01-in. CONFIGURATION: Horizontal		12.3	
BOTTOM OF SCREEN			
BOTTOM OF SUMP		12.7	
BOTTOM OF HOLE		13.0	
HOLE DIA. (IN) 8 3/4-in.			