U.S. Army

Final
UST Corrective Action Plan
Part A Building 419,
Fort Stewart, Georgia

IMA

November 2013

Submitted to:

Directorate of Public Works
Environmental Division
Fort Stewart, Georgia 31314-4927

Submitted by:

U.S. Army Corps of Engineers
Savannah District
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604

Prepared by:

SpecPro Environmental Services LLC
1006 Floyd Culler Court
Oak Ridge, Tennessee 37830
under
Contract No. W912HN-10-D-0001
Delivery Order No. 0029

DOCUMENT 4

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LIST OF ABBREVIATIONS AND ACRONYMS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CAP	Corrective Action Plan
DRO	diesel range organics
EFR	enhanced fluid recovery
EPA	U.S. Environmental Protection Agency
EPD	Environmental Protection Division
ft	foot/ feet
GA	Georgia
GUST	Georgia Underground Storage Tank guidance
Hg	mercury
ISWQS	In-Stream Water Quality Standards
MCL	maximum contaminant level
µg/L	micrograms per liter
MTBE	methyl tertbutyl ether
mg/kg	milligram per kilogram
NWIS	National Water Information System
N/A	not applicable
PA	Preliminary Assessment
PAH	polynuclear aromatic hydrocarbons
SES	SpecPro Environmental Services LLC
STEP	Solutions to Environmental Problems, Inc.
TPH	total petroleum hydrocarbons
USGS	United States Geological Survey
UST	underground storage tank
USTMP	Underground Storage Tank Management Program
VOC	volatile organic compound

CORRECTIVE ACTION PLAN PART A

Facility Name: Building 419

Street Address: Steele Avenue

Facility ID: N/A City: Fort Stewart

County: Liberty Zip Code: 31314

Submitted by UST Owner/Operator:
Name: Thomas C. Fry/Environmental Division
Company: U.S. Army/HQ 3rd, Inf. Div (Mech)
Address: Directorate of Public Works, Bldg 1137
1550 Veterans Parkway
City: Fort Stewart State: GA
Zip Code: 31314 - 4927
Telephone: (912) 767-2010

Prepared by Consultant/Contractor:
Name: Jeffrey Williams, P.E.
Company: SES LLC
Address: 1006 Floyd Culler Court
City: Oak Ridge State: TN
Zip Code: 37830
Telephone: (865) 481-7837

I. PLAN CERTIFICATION

A. UST OWNER/OPERATOR:

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

Name: _____

Signature: _____

Date: _____

B. REGISTERED PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST:

I hereby certify that I have directed and supervised the field work 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: JEFFREY C. WILLIAMS

Signature: Jeffrey C Williams

Date: 11/18/13



Georgia Stamp or Seal

II. INITIAL RESPONSE REPORT

A. INITIAL ABATEMENT

Were initial abatement actions initiated? ☑ Yes __No

If yes, please summarize.

Figure 1 (Appendix I) shows the location of the site. A January 4, 2008, inquiry to an inventory discrepancy indicated that approximately 4,500 gallons of No. 2 heating fuel oil were released into the ground behind Building 419 near Steele Avenue on the west side of the loading dock. Mr. Scott Coburn of the Georgia Environmental Protection Division (EPD) Spill Response Center was notified the day the spill was discovered. It was determined that the release came from the water heating boiler fuel oil return line that was connected to a 4,000-gallon underground storage tank (UST) containing heating oil. Fort Stewart initiated the emergency spill response in close coordination with Georgia EPD. Fort Stewart contracted with SWS First Response to determine the extent of contamination, to remove contaminated soil down to groundwater infiltration, and to remove the UST [Figure 2, Site Plan (Appendix I)]. SWS First Response completed the UST and soil removal on February 7, 2008. (SES Final Work Plan Addendum for Heating Oil Spill Site Investigation Building 419, Fort Stewart, Georgia. SES July 2013, Revision 1).

B. FREE PRODUCT REMOVAL

Free Product Detected? ☑ Yes __No

If yes, please summarize free product recovery efforts.

Continuing free product recovery proposed? ☑ Yes __No

If yes, indicate the method and frequency of removal. Manual bailing or passive skimming ***is not*** *allowed beyond 60 days.*

On February 12, 2008, Solutions to Environmental Problems, Inc. (STEP) installed six recovery wells near the location of the former tank. The next day four of the wells contained free product. Refer to Figure 2a (Appendix I) for location of the recovery wells. Water levels readings and free product thicknesses were obtained on February 13, 2008 as shown in Table 1 (Appendix II).

After the recovery wells were installed, a vacuum extraction truck from Fort Stewart recovered approximately 1,475 gallons of fuel between February 2008 and November 2008 as summarized in Table 2 (Appendix II).

When additional funding became available in Fiscal Year 2011, SpecPro Environmental Services LLC (SES) was contracted to conduct a preliminary site investigation. In addition to the site investigation, a total of three enhanced fluid recovery (EFR) events were performed at the site (June 2011, July 2011, and August 2011). Prior to each event, and after each event, water level readings were obtained from each recovery well as listed on Table 4 (Appendix II). EcoVac Services provided a multiphase extraction system capable of providing up to 20 inches Hg vacuum and up to 20 gallons per minute influent flow rate. The EFR system removed a total of 611 pounds of petroleum hydrocarbons vapor. Total liquid removed was 7,667 gallons with 90 gallons of total product removed during 22 hours of operation as shown in Table 3 (Appendix II). All recovered liquid was transported to the EQ Augusta's treatment facility in Augusta, Georgia, for disposal (Final Preliminary Assessment Report for Heating Oil Spill Site Investigation at Building 419, Fort Stewart, Georgia, August 2012).

Free product recovery is proposed to continue at this site as discussed in the Site Investigation Plan Section.

C. TANK HISTORY

List current and former USTs operated at the site based on owner/operator knowledge [consistent with Environmental Protection Agency (EPA) 7530-1 Form].

CURRENT UST SYSTEMS (IF APPLICABLE)
The UST System was removed in February 2008.
FORMER UST SYSTEMS (IF APPLICABLE)
The 4,000-gallon UST provided heating oil to serve Building 419. After the leak was discovered, SWS First Response removed the tank (SES Final Work Plan Addendum for Heating Oil Spill Site Investigation Building 419, Fort Stewart, Georgia. SES July 2013, Revision 1). Refer to Figure 2 for former tank location. First Response's report is included in Appendix VIII.

D. INITIAL SITE CHARACTERIZATION

1. **Regulated Substances Released (gasoline, diesel, used oil, etc.):**
   Discuss how this determination was made and circumstances of discovery (i.e., previous work, Phase II, tank closure reports).

A January 4, 2008, inquiry to an inventory discrepancy indicated that approximately 4,500 gallons of No. 2 heating fuel oil were released into the ground behind Building 419 near Steele Avenue on the west side of the loading dock as shown on Figure 2 (Appendix I). It was determined that the release came from the water heating boiler fuel oil return line that was connected to a 4,000-gallon UST containing heating oil.

2. **Source(s) of Contamination**
   Discuss how this determination was made.

During the UST removal process, it was determined that the source of the fuel oil contamination was from a piping leak as shown in Figure 2 (Appendix I). Free product was found as a result of the free product entering the excavation during the UST removal. Recovery wells installed by STEP confirmed the free product at the site.

3. **Local Water Resources:**
   Check the methods used to identify all potential water resources within the search radii.
   Check the "documentation provided" box if documentation was provided.

Local water resources information is included in Appendix III and shown on Figure 3 (Appendix I).

Detailed field reconnaissance	Documentation provided – YES
USGS database search	Documentation provided – YES
EPD database	Documentation provided – NO
Communication log with city/county authority	Documentation provided – YES
Surveyed neighbors	Documentation provided – YES
Other (specify)	Documentation provided – NO

a. Site Located in:	☑ High/average	Low susceptibility area

	susceptibility area	
b. Water Supplies within applicable radii?	☑ Yes	No
If yes to b. above, i. Exact distance to nearest public water supply	Approximately 1,800 feet	Direction from Release? Southwest
ii. Exact distance to nearest downgradient public water supply	Approximately 14,000 feet	Direction from Release? North
iii. Exact distance to nearest nonpublic water supply	Approximately 2000 feet	Direction from Release? North
iv. Exact distance to nearest downgradient nonpublic water supply	Approximately 2000 feet	Direction from Release? North
c. Surface water bodies and sewers:		
i. Distance to the nearest surface water body:	Approximately 50 feet	Direction from Release? North
ii. Distance to nearest down gradient surface water body:	Approximately 75 feet	Direction from Release? North
iii. Distance to nearest storm or sanitary sewer:	Approximately 50 feet	Direction from Release? East
iv. Depth to bottom of sewer at the point nearest the plume:	Approximately 6 feet	Direction from Release? East

4. Environmental Media

a. Soil Impacted?	☑ Yes	No
If yes, what is the soil threshold level for benzene?	0.008 milligrams per kilogram (mg/kg) [Georgia Underground Storage Tank Management Program (GA USTMP) Table A, Soil Threshold Levels. (Average or Higher Groundwater Pollution Susceptibility Area, where public water supplies exist within 2.0 miles or nonpublic supplies exist within 0.5 miles) and greater than 500 feet to a withdrawal point, Table A, Column 2]	
Specify which method used for sampling volatile organic compounds (VOCs)	Method 5035 using Encore Samplers and Terracore Samplers.	

Provide a brief discussion of soil sampling.

Soil sampling was conducted in accordance with "Soil Sampling Procedure" (EPA Region 4, December 2011). Soil sampling was conducted using direct push methodology using acetate butyrate liners to obtain continuous samples from the ground surface (or immediately below the asphalt/gravel) to the bottom of the boring, and Encore samplers and stainless steel spoons were used to obtain the sample from the liner at the appropriate depth. In March 2011, SES installed 21 soil borings to delineate free product at the site and to determine the extent of the soil contamination. Soil boring locations are on Figure 4 (Appendix I) and the boring logs are included in Appendix IV. One soil boring (SB-10) was installed in the vicinity of suspected release source area with other borings installed outwardly from that point. The soil borings were installed downgradient of the suspected release as shown in Figure 4 (Appendix I). The location of the loading dock and building did not allow for borings to be installed immediately upgradient. The soil borings were sampled continuously, described and classified by a geologist, and field screened using a photoionization detector. Two soil samples were obtained from each boring. Figure 4a (Appendix I) shows the benzene, toluene, ethylbenzene, and total xylenes (BTEX) results [concentration greater than the Georgia Underground Storage Tank guidance (GUST) detection

Limit]. Soil laboratory analyses are in Appendix V and are listed in Table 5 and Table 6 of Appendix II. At soil boring SB-10, a sample (sample SB10-01) was obtained from the 6 ft to 7 ft interval. Benzene was estimated at 0.504 mg/kg, ethylbenzene was detected at 3.780 mg/kg, toluene was not detected above the GUST detection limit and xylene was detected at 3.4 mg/kg. The Table A threshold for benzene 0.008 mg/kg, toluene is 6.00 mg/kg, ethylbenzene is 10.00 mg/kg and xylene is 700 mg/kg. Benzene was the only VOC parameter exceeding its threshold criteria. Polynuclear aromatic hydrocarbons (PAHs) were not detected but the detection limits ranged from 20.0 mg/kg to 90.8 mg/kg as compared to a GUST detection limit of 0.660 mg/kg. There are no soil threshold values for PAHs. Total petroleum hydrocarbons (TPH) diesel range organics (DRO) were detected at 22,100 mg/kg, as compared to a GUST detection limit of 10 mg/kg. The BTEX results for the deeper samples (concentrations greater than the GUST detection limit) is shown in Figure 4b of Appendix I. At the 7 ft to 8 ft interval of soil boring SB-10, sample SB10-02 showed BTEX and PAHs to be undetected above the GUST detection limits, and TPH DRO was detected at 16.2 mg/kg (above the GUST detection limit of 10 mg/kg). In addition, three of the remaining borings (SB16, SB17, and SB18) showed benzene concentrations that exceeded the Table A soil threshold value from the shallow sample, with benzene concentrations ranging from 0.029 mg/kg (SB17-01) to 0.143 mg/kg (SB16-01). The deeper interval sampled showed three borings with benzene concentrations exceeding the Table A threshold criteria. Boring SB-13 (sample SB13-02), SB-16 (sample SB16-02), and SB-17 (sample SB18-02) reported benzene ranging from 0.059 mg/kg (SB16-02) to 0.183 mg/kg (SB13-02). All samples reporting elevated benzene concentrations were from the area nearest the free product wells. TPH DRO from the deeper interval at SB13 (sample SB13-02) had DRO at 13,900 mg/kg; SB-16 (sample SB16-02) had DRO at 8,310 mg/kg; and SB-17 (sample SB17-02) had DRO at 163 mg/kg. BTEX in the remaining samples from soil borings to the east, north, and west of the free product wells were all less than the GUST detection limit for the shallow and deep samples. Therefore the soil contamination has been delineated in areas to the east, north, and west of the free product wells. All soil borings not used for monitor wells were promptly backfilled with bentonite chips and abandoned. (Final Preliminary Assessment Report for Heating Oil Spill Site Investigation at Building 419, Fort Stewart, Georgia, August 2012). The Final Preliminary Assessment and Site Investigation Report was submitted and reviewed by the GA EPD in August 2012. The GA EPD approved the installation of additional monitor wells and the preparation of a CAP-Part A (reference letter from James S. Guentert, Georgia EPD Solid Waste Management Program to Ms. Tressa Rutland, Fort Stewart dated August 27, 2012).

In July 2013 and August 2013, SES installed three soil borings to complete the soil delineation at the site. Figure 4c (Appendix I) shows the boring locations and the geologic logs are in Appendix IV. Soil boring SB-22 was installed north and east of the free product plume north of Building 419, soil boring SB-23 was installed southeast of the free product plume on the east side of Building 419, and Soil borings SB-24 and SB-25 were installed southwest of the free product plume on the west side of Building 419 as shown in Figure 4c (Appendix I). (It is noted that the well in soil boring SB-24 could not be developed, so its replacement well required the installation of soil boring SB-25.) Soil sampling was conducted in accordance with "Soil Sampling Procedure" (EPA Region 4, December 2011). Soil sampling was conducted using direct push methodology using acetate butyrate liners to obtain continuous samples from the ground surface (or immediately below the asphalt/gravel) to the bottom of the boring, and Encore samplers and stainless steel spoons were used to obtain the sample from the liner at the appropriate depth. A surface sample (first soil encountered from the 1 ft to 3 ft depth interval) was obtained from each boring, and a second sample was obtained from each boring above the water table. The soil samples were analyzed for BTEX and methyl tertbutyl ether (MTBE), PAHs, and TPH DRO. Laboratory analyses sheets are in Appendix V, and the analytical results are listed in Table 7 and Table 8 of Appendix II. The analyses for the surface samples revealed that two borings (SB-22 and SB-23) reported BTEX concentrations as not detected with elevated estimated detection limits that were above the GUST detection limit; PAHs were not detected in any surface sample above the GUST detection limit; and TPH DRO was detected in each sample with values ranging from 18.3 mg/kg to 46 mg/kg. The analyses from the subsurface samples did not report BTEX concentrations above the GUST detection limit; PAHs were not detected in the subsurface samples;

and TPH DRO reported concentrations ranging from a non-detect in the deep sample from SB-23 to 42.3 mg/kg from boring SB-24. Since the deeper soil samples did not have concentrations of BTEX or PAHs above the GUST detection limit it is concluded that the soil contamination is limited to the area containing the free product.		
Is soil contamination above applicable threshold levels?	☑ Yes	No
If yes, indicate highest benzene concentration in soil.	0.504 mg/kg (3/29/11) – Now Monitor well MW-04 reporting free product.	
Give the Sample ID for the sample above:	SB-10-01 – Now Monitor well MW-04 reporting free product.	
Also, give the depth at which it was detected	6-7 ft	
b. Groundwater Impacted?	☑ Yes	No
If yes, check which water quality standard applies?	Drinking water Standard maximum contaminant level (MCL)	☑ In-Stream Water Quality Standards (ISWQS)

Provide a brief discussion of groundwater sampling.

Groundwater monitor wells were installed and developed in accordance with "Design and Installation of Monitoring Wells" (EPA Region 4, January 2013) using hollow stem augers. Groundwater samples were obtained in accordance with "Groundwater Sampling" (EPA Region 4, March 2013), using the low flow technique with a variable speed peristaltic pump with teflon tubing. Samples for volatile organic analyses were obtained using the peristaltic pump/straw method. In April 2011, six of the soil boring locations discussed previously were selected to be groundwater monitor well locations. These locations were selected based upon the contaminant source area to delineate the extent of possible groundwater contamination from the source area as shown in Figure 5 (Appendix I) (groundwater wells MW-01, MW-02, MW-03, MW-04, MW-05, and MW-06). Monitor well schematics are in Appendix VI. The new groundwater monitor wells were allowed to equilibrate with the localized groundwater conditions. Depths to water and free product thickness was measured in all wells at the site to determine the groundwater flow direction and gradient. Table 4 (Appendix II) lists the water level readings, and Figure 6 (Appendix I) shows the potentiometric surface. The groundwater flow direction is to the north with a gradient of 0.019 feet per foot. Free product was measured and recorded to estimate the extent of the free product in the subsurface in April 12, 2011 from wells RW-01, RW-03, RW-04, and RW-05. Groundwater samples were obtained from the six new wells on April 12 and the groundwater samples were analyzed for BTEX and PAHs. Laboratory analyses sheets are in Appendix VII and are listed in Table 9 and Table 10 of Appendix II. BTEX was detected in only one well (MW-04) with an ethylbenzene concentration of 19.8 micrograms per liter (µg/L) and xylene concentration of 112 µg/L both exceeding the GUST detection limit of 5 µg/L. The ISWQS for ethylbenzene is 28,718 µg/L and xylene does not have an ISWQS for comparison. PAHs were not detected above the GUST detection limit of 10 µg/L in any sample from the new wells. Monitor well MW-04 reported free product in that well just before the June 12, 2011 EFR event. (Final Preliminary Assessment Report for Heating Oil Spill Site Investigation at Building 419, Fort Stewart, Georgia, August 2012). Therefore it was determined that the dissolved petroleum contamination is limited to the area containing the free product. Groundwater is not contaminated in areas to the west, north (down gradient) or west of the site. The loading dock and building 419 prevented wells from being installed in areas immediately south (up gradient) of the site. SES recommended completing a Corrective Action Plan (CAP)-Part A for the UST release with installation of three to five soil boring locations and groundwater monitor wells for contamination and free product delineation. After the free phase product is delineated, a pilot study consisting of surfactant injection and multiphase extraction was recommended to address the free phase product on the site. The Final Preliminary Assessment (PA) and Site Investigation (SI) Report was submitted and reviewed by the GA EPD in August 2012. The GA EPD approved of installation of additional monitor wells and the preparation of a CAP-Part A (reference letter from James S. Guentert, Georgia EPD Solid Waste Management Program to Ms. Tressa Rutland, Fort Stewart dated August 27, 2012).

In July 2013 and August 2013, SES installed monitor wells to complete the groundwater delineation at the site. Monitor well MW-07, in soil boring SB-22, was installed north and east of the free product plume north of Building 419, and monitor well MW-08, in soil boring SB-23, was installed southeast of the free product plume on the east side of Building 419. Monitor well MW-09 was installed in soil boring SB-24. It is noted that groundwater monitor well MW-09 encountered heaving sand during development, destroying the well screen, and that well was overdrilled, backfilled with grout, and abandoned. A well abandonment log is provided in Figure 5c (Appendix I). Monitor well 09-A, in soil boring SB-25, was installed near well MW-09 southwest of the free product plume on the west side of Building 419 as shown in Figure 5a (Appendix I). The groundwater monitor wells were installed and developed in accordance with "Design and Installation of Monitoring Wells" (EPA Region 4, January 2013) using hollow stem augers. Monitor well schematics are in Appendix VI. On August 8, 2013, the three groundwater monitor wells were sampled. Depths to water and free product thickness were measured in all wells at the site to determine the groundwater flow direction and gradient. Table 4 (Appendix II) lists the water level readings, and Figure 6a Appendix I) shows the potientiometric surface. The groundwater flow direction is to the north with a gradient of 0.012 feet per foot. Groundwater samples were obtained from monitor wells MW-07, MW-08, and MW-09A in accordance with "Groundwater Sampling" (EPA Region 4, March 2013) using the low flow technique with a variable speed peristaltic pump with teflon tubing. Samples for volatile organic analyses were obtained using the peristaltic pump/ straw method. Free product was measured in RW-04, RW-05, RW-06, and MW-04. Free product thicknesses are listed in Table 4 of Appendix II. Laboratory analyses are in Appendix VII and are listed in Table 11 and Table 12 of Appendix II. Sample results show all BTEX and PAH analytes were not detected above the GUST detection limits for the three wells. Therefore, it is determined that the groundwater contamination is limited to the area of the free product and additional groundwater delineation should not be required.		
i. Groundwater contamination above MCLs?	☑ Yes – Free Product	No
ii. Groundwater contamination above ISWQS?	Yes	☑ No
If yes, indicate highest benzene concentration and the monitor well number	N/A – All benzene concentrations below GUST detection limit.	N/A
c. Surface Water Impacted?	Yes	☑ No
If yes, indicate benzene concentration(s) of surface water sample(s) taken from the surface water body impacted.	A Surface Water sample was taken by Fort Stewart personnel on February 11, 2008 at the storm drain north of Steele Avenue as shown on Figure 2. Analyses are included in Appendix III.	
d. Point of Withdrawal Impacted?	Yes	☑ No
If Yes, indicate benzene concentration(s) of water sample(s) taken from withdrawal point(s).	Not applicable – Point of withdrawal not sampled	

5. Other Geologic/Hydrogeologic Data

a. Depth to groundwater (range):	4.61 ft to 9.37 ft
b. Groundwater Flow Direction:	North
c. Hydraulic Gradient:	0.012 feet per foot
d. Physiographic Province	Coastal Plain physiographic province
e. Unique	

hydrogeologic/geologic conditions	

6. **Corrective Action Completed**

UST System Closed?	☑ Yes No	UST Closure Report Attached?	Yes ☑ No
Phase II Completed?	Yes ☑ No	Phase II Attached?	Yes ☑ No

7. **Site Ranking:**
The site ranking form is in Appendix X.

Environmental Site Sensitivity Score:	294,878

8. **Conclusions and Recommendations**
Choose one option below only and provide justification for the option selected.

a. No Further Action Required
Justification:

b. Implementation SIP followed by completion and submittal of SISR
Justification:
The vertical and horizontal extent of soil contamination has been determined. It is limited to the area containing the free product at the site as discussed. An Enhanced Fluid Recovery Pilot test is proposed for this site to continue to remove the free product at the site and to determine if the addition of a surfactant in conjunction with EFR will expedite the free product removal. Refer to Item III below for additional information.

c. CAP-Part B
Note: Only if delineation has been adequately achieved in the CAP-Part A

III. SITE INVESTIGATION PLAN

A pilot study using EFR with the addition of a Surfactant is proposed. SES proposes to have EcoVac Services implement their proprietary SURFAC® technology (U.S. Patent No. 6,158,924) at the Building 419 site to remove separate phase hydrocarbons (SPH). SURFAC® involves the combination technology of surfactant injection and capture coupled with multi-phase/dual-phase extraction. EcoVac has already conducted three EFR events at the site and phase behavior testing has already been conducted to determine the surfactant formulation best suited for this site. A two-day (8-hour/day) SURFAC® event will be performed at a maximum of four wells (MW-04, RW-04, RW-05, RW-06) to: (1) determine the surfactant injection volumes/locations/sequence; (2) achieve contaminant removal by the multi-phase/dual-phase extraction process; (3) assess the potential need for additional treatment wells; (4) determine the need for additional SPH removal, and; (5) determine the duration of the surfactant injection/capture events. It is also noted that SURFAC® will be implemented only after the (equilibrium) free product thickness is ~0.50 feet/well or less. Therefore a two-day EFR event is needed to reduce the free product thickness, then seven 8-hour extraction/surfactant injection/capture events will be conducted at a maximum of four wells (MW-04, RW-04, RW-05, RW-06). A maximum of 3,000 gallons of diluted surfactant mixture is assumed. It is currently planned that the first phase of the pilot test (two-day event) is scheduled for December 9 and 10, 2013. The two-day extraction event to reduce thicknesses will be

January 7 and 8, 2014, and the seven SURFAC events will be February 3 through 7 plus February 10 and 11, 2014. After this pilot test is completed, the groundwater at the site will be monitored on a quarterly basis to determine the effectiveness of the pilot test.

IV. PUBLIC NOTICE

The Tax Map is shown on Figure 9 (Appendix I) that shows no other property owners are in the vicinity of Building 419 at Fort Stewart. The proposed newspaper notice is below.

NEWSPAPER NOTICE

The Georgia Environmental Protection Division has required Fort Stewart's Directorate of Public Works to prepare a Corrective Action Plan Part A to investigate and/or clean up contamination at the Building 419 Site, Fort Stewart, Georgia. This plan will be submitted to the Georgia Environmental Protection Division on or before November 29, 2013. If you want to examine a copy of the plan, a public display copy is available for review at the Liberty County Public Library (Reference Section), 236 Memorial Drive, Hinesville, GA (912) 368-4003, or if you contact Algeana Stevenson at (912) 315-5144, a copy will be mailed at a nominal fee. Comments to the plan will be accepted until December 30, 2013, and should be directed to the Georgia Environmental Protection Division at (404) 362-2687. Mailing address: Georgia Environmental Protection Division Underground Storage Tank Management Program, 4244 International Parkway, Suite 104, Atlanta, GA 30354. Any questions for Fort Stewart Directorate of Public Works should be directed to Algeana Stevenson at (912) 315-5144.

V. REIMBURSEMENT (CHECK IF APPLICABLE)

Yes ☑ No

Fort Stewart is a federally owned facility and has funded the investigation for the Building 419 site, using U.S. Department of Defense Environmental Restoration Account Funds. Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.

VI. REFERENCES

Environmental Protection Agency (EPA) Region 4, December 2011. "Soil Sampling" (SESDPROC-300-R2).

EPA Region 4, January 2013. "Design and Installation of Monitoring Wells" (SESDGUID-101-R1).

EPA Region 4, March 2013. "Groundwater Sampling" (SESDPROC-301 R3).

EPA Region 4, November 2007. *Field Branches Quality System and Technical Procedures.*

Georgia DNR EPD, January 2011. *Corrective Action Plan Part A Guidance Document 2011.*

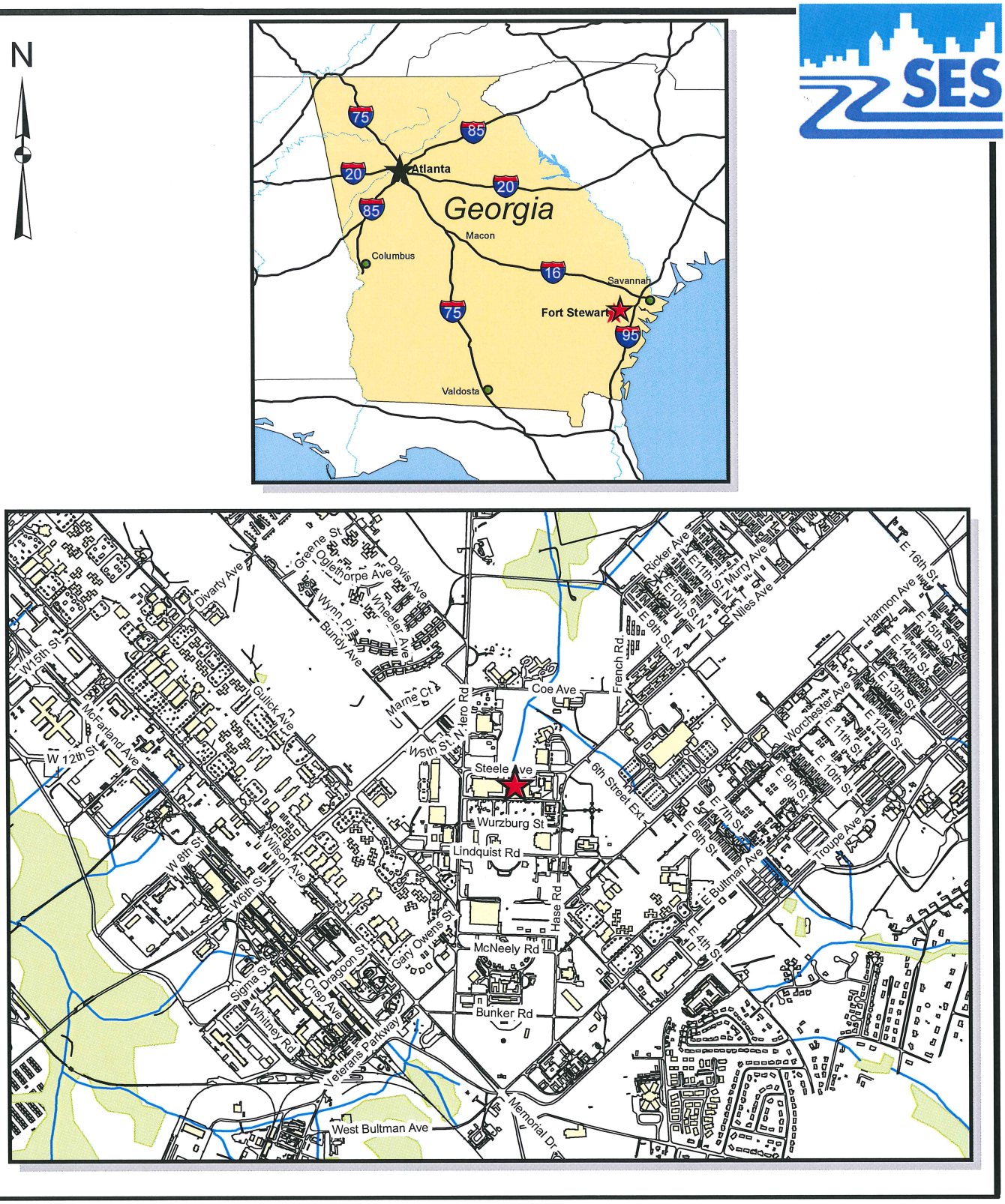
SpecPro Environmental Services (SES), August 2012. *Final Preliminary Assessment and Site Investigation Report for Heating Oil Spill Site Investigation at Building 419 Fort Stewart, Georgia.*

SES, July 2013, Revision 1. *Final Work Plan Addendum for Heating Oil Spill Site Investigation Building 419, Fort Stewart, Georgia.*

U.S. Army Corps of Engineers Savannah District, February 2012. "Scope of Work for Heating Oil Spill Site Investigation Building 419 Fort Stewart, Georgia."

Guentert, James S. Letter to Tressa Rutland, August 2012. *Heating Oil Spill Site, Bldg 419—Ft. Stewart, Georgia.*

APPENDIX I
REPORT FIGURES



LEGEND

Site Location

Job Title: CAP A Building 419
Fort Stewart, Georgia
Source: ESRI, Fort Stewart GIS

Figure 1 Site Location Map

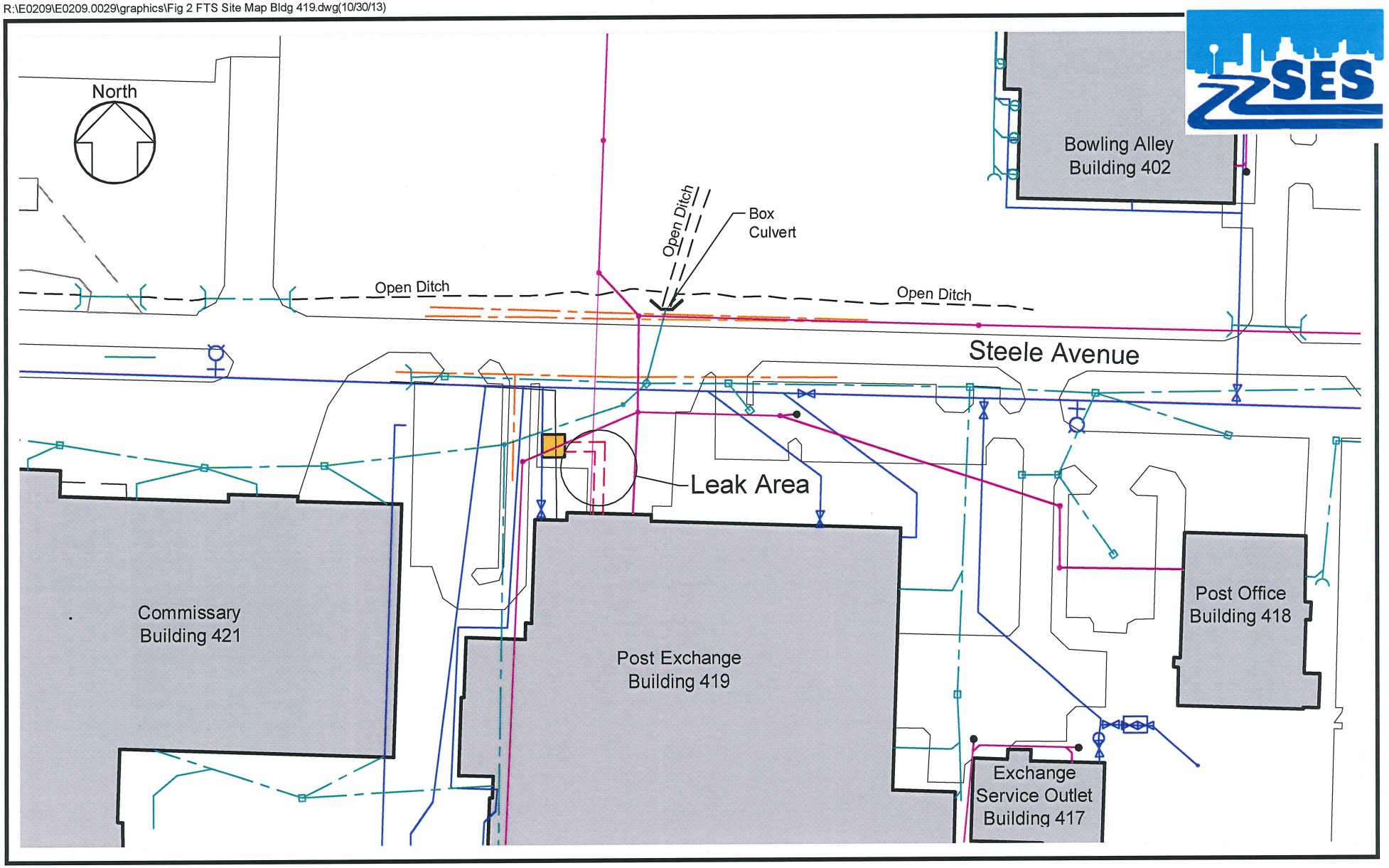
R:/Projects/E0209.0029/Graphics/Fort Stewart Fig 1 Site Location Map.mxd 10/30/13

E0209.0029

10/31/13

R:\E0209\E0209.0029\graphics\Fig 2 FTS Site Map Bldg 419.dwg(10/30/13)

E0209.0029



Legend

Roads
Buildings
Storm Water
Former UST
UST Piping (removed)
Sanitary Sewer
Water Line
Communications
Open Ditch

100' 0 100'
SCALE: 1" = 100'

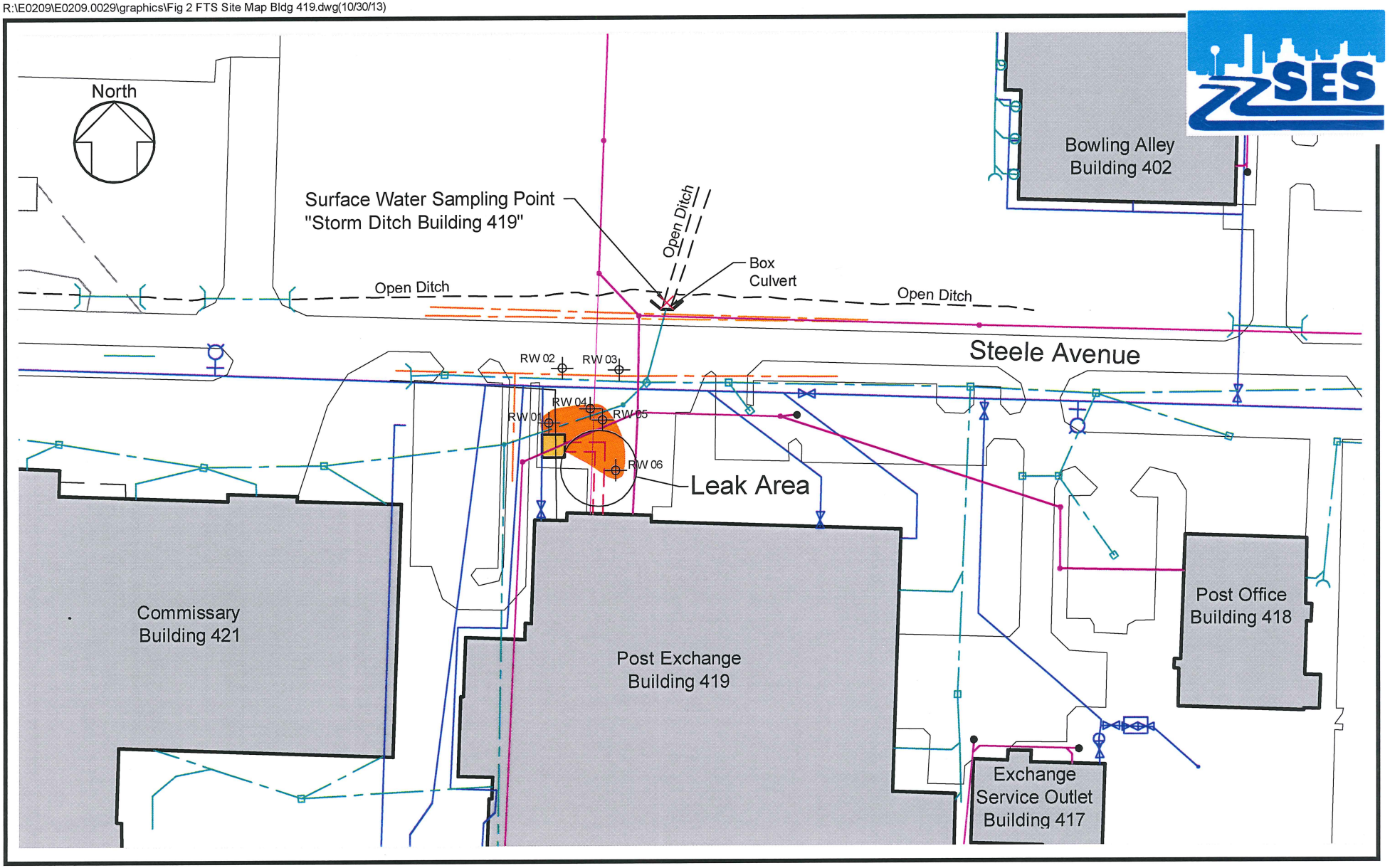
Job Title: CAP A Building 419
Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 2 Site Map

10/31/13

R:\E0209\E0209.0029\graphics\Fig 2 FTS Site Map Bldg 419.dwg(10/30/13)

E0209.0029



Legend

- Roads
- Buildings
- Storm Water
- Former UST
- UST Piping (removed)
- Sanitary Sewer
- Water Line
- Communications
- Open Ditch
- RW 06 Recovery Well
- MW 04 Monitor Well
- Plume

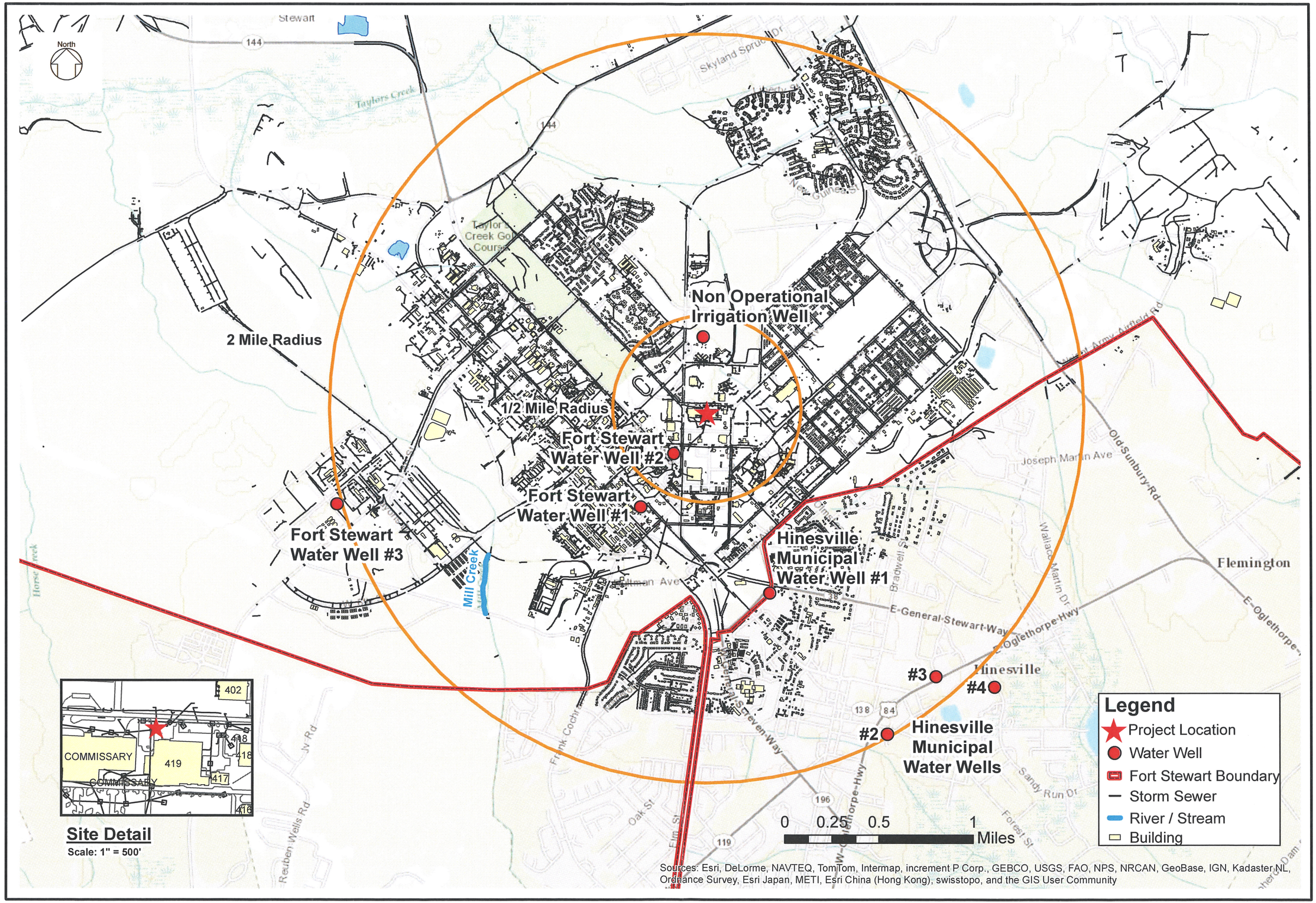
100' 0 100'

SCALE: 1" = 100'

Job Title: CAP A Building 419
Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 2a Site Plan

10/31/13



SpecPro Environmental Services LLC
1006 Floyd Culler Court
Oak Ridge, Tennessee 37830

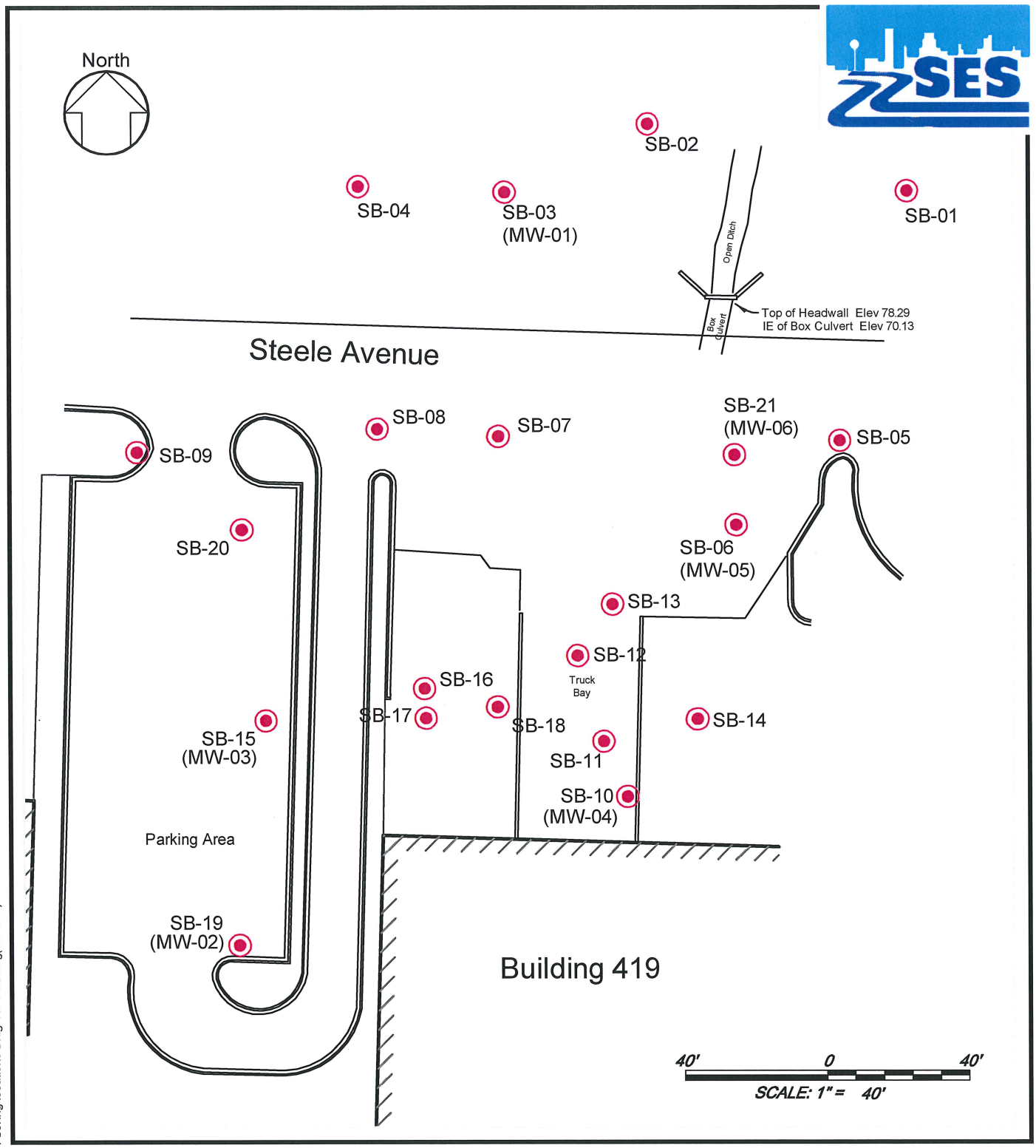
Job Title: CAP A Building 419
Fort Stewart, Georgia
Source: ESRI, Fort Stewart GIS

Figure 3 Potential Receptor Map

R:Projects\IE0209\E0209.0029\Fig 3 Building 419 Potential Receptor Map.mxd (10/29/2019)

E0209.0029

10/31/13



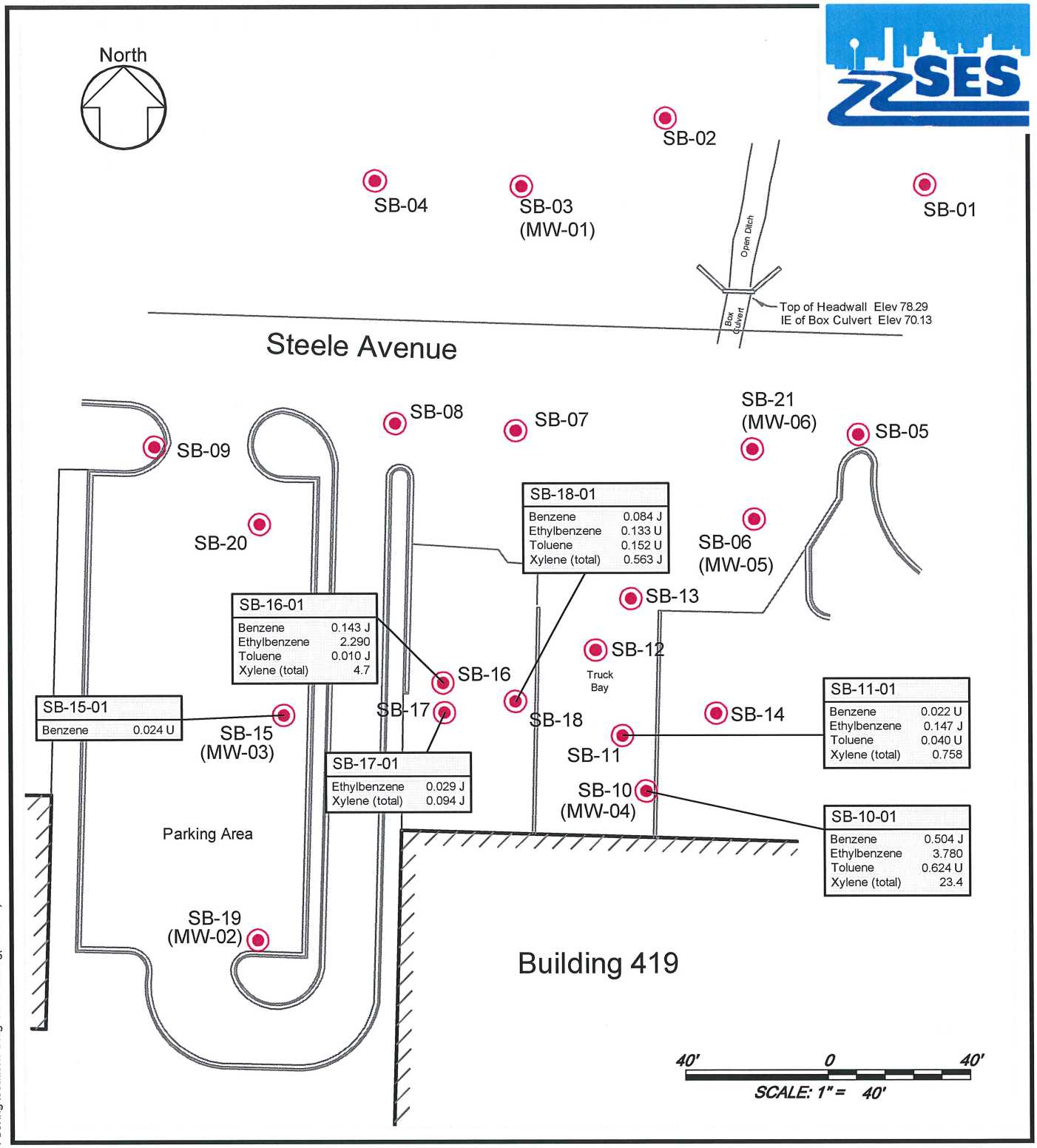
Legend

Boring Location

Job Title: CAP A Building 419, Fort Stewart, Georgia
Source: Fort Stewart, Georgia

Figure 4 March 2011 Soil Boring Locations

R:\E209\E209.0029\graphics\March 2011 boring locations Bldg 419 FTS.dwg(10/30/13)



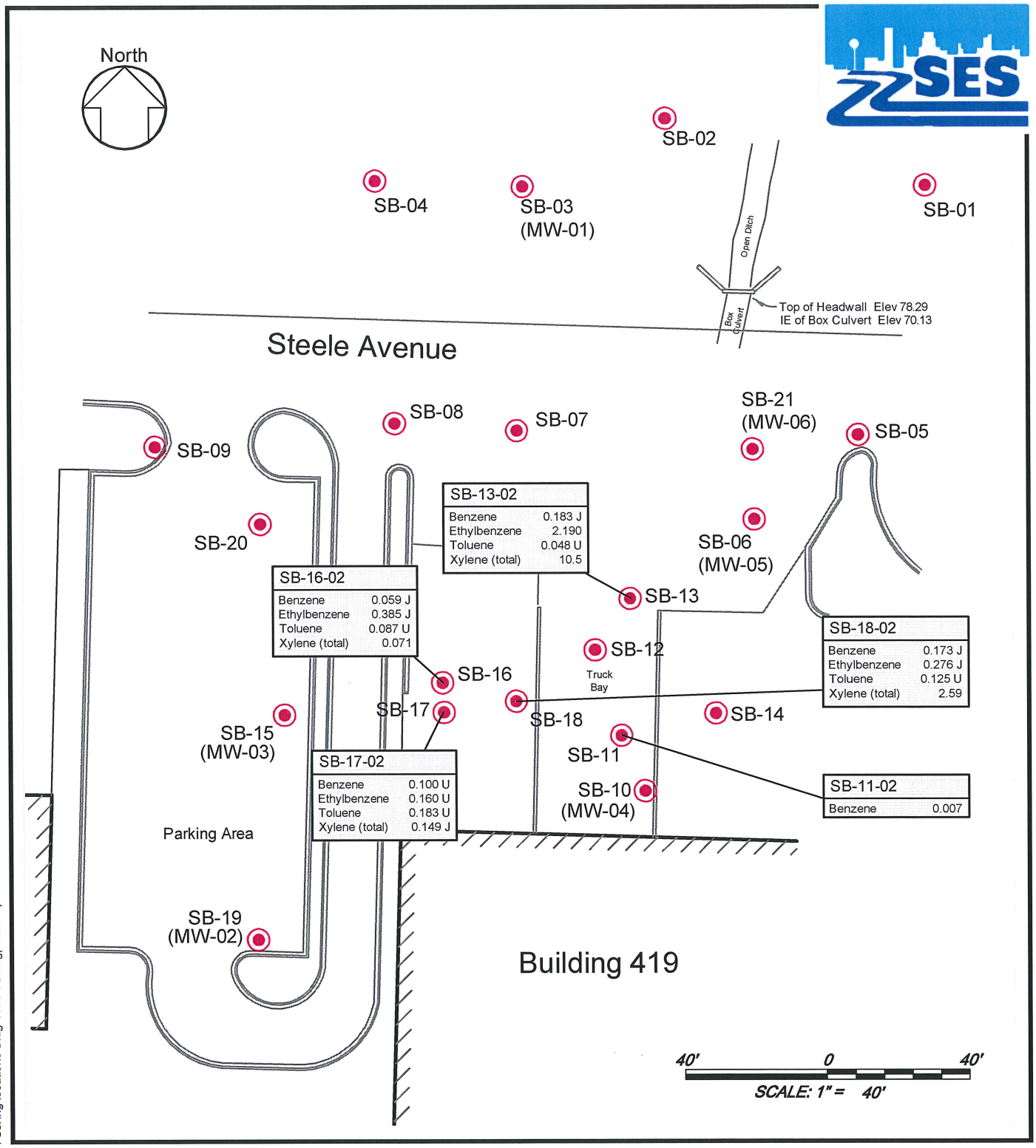
Legend

Boring Location
Concentrations mg/kg

Job Title: CAP A Building 419, Fort Stewart, Georgia
Source: Fort Stewart, Georgia

Figure 4a Shallow Soil Boring Sample Results - BTEX March 2011

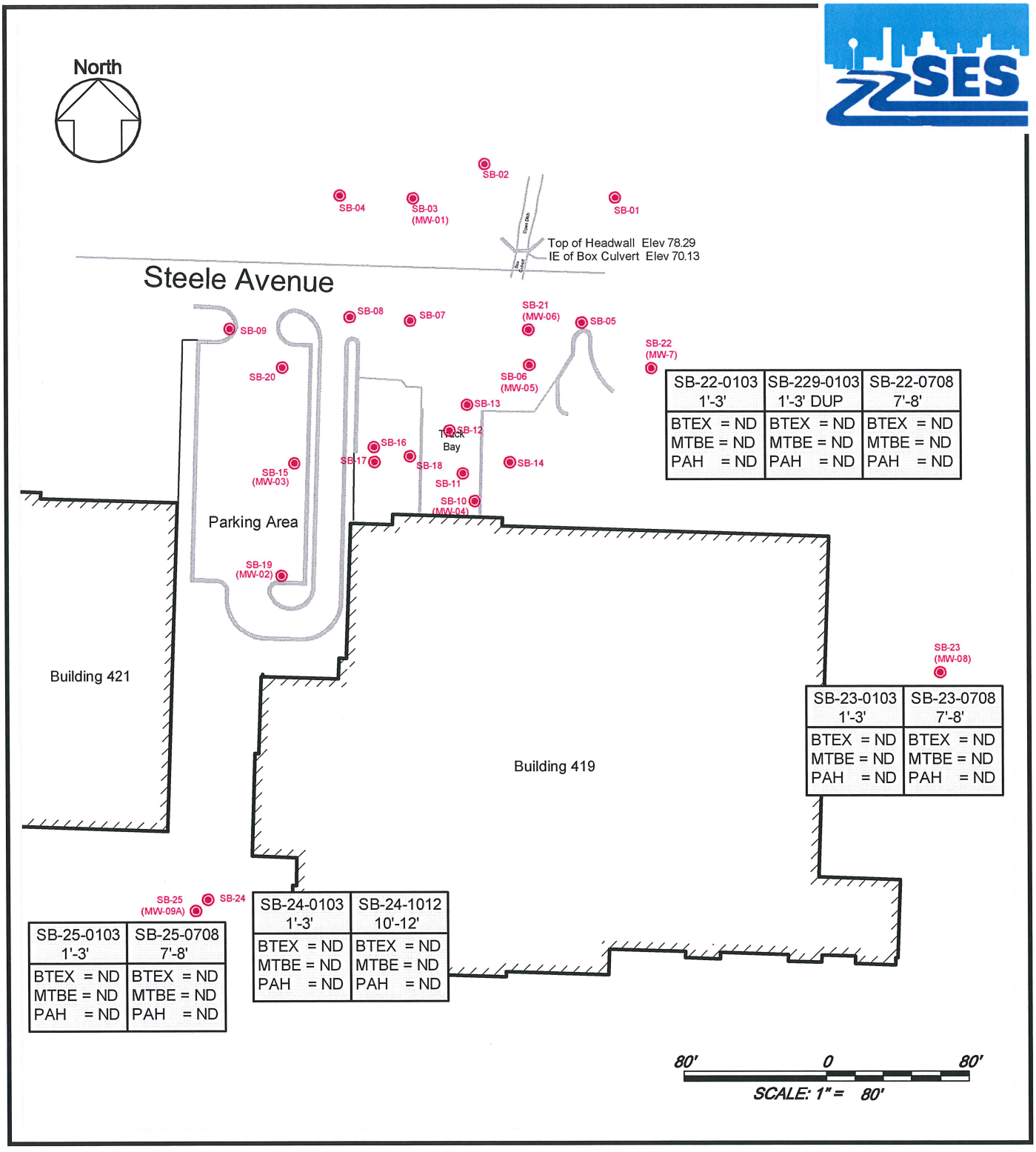
R:\E209\E209.0029\graphics\March 2011 boring locations Bldg 419 FTS.dwg(10/30/13)



Legend	
Boring Location Concentrations mg/kg	Job Title: CAP A Building 419, Fort Stewart, Georgia Source: Fort Stewart GIS

Figure 4b Deep Soil Boring Sample Results - BTEX March 2011

R:\E209\E209.0029\graphics\March 2011 boring locations Bldg 419 FTS.dwg(10/30/13)



SB-22-0103 1'-3'	SB-229-0103 1'-3' DUP	SB-22-0708 7'-8'
BTEX = ND	BTEX = ND	BTEX = ND
MTBE = ND	MTBE = ND	MTBE = ND
PAH = ND	PAH = ND	PAH = ND

SB-23-0103 1'-3'	SB-23-0708 7'-8'
BTEX = ND	BTEX = ND
MTBE = ND	MTBE = ND
PAH = ND	PAH = ND

SB-24-0103 1'-3'	SB-24-1012 10'-12'
BTEX = ND	BTEX = ND
MTBE = ND	MTBE = ND
PAH = ND	PAH = ND

SB-25-0103 1'-3'	SB-25-0708 7'-8'
BTEX = ND	BTEX = ND
MTBE = ND	MTBE = ND
PAH = ND	PAH = ND

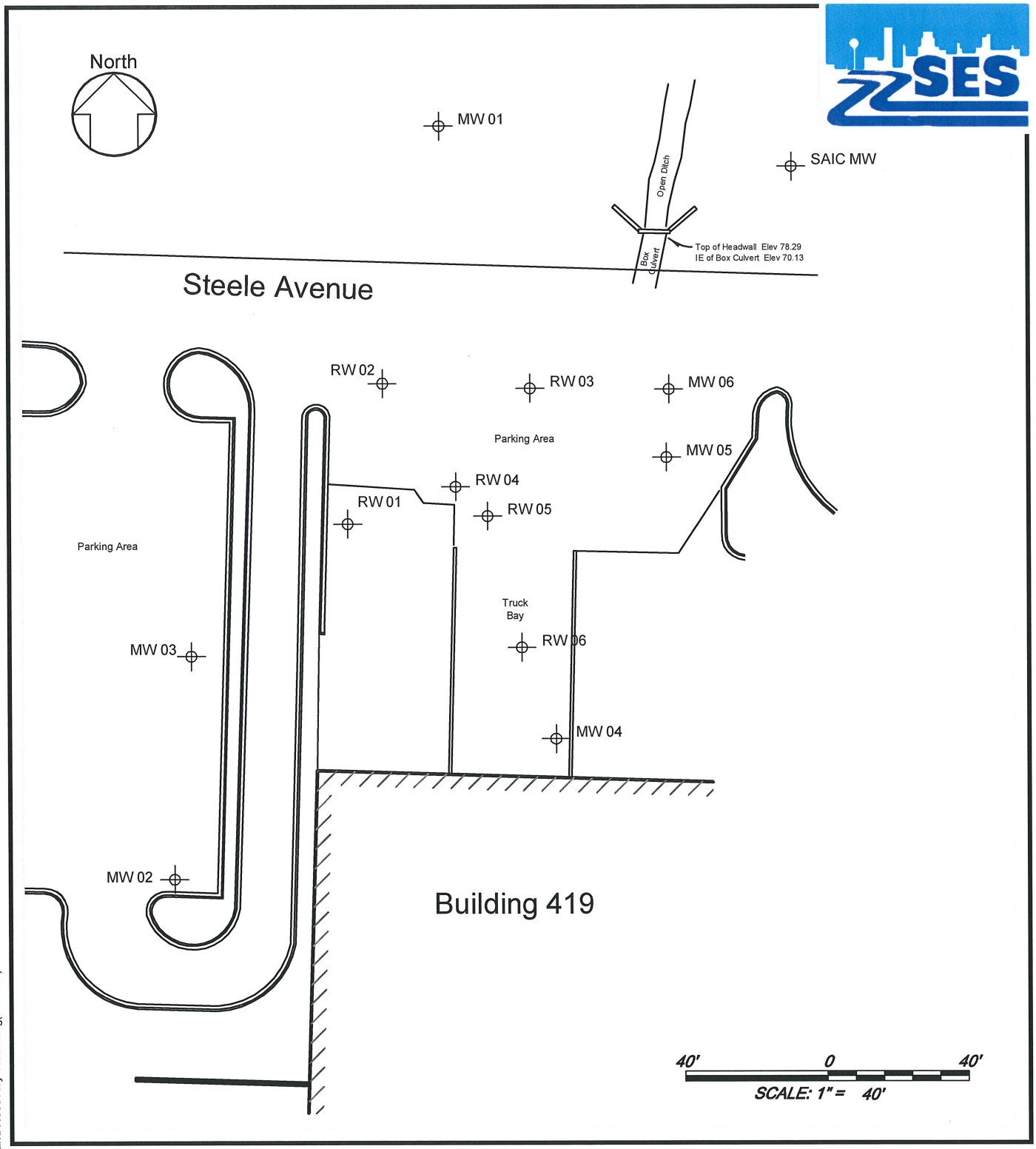
Legend

Soil Boring
ND = Not Detected at GUST Detection Limit of 0.005 mg/kg

Job Title: CAP A Building 419,
Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 4c Soil Boring Locations - August 2013

R:\E209\E209.0029\graphics\Fig 5 August 2013 Groundwater Analysis.dwg(10/042/13)



Legend

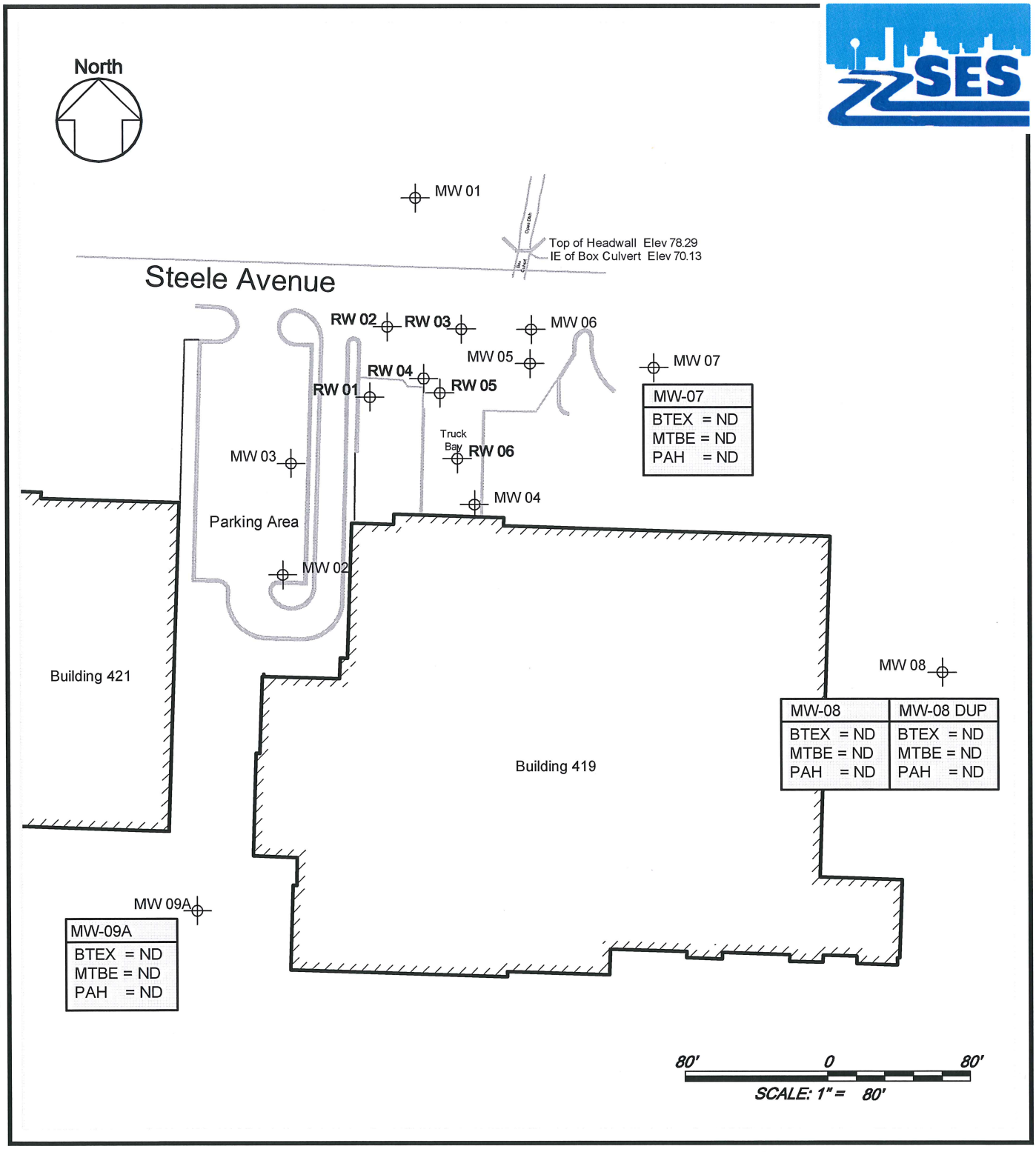
MW 05 Monitor Well

RW 05 Recovery Well

Job Title: CAP A Building 419, Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 5 Monitor Wells and Recovery Wells

R:\E209\E209.0029\graphics\Fig 8 MW and Recovery Wells.dwg(10/30/13)



Legend

MW 01 — Monitor Well

ND = Not Detected at GUST Detection Limit of 0.005 ug/L

Job Title: CAPt A Building 419,
Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 5a Groundwater Analysis Map - August 2013

R:\E209\E209.0029\graphics\Fig 5 August 2013 Groundwater Analysis.dwg(10/042/13)

WELL ABANDONMENT FORM

WELL No. 09

Project: Fort Stewart, Building 419 CAP Part A

Location: Fort Stewart, Georgia

Client: Savannah USACE

Subcontractor: Major Drilling

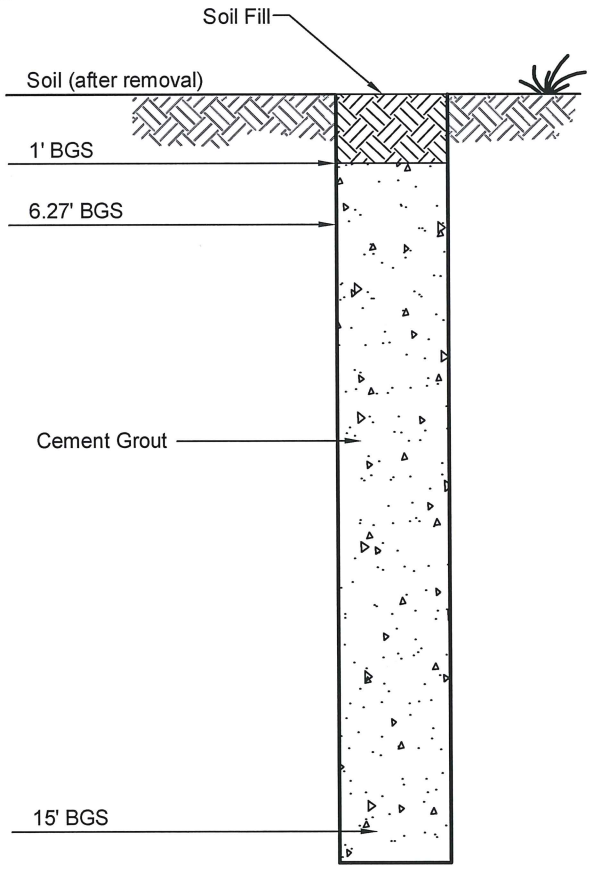
Driller: Ken Burkhead

SES Field Representive: Chris Napolean

Abandonment Date: 8/5/13

Well Type: Monitoring: ☒ Observation: ☒
Temporary: ☐ Extraction: ☐
Injection: ☐ Piezometer: ☐

Above ground structure removed



Protective Casing:
- Type: Schedule 40 PVC
- Removed(Yes/No): Yes

Ground Seal (Surface Pad):
- Type: Concrete
- Dimensions: 3'x3'

Protective Posts:
- Protective Posts Present (Yes/No): No
- Protective Posts Removed (Yes/No): NA

Casing Fill:
- Material: Cement Grout
- Installation: Gravity Tremie Pumped

well Casing Diameter (in.): 2"

Abandonment Method:
- Grout in Place: ☐
- Overdrill: ☒

Comments:

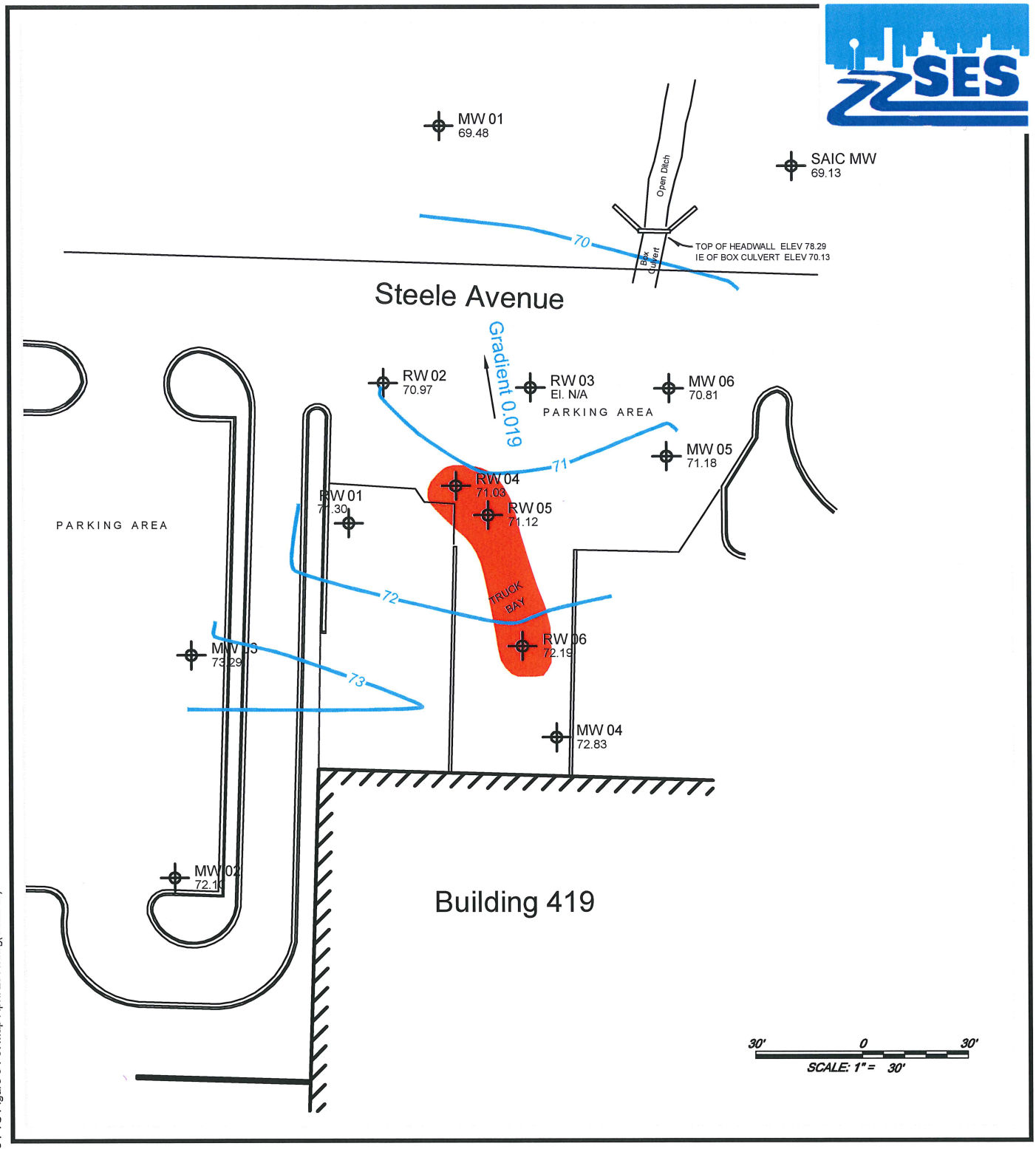
1) All surface structures were removed and disposed off-site.

2) Calculated borehole volume -

3) Actual volume of grout used -

4) Explanation of differences between #2 and #3

Figure 5c



Legend

MW 05 71.18 — Monitor Well, Groundwater Elevation

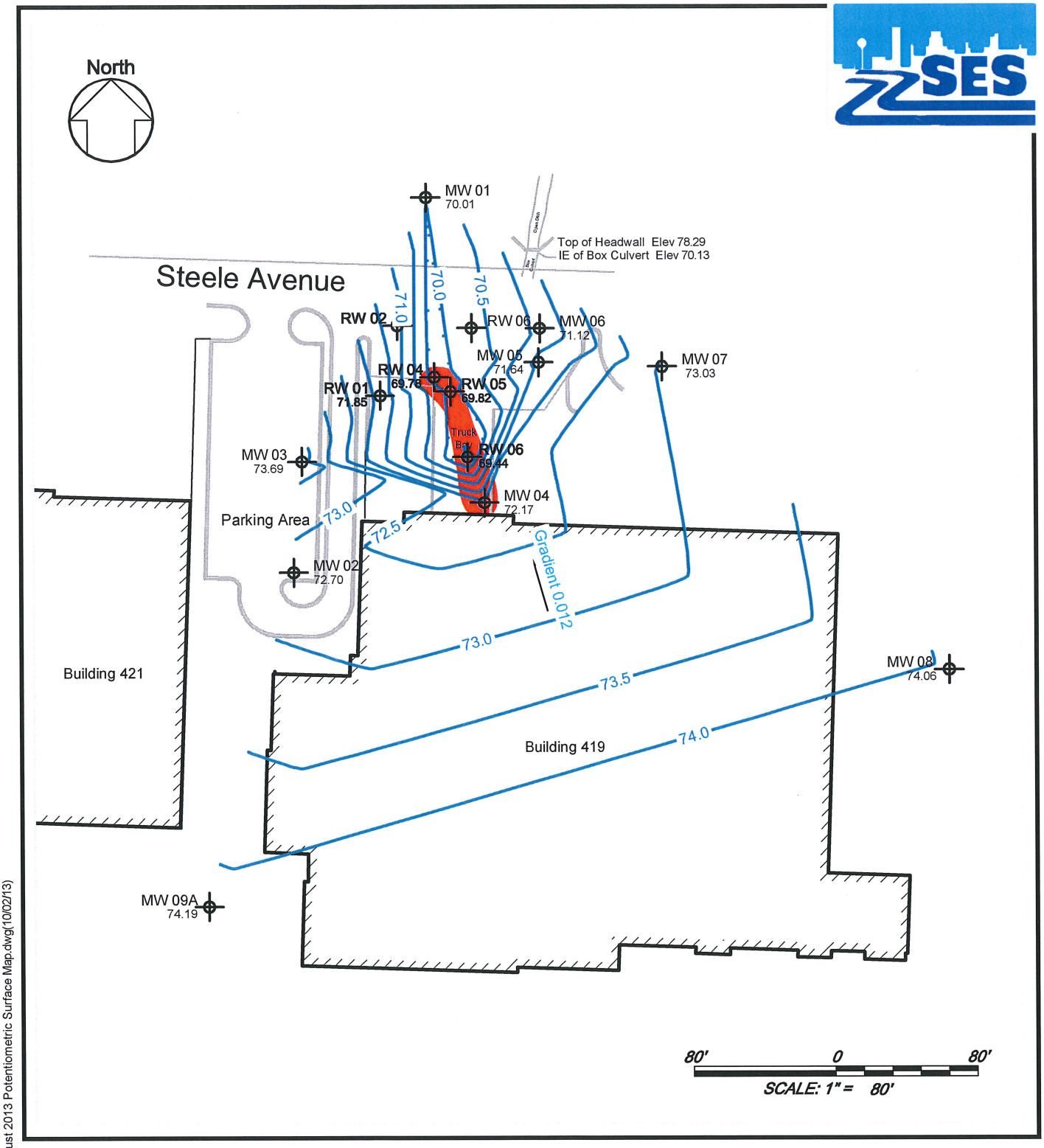
Groundwater Contour

Free Product

Job Title: CAP A Building 419, Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 6 April 2011 Potentiometric Surface Map

R:\E0209\E0209.0029\graphics\Bldg 419 FTS Figure 9 Pot Map April 2011.dwg(10/30/13)



Legend

MW 01 70.01 — Monitor Well, Groundwater Elevation

Groundwater Surface Contour

Free Product

Job Title: CAP A Building 419, Fort Stewart, Georgia
Source: Fort Stewart GIS

Figure 6a August 2013 Potentiometric Surface Map

R:\E209\E209.0029\graphics\Fig 6 August 2013 Potentiometric Surface Map.dwg(10/02/13)



LEGEND

Project Location

Radius

River / Stream

Fort Stewart Boundary
(Boundary exceeds map)

Source: FTS GIS, ESRI
Job Title: CAPA Building 419,
Fort Stewart, Georgia

Figure 9 Tax Map

R:\Projects\E209\E209.0029\Graphics\Fig 13 Building 419 Tax Map.mxd (10/29/13)

E0209.0029

10/30/13

APPENDIX II
REPORT TABLES

Table 1 Building 419, Free Product Thickness by STEP, February 13, 2008

Well Number	Total Depth of Well (ft.)	Depth to Water (ft.)	Depth to Free Product (ft.)	Product Thickness (ft.)
RW 01	10.0	7.71	6.71	1.0
RW 02	10.0	8.01	N/A	N/A
RW 03	10.0	8.03	N/A	N/A
RW 04	10.0	7.91	5.91	2.0
RW 05	10.0	7.83	5.83	2.0
RW 06	8.0	4.31	1.31	3.0

ft. = foot/ feet
N/A = not applicable
RW = recovery well

Table 2 Building 419, Fuel Recovery by Fort Stewart

Date	Fuel Pumped (gallons)	Groundwater Pumped (gallons)
2/8/2008	250	0
2/15/2008	130	0
2/28/2008	100	350
3/3/2008	100	125
3/12/2008	100	100
3/14/2008	100	75
3/17/2008	100	25
4/3/2008	180	20
4/18/2008	200	60
4/25/2008	75	50
5/13/2008	60	80
5/19/2008	75	55
7/29/2008	5	170
10/23/2008	Unknown	600
10/30/2008	Unknown	400
11/6/2008	Unknown	175
Total pumped	1,475	2,285

Table 3 Building 419, Free Product Removal – Enhanced Fluid Recovery Events

Date	Hydrocarbons Removed – Vapor (pounds)	Hydrocarbons Removed – Liquid (gallons)	Total Hydrocarbons Removed (equivalent-gallons)	Total Liquids Removed (gallons)
6/12/11	96	0	14	2,573
7/17/11	199	0	28	2,600
8/6/11	316	0	48	2,494

Table 4 Groundwater Elevations

Well Number	Date	Ground Surface Elevation (ft.)	Top of Casing Elevation (ft.)	Depth of Screened Interval (ft.)	Depth to Free Product (ft. TOC)	Depth to Water (ft. TOC)	Product Thickness (ft.)	Corrected Groundwater Elevation (ft.)
RW-01	2/13/08	79.43	79.25	5.2-15.2	6.71	7.71	1.00	70.72
RW-02	2/13/08	79.55	79.22	5.1-15.1	N/A	8.01	0	71.21
RW-03	2/13/08	79.23	79.09	5.12-15.12	N/A	8.03	0	71.06
RW-04	2/13/08	79.35	78.98	5.81-15.81	5.91	7.91	2.00	69.43
RW-05	2/13/08	79.54	79.19	5.12-15.12	5.83	7.83	2.00	69.72
RW-06	2/13/08	77.69	77.59	5-10	1.31	4.31	3.00	70.82
Groundwater Monitoring April 2011, Preliminary Assessment and Site Investigation								
RW-01	4/27/11	79.43	79.25	5.2-15.2	7.95	7.96	0.01	71.30
RW-02	4/27/11	79.55	79.22	5.1-15.1	N/A	8.25	0	70.97
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	4/27/11	79.35	78.98	5.81-15.81	7.24	11.18	3.94	71.03
RW-05	4/27/11	79.54	79.19	5.12-15.12	7.41	11.06	3.65	71.12
RW-06	4/27/11	77.69	77.59	5-10	5.24	6.13	0.89	72.19
MW-01	4/27/11	76.57	76.29	4-14	N/A	6.81	0	69.48
MW-02	4/27/11	79.71	79.38	4-14	N/A	7.28	0	72.10
MW-03	4/27/11	80.22	79.94	4-14	N/A	6.65	0	73.29
MW-04	4/27/11	77.12	76.78	4-14	N/A	3.95	0	72.83
MW-05	4/27/11	79.30	78.92	4-14	N/A	7.74	0	71.18
MW-06	4/27/11	79.28	78.92	4-14	N/A	8.11	0	70.81
Enhanced Fluid Recovery Event 1, June 2011 – Before Recovery								
RW-01	6/12/11	79.43	79.25	5.2-15.2	8.54	8.79	0.25	70.67
RW-02	6/12/11	79.55	79.22	5.1-15.1	N/A	8.03	0	71.19
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	6/12/11	79.35	78.98	5.81-15.81	7.60	12.10	4.50	70.57
RW-05	6/12/11	79.54	79.19	5.12-15.12	7.81	11.60	3.79	70.70
RW-06	6/12/11	77.69	77.59	5-10	5.79	6.81	1.02	71.62
MW-01	6/12/11	76.57	76.29	4-14	N/A	7.64	0	68.65
MW-02	6/12/11	79.71	79.38	4-14	N/A	8.01	0	71.37
MW-03	6/12/11	80.22	79.94	4-14	N/A	7.66	0	72.28
MW-04	6/12/11	77.12	76.78	4-14	4.51	4.93	0.42	72.19
MW-05	6/12/11	79.30	78.92	4-14	N/A	8.60	0	70.32
MW-06	6/12/11	79.28	78.92	4-14	N/A	8.49	0	70.43
Enhanced Fluid Recovery Event 1, June 2011 – After Recovery								
RW-01	6/12/11	79.43	79.25	5.2-15.2	N/A	10.09	0	69.16
RW-02	6/12/11	79.55	79.22	5.1-15.1	N/A	9.62	0	69.60
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	6/12/11	79.35	78.98	5.81-15.81	N/A	9.89	0	69.09
RW-05	6/12/11	79.54	79.19	5.12-15.12	N/A	10.36	0	68.83
RW-06	6/12/11	77.69	77.59	5-10	N/A	8.09	0	69.50
MW-01	6/12/11	76.57	76.29	4-14	N/A	5.25	0	71.04
MW-02	6/12/11	79.71	79.38	4-14	N/A	8.19	0	71.19
MW-03	6/12/11	80.22	79.94	4-14	N/A	7.74	0	72.20
MW-04	6/12/11	77.12	76.78	4-14	N/A	7.89	0	68.89
MW-05	6/12/11	79.30	78.92	4-14	N/A	8.73	0	70.19
MW-06	6/12/11	79.28	78.92	4-14	N/A	8.84	0	70.08
Enhanced Fluid Recovery Event 2, July 2011 – Before Recovery								
RW-01	7/17/11	79.43	79.25	5.2-15.2	8.41	8.46	0.05	70.83
RW-02	7/17/11	79.55	79.22	5.1-15.1	N/A	8.67	0	70.55

Table 4 Groundwater Elevations (Continued)

Well Number	Date	Ground Surface Elevation (ft.)	Top of Casing Elevation (ft.)	Depth of Screened Interval (ft.)	Depth to Free Product (ft. TOC)	Depth to Water (ft. TOC)	Product Thickness (ft.)	Corrected Groundwater Elevation (ft.)
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	7/17/11	79.35	78.98	5.81-15.81	7.79	10.05	2.26	70.78
RW-05	7/17/11	79.54	79.19	5.12-15.12	7.86	10.45	2.59	70.86
RW-06	7/17/11	77.69	77.59	5-10	5.80	6.27	0.47	71.71
MW-01	7/17/11	76.57	76.29	4-14	N/A	7.31	0	68.98
MW-02	7/17/11	79.71	79.38	4-14	N/A	7.79	0	71.59
MW-03	7/17/11	80.22	79.94	4-14	N/A	7.49	0	72.45
MW-04	7/17/11	77.12	76.78	4-14	4.42	4.88	0.46	72.28
MW-05	7/17/11	79.30	78.92	4-14	N/A	8.05	0	70.87
MW-06	7/17/11	79.28	78.92	4-14	N/A	8.31	0	70.61
Enhanced Fluid Recovery Event 2, July 2011 – After Recovery								
RW-01	7/17/11	79.43	79.25	5.2-15.2	N/A	11.51	0	67.74
RW-02	7/17/11	79.55	79.22	5.1-15.1	N/A	9.29	0	69.93
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	7/17/11	79.35	78.98	5.81-15.81	N/A	11.63	0	67.35
RW-05	7/17/11	79.54	79.19	5.12-15.12	N/A	10.56	0	68.63
RW-06	7/17/11	77.69	77.59	5-10	N/A	8.26	0	69.33
MW-01	7/17/11	76.57	76.29	4-14	N/A	7.41	0	68.88
MW-02	7/17/11	79.71	79.38	4-14	N/A	8.03	0	71.35
MW-03	7/17/11	80.22	79.94	4-14	N/A	7.59	0	72.35
MW-04	7/17/11	77.12	76.78	4-14	N/A	6.61	0	70.17
MW-05	7/17/11	79.30	78.92	4-14	N/A	8.65	0	70.27
MW-06	7/17/11	79.28	78.92	4-14	N/A	8.77	0	70.15
Enhanced Fluid Recovery Event 3, August 2011 – Before Recovery								
RW-01	8/3/11	79.43	79.25	5.2-15.2	N/A	8.05	0	71.20
RW-02	8/3/11	79.55	79.22	5.1-15.1	N/A	8.70	0	70.52
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	8/3/11	79.35	78.98	5.81-15.81	7.99	9.39	1.40	70.74
RW-05	8/3/11	79.54	79.19	5.12-15.12	8.04	9.09	1.05	70.96
RW-06	8/3/11	77.69	77.59	5-10	5.96	6.43	0.47	71.55
MW-01	8/3/11	76.57	76.29	4-14	N/A	7.26	0	69.03
MW-02	8/3/11	79.71	79.38	4-14	N/A	7.62	0	71.76
MW-03	8/3/11	80.22	79.94	4-14	N/A	8.86	0	71.08
MW-04	8/3/11	77.12	76.78	4-14	4.59	4.94	0.35	72.13
MW-05	8/3/11	79.30	78.92	4-14	N/A	8.06	0	70.86
MW-06	8/3/11	79.28	78.92	4-14	N/A	8.35	0	70.57
Enhanced Fluid Recovery Event 3, August 2011 – After Recovery								
RW-01	8/3/11	79.43	79.25	5.2-15.2	N/A	9.64	0	69.61
RW-02	8/3/11	79.55	79.22	5.1-15.1	N/A	9.39	0	69.83
RW-03	4/27/11	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	8/3/11	79.35	78.98	5.81-15.81	N/A	11.56	0	67.42
RW-05	8/3/11	79.54	79.19	5.12-15.12	N/A	10.98	0	68.21
RW-06	8/3/11	77.69	77.59	5-10	N/A	8.99	0	68.60
MW-01	8/3/11	76.57	76.29	4-14	N/A	7.54	0	68.75
MW-02	8/3/11	79.71	79.38	4-14	N/A	7.76	0	71.62
MW-03	8/3/11	80.22	79.94	4-14	N/A	8.88	0	71.06
MW-04	8/3/11	77.12	76.78	4-14	N/A	7.47	0	69.31
MW-05	8/3/11	79.30	78.92	4-14	N/A	8.98	0	69.94

Table 4 Groundwater Elevations (Continued)

Well Number	Date	Ground Surface Elevation (ft.)	Top of Casing Elevation (ft.)	Depth of Screened Interval (ft.)	Depth to Free Product (ft. TOC)	Depth to Water (ft. TOC)	Product Thickness (ft.)	Corrected Groundwater Elevation (ft.)
MW-06	8/3/11	79.28	78.92	4-14	N/A	8.87	0	70.05
Groundwater Monitoring August 2013								
RW-01	8/8/13	79.43	79.25	5.2-15.2	N/A	7.40	0	71.85
RW-02	8/8/13	79.55	79.22	5.1-15.1	Well not accessible for monitoring			
RW-03	8/8/13	79.23	79.09	5.12-15.12	Well not accessible for monitoring			
RW-04	8/8/13	79.35	78.98	5.81-15.81	6.93	9.2	2.27	71.64
RW-05	8/8/13	79.54	79.19	5.12-15.12	6.82	9.37	2.55	71.91
RW-06	8/8/13	77.69	77.59	5-10	4.13	8.15	4.02	72.74
MW-01	8/8/13	76.57	76.29	4-14	N/A	6.28	0	70.01
MW-02	8/8/13	79.71	79.38	4-14	N/A	6.68	0	72.70
MW-03	8/8/13	80.22	79.94	4-14	N/A	6.25	0	73.69
MW-04	8/8/13	77.12	76.78	4-14	2.91	4.61	1.70	73.56
MW-05	8/8/13	79.30	78.92	4-14	N/A	7.28	0	71.64
MW-06	8/8/13	79.28	78.92	4-14	N/A	7.80	0	71.12
MW-07	8/8/13	79.09	78.74	5-15	N/A	5.71	0	73.03
MW-08	8/8/13	8.15	79.90	5-15	N/A	5.84	0	74.06
MW-09	8/8/13	80.54	80.30	4-14	N/A	6.17	0	74.13

NOTE:
Corrected Groundwater Elevation = Top of casing elevation – Depth to water + (Specific gravity x Product Thickness)
Fuel oil's specific gravity of 0.82 was used.
AMSL = Above Mean Sea Level
ft. = foot or feet
TOC = top of casing

Table 5 Preliminary Assessment and Site Investigation Soil Analytical Results, March 2011

Sample Location	Depth (ft. bgs)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)
SB-01-01	1-3	03/29/11	0.000490U	0.000897U	0.000782U	0.000730U	ND	7.28 U
SB-01-02	8-9	03/29/11	0.000467U	0.000855U	0.000746U	0.000696U	ND	7.68 U
SB-02-01	1-3	03/29/11	0.000514U	0.000940U	0.000820U	0.000765U	ND	**19.3**
SB-02-02	8-9	03/29/11	0.000576U	0.00105U	0.000920U	0.000859U	ND	8.91 U
SB-03-01	1-3	03/29/11	0.000461U	0.000844U	0.000736U	0.000687U	ND	7.47 U
SB-03-019	1-3	03/29/11	0.000537U	0.000982U	0.000856U	0.000799U	ND	7.68 U
SB-03-02	6-7	03/29/11	0.000492U	0.000900U	0.000785U	0.000732U	ND	7.67 U
SB-04-01	1-3	03/29/11	0.000481UJ	0.000881UJ	0.000768UJ	0.000717UJ	ND	**39.5**
SB-04-02	6-7	03/29/11	0.000558U	0.00102U	0.000891U	0.000831U	ND	7.61 U
SB-05-01	1-3	03/29/11	0.000485U	0.000887U	0.000774U	0.000722U	ND	7.31 U
SB-05-02	6-6.5	03/29/11	0.000569U	0.00104U	0.000907U	0.000847U	ND	**9.33**
SB-06-01	1-3	03/29/11	0.000534U	0.000976U	0.000851U	0.000795U	ND	7.22 U
SB-06-02	7	03/29/11	0.000499U	0.000914U	0.000797U	0.000744U	ND	7.84 U
SB-07-01	1-3	03/29/11	0.000689UJ	0.00126 UJ	0.00110 UJ	0.00103 UJ	ND	**11.2**
SB-07-02	7	03/29/11	0.000469U	0.000858U	0.000749U	0.000699U	ND	7.79 U
SB-08-01	1-3	03/29/11	0.000479U	0.000876U	0.000764U	0.000713U	ND	7.59 U
SB-08-02	7	03/29/11	0.000473U	0.000865U	0.000755U	0.000704U	ND	7.62 U
SB-09-01	6-7	03/29/11	0.000497U	0.00266 J	0.000793U	0.000740U	0.00266J	**10.3**
SB-09-02	10-11	03/29/11	0.000543U	0.000993U	0.000866U	0.000808U	ND	8.14 U

Table 5 Preliminary Assessment and Site Investigation Soil Analytical Results, March 2011 (Continued)

Sample Location	Depth (ft. bgs)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)
SB-10-01	6-7	03/29/11	**0.504 J**	0.000624 U	**3.780**	**23.4**	28.308J	**22,100**
SB-10-02	8-9	03/29/11	0.000522U	0.000956U	0.000834U	0.000778U	ND	**16.2**
SB-11-01	5'	03/29/11	**0.0216 U**	**0.0395 U**	**0.147 J**	**0.758**	0.967UJ	**918 J**
SB-11-02	9.5'	03/29/11	**0.00661**	0.000937 U	0.00299 J	**0.0173**	0.03351UJ	7.75 U
SB-12-01	5'	03/29/11	0.000534U	0.000977U	0.000852U	0.000795U	ND	**29.3**
SB-12-02	8'	03/29/11	0.000468U	0.000857U	0.000747U	0.000698U	ND	**39.6**
SB-13-01	1-3'	03/30/11	0.000526 U	0.000963 U	0.000840 U	0.000784 U	ND	**53**
SB-13-02	8.5'	03/30/11	**0.183 J**	**0.048 U**	**2.190**	**10.5**	12.921 UJ	**13,900**
SB-14-01	3'	03/30/11	0.00474U	0.00867U	0.00112J	0.000706U	ND	**39**
SB-14-02	7'	03/30/11	0.00163 UJ	0.00298 UJ	0.00260 UJ	0.00243 UJ	ND	**47.9**
SB-15-01	3'-4'	03/30/11	**0.0241 U**	**0.0441U**	**0.0384U**	**0.0359 U**	0.1425U	**13.7**
SB-15-02	7'	03/30/11	0.000502U	0.000918U	0.000801U	0.000747U	ND	**13.5**
SB-16-01	7'-7.5'	03/30/11	**0.143 J**	**0.00955 J**	**2.290**	**4.7**	7.14255J	**8070**
SB-16-02	8'-8.5'	03/30/11	**0.0589 J**	**0.0867 U**	**0.385 J**	**1.82**	2.3506UJ	**8310**
SB-17-01	8'	03/30/11	0.00183 J	**0.00945 UJ**	**0.0289 J**	**0.0943 J**	0.13448UJ	**3590**
SB-17-02	10'	03/30/11	**0.100 U**	**0.183 U**	**0.160 U**	**0.502 J**	0.945UJ	**163**
SB-18-01	6'-7'	03/30/11	**0.0843 J**	**0.152 U**	**0.133 U**	**0.563 J**	0.9323UJ	**3890**
SB-18-02	10'	03/30/11	**0.173 J**	**0.125 U**	**0.276 J**	**2.59**	3.164 UJ	**296**
SB-19-01	4'	03/30/11	0.000458U	0.000838U	0.000731U	0.000682U	ND	7.16 U
SB-19-02	8'	03/30/11	0.000619UJ	0.00113UJ	0.000987UJ	0.000921UJ	ND	**20.2**
SB-20-01	4'	03/30/11	0.000601U	0.00110U	0.000960U	0.000896U	ND	**16.6**
SB-20-019	4'	03/30/11	0.000649UJ	0.00119UJ	0.00104UJ	0.000966UJ	ND	**17.3**
SB-20-02	8.5'	03/30/11	0.000653U	0.00119U	0.00104U	0.000972U	ND	8.43 U
Applicable Standards – Table A			0.008	6.00	10.00	700.00	N/A	N/A
GUST Detection Limit			0.005	0.005	0.005	0.005	N/A	10

Notes: * SB-03-019 is a duplicate sample of SB-03-01 and SB-20-019 is a duplicate sample of SB-20-01.
Applicable standard is GUST-CAP A Guidelines, Table A for average or higher susceptibility area (where public water supplies exist within 2.0 miles or nonpublic water supplies exist within 0.5 miles, and greater than 500 feet to a withdrawal point).
Bold value denotes concentration greater than GUST detection limit. Shaded value denotes concentration greater than Table A threshold value.
Shaded value denotes concentration exceeded Applicable Table A Standard.
U denotes concentration less than the laboratory detection limit shown.
J denotes laboratory estimated value.
BTEX = benzene, toluene, ethylbenzene, xylenes
DRO = diesel range organics
ft. = foot or feet
mg/ kg = milligrams per kilogram
GRO = gasoline range organics
TPH = total petroleum hydrocarbons

Table 6 Preliminary Assessment and Site Investigation Soil Analytical Results for Polynuclear Aromatic Hydrocarbons, March 2011

Sample Location	Depth (ft.)	Date Sampled	Acenapthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indene(1,2,3-cd)pyrene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SB-01-01	1-3’	03/29/11	0.0285 U	0.0219 U	0.0295 U	0.0394 U	0.0252 U	0.0350 U	0.0766 U	0.0427 U	0.0339 U	0.0657 U	0.0591 U	0.0285 U	0.0503U	0.109 U	0.0383 U	0.0350 U	0.0252 U	0.0438 UJ
SB-01-02	8’-9’	03/29/11	0.0300 U	0.0231 U	0.0312 U	0.0415 U	0.0265 U	0.0369 U	0.0808 U	0.0450 U	0.0358 U	0.0692 U	0.0623 U	0.0300 U	0.0531 U	0.115 U	0.0404 U	0.0369 U	0.0265 U	0.0462 UJ
SB-02-01	1’-3’	03/29/11	0.0272 U	0.0209 U	0.0282 U	0.0376 U	0.0240 U	0.0334 U	0.0731 U	0.0407 U	0.0324 U	0.0627 U	0.0564 U	0.0272 U	0.0480 U	0.104 U	0.0366 U	0.0334 U	0.0240 U	0.0418 J
SB-02-02	8’-9’	03/29/11	0.0348 U	0.0268 U	0.0362 U	0.0482 U	0.0308 U	0.0428 U	0.0937 U	0.0522 U	0.0415 U	0.0803 U	0.0723 U	0.0348 U	0.0616 U	0.134 U	0.0469 U	0.0428 U	0.0308 U	0.0536 UJ
SB-03-01	1’-3’	03/29/11	0.0300 U	0.0230 U	0.0311 U	0.0415 U	0.0265 U	0.0369 U	0.0807 U	0.0449 U	0.0357 U	0.0691 U	0.0622 U	0.0300 U	0.0530 U	0.115 U	0.0403 U	0.0369 U	0.0265 U	0.0461 UJ
SB-03-019	1’-3’	03/29/11	0.0298 U	0.0229 U	0.0309 U	0.0413 U	0.0264 U	0.0367 U	0.0802 U	0.0447 U	0.0355 U	0.0688 U	0.0619 U	0.0298 U	0.0527 U	0.015 U	0.0401 U	0.0367 U	0.0264 U	0.0458 UJ
SB-03-02	6’-7’	03/29/11	0.0296 U	0.0228 U	0.0307 U	0.0410 U	0.0262 U	0.0364 U	0.0797 U	0.0444 U	0.0353 U	0.0683 U	0.0615 U	0.0296 U	0.0523 U	0.014 U	0.0398 U	0.0364 U	0.0262 U	0.0455 UJ
SB-04-01	1’-3’	03/29/11	0.0293 U	0.0225 U	0.0304 U	0.0406 U	0.0259 U	0.0361 U	0.0789 U	0.0440 U	0.0349 U	0.0676 U	0.0609 U	0.0293 U	0.0519 U	0.113 U	0.0395 U	0.0361 U	0.0259 U	0.0451 UJ
SB-04-02	6’-7’	03/29/11	0.0303 U	0.0233 U	0.0315 U	0.0419 U	0.0268 U	0.0373 U	0.0816 U	0.0454 U	0.0361 U	0.0699 U	0.0629 U	0.0303 U	0.0536 U	0.117 U	0.0408 U	0.0373 U	0.0268 U	0.0466 UJ
SB-05-01	1’-3’	03/29/11	0.0280 U	0.0215 U	0.0291 U	0.0387 U	0.118 J	0.140 J	0.106 J	0.0544 J	0.0921 J	0.0646 U	0.0581 U	0.0280 U	0.0495 U	0.108 U	0.0377 U	0.0344 U	0.0248 U	0.0955 J
SB-05-02	6’-6.5’	03/29/11	0.0297 U	0.0229 U	0.0309 U	0.0412 U	0.0263 U	0.0366 U	0.0801 U	0.0446 U	0.0355 U	0.0686 U	0.0618 U	0.0297 U	0.0526 U	0.114 U	0.0400 U	0.0366 U	0.0263 U	0.0458 U
SB-06-01	1’-3’	03/29/11	0.0280 U	0.0215 U	0.0291 U	0.0388 U	0.0248 U	0.0345 U	0.0754 U	0.0420 U	0.0334 U	0.0646 U	0.0582 U	0.0280 U	0.0496 U	0.108 U	0.0377 U	0.0345 U	0.0248 U	0.0431 UJ
SB-06-02	7’	03/29/11	0.0312 U	0.0240 U	0.0324 U	0.0432 U	0.0276 U	0.0384 U	0.0840 U	0.0468 U	0.0372 U	0.0720 U	0.0648 U	0.0312 U	0.0552 U	0.120 U	0.0420 U	0.0384 U	0.0276 U	0.0480 UJ
SB-07-01	1’-3’	03/29/11	0.0321 U	0.0247 U	0.0333 U	0.0444 U	0.0284 U	0.0395 U	0.0864 U	0.0481 U	0.0383 U	0.0741 U	0.0666 U	0.0321 U	0.0568 U	0.123 U	0.0432 U	0.0395	0.0284 U	0.0494 UJ
SB-07-02	7’	03/29/11	0.0294 U	0.0226 U	0.0306 U	0.0408 U	0.0260 U	0.0362 U	0.0793 U	0.0442 U	0.0351 U	0.0679 U	0.0611 U	0.0294 U	0.0521 U	0.113 U	0.0396 U	0.0362 U	0.0260 U	0.0453 U
SB-08-01	1’-3’	03/29/11	0.0297 U	0.0228 U	0.0308 U	0.0411 U	0.0262 U	0.0365 U	0.0798 U	0.0445 U	0.0354 U	0.0684 U	0.0616 U	0.0297 U	0.0525 U	0.114 U	0.0399 U	0.0365 U	0.0262 U	0.0456 UJ
SB-08-02	7’	03/29/11	0.0300 U	0.0230 U	0.0311 U	0.0415 U	0.0265 U	0.0369 U	0.0807 U	0.0449 U	0.0357 U	0.0691 U	0.0622 U	0.0300 U	0.0530 U	0.115 U	0.0403 U	0.0369 U	0.0265 U	0.0461 UJ
SB-09-01	6’-7’	03/29/11	0.0281 U	0.0216 U	0.0292 U	0.107 J	0.102 J	0.207 J	0.0756 U	0.0801 J	0.128 J	0.0648 U	0.113 J	0.0281 U	0.0497 U	0.108 U	0.0378 U	0.0346 U	0.0249 U	0.297 J
SB-09-02	10’-11’	03/29/11	0.0308 U	0.0237 U	0.0320 U	0.0426 U	0.0272 U	0.0379 U	0.0829 U	0.0462 U	0.0367 U	0.0711 U	0.0640 U	0.0308 U	0.0545U	0.118 U	0.0415 U	0.0379 U	0.0272 U	0.0474 UJ
SB-10-01	6’-7’	03/29/11	**25.900 U**	**20.000 U**	**26.900 U**	**35.900 U**	**23.000 U**	**31.900 U**	**69.900 U**	**38.900 U**	**30.900 U**	**59.900 U**	**53.900 U**	**25.900 U**	**45.900 U**	**99.800 U**	**34.900 U**	**31.900 U**	**23.000 U**	**39.900 U**
SB-10-02	8’-9’	03/29/11	0.0317 U	0.0244 U	0.0329 U	0.0439 U	0.0280 U	0.0390 U	0.0853 U	0.0475 U	0.0378 U	0.0731 U	0.0658 U	0.0317 U	0.0561 U	0.122 U	0.0427 U	0.0390 U	0.0280 U	0.0488 U
SB-11-01	5’	03/29/11	0.0277 U	0.0213 U	0.0287 U	0.107 J	0.0711 J	0.133 J	0.0745 U	0.0495 J	0.104 J	0.0639 U	0.108 J	0.0277 U	0.0490 U	0.210 J	0.304 J	0.0716 J	0.0245 U	0.314 J
SB-11-02	9.5’	03/29/11	0.0309 U	0.0237 U	0.0320 U	0.0427 U	0.0273 U	0.0380 U	0.0831 U	0.0463 U	0.0368 U	0.0712 U	0.0641 U	0.0309 U	0.0546 U	0.119 U	0.0415 U	0.0380 U	0.0273 U	0.0475 U
SB-12-01	5’	03/29/11	0.0320 U	0.0641 J	0.0333 U	0.175 J	0.216 J	0.333 J	0.0863 U	0.161 J	0.245 J	0.0739 U	0.207 J	0.0320 U	0.0567 U	0.123 U	0.0431 U	0.0394 U	0.0779 J	0.510
SB-12-02	8’	03/29/11	0.0280 U	0.0665 J	0.0291 U	0.208 J	0.269 J	0.427	0.161 J	0.120 J	0.289 J	0.0647 U	0.180 J	0.0280 U	0.122 J	0.108 U	0.0503 J	0.0358 J	0.0617 J	0.517
SB-13-01	1-3’	03/30/11	0.0273 U	0.210 J	0.0568 J	**0.918**	**1.010**	**1.590 J**	0.490	0.567	**1.020**	0.127 J	**0.981**	0.0273 U	0.359	0.105 U	0.0490 J	0.0469 J	0.128 J	**2.690**
SB-13-02	8.5’	03/30/11	0.154 U	0.118 U	0.160 U	0.213 U	0.136 UJ	0.189 UJ	0.414 UJ	0.231 UJ	0.183 U	0.355 UJ	0.319 U	0.154 U	0.272 UJ	**5.460 J**	**8.400 J**	**2.690 J**	**1.640 J**	**0.838 J**
SB-14-01	3’	03/30/11	0.0281 U	0.560	0.139 J	**2.890**	**3.100 J**	**3.560 J**	**1.730 J**	**1.640 J**	**2.880**	0.495 J	**1.590**	0.113 J	**1.430 J**	0.108 U	0.149 J	0.175 J	0.271 J	**5.850**
SB-14-02	7’	03/30/11	0.0674 U	0.0518 U	0.0700 U	0.0933 U	0.0596UJ	0.0829UJ	0.181 UJ	0.101 UJ	0.0803 U	0.155 UJ	0.140 U	0.0674 U	0.119 UJ	0.259 U	0.0907 U	0.0829 U	0.0596 U	0.197 J
SB-15-01	3’-4’	03/30/11	0.0297 U	0.0229 U	0.0309 U	0.0412 U	0.0263 U	0.0366 U	0.0800 U	0.0446 U	0.0354 U	0.0686 U	0.0617 U	0.0297 U	0.0526 U	0.114 U	0.0400 U	0.0366 U	0.0263 U	0.0457 U
SB-15-02	7’	03/30/11	0.0312 U	0.0472 J	0.0325 U	0.332 J	0.223 J	0.337 J	0.118 J	0.143 J	0.336 J	0.0721 U	0.397 J	0.0312 U	0.0553 U	0.120 U	0.0421 U	0.0385 U	0.139 J	0.640
SB-16-01	7’-7.5’	03/30/11	0.149 U	0.115 U	0.155 U	0.207 U	0.132 UJ	0.184 UJ	0.402 UJ	0.224 UJ	0.178 U	0.344 UJ	0.310 U	**1.620 J**	0.264 UJ	**9.880 J**	**15.500 J**	**4.910 J**	**4.120 J**	**1.020 J**
SB-16-02	8’-8.5’	03/30/11	0.169 U	0.130 U	0.175 U	0.234 U	0.149 U	0.208 U	0.455 U	0.253 U	0.201 U	0.390 U	0.351 U	**1.650 J**	0.299 U	**9.240 J**	**14.600 J**	**4.160 J**	**3.880 J**	**0.877 J**
SB-17-01	8’	03/30/11	0.160 U	0.123 U	0.166 U	0.221 U	0.141 UJ	0.196 UJ	0.430 UJ	0.239 UJ	0.190 U	0.368 UJ	0.331 U	0.759 J	0.282 UJ	**2.130**	**3.030**	**0.928 J**	**0.876 J**	**0.874 J**
SB-17-02	10’	03/30/11	0.0481 U	0.0370 U	0.0499U	0.0665 U	0.0425 U	0.0592 U	0.129 U	0.0721 U	0.0573 U	0.111 U	0.0998 U	0.169 J	0.0850 U	**1.430**	**2.420**	**1.030**	0.231 J	0.0739 U
SB-18-01	6’-7’	03/30/11	0.210 U	0.161 U	0.218 U	0.290 U	0.185 U	0.258 U	0.565 U	0.315 U	0.250 U	0.484 U	0.435 U	0.210 U	0.371 U	**2.680**	**3.970**	**2.110 J**	**0.738 J**	0.484 J
SB-18-02	10’	03/30/11	0.0318 U	0.0245 U	0.0331 U	0.0441 U	0.0282 U	0.0392 U	0.0857 U	0.0477 U	0.0379 U	0.0735 U	0.0661 U	0.0801 J	0.0563 U	0.406	0.655	0.254 J	0.155 J	0.0490 U
SB-19-01	4’	03/30/11	0.0278 U	0.0214 U	0.0289 U	0.0385 U	0.0246 U	0.0342 U	0.0748 U	0.0417 U	0.0331 U	0.0642 U	0.0577 U	0.0278 U	0.0492 U	0.107 U	0.0374 U	0.0342 U	0.0246 U	0.0428 U

Table 6 Preliminary Assessment and Site Investigation Soil Analytical Results for Polynuclear Aromatic Hydrocarbons, March 2011 (Continued)

Sample Location	Depth (ft.)	Date Sampled	Acenapthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(g,h,i)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indene(1,2,3-cd)pyrene (mg/kg)	1-Methylnaphthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SB-19-02	8'	03/30/11	0.0298 U	0.0229 U	0.0310 U	0.0413 U	0.0264 U	0.0367 U	0.0803 U	0.0447 U	0.0355 U	0.0688 U	0.0619 U	0.0298 U	0.0527 U	0.115 U	0.0401 U	0.0367 U	0.0264 U	0.0530 J
SB-20-01	4'	03/30/11	0.0329 U	0.0253 U	0.0341 U	0.0455 U	0.0291 U	0.0404 U	0.0885 U	0.0493 U	0.0392 U	0.0758 U	0.0682 U	0.0329 U	0.0581 U	0.126 U	0.0442 U	0.0404 U	0.0291 U	0.0505 U
SB-20-019	4'	03/30/11	0.0356 U	0.0274 U	0.0369 U	0.0493 U	0.0315 U	0.0438 U	0.0958 U	0.0534 U	0.0424 U	0.0821 U	0.0739 U	0.0356 U	0.0629 U	0.137 U	0.0479 U	0.115 J	0.0749 J	0.0547 U
SB-20-02	8.5'	03/30/11	0.0323 U	0.0248 U	0.0335 U	0.0447 U	0.0286 U	0.0397 U	0.0869 U	0.0484 U	0.0385 U	0.0745 U	0.0671 U	0.0323 U	0.0571 U	0.124 U	0.0435 U	0.0397 U	0.0286 U	0.0497 U
Applicable Standards –Table A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUST Detection Limit			0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660

Notes: * SB-03-019 is a duplicate sample of SB-03-01 and SB-20-019 is a duplicate sample of SB-20-01.
Applicable standard is GUST-CAP A Guidelines, Table A for average or higher susceptibility area (where public water supplies exist within 2.0 miles or nonpublic water supplies exist within 0.5 miles, and greater than 500 feet to a withdrawal point).
Bold value denotes concentration exceeded the GUST Detection Limit
U denotes concentration not detected equal to or greater that lab detection limit of .005 mg/kg for BTEX and 10.00 mg/kg for TPH.
J denotes laboratory estimated value.
ft. = foot or feet
mg/ kg = milligrams per kilogram

Table 7 Site Investigation Soil Analytical Results, July–August 2013

Sample Location	Depth (ft.)	Date Sampled	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)	Methyl t-Betyl Ether (mg/kg)
SB-22-0103	1'-3'	7/30/13	**0.0717 UJ**	**0.0717 UJ**	**0.0717 UJ**	**0.215 UJ**	ND	**41.1 U**	0.0717 UJ
SB-229-0103	1'-3'	7/30/13	0.00168 U	0.00168 U	0.00168 U	**0.00505 U**	ND	**18.3J**	0.00168 U
SB-22-0708	7'-8'	7/30/13	0.00128 U	0.00128 U	0.00128 U	0.00385 U	ND	**17.3 J**	0.00128 U
SB-23-0103	1'-3'	7/30/13	**0.0968 U**	**0.0968 U**	**0.0968 U**	**0.290 U**	ND	**46.0 J**	0.0968 U
SB-23-0708	7'-8'	7/30/13	0.00125 U	0.00125 U	0.00125 U	0.00374 U	ND	8.61 U	0.00125 U
SB-24-0103	1'-3'	7/30/13	0.00117 U	0.00117 U	0.00117 U	0.00350 U	ND	**39.7 J**	0.00117 U
SB-24-1012	10'-12'	7/30/13	0.00165 U	0.00165 U	0.00165 U	0.00496 U	ND	**42.3**	0.00165 U
SB-25-0103	1'-3'	8/5/13	0.00143 U	0.00143 U	0.00143 U	0.00428 U	ND	**20.9 J**	0.00143 U
SB-25-0708	7'-8'	8/5/13	0.00124 U	0.00124 U	0.00124 U	0.00371 U	ND	**10.6 J**	0.00124 U
Applicable Standards: Table A			0.008	6.00	10.00	700.00	N/A	N/A	N/A
GUST Detection Limits			0.005	0.005	0.005	0.005	N/A	10	N/A

Notes: * SB-229-0103 is a duplicate sample of SB-22-0103.
Applicable standard is GUST-CAP A Guidelines, Table A for average or higher susceptibility area (where public water supplies exist within 2.0 miles or nonpublic water supplies exist within 0.5 miles, and greater than 500 feet to a withdrawal point).
Bold value denotes concentration exceeded GUST Detection Limit. Shaded value denotes concentration exceeded Applicable Table A standard.
U denotes concentration not detected equal to or greater that lab detection limit.
J denotes laboratory estimated value.
BTEX = benzene, toluene, ethylbenzene, xylenes
ft. = foot or feet
mg/ kg = milligrams per kilogram
TPH = total petroleum hydrocarbons
DRO = diesel range organics
GRO = gasoline range organics
N/A = not applicable
ND = not detected

Table 8 Site Investigation Soil Analytical Results for Polynuclear Aromatic Hydrocarbons, July 2013

Sample Location	Depth (ft.)	Date Sampled	Acenaphthene	Acenapthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthanlene	Phenanthrene	Pyrene
SB-22-0103	1'-3'	7/30/13	0.00216 U	0.009	0.00216 U	0.012	0.0148	0.0201	0.0115	0.0218	0.0170	0.00923	0.0185 J	0.00216 U	0.0121	0.00216 U	0.00216 U	0.0294 J
SB-229-0103	1'-3'	7/30/13	0.00233 U	0.00468 J	0.00233 U	0.00233 U	0.00233 U	0.0109	0.00627 J	0.00974	0.00571 J	0.00905 J	0.00544 J	0.00233 U	0.00493 J	0.00233 U	0.00233 U	0.00715 J
SB-22-0708	7'-8'	7/30/13	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U	0.00226 U
SB-23-0103	1'-3'	7/30/13	0.00238 U	0.0337	0.0145	0.0449	0.0683	0.0658	0.0352	0.0748	0.0648	0.0123	0.0751	0.00238 U	0.0367	0.0130	0.0199	0.134
SB-23-0708	7'-8'	7/30/13	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U
SB-24-0103	1'-3'	7/30/13	0.00503 J	0.131	0.0543	0.247	0.312	0.271	0.154	0.254	0.322	0.0511	0.370	0.00517 J	0.156	0.0134	0.0686	0.616
SB-24-1012	10'-12'	7/30/13	0.0118 U	0.0118 U	0.0018 U	0.0303 J	0.0118 U	0.0124 J	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0118 U	0.0766
SB-25-0103	1'-3'	8/5/13	0.00198 U	0.00504J	0.00278 J	0.00633 J	0.007 J	0.0166	0.0102 UB	0.0122	0.017	0.00389 J	0.0169	0.00241J	0.0124 UB	0.00648 J	0.0128	0.0207
SB-25-0708	7'-8'	8/5/13	0.00215 U	0.00215 U	0.00215 U	0.00215 U	0.00215 U	0.00215 U	0.00489 UB	0.00215 U	0.00215 U	0.00215 U	0.00349 J	0.00215 U	0.00392 UB	0.00215 U	0.00303 J	0.00564 J
Applicable Standards: Table A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUST Detection Limit			0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660	0.660

Notes: * SB-03-019 is a duplicate sample of SB-03-01.
Applicable standard is GUST-CAP A Guidelines, Table A for average or higher susceptibility area (where public water supplies exist within 2.0 miles or nonpublic water supplies exist within 0.5 miles, and greater than 500 feet to a withdrawal point).
U denotes concentration not detected equal to or greater that lab detection limit.
UB denotes that the analyte was found in the associated method blank as well as the sample above the QC level.
J denotes laboratory estimated value.
ft. = foot or feet
mg/ kg = milligrams per kilogram

Table 9 Preliminary Assessment and Site Investigation Groundwater Analytical Results, April 2011

Well Number	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-01-01	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
MW-02-02	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
MW-03-03	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
MW-04-04	4/12/11	3.67	0.839J	**19.8**	**112**	136.309
MW-05-05	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
MW-05-059*	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
MW-06-06	4/12/11	0.140U	0.190U	0.150U	0.220U	ND
Applicable Standards		5 (MCL) 51 (ISWQS)	1,000 (MCL)	700 (MCL)	N/A	N/A
GUST Detection Limits		5	5	5	5	N/A

Notes: * MW-059 is a duplicate sample of MW-05-05.
Applicable standard is Drinking Water Maximum Contaminant Level (MCL) and the Georgia In-Stream Water Quality Standard (ISWQS).
Bold text indicates exceedances.
U denotes concentration not detected equal to or greater that lab detection limit of 5 µg/l for BTEX components.
J denotes laboratory estimated value.
µg/L = micrograms per liter BTEX = benzene, toluene, ethylbenzene, xylenes
N/A = not applicable

Table 10 Preliminary Assessment and Site Investigation Groundwater Analytical Results for Polynuclear Aromatic Hydrocarbons, April 2011

Sample Location	Date Sampled	Acenaphthene	Acenapthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthanlene	Phenanthrene	Pyrene
MW-01-01	4/12/11	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U
MW-02-02	4/12/11	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ	0.0472UJ
MW-03-03	4/12/11	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0563J
MW-04-04	4/12/11	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.0463UJ	0.414 U	0.110 U	0.0463UJ	0.0463UJ	0.139 J
MW-05-05	4/12/11	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U	0.0463 U
MW-05-059	4/12/11	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U
MW-06-06	4/12/11	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Georgia Instream Water Quality Standard (µg/L)		NRC	NRC	110,000	NRC	NRC	NRC	NRC	NRC	NRC	NRC	370	14,000	NRC	NRC	NRC	NRC	NRC	11,000
GUST Detection Limit µg/L)		**10.00**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**N/A**	**N/A**	**10**	**10**	**10**

Notes: * MW-05-059 is a duplicate sample of MW-05-05.
U denotes concentration not detected equal to or greater than lab detection limit shown.
J denotes laboratory estimated value.
ft. = foot or feet
Units are micrograms per liter (µg/L)
NRC = No regulatory criteria.
N/A = not applicable

Table 11 Site Investigation Groundwater Analytical Results, August 2013

Well Number	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)
MW-7	8/8/13	0.250U	0.250U	0.250U	0.750U	1.5	0.250U
MW-8	8/8/13	0.250U	0.250U	0.250U	0.750U	1.5	0.250U
MW-89	8/8/13	0.250U	0.250U	0.250U	0.750U	1.5	0.250U
MW-9	8/8/13	0.250U	0.250U	0.250U	0.750U	1.5	0.250U
Applicable Standards		5 (MCL) 51 (ISWQS)	1,000 (MCL)	700 (MCL)	N/A	N/A	N/A
GUST Detection Limits		5	5	5	5	N/A	N/A

Notes: * MW-89 is a duplicate sample of MW-8.
Applicable standard is Drinking Water Maximum Contaminant Level (MCL) and the Georgia In-Stream Water Quality Standard (ISWQS).
U denotes concentration not detected at lab detection limit shown.
µg/L = micrograms per liter
BTEX = benzene, toluene, ethylbenzene, xylenes
MTBE = methyl tertbutyl ether
N/A = not applicable

Table 12 Site Investigation Groundwater Analytical Results for Polynuclear Aromatic Hydrocarbons, August 2013

Sample Location	Date Sampled	Acenaphthene	Acenapthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthanlene	Phenanthrene	Pyrene
MW-7	8/8/13	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.0633J	0.050U	0.050U	0.050U	0.100U	0.050U
MW-8	8/8/13	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0474J	0.0463U	0.0463U	0.0463U	0.0926U	0.0463U
MW-89	8/8/13	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0463U	0.0556J	0.0463U	0.0463U	0.0463U	0.0926U	0.0582J
MW-9	8/8/13	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0481U	0.0962U	0.0481U
Georgia Instream Water Quality Standard (µg/L)		NRC	NRC	110,000	NRC	NRC	NRC	NRC	NRC	NRC	NRC	370	14,000	NRC	NRC	NRC	11,000
GUST Minimum Detection Limit(µg/L)		**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**

Notes: * MW-89 is a duplicate sample of MW-8.
U denotes concentration not detected equal to or greater that laboratory detection limit.
J denotes laboratory estimated value.
Applicable standard is Drinking Water Maximum Contaminant Level (MCL) and the Georgia In-Stream Water Quality Standard (ISWQS).
µg/ kg = micrograms per kilogram

APPENDIX III

WATER RESOURCES SURVEY DOCUMENTATION

WATER RESOURCES INVENTORY SURVEY

As required by Georgia Underground Storage Tank (GUST) Rule 391-3-15-.09(4)(a)-(d), all local water resources were identified and documented to determine the site's pollution susceptibility area. The survey conducted for Building 419 provided documentation information for public and nonpublic water supply wells, surface water bodies, underground utilities, and potential receptors. The information presented in this section provides the supporting documentation for Section II.D.3 for the CAP-Part A form. The survey was conducted September 23, 2013, through September 27, 2013.

The results of the survey found five public drinking water systems, and irrigation wells within a two-mile radius from the Building 419 site. Sanitary and storm sewers were found adjacent to the site. Based on these findings, the Building 419 Heating Oil Tank site is in a high groundwater pollution susceptibility area.

WATER SUPPLY WELLS

The water supply well survey was conducted for the Building 419, which is in an area of higher groundwater pollution susceptibility as defined by the Groundwater Pollution Susceptibility Map of Georgia (Georgia Department of Natural Resources, Environmental Protection Division, Georgia Geological Survey, 1992). The following GA DNR guidelines/requirements were used:

- Identify the location of all public supply wells, as defined by the GA DNR, which exist within two miles of the site;
- Identify the location of all nonpublic supply wells that exist within ½ mile of the site;
- Identify the location of all supply wells nearest the site; and
- Identify the location of all wells downgradient of the site.

The survey was accomplished by obtaining information from the Fort Stewart Directorate of Public Works (DPW), Environmental Division; searching Fort Stewart's geographic information system files for the location of water wells on Fort Stewart; and conducting a database search of the United States Geologic Survey (USGS) Water Resources, National Water Information System (NWIS) Site Inventory Database for Liberty County, Georgia. A summary of the information obtained from the survey is provided in the following sections.

According to the USGS NWIS Site Inventory Database for water wells in Liberty County, Georgia, seven water wells are within the 2-mile radius of the site, as shown on Figure 3.

Fort Stewart Drinking Water Well #2 is approximately 1,800 feet southwest of the site and serves as one of the drinking water sources for Fort Stewart. The total well depth is 808 ft. below ground surface (bgs) with the casing set at 470 ft. bgs. The pump rate for the well is 920 gallons per minute (gpm). The well is completed in the Floridan aquifer system (S400FLORDN) national aquifer and the Upper Floridan Aquifer (120FLRDU) local aquifer.

Fort Stewart Drinking Water Well #1 is approximately ~3,500 ft. southwest of the site and serves as one of the main drinking water sources for Fort Stewart. The total well depth is 816 feet below bgs with the casing set at 451 feet bgs. The pump rate for the well is 2,250 gpm. The well is completed in the Floridan aquifer system (S400FLORDN) national aquifer and in the Upper Floridan Aquifer (120FLRDU) local aquifer

SURFACE WATER BODIES

The location of surface water, storm sewers, and sanitary sewers were obtained from USGS NWIS Site Inventory Database and Fort Stewart DPW, and they were verified in the field.

The nearest surface water is an unnamed tributary approximately 75 ft. north of the site. The unnamed tributary flows in a northerly direction and empties into Taylors Creek. This surface water body was sampled on February 11, 2008, by Fort Stewart personnel. Chain of custody information and certificates of analyses are included in this Appendix.

Site reconnaissance identified a storm water inlet catch basin 10 ft. north of the site. The depth below ground surface of the catch basin is 1.5 ft.

5102 LaRoche Avenue
Savannah, GA 31404
Phone (912) 354-7858 Fax (912) 352-0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler:	Lab PM: Hoffman, Sheila	Carrier Tracking No(s): 08-25-S	COC No: 680-15076.1
Client Contact: Mr. Christian Montano	Phone:	E-Mail: sheila.hoffman@testamericainc.com		Page: Page 1 of 1
Company: Environmental Branch/Directorate of PW				Job #:
Address: 1550 Frank Cochran Drive - Bldg. 1137	Due Date Requested:			
City: Ft. Stewart	TAT Requested (days):			
State, Zip: GA, 31314-4928				
Phone:	PO #: Purchase Order not requir			
Email: christian.montano@stewart.army.mil	WO #: 08-25-S			
Project Name:	Project #: 68001990			
Site: Georgia	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1664A	8260B	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	A		
Storm ditch Bldg 419	11 Feb 08		G	Water			1	1		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	11 Feb 08 / 1650	EEI	2/11/08	1630	TALSA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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ANALYTICAL REPORT

Job Number: 680-34123-1

Job Description: 08-25-S

For:
Environmental Branch/Directorate of PW
1550 Frank Cochran Drive - Bldg. 1137
Ft. Stewart, GA 31314-4928

Attention: Mr. Christian Montano

Sheila Hoffman

Sheila Hoffman
Project Manager I
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02/22/2008

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ACCREDITED IN ACCORDANCE WITH nelac

METHOD / ANALYST SUMMARY

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Method	Analyst	Analyst ID
SW846 8260B	Smith, Carion	CS
1664A 1664A	Lizana, Charlotte A	CAL

SAMPLE SUMMARY

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-34123-1	Storm Ditch Bldg 419	Water	02/11/2008 0000	02/11/2008 1630

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Client Sample ID: **Storm Ditch Bldg 419**

Lab Sample ID: 680-34123-1
Client Matrix: Water

Date Sampled: 02/11/2008 0000
Date Received: 02/11/2008 1630

8260B Volatile Organic Compounds by GC/MS

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 02/14/2008 1727
Date Prepared: 02/14/2008 1727

Analysis Batch: 680-98211

Instrument ID: GC/MS Volatiles - B
Lab File ID: b0354.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	RL
Chloromethane	<1.0		1.0
Bromomethane	<1.0		1.0
Vinyl chloride	<1.0		1.0
Chloroethane	<1.0		1.0
Methylene Chloride	<5.0		5.0
Acetone	<25		25
Carbon disulfide	<2.0		2.0
1,1-Dichloroethene	<1.0		1.0
1,1-Dichloroethane	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
Chloroform	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
2-Butanone (MEK)	<10		10
1,1,1-Trichloroethane	<1.0		1.0
Carbon tetrachloride	<1.0		1.0
Dichlorobromomethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Trichloroethene	<1.0		1.0
Chlorodibromomethane	<1.0		1.0
1,1,2-Trichloroethane	<1.0		1.0
Benzene	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
Bromoform	<1.0		1.0
2-Hexanone	<10		10
4-Methyl-2-pentanone (MIBK)	<10		10
Tetrachloroethene	<1.0		1.0
Toluene	<1.0		1.0
Chlorobenzene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Styrene	<1.0		1.0
Xylenes, Total	<2.0		2.0

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	82	75 - 120
4-Bromofluorobenzene	91	75 - 120
Dibromofluoromethane	96	75 - 121

General Chemistry

Client Sample ID: **Storm Ditch Bldg 419**

Lab Sample ID: 680-34123-1
Client Matrix: Water

Date Sampled: 02/11/2008 0000
Date Received: 02/11/2008 1630

Analyte	Result	Qual	Units	RL	Dil	Method
TPH (1664A)	44		mg/L	5.0	1.0	1664A
	Anly Batch: 680-98592	Date Analyzed	02/21/2008 1056			
	Prep Batch: 680-98318	Date Prepared:	02/19/2008 0958			

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Method Blank - Batch: 680-98211

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-98211/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/14/2008 1539
Date Prepared: 02/14/2008 1539

Analysis Batch: 680-98211
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - B
Lab File ID: bq129.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL
Chloromethane	<1.0		1.0
Bromomethane	<1.0		1.0
Vinyl chloride	<1.0		1.0
Chloroethane	<1.0		1.0
Methylene Chloride	<5.0		5.0
Acetone	<25		25
Carbon disulfide	<2.0		2.0
1,1-Dichloroethene	<1.0		1.0
1,1-Dichloroethane	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
Chloroform	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
2-Butanone (MEK)	<10		10
1,1,1-Trichloroethane	<1.0		1.0
Carbon tetrachloride	<1.0		1.0
Dichlorobromomethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Trichloroethene	<1.0		1.0
Chlorodibromomethane	<1.0		1.0
1,1,2-Trichloroethane	<1.0		1.0
Benzene	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
Bromoform	<1.0		1.0
2-Hexanone	<10		10
4-Methyl-2-pentanone (MIBK)	<10		10
Tetrachloroethene	<1.0		1.0
Toluene	<1.0		1.0
Chlorobenzene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Styrene	<1.0		1.0
Xylenes, Total	<2.0		2.0

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	88	75 - 120
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	96	75 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Lab Control Spike - Batch: 680-98211

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 680-98211/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/14/2008 1257
Date Prepared: 02/14/2008 1257

Analysis Batch: 680-98211
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - B
Lab File ID: bq125.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloromethane	50.0	50.1	100	48 - 142	
Bromomethane	50.0	59.5	119	12 - 184	
Vinyl chloride	50.0	48.2	96	59 - 144	
Chloroethane	50.0	49.3	99	40 - 165	
Methylene Chloride	50.0	50.5	101	70 - 125	
Acetone	100	113	113	17 - 175	
Carbon disulfide	50.0	54.3	109	55 - 131	
1,1-Dichloroethene	50.0	46.4	93	62 - 141	
1,1-Dichloroethane	50.0	49.8	100	74 - 127	
cis-1,2-Dichloroethene	50.0	49.4	99	69 - 134	
trans-1,2-Dichloroethene	50.0	44.8	90	72 - 131	
Chloroform	50.0	53.3	107	82 - 120	
1,2-Dichloroethane	50.0	49.1	98	66 - 132	
2-Butanone (MEK)	100	105	105	33 - 157	
1,1,1-Trichloroethane	50.0	50.8	102	76 - 127	
Carbon tetrachloride	50.0	54.0	108	71 - 135	
Dichlorobromomethane	50.0	52.7	105	78 - 127	
1,1,2,2-Tetrachloroethane	50.0	47.4	95	69 - 129	
1,2-Dichloropropane	50.0	52.2	104	73 - 124	
trans-1,3-Dichloropropene	50.0	51.0	102	73 - 128	
Trichloroethene	50.0	50.7	101	84 - 115	
Chlorodibromomethane	50.0	49.6	99	75 - 133	
1,1,2-Trichloroethane	50.0	49.8	100	75 - 121	
Benzene	50.0	49.2	98	77 - 119	
cis-1,3-Dichloropropene	50.0	52.0	104	76 - 126	
Bromoform	50.0	51.2	102	62 - 133	
2-Hexanone	100	101	101	34 - 161	
4-Methyl-2-pentanone (MIBK)	100	101	101	40 - 151	
Tetrachloroethene	50.0	48.3	97	76 - 126	
Toluene	50.0	49.2	98	81 - 117	
Chlorobenzene	50.0	49.4	99	85 - 116	
Ethylbenzene	50.0	49.5	99	86 - 116	
Styrene	50.0	48.9	98	82 - 122	
Xylenes, Total	150	149	99	84 - 118	

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	99	75 - 120
4-Bromofluorobenzene	99	75 - 120
Dibromofluoromethane	102	75 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Environmental Branch/Directorate of PW

Job Number: 680-34123-1

Method Blank - Batch: 680-98318

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 680-98318/21-A	Analysis Batch:	680-98592	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-98318	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	500 mL
Date Analyzed:	02/21/2008 1056			Final Weight/Volume:	500 mL
Date Prepared:	02/19/2008 0958				

Analyte	Result	Qual	RL
TPH (1664A)	<5.0		5.0

Lab Control Spike - Batch: 680-98318

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 680-98318/22-A	Analysis Batch:	680-98592	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	680-98318	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	500 mL
Date Analyzed:	02/21/2008 1056			Final Weight/Volume:	500 mL
Date Prepared:	02/19/2008 0958				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
TPH (1664A)	20.0	19.6	98	64 - 132	

Calculations are performed before rounding to avoid round-off errors in calculated results.

APPENDIX IV
SOIL BORING LOGS

BORING LOG

Boring/ Well No:	SB-01	Installation:	Fort Stewart	Site:	Building 419
Project No.:	E00209.0007		Client/ Project:	US Army Corps of Engineers	
Contractor:	SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling	
Driller:	James Chambers		Borehole Diameter:	4 Inches	
Start - Date:	3/29/2011 Time: 9:30 AM		End Date:	3/29/2011 Time:	10:00 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe		Coordinates:		
Logged By:	Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D	

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-01-01	Y	N	0.0	N/A	4/4	GRASS. FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS. COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N			N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-01-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER ENCOUNTERED AT 8.5' BGS. SAND IS FINE TO MEDIUM COARSE. VERY WET. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 8.5' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-02	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 10:30 AM	End Date: 3/29/2011	Time: 10:45 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-02-01	Y	N	0.0	N/A	4/4	GRASS. FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND. MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N			N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-02-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER ENCOUNTERED AT 9' BGS. SAND IS FINE TO MEDIUM COARSE. VERY WET. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 9' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No:	SB-03/MW-01	Installation:	Fort Stewart	Site:	Building 419
Project No.:	E00209.0007		Client/ Project:	US Army Corps of Engineers	
Contractor:	SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling	
Driller:	James Chambers		Borehole Diameter:	4 Inches	
Start - Date:	3/29/2011	Time: 11:10 AM	End Date:	3/29/2011	Time: 11:45 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe		Coordinates:		
Logged By:	Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D	

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-03-01	Y	N	0.0	N/A	4/4	GRASS. FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-03-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 7' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7' BGS	
8'	Y		Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
12'	N				0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS MEDIUM TO COARSE. VERY WET. FROM 12'-15' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-04	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 10:55 AM	End Date: 3/29/2011	Time: 11:05 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Lithologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O
0'	Y	SB-04-01	Y	N	0.0	N/A	4/4	GRASS. FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-04-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 7' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7' BGS	
8'														
12'														
16'														

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-05	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011 Time: 1:00 PM		End Date: 3/29/2011	Time: 1:25 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-05-01	Y	N	0.0	N/A	4/4	ASHPHALT AND FILL MATERIAL FROM 0-6" BGS. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-05-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 6.5' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 6.5' BGS	
8'														
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-06/MW-05	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 1:30 PM	End Date: 3/29/2011	Time: 1:45 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-06-01	Y	N	0.0	N/A	4/4	ASHPALT - FROM 0-6" BGS. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-06-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 7' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7' BGS	
8'	Y		Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS FINE TO MEDIUM COARSE. VERY WET. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
12'	N				0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS MEDIUM TO COARSE. VERY WET. FROM 12'-15' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-07	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 2:00 PM	End Date: 3/29/2011	Time: 2:15 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-07-01	Y	N	0.0	N/A	4/4	ASHPALT - FROM 0-6" BGS. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-07-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 7' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7' BGS	
8'														
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-08	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 2:25 PM	End Date: 3/29/2011	Time: 2:50 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-08-01	Y	N	0.0	N/A	4/4	ASHPALT - FROM 0-6" BGS. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-08-02		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 7' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7' BGS	
8'														
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-09	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 2:50 PM	End Date: 3/29/2011	Time: 3:15 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	0.0	N/A	4/4	GRASS - FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 6"-18" BGS 80% SAND AND 20% SILT. FINE TO MEDIUM SANDS AND COARSE SILTS, COLOR 5YR3/2. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-09-01		N	0.0	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-09-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS FINE TO MEDIUM COARSE. VERY WET. GROUNDWATER ENCOUNTERED AT 11' BGS. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 11' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-10	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 3:10 PM	End Date: 3/29/2011	Time: 3:55 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM	To	Protection Level: Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	0.0	N/A	0/4	CONCRETE (LOADING DOCK AREA) FROM 0-18" BGS - FILL MATERIAL FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY, MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-10-01		N	5.7	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER ENCOUNTERED AT 5' BGS. SHEEN OBSERVED, WITH STRONG ODOR. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 5' BGS	
8'	Y	SB-10-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-11/MW-04	Installation: Fort Stewart	Site: Building 419	
Project No.: E00209.0007	Client/ Project: US Army Corps of Engineers		
Contractor: SpecPro Environmental Services LLC	Drilling Contractor: Major Drilling		
Driller: James Chambers	Borehole Diameter: 4 Inches		
Start - Date: 3/29/2011 Time: 4:00 PM	End Date: 3/29/2011 Time: 4:20 PM		
Drilling Method / Rig Type: Direct Push/Geoprobe	Coordinates:		
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level: Level D	

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	0.0	N/A	2/4	CONCRETE (LOADING DOCK AREA) FROM 0-18" BGS - FILL MATERIAL FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY, MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-11-01		N	10.5	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-11-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER ENCOUNTERED AT 9.5' BGS. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 9.5' BGS	
12'	N				0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS MEDIUM TO COARSE. VERY WET. FROM 12'-15' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-12	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/29/2011	Time: 4:30 PM	End Date: 3/29/2011	Time: 4:55 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	0.0	N/A	2/4	CONCRETE (LOADING DOCK AREA) FROM 0-18" BGS - FILL MATERIAL FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY, MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-12-01		N	10.5	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-12-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 8' BGS. SHEEN OBSERVED, WITH STRONG ODOR. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 8' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-13	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011 Time: 8:45 AM		End Date: 3/30/2011	Time: 9:10 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-13-01	Y	N	0.0	N/A	4/4	CONCRETE (LOADING DOCK AREA) FROM 0-18" BGS - FILL MATERIAL FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N			N	NA	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-13-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 9' BGS. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 9' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-14	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011	Time: 9:30 AM	End Date: 3/30/2011	Time: 9:50 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y	SB-14-01	Y	N	0.0	N/A	4/4	CONCRETE (LOADING DOCK AREA) FROM 0-18" BGS - FILL MATERIAL FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING. VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-14-02		N	NA	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. GROUNDWATER AT 7.5' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 7.5' BGS	
8'														
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-15/MW-02	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011	Time: 10:00 AM	End Date: 3/30/2011	Time: 10:15 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	0.0	N/A	4/4	ASHPALT-PARKING LOT FROM 0-18" BGS - FILL MATERIAL. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-15-01		N	NA	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-15-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 8' BGS. SLIGHT PETROLEUM ODOR. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 8' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-16	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011	Time: 10:30 AM	End Date: 3/30/2011	Time: 10:45 AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	GRASS (NEAR FORMER TANK AREA). FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. WOOD DEBRIS. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-16-01		N	30	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-16-02	Y		0.0	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. WOOD DEBRIS. GROUNDWATER AT 8.5' BGS. SLIGHT PETROLEUM ODOR. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 8.5' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No:	SB-17	Installation:	Fort Stewart	Site:	Building 419
Project No.:	E00209.0007		Client/ Project:	US Army Corps of Engineers	
Contractor:	SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling	
Driller:	James Chambers		Borehole Diameter:	4 Inches	
Start - Date:	3/30/2011	Time: 10:55 AM	End Date:	3/30/2011	Time: 11:05 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe		Coordinates:		
Logged By:	Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D	

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	GRASS (NEAR FORMER TANK AREA). FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N			N	NA	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-17-01	Y		15.5	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 8.5' BGS. SLIGHT PETROLEUM ODOR. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 8.5' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No:	SB-18	Installation:	Fort Stewart	Site:	Building 419
Project No.:	E00209.0007		Client/ Project:	US Army Corps of Engineers	
Contractor:	SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling	
Driller:	James Chambers		Borehole Diameter:	4 Inches	
Start - Date:	3/30/2011	Time: 11:10 AM	End Date:	3/30/2011	Time: 11:35 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe		Coordinates:		
Logged By:	Doug Hawn	E-Log (Y / N) FROM	To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	GRASS (NEAR FORMER TANK AREA). FROM 0-6" BGS - DARK ORGANIC MATTER. FROM 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING. VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-18-01		N	NA 40	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS. WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-18-02	Y		27	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 10.5' BGS. STRONG PETROLEUM ODOR. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 10.5' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-19/MW-03	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011	Time: 2:00 PM	End Date: 3/30/2011	Time: 2:10 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	ASHPHALT PARKING LOT AND FILL MATERIAL FROM 0-18". 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-19-01		N	40	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-19-02	Y		45 27	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 9' BGS. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 9' BGS	
12'	N					N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS MEDIUM TO COARSE. VERY WET. FROM 12'-15' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-20	Installation:	Fort Stewart	Site: Building 419
Project No.: E00209.0007		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: James Chambers		Borehole Diameter:	4 Inches
Start - Date: 3/30/2011	Time: 2:15 PM	End Date: 3/30/2011	Time: 2:25 PM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates:	
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	ASHPHALT PARKING LOT AND FILL MATERIAL FROM 0-18". 18"-20" BGS - DARK GRITTY SAND, MOIST. FROM 20"-42" BGS - LIGHT TAN/GREY SAND, FIND GRAINED WITH SOME CLAY. MOTTLING, VERY PLASTIC.	O SM CH	N/A		Y		
4'	N	SB-20-01		N	45	N/A	4/4	HEAVY MOTTLING. 80% SAND AND 20% SILT FROM 5'-6' BGS, WITH MEDIUM TO COARSE SANDS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y		
8'	Y	SB-20-02	Y		65	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. GROUNDWATER AT 9' BGS. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y	WATER ENCOUNTERED AT 9' BGS	
12'														
16'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-20/MW-06	Installation: Fort Stewart	Site: Building 419	
Project No.: E00209.0007	Client/ Project: US Army Corps of Engineers		
Contractor: SpecPro Environmental Services LLC	Drilling Contractor: Major Drilling		
Driller: James Chambers	Borehole Diameter: 4 Inches		
Start - Date: 4/7/2011 Time: 10:00 AM	End Date: 4/7/2011 Time: 10:15 AM		
Drilling Method / Rig Type: Direct Push/Geoprobe	Coordinates:		
Logged By: Doug Hawn	E-Log (Y / N) FROM To	Protection Level: Level D	

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Litologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft)
0'	Y		Y	N	NA	N/A	4/4	ASHPHALT PARKING LOT AND FILL MATERIAL FROM 0-18". 18"-42" BGS - GRAVEL FILL MATERIAL.	O SM CH	N/A		Y		
4'	N			N	NA	N/A	4/4	FROM 5'-6' BGS ORGANIC, BLACK, MUCKY SOIL WITH MEDIUM TO COARSE SANDS. GROUNDWATER AT 6' BGS. FROM 6'-8' BGS 80% CLAY, 10% SAND, AND 10% SILT, WITH MEDIUM PLASTICITY. MEDIUM STIFFNESS. FROM 5'-6' BGS COLOR 5YR6/4 AND FROM 6'-8' BGS COLOR GLEY 1 7/10Y.	SM CL	N/A		Y	WATER ENCOUNTERED AT 6' BGS	
8'	Y		Y		NA	N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS FINE TO MEDIUM COARSE. FROM 10'-12' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
12'	N					N/A	4/4	80% SAND, 10% SILT, AND 10% CLAY. SAND IS MEDIUM TO COARSE. VERY WET. FROM 12'-15' BGS COLOR GLEY 1 7/10Y.		N/A		Y		
16'														
A	B	C	D	E	F	G	H I		J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-22 (MW-7)	Installation:	Fort Stewart	Site: Bldg 419
Project No.:	E0209.0029	Client/ Project:	US Army Corps of Engineers
Contractor:	SpecPro Environmental Services LLC	Drilling Contractor:	Major Drilling
Driller:	Kenneth Burkhead	Borehole Diameter:	2 Inches
Start - Date: 7/30/2013	Time: 10:00 AM	End Date: 7/30/2013	Time: 11:00 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe	Coordinates: N TBD	E TBD
Logged By:	C. Napoleon	E-Log (Y / N) FROM 0 To 20	Protection Level: Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Lithologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft) TBD
0'	N	SB-22-0103	Y	N	0.3 0.5	N/A	3.8/5	0'-2.5 Light yellowish brown (2.5YR 6/4) fine grained sand with organics. 2.5-5 Black (10YR 2/1) fine grained sand, moist.	SP SP	N/A		Y	Sample SB-22-0103 from 1-3 ft BGS	
5'	Y	SB-22-0708			0.3 0.7	N/A	5/5	5.0-7.2 Same as above. 7.2-10 Black (10YR 2/1) fine grained sand, wet.	SP	N/A			Water at 7.5 ft BGS Sample SB-22-0708 from 7-8 ft BGS at top of saturated zone.	
10'	N				0.2 0.6		5/5	10- 12.5 Same as above. 12.5-15 Dark yellowish brown (10YR 3/4) fine grained sand, moist.	SP	N/A				
15'	N				0.4 0.4		5/5	15-20 Dark yellowish brown (10YR 3/4) fine grained sand, wet. Boring terminated at 20 ft BGS without refusal.	SP	N/A				
20'														
25'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
Multi Rae S/N 095-531866
Notes:

BORING LOG

Boring/ Well No: SB-23 (MW-08)	Installation:	Fort Stewart	Site: Bldg 419
Project No.:	E0209.0029	Client/ Project:	US Army Corps of Engineers
Contractor:	SpecPro Environmental Services LLC	Drilling Contractor:	Major Drilling
Driller:	Kenneth Burkhead	Borehole Diameter:	2 Inches
Start - Date: 7/31/2013	Time: 8:40 AM	End Date: 7/31/2013	Time: 9:40 AM
Drilling Method / Rig Type:	Direct Push/Geoprobe	Coordinates: N TBD	E TBD
Logged By: C. Napoleon	E-Log (Y / N) FROM 0 To 20	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Lithologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft) TBD
0'	Y	SB-23-0103	Y	N	1.9 1.9	N/A	3.2/5	0'-3 Very dark brown (10YR 2/2) fine grained sand with organics, moist 3-7 Black (10YR 2/1) fine grained sand, moist.	SP	N/A		Y	Soil Sample 1-3ft BGS (SB-23-0103)	
5'	Y	SB-23-0708			1.2 1.4	N/A	5/5	7-12' Black (10YR 2/1) fine grained sand, very wet	SP	N/A			Water at 7.5 ft BGS Sample boring at saturated zone 7-8 ft BGS (SB-23-0708).	
10'	N				0.8 0.2		5/5	12-15' Light yellowish brown (10YR 6/4) medium grained sand, wet	SP	N/A				
15'	N				0.2 0.2		5/5	15-20' Light yellowish brown (10YR 6/4) fine grained sand, wet Boring terminated at 20 ft BGS without refusal.	SP	N/A				
20'														
25'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring _____
O = Other
OVA Instrument (Make/Model) Multi Rae S/N 095-531866
On-Site G/C (Make/Model) _____
GC Operator: _____
Notes: _____

BORING LOG

Boring/ Well No: SB-24 (MW-9)	Installation:	Fort Stewart	Site: Bldg 419
Project No.:	E0209.0029	Client/ Project:	US Army Corps of Engineers
Contractor:	SpecPro Environmental Services LLC	Drilling Contractor:	Major Drilling
Driller:	Kenneth Burkhead	Borehole Diameter:	2 Inches
Start - Date: 7/31/2013	Time: 12:40 PM	End Date: 7/31/2013	Time: 13:40 PM
Drilling Method / Rig Type:	Direct Push/Geoprobe	Coordinates: N TBD	E TBD
Logged By: C. Napoleon	E-Log (Y / N) FROM 0 To 20	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Lithologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS Elev. (ft) TBD
0'	Y	SB-24-0103	Y	N	0.0 0.1	N/A	3.6/5	0-3 Dark brown (10YR 3/3) fine grained sand with organics, moist 3-5 Very dark brown (10YR 2/2) fine grained sand, moist	GP SP	N/A		Y	Soil Sampled 1-3ft BGS	
5'	N				N/A	N/A	0/5	5-10' Extremely soft, No recovery	SP SP	N/A			Extremely Soft at 5-10ft interval.	
10'	Y	SB-24-1012			0.5 0.8		5/5	10-12' Black (10YR2/1) fine grained sand, wet. 12-20' dark yellowish brown (10YR 3/6) fine grained sand, moist	SP	N/A			Soil Sampled at 10-12 ft BGS.	
15'	N				1.6 0.6		5/5	Boring terminated at 20 ft BGS no refusal.	SP	N/A				
20'														
25'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring
O = Other
OVA Instrument (Make/Model)
On-Site G/C (Make/Model)
GC Operator:
MiniRae 2000 PID
Notes:

BORING LOG

Boring/ Well No: SB-25 (MW-9A)	Installation:	Fort Stewart	Site: Bldg 419
Project No.: E0209.0029		Client/ Project:	US Army Corps of Engineers
Contractor: SpecPro Environmental Services LLC		Drilling Contractor:	Major Drilling
Driller: Kenneth Burkhead		Borehole Diameter:	2 Inches
Start - Date: 8/5/2013 Time: 9:00AM		End Date: 8/5/2013	Time: 10:00AM
Drilling Method / Rig Type: Direct Push/Geoprobe		Coordinates: N TBD	E TBD
Logged By: C. Napoleon	E-Log (Y / N) FROM 0 To 20	Protection Level:	Level D

Depth (ft)	Sample	Sample No.	Off-site Lab (Y/N)	On-site lab (Y/N)	OVA Reading (ppm)	Headspace (ppm)	Recovery (ft/ft)	Lithologic Description	USCS	Blows/6 inch	Stratigraphic Log	Well Construction Data	Water Depth & Remarks	GS TBD
0'	Y	SB-25-0103	Y	N	0.0 0.0	N/A	3.6/5	0-5' Very dark brown (10YR 2/2) fine grained sand with organics	GP SP	N/A		Y	Soil Sampled 1-3ft BGS Sample SB-25-0103	
5'	Y	SB-25-0708			0.0 0.1	N/A	5/5	5-7 Black (10YR 2/1) fine grained sand, moist 7-12.5 Black (10YR 2/1) fine grained sand, wet	SP SP	N/A			Water at 7ft BGS Sample SB-25-0708	
10'	N				0.1 0.4		5/5	12.5-20 Yellowish brown (10YR 5/6) fine grained sand, wet.	SP	N/A				
15'	N				0.2 0.0		5/5	Boring terminated at 20 ft BGS no refusal.	SP	N/A				
20'														
25'														
	A	B	C	D	E	F	G	H I	J	K	L	M	N	O

U = Thin Wall Tube
S = Split Spoon (tube)
C = Cuttings
R = Rock Coring _____
O = Other
OVA Instrument (Make/Model) MiniRae 2000 PID
On-Site G/C (Make/Model) _____
GC Operator: _____
Notes: _____

APPENDIX V
SOIL LABORATORY RESULTS

ANALYSIS DATA SHEET

SB-01-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-01	File ID:	006B0601.D
Sampled:	03/29/11 09:50	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 12:04
Solids:	89.59	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.28	7.28	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.450	1.182	81.5	35 - 140	

ANALYSIS DATA SHEET

SB-01-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Solid	Laboratory ID:	1103247-03	File ID:	009B0901.D
Sampled:	03/29/11 09:55	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 13:46
Solids:	85.52	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002

Instrument: GL-GCFID

Rev 2nd n

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.68	7.68	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.528	1.233	80.7	35 - 140	

ANALYSIS DATA SHEET

SB-02-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-04	File ID:	010B1001.D
Sampled:	03/29/11 10:35	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 14:19
Solids:	94.48	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2nd

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	19.3	6.91	6.91	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.375	1.049	76.3	35 - 140	

ANALYSIS DATA SHEET

SB-02-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-05	File ID:	011B1101.D
Sampled:	03/29/11 10:40	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 14:53
Solids:	72.28	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		8.91	8.91	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.774	1.276	72.0	35 - 140	

ANALYSIS DATA SHEET

SB-04-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-06	File ID:	012B1201.D
Sampled:	03/29/11 11:00	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 15:27
Solids:	88.11	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002

Instrument: GL-GCFID

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	39.5	7.55	7.55	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.503	0.8271	55.0	35 - 140	

ANALYSIS DATA SHEET

SB-04-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-07	File ID:	013B1301.D
Sampled:	03/29/11 11:05	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 16:01
Solids:	84.70	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002

Instrument: GL-GCFID

Rev Qual U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.61	7.61	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.514	1.161	76.7	35 - 140	

ANALYSIS DATA SHEET

SB-03-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-08	File ID:	014B1401.D
Sampled:	03/29/11 11:20	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 16:35
Solids:	86.20	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2nd u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.47	7.47	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.487	0.9708	65.3	35 - 140	

ANALYSIS DATA SHEET

SB-03-019

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-09	File ID:	015B1501.D
Sampled:	03/29/11 11:20	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 17:08
Solids:	85.54	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

RPD qual U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.68	7.68	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.528	1.076	70.4	35 - 140	

ANALYSIS DATA SHEET

SB-03-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-10	File ID:	016B1601.D
Sampled:	03/29/11 11:35	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 17:42
Solids:	85.04	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.67	7.67	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.527	1.138	74.5	35 - 140	

ANALYSIS DATA SHEET

SB-05-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-11	File ID:	018B1801.D
Sampled:	03/29/11 13:15	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 18:49
Solids:	91.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2 ind U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.31	7.31	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.454	1.010	69.4	35 - 140	

ANALYSIS DATA SHEET

SB-05-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-12	File ID:	019B1901.D
Sampled:	03/29/11 13:20	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 19:23
Solids:	83.51	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002

Instrument: GL-GCFID

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	9.33	7.92	7.92	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.576	1.045	66.3	35 - 140	

ANALYSIS DATA SHEET

SB-06-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-13	File ID:	020B2001.D
Sampled:	03/29/11 13:40	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 19:57
Solids:	91.00	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2nd u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.22	7.22	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.436	0.8376	58.3	35 - 140	

ANALYSIS DATA SHEET

SB-06-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-14	File ID:	021B2101.D
Sampled:	03/29/11 13:45	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 20:30
Solids:	81.70	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002

Instrument: GL-GCFID

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.84	7.84	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.559	1.039	66.6	35 - 140	

ANALYSIS DATA SHEET

SB-07-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-15	File ID:	022B2201.D
Sampled:	03/29/11 14:05	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 21:04
Solids:	77.91	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence: 1D09110	Calibration:	1038002	Instrument: GL-GCFID

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	11.2	8.27	8.27	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.646	0.8409	51.1	35 - 140	

ANALYSIS DATA SHEET

SB-07-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-16	File ID:	023B2301.D
Sampled:	03/29/11 14:10	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 21:38
Solids:	84.91	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.79	7.79	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.550	1.060	68.4	35 - 140	

ANALYSIS DATA SHEET

SB-08-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-17	File ID:	024B2401.D
Sampled:	03/29/11 14:35	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 22:11
Solids:	83.78	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.59	7.59	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.511	0.8553	56.6	35 - 140	

ANALYSIS DATA SHEET

SB-08-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-18	File ID:	025B2501.D
Sampled:	03/29/11 14:45	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 22:45
Solids:	84.52	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Re Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.62	7.62	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.517	0.9683	63.8	35 - 140	

ANALYSIS DATA SHEET

SB-09-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-19	File ID:	026B2601.D
Sampled:	03/29/11 15:00	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 23:19
Solids:	91.32	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	10.3	7.19	7.19	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.431	0.7532	52.6	35 - 140	

ANALYSIS DATA SHEET

SB-09-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-20	File ID:	027B2701.D
Sampled:	03/29/11 15:10	Prepared:	03/30/11 12:45	Analyzed:	03/31/11 23:53
Solids:	80.66	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30010	Sequence:	1D09110	Calibration:	1038002
				Instrument:	GL-GCFID

Rev 2nd U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		8.14	8.14	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.621	0.9953	61.4	35 - 140	

ANALYSIS DATA SHEET

SB-10-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-21	File ID:	031B3101.D
Sampled:	03/29/11 15:40	Prepared:	03/30/11 14:45	Analyzed:	04/01/11 02:09
Solids:	68.32	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30019	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	22100	1340	1340	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	266.1	234.1	88.0	35 - 140	

ANALYSIS DATA SHEET

SB-10-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-22	File ID:	035B3501.D
Sampled:	03/29/11 15:45	Prepared:	03/30/11 12:45	Analyzed:	04/01/11 10:20
Solids:	81.50	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30012	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2nd

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	16.2	8.06	8.06	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.604	1.052	65.6	35 - 140	

ANALYSIS DATA SHEET

SB-11-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-23	File ID:	040B4001.D
Sampled:	03/29/11 16:10	Prepared:	03/30/11 12:45	Analyzed:	04/01/11 13:10
Solids:	88.60	Preparation:	EXT_3546	Dilution:	5
Batch:	1C30012	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual J 7a

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	918	36.4	36.4	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.447	2.052	142	35 - 140	*

ANALYSIS DATA SHEET

SB-11-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-24	File ID:	037B3701.D
Sampled:	03/29/11 16:15	Prepared:	03/30/11 12:45	Analyzed:	04/01/11 11:28
Solids:	83.17	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30012	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2 Qual U

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.75	7.75	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.542	1.041	67.5	35 - 140	

ANALYSIS DATA SHEET

SB-12-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-25	File ID:	038B3801.D
Sampled:	03/29/11 16:40	Prepared:	03/30/11 12:45	Analyzed:	04/01/11 12:02
Solids:	80.60	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30012	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev 2nd

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	29.3	8.10	8.10	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.611	1.064	66.1	35 - 140	

ANALYSIS DATA SHEET

SB-12-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-26	File ID:	039B3901.D
Sampled:	03/29/11 16:50	Prepared:	03/30/11 12:45	Analyzed:	04/01/11 12:36
Solids:	90.89	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30012	Sequence:	1D09110	Calibration:	1038002
Instrument:	GL-GCFID				

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	39.6	7.04	7.04	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.402	1.033	73.7	35 - 140	

ANALYSIS DATA SHEET

SB-01-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-01	File ID:	0324701.D
Sampled:	03/29/11 09:50	Prepared:	03/30/11 16:15	Analyzed:	03/31/11 22:07
Solids:	89.59	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		28.5	361	U
208-96-8	Acenaphthylene		21.9	361	U
120-12-7	Anthracene		29.5	361	U
56-55-3	Benzo(a)anthracene		39.4	361	U
50-32-8	Benzo(a)pyrene		25.2	361	U
205-99-2	Benzo(b)fluoranthene		35.0	361	Q, U
191-24-2	Benzo(g,h,i)perylene		76.6	361	U
207-08-9	Benzo(k)fluoranthene		42.7	361	U
218-01-9	Chrysene		33.9	361	U
53-70-3	Dibenz(a,h)anthracene		65.7	361	U
206-44-0	Fluoranthene		59.1	361	U
86-73-7	Fluorene		28.5	361	U
193-39-5	Indeno(1,2,3-cd)pyrene		50.3	361	U
90-12-0	1-Methylnaphthalene		109	361	U
91-57-6	2-Methylnaphthalene		38.3	361	U
91-20-3	Naphthalene		35.0	361	U
85-01-8	Phenanthrene		25.2	361	U
129-00-0	Pyrene		43.8	361	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3648	2333	64.0	45 - 105	
Nitrobenzene-d5	3648	2669	73.2	35 - 100	
Terphenyl-d14	3648	2929	80.3	30 - 125	X

ANALYSIS DATA SHEET

SB-01-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Solid	Laboratory ID:	1103247-03	File ID:	0324703.D
Sampled:	03/29/11 09:55	Prepared:	03/30/11 16:15	Analyzed:	03/31/11 22:36
Solids:	85.52	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rerun 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.0	381	U
208-96-8	Acenaphthylene		23.1	381	U
120-12-7	Anthracene		31.2	381	U
56-55-3	Benzo(a)anthracene		41.5	381	U
50-32-8	Benzo(a)pyrene		26.5	381	U
205-99-2	Benzo(b)fluoranthene		36.9	381	Q, U
191-24-2	Benzo(g,h,i)perylene		80.8	381	U
207-08-9	Benzo(k)fluoranthene		45.0	381	U
218-01-9	Chrysene		35.8	381	U
53-70-3	Dibenz(a,h)anthracene		69.2	381	U
206-44-0	Fluoranthene		62.3	381	U
86-73-7	Fluorene		30.0	381	U
193-39-5	Indeno(1,2,3-cd)pyrene		53.1	381	U
90-12-0	1-Methylnaphthalene		115	381	U
91-57-6	2-Methylnaphthalene		40.4	381	U
91-20-3	Naphthalene		36.9	381	U
85-01-8	Phenanthrene		26.5	381	U
129-00-0	Pyrene		46.2	381	X, U

use 5b

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3846	3681	95.7	45 - 105	
Nitrobenzene-d5	3846	3455	89.8	35 - 100	
Terphenyl-d14	3846	4385	114	30 - 125	X

ANALYSIS DATA SHEET

SB-02-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-04	File ID:	0324704.D
Sampled:	03/29/11 10:35	Prepared:	03/30/11 16:15	Analyzed:	03/31/11 23:04
Solids:	94.48	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		27.2	345	U
208-96-8	Acenaphthylene		20.9	345	U
120-12-7	Anthracene		28.2	345	U
56-55-3	Benzo(a)anthracene		37.6	345	U
50-32-8	Benzo(a)pyrene		24.0	345	U
205-99-2	Benzo(b)fluoranthene		33.4	345	Q, U
191-24-2	Benzo(g,h,i)perylene		73.1	345	U
207-08-9	Benzo(k)fluoranthene		40.7	345	U
218-01-9	Chrysene		32.4	345	U
53-70-3	Dibenz(a,h)anthracene		62.7	345	U
206-44-0	Fluoranthene		56.4	345	U
86-73-7	Fluorene		27.2	345	U
193-39-5	Indeno(1,2,3-cd)pyrene		48.0	345	U
90-12-0	1-Methylnaphthalene		104	345	U
91-57-6	2-Methylnaphthalene		36.6	345	U
91-20-3	Naphthalene		33.4	345	U
85-01-8	Phenanthrene		24.0	345	U
129-00-0	Pyrene	94.4	41.8	345	X, J

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J 56

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3482	2227	64.0	45 - 105	
Nitrobenzene-d5	3482	2307	66.2	35 - 100	
Terphenyl-d14	3482	3845	110	30 - 125	X

ANALYSIS DATA SHEET

SB-02-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-05 File ID: 0324705.D

Sampled: 03/29/11 10:40 Prepared: 03/30/11 16:15 Analyzed: 03/31/11 23:32

Solids: 72.28 Preparation: EXT_3546 Dilution: 1

Batch: 1C30011 Sequence: 1D09108 Calibration: 1032006 Instrument: MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		34.8	442	U
208-96-8	Acenaphthylene		26.8	442	U
120-12-7	Anthracene		36.2	442	U
56-55-3	Benzo(a)anthracene		48.2	442	U
50-32-8	Benzo(a)pyrene		30.8	442	U
205-99-2	Benzo(b)fluoranthene		42.8	442	Q, U
191-24-2	Benzo(g,h,i)perylene		93.7	442	U
207-08-9	Benzo(k)fluoranthene		52.2	442	U
218-01-9	Chrysene		41.5	442	U
53-70-3	Dibenz(a,h)anthracene		80.3	442	U
206-44-0	Fluoranthene		72.3	442	U
86-73-7	Fluorene		34.8	442	U
193-39-5	Indeno(1,2,3-cd)pyrene		61.6	442	U
90-12-0	1-Methylnaphthalene		134	442	U
91-57-6	2-Methylnaphthalene		46.9	442	U
91-20-3	Naphthalene		42.8	442	U
85-01-8	Phenanthrene		30.8	442	U
129-00-0	Pyrene		53.6	442	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4463	3497	78.3	45 - 105	
Nitrobenzene-d5	4463	3978	89.1	35 - 100	
Terphenyl-d14	4463	4515	101	30 - 125	X

ANALYSIS DATA SHEET

SB-04-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-06	File ID:	0324706.D
Sampled:	03/29/11 11:00	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 00:01
Solids:	88.11	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
Instrument:	MS-BNA1				

Raw Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.3	372	U
208-96-8	Acenaphthylene		22.5	372	U
120-12-7	Anthracene		30.4	372	U
56-55-3	Benzo(a)anthracene		40.6	372	U
50-32-8	Benzo(a)pyrene		25.9	372	U
205-99-2	Benzo(b)fluoranthene		36.1	372	Q, U
191-24-2	Benzo(g,h,i)perylene		78.9	372	U
207-08-9	Benzo(k)fluoranthene		44.0	372	U
218-01-9	Chrysene		34.9	372	U
53-70-3	Dibenz(a,h)anthracene		67.6	372	U
206-44-0	Fluoranthene		60.9	372	U
86-73-7	Fluorene		29.3	372	U
193-39-5	Indeno(1,2,3-cd)pyrene		51.9	372	U
90-12-0	1-Methylnaphthalene		113	372	U
91-57-6	2-Methylnaphthalene		39.5	372	U
91-20-3	Naphthalene		36.1	372	U
85-01-8	Phenanthrene		25.9	372	U
129-00-0	Pyrene		45.1	372	X, U

UJ 56

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3758	2150	57.2	45 - 105	
Nitrobenzene-d5	3758	2132	56.7	35 - 100	
Terphenyl-d14	3758	2662	70.8	30 - 125	X

ANALYSIS DATA SHEET

SB-04-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-07	File ID:	0324707.D
Sampled:	03/29/11 11:05	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 00:29
Solids:	84.70	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.3	384	U
208-96-8	Acenaphthylene		23.3	384	U
120-12-7	Anthracene		31.5	384	U
56-55-3	Benzo(a)anthracene		41.9	384	U
50-32-8	Benzo(a)pyrene		26.8	384	U
205-99-2	Benzo(b)fluoranthene		37.3	384	Q, U
191-24-2	Benzo(g,h,i)perylene		81.6	384	U
207-08-9	Benzo(k)fluoranthene		45.4	384	U
218-01-9	Chrysene		36.1	384	U
53-70-3	Dibenz(a,h)anthracene		69.9	384	U
206-44-0	Fluoranthene		62.9	384	U
86-73-7	Fluorene		30.3	384	U
193-39-5	Indeno(1,2,3-cd)pyrene		53.6	384	U
90-12-0	1-Methylnaphthalene		117	384	U
91-57-6	2-Methylnaphthalene		40.8	384	U
91-20-3	Naphthalene		37.3	384	U
85-01-8	Phenanthrene		26.8	384	U
129-00-0	Pyrene		46.6	384	X, U

UJ 5b

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3883	3566	91.8	45 - 105	
Nitrobenzene-d5	3883	3295	84.9	35 - 100	
Terphenyl-d14	3883	3707	95.4	30 - 125	X

ANALYSIS DATA SHEET

SB-03-01

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-08 File ID: 0324708.D

Sampled: 03/29/11 11:20 Prepared: 03/30/11 16:15 Analyzed: 04/01/11 00:58

Solids: 86.20 Preparation: EXT_3546 Dilution: 1

Batch: 1C30011 Sequence: 1D09108 Calibration: 1032006 Instrument: MS-BNA1

Raw Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.0	380	U
208-96-8	Acenaphthylene		23.0	380	U
120-12-7	Anthracene		31.1	380	U
56-55-3	Benzo(a)anthracene		41.5	380	U
50-32-8	Benzo(a)pyrene		26.5	380	U
205-99-2	Benzo(b)fluoranthene		36.9	380	Q, U
191-24-2	Benzo(g,h,i)perylene		80.7	380	U
207-08-9	Benzo(k)fluoranthene		44.9	380	U
218-01-9	Chrysene		35.7	380	U
53-70-3	Dibenz(a,h)anthracene		69.1	380	U
206-44-0	Fluoranthene		62.2	380	U
86-73-7	Fluorene		30.0	380	U
193-39-5	Indeno(1,2,3-cd)pyrene		53.0	380	U
90-12-0	1-Methylnaphthalene		115	380	U
91-57-6	2-Methylnaphthalene		40.3	380	U
91-20-3	Naphthalene		36.9	380	U
85-01-8	Phenanthrene		26.5	380	U
129-00-0	Pyrene		46.1	380	X, U

UJ 5b

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3842	2344	61.0	45 - 105	
Nitrobenzene-d5	3842	2503	65.2	35 - 100	
Terphenyl-d14	3842	3133	81.5	30 - 125	X

ANALYSIS DATA SHEET

SB-03-019

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-09	File ID:	0324709.D
Sampled:	03/29/11 11:20	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 01:26
Solids:	85.54	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence: 1D09108	Calibration:	1032006	Instrument: MS-BNA1

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.8	378	U
208-96-8	Acenaphthylene		22.9	378	U
120-12-7	Anthracene		30.9	378	U
56-55-3	Benzo(a)anthracene		41.3	378	U
50-32-8	Benzo(a)pyrene		26.4	378	U
205-99-2	Benzo(b)fluoranthene		36.7	378	Q, U
191-24-2	Benzo(g,h,i)perylene		80.2	378	U
207-08-9	Benzo(k)fluoranthene		44.7	378	U
218-01-9	Chrysene		35.5	378	U
53-70-3	Dibenz(a,h)anthracene		68.8	378	U
206-44-0	Fluoranthene		61.9	378	U
86-73-7	Fluorene		29.8	378	U
193-39-5	Indeno(1,2,3-cd)pyrene		52.7	378	U
90-12-0	1-Methylnaphthalene		115	378	U
91-57-6	2-Methylnaphthalene		40.1	378	U
91-20-3	Naphthalene		36.7	378	U
85-01-8	Phenanthrene		26.4	378	U
129-00-0	Pyrene		45.8	378	X, U

UJ 5b

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3821	2365	61.9	45 - 105	
Nitrobenzene-d5	3821	2319	60.7	35 - 100	
Terphenyl-d14	3821	3035	79.4	30 - 125	X

ANALYSIS DATA SHEET

SB-03-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-10	File ID:	0324710.D
Sampled:	03/29/11 11:35	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 01:55
Solids:	85.04	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
Instrument:	MS-BNA1				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.6	376	U
208-96-8	Acenaphthylene		22.8	376	U
120-12-7	Anthracene		30.7	376	U
56-55-3	Benzo(a)anthracene		41.0	376	U
50-32-8	Benzo(a)pyrene		26.2	376	U
205-99-2	Benzo(b)fluoranthene		36.4	376	Q, U
191-24-2	Benzo(g,h,i)perylene		79.7	376	U
207-08-9	Benzo(k)fluoranthene		44.4	376	U
218-01-9	Chrysene		35.3	376	U
53-70-3	Dibenz(a,h)anthracene		68.3	376	U
206-44-0	Fluoranthene		61.5	376	U
86-73-7	Fluorene		29.6	376	U
193-39-5	Indeno(1,2,3-cd)pyrene		52.3	376	U
90-12-0	1-Methylnaphthalene		114	376	U
91-57-6	2-Methylnaphthalene		39.8	376	U
91-20-3	Naphthalene		36.4	376	U
85-01-8	Phenanthrene		26.2	376	U
129-00-0	Pyrene		45.5	376	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug Kg dry)	CONC (ug Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3793	3127	82.4	45 - 105	
Nitrobenzene-d5	3793	3006	79.2	35 - 100	
Terphenyl-d14	3793	4776	126	30 - 125	*X

ANALYSIS DATA SHEET

SB-05-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-11	File ID:	0324711.D
Sampled:	03/29/11 13:15	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 02:23
Solids:	91.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		28.0	355	U
208-96-8	Acenaphthylene		21.5	355	U
120-12-7	Anthracene		29.1	355	U
56-55-3	Benzo(a)anthracene		38.7	355	U
50-32-8	Benzo(a)pyrene	118	24.8	355	J
205-99-2	Benzo(b)fluoranthene	140	34.4	355	Q, J
191-24-2	Benzo(g,h,i)perylene	106	75.3	355	J
207-08-9	Benzo(k)fluoranthene	54.4	42.0	355	J
218-01-9	Chrysene	92.1	33.4	355	J
53-70-3	Dibenz(a,h)anthracene		64.6	355	U
206-44-0	Fluoranthene		58.1	355	U
86-73-7	Fluorene		28.0	355	U
193-39-5	Indeno(1,2,3-cd)pyrene		49.5	355	U
90-12-0	1-Methylnaphthalene		108	355	U
91-57-6	2-Methylnaphthalene		37.7	355	U
91-20-3	Naphthalene		34.4	355	U
85-01-8	Phenanthrene		24.8	355	U
129-00-0	Pyrene	95.5	43.1	355	X, J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3588	3232	90.1	45 - 105	
Nitrobenzene-d5	3588	2796	77.9	35 - 100	
Terphenyl-d14	3588	3692	103	30 - 125	X

ANALYSIS DATA SHEET

SB-05-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-12	File ID:	0324712.D
Sampled:	03/29/11 13:20	Prepared:	03/30/11 16:15	Analyzed:	04/02/11 21:53
Solids:	83.51	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09303	Calibration:	1032006
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.7	378	U
208-96-8	Acenaphthylene		22.9	378	U
120-12-7	Anthracene		30.9	378	U
56-55-3	Benzo(a)anthracene		41.2	378	U
50-32-8	Benzo(a)pyrene		26.3	378	U
205-99-2	Benzo(b)fluoranthene		36.6	378	Q, X, U
191-24-2	Benzo(g,h,i)perylene		80.1	378	U
207-08-9	Benzo(k)fluoranthene		44.6	378	U
218-01-9	Chrysene		35.5	378	U
53-70-3	Dibenz(a,h)anthracene		68.6	378	U
206-44-0	Fluoranthene		61.8	378	U
86-73-7	Fluorene		29.7	378	U
193-39-5	Indeno(1,2,3-cd)pyrene		52.6	378	U
90-12-0	1-Methylnaphthalene		114	378	U
91-57-6	2-Methylnaphthalene		40.0	378	U
91-20-3	Naphthalene		36.6	378	U
85-01-8	Phenanthrene		26.3	378	U
129-00-0	Pyrene		45.8	378	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3814	2436	63.9	45 - 105	
Nitrobenzene-d5	3814	2380	62.4	35 - 100	
Terphenyl-d14	3814	3664	96.1	30 - 125	

ANALYSIS DATA SHEET

SB-06-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-13	File ID:	0324713.D
Sampled:	03/29/11 13:40	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 03:20
Solids:	91.00	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		28.0	356	U
208-96-8	Acenaphthylene		21.5	356	U
120-12-7	Anthracene		29.1	356	U
56-55-3	Benzo(a)anthracene		38.8	356	U
50-32-8	Benzo(a)pyrene		24.8	356	U
205-99-2	Benzo(b)fluoranthene		34.5	356	Q, U
191-24-2	Benzo(g,h,i)perylene		75.4	356	U
207-08-9	Benzo(k)fluoranthene		42.0	356	U
218-01-9	Chrysene		33.4	356	U
53-70-3	Dibenz(a,h)anthracene		64.6	356	U
206-44-0	Fluoranthene		58.2	356	U
86-73-7	Fluorene		28.0	356	U
193-39-5	Indeno(1,2,3-cd)pyrene		49.6	356	U
90-12-0	1-Methylnaphthalene		108	356	U
91-57-6	2-Methylnaphthalene		37.7	356	U
91-20-3	Naphthalene		34.5	356	U
85-01-8	Phenanthrene		24.8	356	U
129-00-0	Pyrene		43.1	356	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3591	1854	51.6	45 - 105	
Nitrobenzene-d5	3591	2307	64.2	35 - 100	
Terphenyl-d14	3591	2707	75.4	30 - 125	X

ANALYSIS DATA SHEET

SB-06-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-14 File ID: 0324714.D

Sampled: 03/29/11 13:45 Prepared: 03/30/11 16:15 Analyzed: 04/01/11 03:49

Solids: 81.70 Preparation: EXT_3546 Dilution: 1

Batch: 1C30011 Sequence: 1D09108 Calibration: 1032006 Instrument: MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		31.2	396	U
208-96-8	Acenaphthylene		24.0	396	U
120-12-7	Anthracene		32.4	396	U
56-55-3	Benzo(a)anthracene		43.2	396	U
50-32-8	Benzo(a)pyrene		27.6	396	U
205-99-2	Benzo(b)fluoranthene		38.4	396	Q, U
191-24-2	Benzo(g,h,i)perylene		84.0	396	U
207-08-9	Benzo(k)fluoranthene		46.8	396	U
218-01-9	Chrysene		37.2	396	U
53-70-3	Dibenz(a,h)anthracene		72.0	396	U
206-44-0	Fluoranthene		64.8	396	U
86-73-7	Fluorene		31.2	396	U
193-39-5	Indeno(1,2,3-cd)pyrene		55.2	396	U
90-12-0	1-Methylnaphthalene		120	396	U
91-57-6	2-Methylnaphthalene		42.0	396	U
91-20-3	Naphthalene		38.4	396	U
85-01-8	Phenanthrene		27.6	396	U
129-00-0	Pyrene		48.0	396	X, U

UJ 56

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4000	3140	78.5	45 - 105	
Nitrobenzene-d5	4000	3461	86.5	35 - 100	
Terphenyl-d14	4000	4538	113	30 - 125	X

ANALYSIS DATA SHEET

SB-07-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-15	File ID:	0324715.D
Sampled:	03/29/11 14:05	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 04:17
Solids:	77.91	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		32.1	407	U
208-96-8	Acenaphthylene		24.7	407	U
120-12-7	Anthracene		33.3	407	U
56-55-3	Benzo(a)anthracene		44.4	407	U
50-32-8	Benzo(a)pyrene		28.4	407	U
205-99-2	Benzo(b)fluoranthene		39.5	407	Q, U
191-24-2	Benzo(g,h,i)perylene		86.4	407	U
207-08-9	Benzo(k)fluoranthene		48.1	407	U
218-01-9	Chrysene		38.3	407	U
53-70-3	Dibenz(a,h)anthracene		74.1	407	U
206-44-0	Fluoranthene		66.6	407	U
86-73-7	Fluorene		32.1	407	U
193-39-5	Indeno(1,2,3-cd)pyrene		56.8	407	U
90-12-0	1-Methylnaphthalene		123	407	U
91-57-6	2-Methylnaphthalene		43.2	407	U
91-20-3	Naphthalene		39.5	407	U
85-01-8	Phenanthrene		28.4	407	U
129-00-0	Pyrene		49.4	407	X, U

UJ 55

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4114	2322	56.4	45 - 105	
Nitrobenzene-d5	4114	2175	52.9	35 - 100	
Terphenyl-d14	4114	3068	74.6	30 - 125	X

ANALYSIS DATA SHEET

SB-07-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-16	File ID:	0324716.D
Sampled:	03/29/11 14:10	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 15:37
Solids:	84.91	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09302	Calibration:	1032006
				Instrument:	MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.4	374	U
208-96-8	Acenaphthylene		22.6	374	U
120-12-7	Anthracene		30.6	374	U
56-55-3	Benzo(a)anthracene		40.8	374	U
50-32-8	Benzo(a)pyrene		26.0	374	U
205-99-2	Benzo(b)fluoranthene		36.2	374	Q, U
191-24-2	Benzo(g,h,i)perylene		79.3	374	U
207-08-9	Benzo(k)fluoranthene		44.2	374	U
218-01-9	Chrysene		35.1	374	U
53-70-3	Dibenz(a,h)anthracene		67.9	374	U
206-44-0	Fluoranthene		61.1	374	U
86-73-7	Fluorene		29.4	374	U
193-39-5	Indeno(1,2,3-cd)pyrene		52.1	374	U
90-12-0	1-Methylnaphthalene		113	374	U
91-57-6	2-Methylnaphthalene		39.6	374	U
91-20-3	Naphthalene		36.2	374	U
85-01-8	Phenanthrene		26.0	374	U
129-00-0	Pyrene		45.3	374	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3775	3340	88.5	45 - 105	
Nitrobenzene-d5	3775	3333	88.3	35 - 100	
Terphenyl-d14	3775	4257	113	30 - 125	

Raw Qual

ANALYSIS DATA SHEET

SB-08-01

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-17 File ID: 0324717.D

Sampled: 03/29/11 14:35 Prepared: 03/30/11 16:15 Analyzed: 04/01/11 05:14

Solids: 83.78 Preparation: EXT_3546 Dilution: 1

Batch: 1C30011 Sequence: 1D09108 Calibration: 1032006 Instrument: MS-BNA1

Red Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.7	376	U
208-96-8	Acenaphthylene		22.8	376	U
120-12-7	Anthracene		30.8	376	U
56-55-3	Benzo(a)anthracene		41.1	376	U
50-32-8	Benzo(a)pyrene		26.2	376	U
205-99-2	Benzo(b)fluoranthene		36.5	376	Q, U
191-24-2	Benzo(g,h,i)perylene		79.8	376	U
207-08-9	Benzo(k)fluoranthene		44.5	376	U
218-01-9	Chrysene		35.4	376	U
53-70-3	Dibenz(a,h)anthracene		68.4	376	U
206-44-0	Fluoranthene		61.6	376	U
86-73-7	Fluorene		29.7	376	U
193-39-5	Indeno(1,2,3-cd)pyrene		52.5	376	U
90-12-0	1-Methylnaphthalene		114	376	U
91-57-6	2-Methylnaphthalene		39.9	376	U
91-20-3	Naphthalene		36.5	376	U
85-01-8	Phenanthrene		26.2	376	U
129-00-0	Pyrene		45.6	376	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3801	2863	75.3	45 - 105	
Nitrobenzene-d5	3801	2721	71.6	35 - 100	
Terphenyl-d14	3801	3680	96.8	30 - 125	X

ANALYSIS DATA SHEET

SB-08-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-18	File ID:	0324718.D
Sampled:	03/29/11 14:45	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 05:42
Solids:	84.52	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30011	Sequence:	1D09108	Calibration:	1032006
				Instrument:	MS-BNAI

Rev 2nd a

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.0	380	U
208-96-8	Acenaphthylene		23.0	380	U
120-12-7	Anthracene		31.1	380	U
56-55-3	Benzo(a)anthracene		41.5	380	U
50-32-8	Benzo(a)pyrene		26.5	380	U
205-99-2	Benzo(b)fluoranthene		36.9	380	Q, U
191-24-2	Benzo(g,h,i)perylene		80.7	380	U
207-08-9	Benzo(k)fluoranthene		44.9	380	U
218-01-9	Chrysene		35.7	380	U
53-70-3	Dibenz(a,h)anthracene		69.1	380	U
206-44-0	Fluoranthene		62.2	380	U
86-73-7	Fluorene		30.0	380	U
193-39-5	Indeno(1,2,3-cd)pyrene		53.0	380	U
90-12-0	1-Methylnaphthalene		115	380	U
91-57-6	2-Methylnaphthalene		40.3	380	U
91-20-3	Naphthalene		36.9	380	U
85-01-8	Phenanthrene		26.5	380	U
129-00-0	Pyrene		46.1	380	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	%REC	QC LIMITS	Q
2-Fluorobiphenyl	3841	3557	92.6	45 - 105	
Nitrobenzene-d5	3841	3157	82.2	35 - 100	
Terphenyl-d14	3841	4524	118	30 - 125	X

ANALYSIS DATA SHEET

SB-09-01

Laboratory: Empirical Laboratories, LLC
SDG: 1103247
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103247-19
File ID: 0324719.D
Sampled: 03/29/11 15:00
Prepared: 03/30/11 16:15
Analyzed: 04/01/11 06:10
Solids: 91.32
Preparation: EXT_3546
Dilution: 1
Batch: 1C30011
Sequence: 1D09108
Calibration: 1032006
Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		28.1	357	U
208-96-8	Acenaphthylene		21.6	357	U
120-12-7	Anthracene		29.2	357	U
56-55-3	Benzo(a)anthracene	107	38.9	357	J
50-32-8	Benzo(a)pyrene	102	24.9	357	J
205-99-2	Benzo(b)fluoranthene	207	34.6	357	Q, J
191-24-2	Benzo(g,h,i)perylene		75.6	357	U
207-08-9	Benzo(k)fluoranthene	80.1	42.1	357	J
218-01-9	Chrysene	128	33.5	357	J
53-70-3	Dibenz(a,h)anthracene		64.8	357	U
206-44-0	Fluoranthene	113	58.4	357	J
86-73-7	Fluorene		28.1	357	U
193-39-5	Indeno(1,2,3-cd)pyrene		49.7	357	U
90-12-0	1-Methylnaphthalene		108	357	U
91-57-6	2-Methylnaphthalene		37.8	357	U
91-20-3	Naphthalene		34.6	357	U
85-01-8	Phenanthrene		24.9	357	U
129-00-0	Pyrene	297	43.2	357	X, J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3602	2523	70.0	45 - 105	
Nitrobenzene-d5	3602	2359	65.5	35 - 100	
Terphenyl-d14	3602	3598	99.9	30 - 125	X

Rev Qual
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ANALYSIS DATA SHEET

SB-09-02

Laboratory: Empirical Laboratories, LLC
SDG: 1103247
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103247-20
File ID: 0324720.D
Sampled: 03/29/11 15:10
Prepared: 03/30/11 16:15
Analyzed: 04/01/11 06:38
Solids: 80.66
Preparation: EXT_3546
Dilution: 1
Batch: 1C30011
Sequence: 1D09108
Calibration: 1032006
Instrument: MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.8	391	U
208-96-8	Acenaphthylene		23.7	391	U
120-12-7	Anthracene		32.0	391	U
56-55-3	Benzo(a)anthracene		42.6	391	U
50-32-8	Benzo(a)pyrene		27.2	391	U
205-99-2	Benzo(b)fluoranthene		37.9	391	Q, U
191-24-2	Benzo(g,h,i)perylene		82.9	391	U
207-08-9	Benzo(k)fluoranthene		46.2	391	U
218-01-9	Chrysene		36.7	391	U
53-70-3	Dibenz(a,h)anthracene		71.1	391	U
206-44-0	Fluoranthene		64.0	391	U
86-73-7	Fluorene		30.8	391	U
193-39-5	Indeno(1,2,3-cd)pyrene		54.5	391	U
90-12-0	1-Methylnaphthalene		118	391	U
91-57-6	2-Methylnaphthalene		41.5	391	U
91-20-3	Naphthalene		37.9	391	U
85-01-8	Phenanthrene		27.2	391	U
129-00-0	Pyrene		47.4	391	X, U

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SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3949	3271	82.8	45 - 105	
Nitrobenzene-d5	3949	3302	83.6	35 - 100	
Terphenyl-d14	3949	3953	100	30 - 125	X

ANALYSIS DATA SHEET

SB-10-01

Laboratory: Empirical Laboratories, LLC
SDG: 1103247
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103247-21
File ID: 0324721D.D
Sampled: 03/29/11 15:40
Prepared: 03/30/11 15:30
Analyzed: 03/30/11 18:04
Solids: 68.32
Preparation: EXT_3546
Dilution: 5
Batch: 1C30020
Sequence: 1C08909
Calibration: 1032006
Instrument: MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		25900	329000	Q, U
208-96-8	Acenaphthylene		20000	329000	Q, U
120-12-7	Anthracene		26900	329000	Q, U
56-55-3	Benzo(a)anthracene		35900	329000	Q, U
50-32-8	Benzo(a)pyrene		23000	329000	U
205-99-2	Benzo(b)fluoranthene		31900	329000	U
191-24-2	Benzo(g,h,i)perylene		69900	329000	U
207-08-9	Benzo(k)fluoranthene		38900	329000	U
218-01-9	Chrysene		30900	329000	Q, U
53-70-3	Dibenz(a,h)anthracene		59900	329000	U
206-44-0	Fluoranthene		53900	329000	U
86-73-7	Fluorene		25900	329000	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		45900	329000	U
90-12-0	1-Methylnaphthalene		99800	329000	Q, U
91-57-6	2-Methylnaphthalene		34900	329000	Q, U
91-20-3	Naphthalene		31900	329000	Q, U
85-01-8	Phenanthrene		23000	329000	Q, U
129-00-0	Pyrene		39900	329000	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	6653000	6035000	90.7	45 - 105	
Nitrobenzene-d5	6653000	6759000	102	35 - 100	*
Terphenyl-d14	6653000	6546000	98.4	30 - 125	

ANALYSIS DATA SHEET

SB-10-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-22 File ID: 0324722.D

Sampled: 03/29/11 15:45 Prepared: 03/30/11 16:15 Analyzed: 04/01/11 16:05

Solids: 81.50 Preparation: EXT_3546 Dilution: 1

Batch: 1C30013 Sequence: 1D09302 Calibration: 1032006 Instrument: MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		31.7	402	U
208-96-8	Acenaphthylene		24.4	402	U
120-12-7	Anthracene		32.9	402	U
56-55-3	Benzo(a)anthracene		43.9	402	U
50-32-8	Benzo(a)pyrene		28.0	402	U
205-99-2	Benzo(b)fluoranthene		39.0	402	U
191-24-2	Benzo(g,h,i)perylene		85.3	402	U
207-08-9	Benzo(k)fluoranthene		47.5	402	U
218-01-9	Chrysene		37.8	402	U
53-70-3	Dibenz(a,h)anthracene		73.1	402	U
206-44-0	Fluoranthene		65.8	402	U
86-73-7	Fluorene		31.7	402	U
193-39-5	Indeno(1,2,3-cd)pyrene		56.1	402	U
90-12-0	1-Methylnaphthalene		122	402	U
91-57-6	2-Methylnaphthalene		42.7	402	Q, U
91-20-3	Naphthalene		39.0	402	U
85-01-8	Phenanthrene		28.0	402	U
129-00-0	Pyrene		48.8	402	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4063	3425	84.3	45 - 105	
Nitrobenzene-d5	4063	3469	85.4	35 - 100	
Terphenyl-d14	4063	4466	110	30 - 125	

ANALYSIS DATA SHEET

SB-11-01

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-23 File ID: 0324723.D

Sampled: 03/29/11 16:10 Prepared: 03/30/11 16:15 Analyzed: 04/01/11 16:34

Solids: 88.60 Preparation: EXT_3546 Dilution: 1

Batch: 1C30013 Sequence: 1D09302 Calibration: 1032006 Instrument: MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		27.7	351	U
208-96-8	Acenaphthylene		21.3	351	U
120-12-7	Anthracene		28.7	351	U
56-55-3	Benzo(a)anthracene	107	38.3	351	J
50-32-8	Benzo(a)pyrene	71.1	24.5	351	J
205-99-2	Benzo(b)fluoranthene	133	34.1	351	J
191-24-2	Benzo(g,h,i)perylene		74.5	351	U
207-08-9	Benzo(k)fluoranthene	49.5	41.5	351	J
218-01-9	Chrysene	104	33.0	351	J
53-70-3	Dibenz(a,h)anthracene		63.9	351	U
206-44-0	Fluoranthene	108	57.5	351	J
86-73-7	Fluorene		27.7	351	U
193-39-5	Indeno(1,2,3-cd)pyrene		49.0	351	U
90-12-0	1-Methylnaphthalene	210	106	351	J
91-57-6	2-Methylnaphthalene	304	37.3	351	Q, J
91-20-3	Naphthalene	71.6	34.1	351	J
85-01-8	Phenanthrene		24.5	351	U
129-00-0	Pyrene	314	42.6	351	J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3549	2634	74.2	45 - 105	
Nitrobenzene-d5	3549	3249	91.5	35 - 100	
Terphenyl-d14	3549	3750	106	30 - 125	

ANALYSIS DATA SHEET

SB-11-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-24	File ID:	0324724.D
Sampled:	03/29/11 16:15	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 17:03
Solids:	83.17	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30013	Sequence:	1D09302	Calibration:	1032006
				Instrument:	MS-BNA1

Rev 2nd U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		30.9	392	U
208-96-8	Acenaphthylene		23.7	392	U
120-12-7	Anthracene		32.0	392	U
56-55-3	Benzo(a)anthracene		42.7	392	U
50-32-8	Benzo(a)pyrene		27.3	392	U
205-99-2	Benzo(b)fluoranthene		38.0	392	U
191-24-2	Benzo(g,h,i)perylene		83.1	392	U
207-08-9	Benzo(k)fluoranthene		46.3	392	U
218-01-9	Chrysene		36.8	392	U
53-70-3	Dibenz(a,h)anthracene		71.2	392	U
206-44-0	Fluoranthene		64.1	392	U
86-73-7	Fluorene		30.9	392	U
193-39-5	Indeno(1,2,3-cd)pyrene		54.6	392	U
90-12-0	1-Methylnaphthalene		119	392	U
91-57-6	2-Methylnaphthalene		41.5	392	Q, U
91-20-3	Naphthalene		38.0	392	U
85-01-8	Phenanthrene		27.3	392	U
129-00-0	Pyrene		47.5	392	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3955	2966	75.0	45 - 105	
Nitrobenzene-d5	3955	3542	89.5	35 - 100	
Terphenyl-d14	3955	3587	90.7	30 - 125	

ANALYSIS DATA SHEET

SB-12-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-25	File ID:	0324725.D
Sampled:	03/29/11 16:40	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 17:31
Solids:	80.60	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30013	Sequence:	1D09302	Calibration:	1032006
				Instrument:	MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rw Qual
83-32-9	Acenaphthene		32.0	407	U	U
208-96-8	Acenaphthylene	64.1	24.6	407	J	J
120-12-7	Anthracene		33.3	407	U	U
56-55-3	Benzo(a)anthracene	175	44.4	407	J	J
50-32-8	Benzo(a)pyrene	216	28.3	407	J	J
205-99-2	Benzo(b)fluoranthene	333	39.4	407	J	J
191-24-2	Benzo(g,h,i)perylene		86.3	407	U	U
207-08-9	Benzo(k)fluoranthene	161	48.1	407	J	J
218-01-9	Chrysene	245	38.2	407	J	J
53-70-3	Dibenz(a,h)anthracene		73.9	407	U	U
206-44-0	Fluoranthene	207	66.6	407	J	J
86-73-7	Fluorene		32.0	407	U	U
193-39-5	Indeno(1,2,3-cd)pyrene		56.7	407	U	U
90-12-0	1-Methylnaphthalene		123	407	U	U
91-57-6	2-Methylnaphthalene		43.1	407	Q, U	Q, U
91-20-3	Naphthalene		39.4	407	U	U
85-01-8	Phenanthrene	77.9	28.3	407	J	J
129-00-0	Pyrene	510	49.3	407		

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4108	3227	78.5	45 - 105	
Nitrobenzene-d5	4108	3716	90.5	35 - 100	
Terphenyl-d14	4108	4088	99.5	30 - 125	

ANALYSIS DATA SHEET

SB-12-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-26	File ID:	0324726.D
Sampled:	03/29/11 16:50	Prepared:	03/30/11 16:15	Analyzed:	04/01/11 17:59
Solids:	90.89	Preparation:	EXT_3546	Dilution:	1
Batch:	1C30013	Sequence:	1D09302	Calibration:	1032006
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rw Qual
83-32-9	Acenaphthene		28.0	356	U	U
208-96-8	Acenaphthylene	66.5	21.6	356	J	J
120-12-7	Anthracene		29.1	356	U	U
56-55-3	Benzo(a)anthracene	208	38.8	356	J	J
50-32-8	Benzo(a)pyrene	269	24.8	356	J	J
205-99-2	Benzo(b)fluoranthene	427	34.5	356		
191-24-2	Benzo(g,h,i)perylene	161	75.5	356	J	J
207-08-9	Benzo(k)fluoranthene	120	42.1	356	J	J
218-01-9	Chrysene	289	33.4	356	J	J
53-70-3	Dibenz(a,h)anthracene		64.7	356	U	U
206-44-0	Fluoranthene	180	58.2	356	J	J
86-73-7	Fluorene		28.0	356	U	U
193-39-5	Indeno(1,2,3-cd)pyrene	122	49.6	356	J	J
90-12-0	1-Methylnaphthalene		108	356	U	U
91-57-6	2-Methylnaphthalene	50.3	37.8	356	Q, J	Q, J
91-20-3	Naphthalene	35.8	34.5	356	J	J
85-01-8	Phenanthrene	61.7	24.8	356	J	J
129-00-0	Pyrene	517	43.1	356		

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3596	3001	83.5	45 - 105	
Nitrobenzene-d5	3596	3111	86.5	35 - 100	
Terphenyl-d14	3596	3454	96.1	30 - 125	

ANALYSIS DATA SHEET

SB-13-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Solid	Laboratory ID:	1103258-02	File ID:	006F0601.D
Sampled:	03/30/11 08:55	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 12:40
Solids:	91.51	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence: 1D09301	Calibration:	1080001	Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	53.0	7.13	7.13	N

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.419	1.368	96.4	35 - 140	

ANALYSIS DATA SHEET

SB-13-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-03RE1	File ID:	011F1101.D
Sampled:	03/30/11 09:05	Prepared:	03/31/11 15:20	Analyzed:	04/04/11 15:07
Solids:	80.24	Preparation:	EXT_3546	Dilution:	50
Batch:	1C31014	Sequence:	1D09505	Calibration:	1095001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	13900	399	399	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.588	0.000		35 - 140	DU

ANALYSIS DATA SHEET

SB-14-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-04	File ID:	010F1001.D
Sampled:	03/30/11 09:30	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 14:54
Solids:	90.80	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
Instrument:	GL-GCFID2				

Re Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	39.0	7.19	7.19	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.430	1.167	81.6	35 - 140	

ANALYSIS DATA SHEET

SB-14-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-05	File ID:	011F1101.D
Sampled:	03/30/11 09:40	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 15:28
Solids:	38.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
Instrument:	GL-GCFID2				

Re Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	47.9	17.1	17.1	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	3.410	1.918	56.2	35 - 140	

ANALYSIS DATA SHEET

SB-15-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-06	File ID:	012F1201.D
Sampled:	03/30/11 10:10	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 16:01
Solids:	83.55	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	13.7	7.81	7.81	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.554	1.067	68.7	35 - 140	

ANALYSIS DATA SHEET

SB-15-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SLS, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-07	File ID:	013F1301.D
Sampled:	03/30/11 10:15	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 16:35
Solids:	81.04	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	13.5	8.05	8.05	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.603	1.163	72.5	35 - 140	

ANALYSIS DATA SHEET

SB-16-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-08RE1	File ID:	004F0401.D
Sampled:	03/30/11 10:30	Prepared:	03/31/11 15:20	Analyzed:	04/05/11 10:47
Solids:	85.95	Preparation:	EXT_3546	Dilution:	50
Batch:	1C31014	Sequence:	1D09510	Calibration:	1095001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	8070	372	372	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.482	0.000		35 - 140	DU

ANALYSIS DATA SHEET

SB-16-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-09RE1	File ID:	013F1301.D
Sampled:	03/30/11 10:40	Prepared:	03/31/11 15:20	Analyzed:	04/04/11 16:15
Solids:	76.43	Preparation:	EXT_3546	Dilution:	20
Batch:	1C31014	Sequence:	1D09505	Calibration:	1095001
Instrument:	GL-GCFID2				

Red Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	8310	171	171	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.699	1.796	106	35 - 140	

ANALYSIS DATA SHEET

SB-17-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-10RE1	File ID:	014F1401.D
Sampled:	03/30/11 10:55	Prepared:	03/31/11 15:20	Analyzed:	04/04/11 16:49
Solids:	77.36	Preparation:	EXT_3546	Dilution:	10
Batch:	1C31014	Sequence:	1D09505	Calibration:	1095001
Instrument:	GL-GCFID2				

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	3590	82.2	82.2	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.636	1.319	80.6	35 - 140	

ANALYSIS DATA SHEET

SB-17-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-11	File ID:	018F1801.D
Sampled:	03/30/11 11:00	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 19:23
Solids:	53.04	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
Instrument:	GL-GCFID2				

Rd qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	163	12.0	12.0	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	2.387	1.514	63.4	35 - 140	

ANALYSIS DATA SHEET

SB-18-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-12RE1	File ID:	015F1501.D
Sampled:	03/30/11 11:15	Prepared:	03/31/11 15:20	Analyzed:	04/04/11 17:23
Solids:	59.62	Preparation:	EXT_3546	Dilution:	10
Batch:	1C31014	Sequence:	1D09505	Calibration:	1095001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	3890	109	109	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	2.178	1.461	67.1	35 - 140	

ANALYSIS DATA SHEET

SB-18-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-13	File ID:	020F2001.D
Sampled:	03/30/11 11:25	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 20:29
Solids:	80.61	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001

Instrument: GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	296	8.20	8.20	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.632	1.556	95.3	35 - 140	

ANALYSIS DATA SHEET

SB-19-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-14	File ID:	021F2101.D
Sampled:	03/30/11 14:00	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 21:03
Solids:	91.10	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
				Instrument:	GL-GCFID2

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		7.16	7.16	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.426	0.8521	59.8	35 - 140	

ANALYSIS DATA SHEET

SB-19-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-15	File ID:	022F2201.D
Sampled:	03/30/11 14:05	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 21:36
Solids:	83.85	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
Instrument:	GL-GCFID2				

Re Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	20.2	7.63	7.63	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.519	0.8590	56.5	35 - 140	

ANALYSIS DATA SHEET

SB-20-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-16	File ID:	023F2301.D
Sampled:	03/30/11 14:15	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 22:09
Solids:	77.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001

Instrument: GL-GCFID2

Rev 2nd

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	16.6	8.41	8.41	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.674	0.8871	53.0	35 - 140	

ANALYSIS DATA SHEET

SB-20-019

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-17	File ID:	024F2401.D
Sampled:	03/30/11 14:15	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 22:43
Solids:	69.39	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
				Instrument:	GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)	17.3	9.53	9.53	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.896	1.009	53.2	35 - 140	

ANALYSIS DATA SHEET

SB-20-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-18	File ID:	025F2501.D
Sampled:	03/30/11 14:20	Prepared:	03/31/11 15:20	Analyzed:	04/01/11 23:16
Solids:	77.42	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31014	Sequence:	1D09301	Calibration:	1080001
Instrument:	GL-GCFID2				

Rev Qual u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	MDL	MRL	Q
11-84-7	Diesel Range Organics (C10-C28)		8.43	8.43	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.678	0.8403	50.1	35 - 140	

ANALYSIS DATA SHEET

SB-13-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Solid	Laboratory ID:	1103258-02	File ID:	0325802.D
Sampled:	03/30/11 08:55	Prepared:	03/31/11 12:30	Analyzed:	04/01/11 19:24
Solids:	91.51	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09302	Calibration:	1032006
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		27.3	347	Q, U
208-96-8	Acenaphthylene	210	21.0	347	J
120-12-7	Anthracene	56.8	28.4	347	Q, J
56-55-3	Benzo(a)anthracene	918	37.8	347	
50-32-8	Benzo(a)pyrene	1010	24.2	347	
205-99-2	Benzo(b)fluoranthene	1590	33.6	347	N, Q
191-24-2	Benzo(g,h,i)perylene	490	73.6	347	N
207-08-9	Benzo(k)fluoranthene	567	41.0	347	
218-01-9	Chrysene	1020	32.6	347	
53-70-3	Dibenz(a,h)anthracene	127	63.0	347	J
206-44-0	Fluoranthene	981	56.7	347	
86-73-7	Fluorene		27.3	347	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene	359	48.3	347	N
90-12-0	1-Methylnaphthalene		105	347	U
91-57-6	2-Methylnaphthalene	49.0	36.8	347	J
91-20-3	Naphthalene	46.9	33.6	347	J
85-01-8	Phenanthrene	128	24.2	347	J
129-00-0	Pyrene	2690	42.0	347	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3502	2903	82.9	45 - 105	
Nitrobenzene-d5	3502	3322	94.8	35 - 100	
Terphenyl-d14	3502	3759	107	30 - 125	

ANALYSIS DATA SHEET

SB-13-02

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-03 File ID: 0325803D.D

Sampled: 03/30/11 09:05 Prepared: 03/31/11 12:30 Analyzed: 04/02/11 22:21

Solids: 80.24 Preparation: EXT_3546 Dilution: 5

Batch: 1C31013 Sequence: 1D09303 Calibration: 1032006 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		154	1950	Q, U	u
208-96-8	Acenaphthylene		118	1950	U	
120-12-7	Anthracene		160	1950	Q, U	
56-55-3	Benzo(a)anthracene		213	1950	U	
50-32-8	Benzo(a)pyrene		136	1950	S, U	uJ 10a
205-99-2	Benzo(b)fluoranthene		189	1950	X, Q, S, U	uJ 10a
191-24-2	Benzo(g,h,i)perylene		414	1950	S, U	
207-08-9	Benzo(k)fluoranthene		231	1950	S, U	
218-01-9	Chrysene		183	1950	U	u
53-70-3	Dibenz(a,h)anthracene		355	1950	S, U	uJ 10a
206-44-0	Fluoranthene		319	1950	U	u
86-73-7	Fluorene		154	1950	Q, U	u
193-39-5	Indeno(1,2,3-cd)pyrene		272	1950	S, U	uJ 10a
90-12-0	1-Methylnaphthalene	5460	592	1950	D	J 7a
91-57-6	2-Methylnaphthalene	8400	207	1950	D	J 7a
91-20-3	Naphthalene	2690	189	1950	D	J 7a
85-01-8	Phenanthrene	1640	136	1950	J, D	J 7a
129-00-0	Pyrene	838	237	1950	J, D	J 7a

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3944	3581	90.8	45 - 105	
Nitrobenzene-d5	3944	7463	189	35 - 100	*
Terphenyl-d14	3944	4784	121	30 - 125	

ANALYSIS DATA SHEET

SB-14-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-04	File ID:	0325804.D
Sampled:	03/30/11 09:30	Prepared:	03/31/11 12:30	Analyzed:	04/02/11 22:50
Solids:	90.80	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09303	Calibration:	1032006

Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		28.1	356	Q, U	U
208-96-8	Acenaphthylene	560	21.6	356		~~J~~ Hold
120-12-7	Anthracene	139	29.2	356	Q, J	J 11a
56-55-3	Benzo(a)anthracene	2890	38.9	356		
50-32-8	Benzo(a)pyrene	3100	24.8	356	S	J 10a
205-99-2	Benzo(b)fluoranthene	3560	34.6	356	Q, S, X	J 11a, 8a
191-24-2	Benzo(g,h,i)perylene	1730	75.6	356	S	J 10a, 10a
207-08-9	Benzo(k)fluoranthene	1640	42.1	356	S	↓ ↓
218-01-9	Chrysene	2880	33.5	356		
53-70-3	Dibenz(a,h)anthracene	495	64.8	356	S	J 10a
206-44-0	Fluoranthene	1590	58.3	356		
86-73-7	Fluorene	113	28.1	356	Q, J	J 11a
193-39-5	Indeno(1,2,3-cd)pyrene	1430	49.7	356	S	J 10a
90-12-0	1-Methylnaphthalene		108	356	U	U
91-57-6	2-Methylnaphthalene	149	37.8	356	J	J
91-20-3	Naphthalene	175	34.6	356	J	
85-01-8	Phenanthrene	271	24.8	356	J	
129-00-0	Pyrene	5850	43.2	356		

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3599	2867	79.7	45 - 105	
Nitrobenzene-d5	3599	3144	87.3	35 - 100	
Terphenyl-d14	3599	4893	136	30 - 125	*

ANALYSIS DATA SHEET

SB-14-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-05	File ID:	0325805.D
Sampled:	03/30/11 09:40	Prepared:	03/31/11 12:30	Analyzed:	04/01/11 20:50
Solids:	38.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09302	Calibration:	1032006
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		67.4	855	Q, U	U
208-96-8	Acenaphthylene		51.8	855	U	U
120-12-7	Anthracene		70.0	855	Q, U	U
56-55-3	Benzo(a)anthracene		93.3	855	U	U
50-32-8	Benzo(a)pyrene		59.6	855	S, U	UJ 10a
205-99-2	Benzo(b)fluoranthene		82.9	855	Q, S, U	
191-24-2	Benzo(g,h,i)perylene		181	855	S, U	
207-08-9	Benzo(k)fluoranthene		101	855	S, U	
218-01-9	Chrysene		80.3	855	U	U
53-70-3	Dibenz(a,h)anthracene		155	855	S, U	UJ 10a
206-44-0	Fluoranthene		140	855	U	U
86-73-7	Fluorene		67.4	855	Q, U	U
193-39-5	Indeno(1,2,3-cd)pyrene		119	855	S, U	UJ 10a
90-12-0	1-Methylnaphthalene		259	855	U	U
91-57-6	2-Methylnaphthalene		90.7	855	U	
91-20-3	Naphthalene		82.9	855	U	
85-01-8	Phenanthrene		59.6	855	U	
129-00-0	Pyrene	197	104	855	J	J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	8638	6739	78.0	45 - 105	
Nitrobenzene-d5	8638	7491	86.7	35 - 100	
Terphenyl-d14	8638	9521	110	30 - 125	

ANALYSIS DATA SHEET

SB-15-01

Laboratory: Empirical Laboratories, LLC
SDG: 1103258
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103258-06
File ID: 0325806.D
Sampled: 03/30/11 10:10
Prepared: 03/31/11 12:30
Analyzed: 04/02/11 23:48
Solids: 83.55
Preparation: EXT_3546
Dilution: 1
Batch: 1C31013
Sequence: 1D09303
Calibration: 1032006
Instrument: MS-BNA1

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.7	377	Q, U
208-96-8	Acenaphthylene		22.9	377	U
120-12-7	Anthracene		30.9	377	Q, U
56-55-3	Benzo(a)anthracene		41.2	377	U
50-32-8	Benzo(a)pyrene		26.3	377	U
205-99-2	Benzo(b)fluoranthene		36.6	377	Q, X, U
191-24-2	Benzo(g,h,i)perylene		80.0	377	U
207-08-9	Benzo(k)fluoranthene		44.6	377	U
218-01-9	Chrysene		35.4	377	U
53-70-3	Dibenz(a,h)anthracene		68.6	377	U
206-44-0	Fluoranthene		61.7	377	U
86-73-7	Fluorene		29.7	377	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		52.6	377	U
90-12-0	1-Methylnaphthalene		114	377	U
91-57-6	2-Methylnaphthalene		40.0	377	U
91-20-3	Naphthalene		36.6	377	U
85-01-8	Phenanthrene		26.3	377	U
129-00-0	Pyrene		45.7	377	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3812	3652	95.8	45 - 105	
Nitrobenzene-d5	3812	3654	95.9	35 - 100	
Terphenyl-d14	3812	4127	108	30 - 125	

ANALYSIS DATA SHEET

SB-15-02

Laboratory: Empirical Laboratories, LLC
SDG: 1103258
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103258-07
File ID: 0325807.D
Sampled: 03/30/11 10:15
Prepared: 03/31/11 12:30
Analyzed: 04/03/11 00:17
Solids: 81.04
Preparation: EXT_3546
Dilution: 1
Batch: 1C31013
Sequence: 1D09303
Calibration: 1032006
Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		31.2	397	Q, U	U
208-96-8	Acenaphthylene	47.2	24.0	397	J	J
120-12-7	Anthracene		32.5	397	Q, U	U
56-55-3	Benzo(a)anthracene	332	43.3	397	J	J
50-32-8	Benzo(a)pyrene	223	27.6	397	J	J
205-99-2	Benzo(b)fluoranthene	337	38.5	397	Q, X, J	J
191-24-2	Benzo(g,h,i)perylene	118	84.1	397	J	J
207-08-9	Benzo(k)fluoranthene	143	46.9	397	J	J
218-01-9	Chrysene	336	37.3	397	J	J
53-70-3	Dibenz(a,h)anthracene		72.1	397	U	U
206-44-0	Fluoranthene	397	64.9	397	J	J
86-73-7	Fluorene		31.2	397	Q, U	U
193-39-5	Indeno(1,2,3-cd)pyrene		55.3	397	U	U
90-12-0	1-Methylnaphthalene		120	397	U	U
91-57-6	2-Methylnaphthalene		42.1	397	U	U
91-20-3	Naphthalene		38.5	397	U	U
85-01-8	Phenanthrene	139	27.6	397	J	J
129-00-0	Pyrene	640	48.1	397		

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4006	3494	87.2	45 - 105	
Nitrobenzene-d5	4006	3131	78.1	35 - 100	
Terphenyl-d14	4006	3889	97.1	30 - 125	

ANALYSIS DATA SHEET

SB-16-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-08	File ID:	0325808D.D
Sampled:	03/30/11 10:30	Prepared:	03/31/11 12:30	Analyzed:	04/03/11 00:45
Solids:	85.95	Preparation:	EXT_3546	Dilution:	5
Batch:	1C31013	Sequence:	1D09303	Calibration:	1032006
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		149	1890	Q, U	U
208-96-8	Acenaphthylene		115	1890	U	
120-12-7	Anthracene		155	1890	Q, U	
56-55-3	Benzo(a)anthracene		207	1890	U	
50-32-8	Benzo(a)pyrene		132	1890	S, U	UJ 10a
205-99-2	Benzo(b)fluoranthene		184	1890	Q, S, X, U	
191-24-2	Benzo(g,h,i)perylene		402	1890	S, U	
207-08-9	Benzo(k)fluoranthene		224	1890	S, U	
218-01-9	Chrysene		178	1890	U	U
53-70-3	Dibenz(a,h)anthracene		344	1890	S, U	UJ 10a
206-44-0	Fluoranthene		310	1890	U	U
86-73-7	Fluorene	1620	149	1890	Q, J, D	J 7a,b
193-39-5	Indeno(1,2,3-cd)pyrene		264	1890	S, U	UJ 10a
90-12-0	1-Methylnaphthalene	9880	574	1890	D	J 7a
91-57-6	2-Methylnaphthalene	15500	201	1890	D	
91-20-3	Naphthalene	4910	184	1890	D	
85-01-8	Phenanthrene	4120	132	1890	D	
129-00-0	Pyrene	1020	230	1890	J, D	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3827	3857	101	45 - 105	
Nitrobenzene-d5	3827	5102	133	35 - 100	*
Terphenyl-d14	3827	4699	123	30 - 125	

ANALYSIS DATA SHEET

SB-16-02

Laboratory: Empirical Laboratories, LLC
SDG: 1103258
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103258-09
File ID: 0325809D.D
Sampled: 03/30/11 10:40
Prepared: 03/31/11 12:30
Analyzed: 04/03/11 01:14
Solids: 76.43
Preparation: EXT_3546
Dilution: 5
Batch: 1C31013
Sequence: 1D09303
Calibration: 1032006
Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		169	2140	Q, U
208-96-8	Acenaphthylene		130	2140	U
120-12-7	Anthracene		175	2140	Q, U
56-55-3	Benzo(a)anthracene		234	2140	U
50-32-8	Benzo(a)pyrene		149	2140	U
205-99-2	Benzo(b)fluoranthene		208	2140	Q, X, U
191-24-2	Benzo(g,h,i)perylene		455	2140	U
207-08-9	Benzo(k)fluoranthene		253	2140	U
218-01-9	Chrysene		201	2140	U
53-70-3	Dibenz(a,h)anthracene		390	2140	U
206-44-0	Fluoranthene		351	2140	U
86-73-7	Fluorene	1650	169	2140	Q, J, D
193-39-5	Indeno(1,2,3-cd)pyrene		299	2140	U
90-12-0	1-Methylnaphthalene	9240	650	2140	D
91-57-6	2-Methylnaphthalene	14600	227	2140	D
91-20-3	Naphthalene	4160	208	2140	D
85-01-8	Phenanthrene	3880	149	2140	D
129-00-0	Pyrene	877	260	2140	J, D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4332	4379	101	45 - 105	
Nitrobenzene-d5	4332	4802	111	35 - 100	*
Terphenyl-d14	4332	4848	112	30 - 125	

Rev Qual
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ANALYSIS DATA SHEET

SB-17-01

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-10 File ID: 0325810D.D

Sampled: 03/30/11 10:55 Prepared: 03/31/11 12:30 Analyzed: 04/03/11 01:43

Solids: 77.36 Preparation: EXT_3546 Dilution: 5

Batch: 1C31013 Sequence: 1D09303 Calibration: 1032006 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		160	2020	Q, U	u
208-96-8	Acenaphthylene		123	2020	U	
120-12-7	Anthracene		166	2020	Q, U	
56-55-3	Benzo(a)anthracene		221	2020	U	
50-32-8	Benzo(a)pyrene		141	2020	S, U	UJ 10a
205-99-2	Benzo(b)fluoranthene		196	2020	Q, S, X, U	
191-24-2	Benzo(g,h,i)perylene		430	2020	S, U	
207-08-9	Benzo(k)fluoranthene		239	2020	S, U	
218-01-9	Chrysene		190	2020	U	u
53-70-3	Dibenz(a,h)anthracene		368	2020	S, U	UJ 10a
206-44-0	Fluoranthene		331	2020	U	u
86-73-7	Fluorene	759	160	2020	Q, J, D	J 11a
193-39-5	Indeno(1,2,3-cd)pyrene		282	2020	S, U	UJ 10a
90-12-0	1-Methylnaphthalene	2130	614	2020	D	
91-57-6	2-Methylnaphthalene	3030	215	2020	D	
91-20-3	Naphthalene	928	196	2020	J, D	J
85-01-8	Phenanthrene	876	141	2020	J, D	J
129-00-0	Pyrene	874	245	2020	J, D	J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4090	3256	79.6	45 - 105	
Nitrobenzene-d5	4090	3605	88.1	35 - 100	
Terphenyl-d14	4090	4803	117	30 - 125	

ANALYSIS DATA SHEET

SB-17-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-11	File ID:	0325811.D
Sampled:	03/30/11 11:00	Prepared:	03/31/11 12:30	Analyzed:	04/03/11 18:37
Solids:	53.04	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence: 1D09304	Calibration:	1032006	Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		48.1	610	Q, U	U
208-96-8	Acenaphthylene		37.0	610	U	
120-12-7	Anthracene		49.9	610	Q, U	
56-55-3	Benzo(a)anthracene		66.5	610	U	
50-32-8	Benzo(a)pyrene		42.5	610	U	
205-99-2	Benzo(b)fluoranthene		59.2	610	Q, U	
191-24-2	Benzo(g,h,i)perylene		129	610	U	
207-08-9	Benzo(k)fluoranthene		72.1	610	U	
218-01-9	Chrysene		57.3	610	U	
53-70-3	Dibenz(a,h)anthracene		111	610	U	
206-44-0	Fluoranthene		99.8	610	U	
86-73-7	Fluorene	169	48.1	610	Q, J	J lka
193-39-5	Indeno(1,2,3-cd)pyrene		85.0	610	U	U
90-12-0	1-Methylnaphthalene	1430	185	610		
91-57-6	2-Methylnaphthalene	2420	64.7	610		
91-20-3	Naphthalene	1030	59.2	610		
85-01-8	Phenanthrene	231	42.5	610	J	J
129-00-0	Pyrene		73.9	610	U	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	6162	4845	78.6	45 - 105	
Nitrobenzene-d5	6162	5080	82.5	35 - 100	
Terphenyl-d14	6162	5691	92.4	30 - 125	

ANALYSIS DATA SHEET

SB-18-01

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-12 File ID: 0325812.D

Sampled: 03/30/11 11:15 Prepared: 03/31/11 12:30 Analyzed: 04/03/11 18:08

Solids: 59.62 Preparation: EXT_3546 Dilution: 5

Batch: 1C31013 Sequence: 1D09304 Calibration: 1032006 Instrument: MS-BNA1

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		210	2660	Q, U
208-96-8	Acenaphthylene		161	2660	U
120-12-7	Anthracene		218	2660	Q, U
56-55-3	Benzo(a)anthracene		290	2660	U
50-32-8	Benzo(a)pyrene		185	2660	U
205-99-2	Benzo(b)fluoranthene		258	2660	Q, U
191-24-2	Benzo(g,h,i)perylene		565	2660	U
207-08-9	Benzo(k)fluoranthene		315	2660	U
218-01-9	Chrysene		250	2660	U
53-70-3	Dibenz(a,h)anthracene		484	2660	U
206-44-0	Fluoranthene		435	2660	U
86-73-7	Fluorene		210	2660	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		371	2660	U
90-12-0	1-Methylnaphthalene	2680	806	2660	D
91-57-6	2-Methylnaphthalene	3970	282	2660	D
91-20-3	Naphthalene	2110	258	2660	J, D
85-01-8	Phenanthrene	738	185	2660	J, D
129-00-0	Pyrene	484	323	2660	J, D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	5376	3470	64.5	45 - 105	
Nitrobenzene-d5	5376	4366	81.2	35 - 100	
Terphenyl-d14	5376	3938	73.2	30 - 125	

ANALYSIS DATA SHEET

SB-18-02

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-13 File ID: 0325813.D

Sampled: 03/30/11 11:25 Prepared: 03/31/11 12:30 Analyzed: 04/02/11 19:02

Solids: 80.61 Preparation: EXT_3546 Dilution: 1

Batch: 1C31013 Sequence: 1D09303 Calibration: 1032006 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		31.8	404	Q, U	U
208-96-8	Acenaphthylene		24.5	404	U	
120-12-7	Anthracene		33.1	404	Q, U	
56-55-3	Benzo(a)anthracene		44.1	404	U	
50-32-8	Benzo(a)pyrene		28.2	404	U	
205-99-2	Benzo(b)fluoranthene		39.2	404	Q, X, U	
191-24-2	Benzo(g,h,i)perylene		85.7	404	U	
207-08-9	Benzo(k)fluoranthene		47.7	404	U	
218-01-9	Chrysene		37.9	404	U	
53-70-3	Dibenz(a,h)anthracene		73.5	404	U	
206-44-0	Fluoranthene		66.1	404	U	
86-73-7	Fluorene	80.1	31.8	404	Q, J	J IIa
193-39-5	Indeno(1,2,3-cd)pyrene		56.3	404	U	U
90-12-0	1-Methylnaphthalene	406	122	404		
91-57-6	2-Methylnaphthalene	655	42.8	404		
91-20-3	Naphthalene	254	39.2	404	J	J
85-01-8	Phenanthrene	155	28.2	404	J	J
129-00-0	Pyrene		49.0	404	U	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4081	3464	84.9	45 - 105	
Nitrobenzene-d5	4081	4002	98.1	35 - 100	
Terphenyl-d14	4081	4041	99.0	30 - 125	

ANALYSIS DATA SHEET

SB-19-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-14	File ID:	0325814.D
Sampled:	03/30/11 14:00	Prepared:	03/31/11 12:30	Analyzed:	04/02/11 19:30
Solids:	91.10	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09303	Calibration:	1032006
Instrument:	MS-BNA1				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		27.8	353	Q, U
208-96-8	Acenaphthylene		21.4	353	U
120-12-7	Anthracene		28.9	353	Q, U
56-55-3	Benzo(a)anthracene		38.5	353	U
50-32-8	Benzo(a)pyrene		24.6	353	U
205-99-2	Benzo(b)fluoranthene		34.2	353	Q, X, U
191-24-2	Benzo(g,h,i)perylene		74.8	353	U
207-08-9	Benzo(k)fluoranthene		41.7	353	U
218-01-9	Chrysene		33.1	353	U
53-70-3	Dibenz(a,h)anthracene		64.2	353	U
206-44-0	Fluoranthene		57.7	353	U
86-73-7	Fluorene		27.8	353	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		49.2	353	U
90-12-0	1-Methylnaphthalene		107	353	U
91-57-6	2-Methylnaphthalene		37.4	353	U
91-20-3	Naphthalene		34.2	353	U
85-01-8	Phenanthrene		24.6	353	U
129-00-0	Pyrene		42.8	353	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3564	3473	97.4	45 - 105	
Nitrobenzene-d5	3564	3634	102	35 - 100	*
Terphenyl-d14	3564	4151	116	30 - 125	

ANALYSIS DATA SHEET

SB-19-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-15	File ID:	0325815.D
Sampled:	03/30/11 14:05	Prepared:	03/31/11 12:30	Analyzed:	04/03/11 20:03
Solids:	83.85	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09304	Calibration:	1032006
Instrument:	MS-BNA1				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		29.8	378	Q, U
208-96-8	Acenaphthylene		22.9	378	U
120-12-7	Anthracene		31.0	378	Q, U
56-55-3	Benzo(a)anthracene		41.3	378	U
50-32-8	Benzo(a)pyrene		26.4	378	U
205-99-2	Benzo(b)fluoranthene		36.7	378	Q, U
191-24-2	Benzo(g,h,i)perylene		80.3	378	U
207-08-9	Benzo(k)fluoranthene		44.7	378	U
218-01-9	Chrysene		35.5	378	U
53-70-3	Dibenz(a,h)anthracene		68.8	378	U
206-44-0	Fluoranthene		61.9	378	U
86-73-7	Fluorene		29.8	378	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		52.7	378	U
90-12-0	1-Methylnaphthalene		115	378	U
91-57-6	2-Methylnaphthalene		40.1	378	U
91-20-3	Naphthalene		36.7	378	U
85-01-8	Phenanthrene		26.4	378	U
129-00-0	Pyrene	53.0	45.9	378	J

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3822	3196	83.6	45 - 105	
Nitrobenzene-d5	3822	3394	88.8	35 - 100	
Terphenyl-d14	3822	4196	110	30 - 125	

ANALYSIS DATA SHEET

SB-20-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-16	File ID:	0325816.D
Sampled:	03/30/11 14:15	Prepared:	03/31/11 12:30	Analyzed:	04/03/11 21:01
Solids:	77.08	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09304	Calibration:	1032006
				Instrument:	MS-BNA1

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		32.9	417	Q, U
208-96-8	Acenaphthylene		25.3	417	U
120-12-7	Anthracene		34.1	417	Q, U
56-55-3	Benzo(a)anthracene		45.5	417	U
50-32-8	Benzo(a)pyrene		29.1	417	U
205-99-2	Benzo(b)fluoranthene		40.4	417	Q, U
191-24-2	Benzo(g,h,i)perylene		88.5	417	U
207-08-9	Benzo(k)fluoranthene		49.3	417	U
218-01-9	Chrysene		39.2	417	U
53-70-3	Dibenz(a,h)anthracene		75.8	417	U
206-44-0	Fluoranthene		68.2	417	U
86-73-7	Fluorene		32.9	417	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		58.1	417	U
90-12-0	1-Methylnaphthalene		126	417	U
91-57-6	2-Methylnaphthalene		44.2	417	U
91-20-3	Naphthalene		40.4	417	U
85-01-8	Phenanthrene		29.1	417	U
129-00-0	Pyrene		50.5	417	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4212	3509	83.3	45 - 105	
Nitrobenzene-d5	4212	3656	86.8	35 - 100	
Terphenyl-d14	4212	4937	117	30 - 125	

ANALYSIS DATA SHEET

SB-20-019

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-17	File ID:	0325817.D
Sampled:	03/30/11 14:15	Prepared:	03/31/11 12:30	Analyzed:	04/03/11 20:32
Solids:	69.39	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09304	Calibration:	1032006
				Instrument:	MS-BNA1

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		35.6	451	Q, U
208-96-8	Acenaphthylene		27.4	451	U
120-12-7	Anthracene		36.9	451	Q, U
56-55-3	Benzo(a)anthracene		49.3	451	U
50-32-8	Benzo(a)pyrene		31.5	451	U
205-99-2	Benzo(b)fluoranthene		43.8	451	Q, U
191-24-2	Benzo(g,h,i)perylene		95.8	451	U
207-08-9	Benzo(k)fluoranthene		53.4	451	U
218-01-9	Chrysene		42.4	451	U
53-70-3	Dibenz(a,h)anthracene		82.1	451	U
206-44-0	Fluoranthene		73.9	451	U
86-73-7	Fluorene		35.6	451	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		62.9	451	U
90-12-0	1-Methylnaphthalene		137	451	U
91-57-6	2-Methylnaphthalene		47.9	451	U
91-20-3	Naphthalene	115	43.8	451	J
85-01-8	Phenanthrene	74.9	31.5	451	J
129-00-0	Pyrene		54.7	451	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4560	3832	84.0	45 - 105	
Nitrobenzene-d5	4560	4281	93.9	35 - 100	
Terphenyl-d14	4560	4624	101	30 - 125	

ANALYSIS DATA SHEET

SB-20-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-18RE1	File ID:	0325818.D
Sampled:	03/30/11 14:20	Prepared:	04/01/11 11:45	Analyzed:	04/03/11 17:39
Solids:	77.42	Preparation:	EXT_3546	Dilution:	1
Batch:	1C31013	Sequence:	1D09304	Calibration:	1032006
Instrument:	MS-BNA1				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
83-32-9	Acenaphthene		32.3	410	Q, U
208-96-8	Acenaphthylene		24.8	410	U
120-12-7	Anthracene		33.5	410	Q, U
56-55-3	Benzo(a)anthracene		44.7	410	U
50-32-8	Benzo(a)pyrene		28.6	410	U
205-99-2	Benzo(b)fluoranthene		39.7	410	Q, U
191-24-2	Benzo(g,h,i)perylene		86.9	410	U
207-08-9	Benzo(k)fluoranthene		48.4	410	U
218-01-9	Chrysene		38.5	410	U
53-70-3	Dibenz(a,h)anthracene		74.5	410	U
206-44-0	Fluoranthene		67.1	410	U
86-73-7	Fluorene		32.3	410	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		57.1	410	U
90-12-0	1-Methylnaphthalene		124	410	U
91-57-6	2-Methylnaphthalene		43.5	410	U
91-20-3	Naphthalene		39.7	410	U
85-01-8	Phenanthrene		28.6	410	U
129-00-0	Pyrene		49.7	410	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4140	2171	52.4	45 - 105	
Nitrobenzene-d5	4140	2088	50.4	35 - 100	
Terphenyl-d14	4140	1975	47.7	30 - 125	

DATA VALIDATION WORKSHEETS
SEMIVOLATILE ORGANICS

Reviewer: Kitchings Date: 4/19

Project: FTC-419 SDG: 1103258 Matrix/No. Samples: S-17

I. Technical Holding Times			
A. Sample Preservation, Handling and Transport			
1. Have all samples been preserved correctly?	(Yes)	No	N/A
2. Have sample temperatures been kept at 4° C (+ or - 2 °)?	(Yes)	No	N/A
3. Were all samples received in proper condition?	(Yes)	No	N/A
4. Were any qualifications required based on this information?	Yes	(No)	N/A
Coolers @ 2.4 °C.			
B. Chain of Custody			
1. Were all samples properly recorded on COCs?	(Yes)	No	N/A
2. Were correct analyses performed on samples?	(Yes)	No	N/A
C. Holding Times			
1. Were samples extracted and analyzed within acceptable holding times?	(Yes)	No	N/A
2. Were any qualifications required based on this information?	Yes	(No)	N/A

SAMPLED	PREPPED	ANALYZED
3/30	3/31	4/1

II. GC/MS Instrument Performance Check			
1. Were instrument performance check samples run for each analysis period?	(Yes)	No	N/A
2. Were ion abundance criteria met for DTFPP analysis?	(Yes)	No	N/A
3. Do laboratory forms match raw data?	Yes	No	(N/A)
4. Were any qualifications required based on this information?	Yes	(No)	N/A

Comments/Qualifications:

1/26.
198 base
all criteria met.

4/1 → 13-01, 14-02 → 4/2 → 18-02 etc. → 4/3 → 20-2 etc.

ANALYSIS DATA SHEET

SB-01-01

Laboratory: Empirical Laboratories, LLC
SDG: 1103247
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103247-01
File ID: 0324701.D
Sampled: 03/29/11 09:50
Prepared: 03/31/11 00:00
Analyzed: 03/31/11 08:54
Solids: 89.59
Preparation: 5035
Dilution: 1
Batch: 1D04001
Sequence: 1D09401
Calibration: 1081001
Instrument: MS-VOA6

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.490	5.22	U
100-41-4	Ethylbenzene		0.782	5.22	U
108-88-3	Toluene		0.897	5.22	U
1330-20-7	Xylenes (total)		0.730	5.22	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.30	32.14	103	85 - 120	
Dibromofluoromethane	31.30	32.40	104	80 - 125	
1,2-Dichloroethane-d4	31.30	32.98	105	75 - 140	
Toluene-d8	31.30	31.92	102	85 - 115	

ANALYSIS DATA SHEET

SB-01-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Solid Laboratory ID: 1103247-03 File ID: 0324703.D

Sampled: 03/29/11 09:55 Prepared: 03/31/11 00:00 Analyzed: 03/31/11 09:18

Solids: 85.52 Preparation: 5035 Dilution: 1

Batch: 1D04001 Sequence: 1D09401 Calibration: 1081001 Instrument: MS-VOA6

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.467	4.97	U
100-41-4	Ethylbenzene		0.746	4.97	U
108-88-3	Toluene		0.855	4.97	U
1330-20-7	Xylenes (total)		0.696	4.97	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.83	29.81	99.9	85 - 120	
Dibromofluoromethane	29.83	29.93	100	80 - 125	
1,2-Dichloroethane-d4	29.83	30.19	101	75 - 140	
Toluene-d8	29.83	31.24	105	85 - 115	

ANALYSIS DATA SHEET

SB-02-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-04	File ID:	0324704.D
Sampled:	03/29/11 10:35	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 09:42
Solids:	94.48	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
				Instrument:	MS-VOA6

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.514	5.47	U
100-41-4	Ethylbenzene		0.820	5.47	U
108-88-3	Toluene		0.940	5.47	U
1330-20-7	Xylenes (total)		0.765	5.47	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	%REC	QC LIMITS	Q
Bromofluorobenzene	32.80	32.12	97.9	85 - 120	
Dibromofluoromethane	32.80	34.20	104	80 - 125	
1,2-Dichloroethane-d4	32.80	33.43	102	75 - 140	
Toluene-d8	32.80	33.95	104	85 - 115	

ANALYSIS DATA SHEET

SB-02-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-05	File ID:	0324705.D
Sampled:	03/29/11 10:40	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 10:06
Solids:	72.28	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.576	6.13	U
100-41-4	Ethylbenzene		0.920	6.13	U
108-88-3	Toluene		1.05	6.13	U
1330-20-7	Xylenes (total)		0.859	6.13	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	36.80	36.99	101	85 - 120	
Dibromofluoromethane	36.80	37.29	101	80 - 125	
1,2-Dichloroethane-d4	36.80	37.98	103	75 - 140	
Toluene-d8	36.80	37.36	102	85 - 115	

ANALYSIS DATA SHEET

SB-04-01

Laboratory: Empirical Laboratories, LLC
SDG: 1103247
Client: SES, Inc. (S750)
Project: FTS UST 2008-2010
Matrix: Soil
Laboratory ID: 1103247-06
File ID: 0324706.D
Sampled: 03/29/11 11:00
Prepared: 03/31/11 00:00
Analyzed: 03/31/11 10:30
Solids: 88.11
Preparation: 5035
Dilution: 1
Batch: 1D04001
Sequence: 1D09401
Calibration: 1081001
Instrument: MS-VOA6

Rev Qual RJ 1/6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.482	5.13	S, U
100-41-4	Ethylbenzene		0.770	5.13	S, U
108-88-3	Toluene		0.882	5.13	S, U
1330-20-7	Xylenes (total)		0.718	5.13	S, U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.78	25.76	83.7	85 - 120	*S
Dibromofluoromethane	30.78	33.43	109	80 - 125	S
1,2-Dichloroethane-d4	30.78	34.64	113	75 - 140	S
Toluene-d8	30.78	35.29	115	85 - 115	S

ANALYSIS DATA SHEET

SB-04-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-06RE1	File ID:	0324706R.D
Sampled:	03/29/11 11:00	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 10:06
Solids:	88.11	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
				Instrument:	MS-VOA6

Raw Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.481	5.12	U
100-41-4	Ethylbenzene		0.768	5.12	U
108-88-3	Toluene		0.881	5.12	U
1330-20-7	Xylenes (total)		0.717	5.12	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.73	24.34	79.2	85 - 120	*X
Dibromofluoromethane	30.73	31.98	104	80 - 125	
1,2-Dichloroethane-d4	30.73	29.87	97.2	75 - 140	
Toluene-d8	30.73	37.95	123	85 - 115	*

ANALYSIS DATA SHEET

SB-04-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-07 File ID: 0324707.D

Sampled: 03/29/11 11:05 Prepared: 03/31/11 00:00 Analyzed: 03/31/11 10:55

Solids: 84.70 Preparation: 5035 Dilution: 1

Batch: 1D04001 Sequence: 1D09401 Calibration: 1081001 Instrument: MS-VOA6

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.558	5.94	U
100-41-4	Ethylbenzene		0.891	5.94	U
108-88-3	Toluene		1.02	5.94	U
1330-20-7	Xylenes (total)		0.831	5.94	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	35.63	35.85	101	85 - 120	
Dibromofluoromethane	35.63	36.66	103	80 - 125	
1,2-Dichloroethane-d4	35.63	34.50	96.8	75 - 140	
Toluene-d8	35.63	35.77	100	85 - 115	

ANALYSIS DATA SHEET

SB-03-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-08	File ID:	0324708.D
Sampled:	03/29/11 11:20	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 11:19
Solids:	86.20	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.461	4.91	U
100-41-4	Ethylbenzene		0.736	4.91	U
108-88-3	Toluene		0.844	4.91	U
1330-20-7	Xylenes (total)		0.687	4.91	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.45	29.30	99.5	85 - 120	
Dibromofluoromethane	29.45	29.90	102	80 - 125	
1,2-Dichloroethane-d4	29.45	30.34	103	75 - 140	
Toluene-d8	29.45	30.72	104	85 - 115	

ANALYSIS DATA SHEET

SB-03-019

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-09	File ID:	0324709.D
Sampled:	03/29/11 11:20	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 11:43
Solids:	85.54	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.537	5.71	U
100-41-4	Ethylbenzene		0.856	5.71	U
108-88-3	Toluene		0.982	5.71	U
1330-20-7	Xylenes (total)		0.799	5.71	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.25	34.03	99.3	85 - 120	
Dibromofluoromethane	34.25	34.73	101	80 - 125	
1,2-Dichloroethane-d4	34.25	35.93	105	75 - 140	
Toluene-d8	34.25	34.52	101	85 - 115	

ANALYSIS DATA SHEET

SB-03-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-10	File ID:	0324710.D
Sampled:	03/29/11 11:35	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 12:07
Solids:	85.04	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.492	5.23	U
100-41-4	Ethylbenzene		0.785	5.23	U
108-88-3	Toluene		0.900	5.23	U
1330-20-7	Xylenes (total)		0.732	5.23	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.39	31.42	100	85 - 120	
Dibromofluoromethane	31.39	32.18	103	80 - 125	
1,2-Dichloroethane-d4	31.39	31.96	102	75 - 140	
Toluene-d8	31.39	32.81	105	85 - 115	

ANALYSIS DATA SHEET

SB-05-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-11	File ID:	0324711.D
Sampled:	03/29/11 13:15	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 12:31
Solids:	91.08	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.485	5.16	U
100-41-4	Ethylbenzene		0.774	5.16	U
108-88-3	Toluene		0.887	5.16	U
1330-20-7	Xylenes (total)		0.722	5.16	U

Rev Qual U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.96	30.20	97.6	85 - 120	
Dibromofluoromethane	30.96	34.50	111	80 - 125	
1,2-Dichloroethane-d4	30.96	34.26	111	75 - 140	
Toluene-d8	30.96	32.73	106	85 - 115	

ANALYSIS DATA SHEET

SB-05-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-12	File ID:	0324712.D
Sampled:	03/29/11 13:20	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 12:55
Solids:	83.51	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.569	6.05	U
100-41-4	Ethylbenzene		0.907	6.05	U
108-88-3	Toluene		1.04	6.05	U
1330-20-7	Xylenes (total)		0.847	6.05	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	36.29	35.66	98.3	85 - 120	
Dibromofluoromethane	36.29	36.47	101	80 - 125	
1,2-Dichloroethane-d4	36.29	37.96	105	75 - 140	
Toluene-d8	36.29	38.17	105	85 - 115	

ANALYSIS DATA SHEET

SB-06-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-13	File ID:	0324713.D
Sampled:	03/29/11 13:40	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 13:20
Solids:	91.00	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Raw & Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.534	5.68	U
100-41-4	Ethylbenzene		0.851	5.68	U
108-88-3	Toluene		0.976	5.68	U
1330-20-7	Xylenes (total)		0.795	5.68	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.06	33.48	98.3	85 - 120	
Dibromofluoromethane	34.06	34.42	101	80 - 125	
1,2-Dichloroethane-d4	34.06	36.27	107	75 - 140	
Toluene-d8	34.06	34.56	101	85 - 115	

ANALYSIS DATA SHEET

SB-06-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. ($750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-14 File ID: 0324714.D

Sampled: 03/29/11 13:45 Prepared: 03/31/11 00:00 Analyzed: 03/31/11 13:45

Solids: 81.70 Preparation: 5035 Dilution: 1

Batch: 1D04001 Sequence: 1D09401 Calibration: 1081001 Instrument: MS-VOA6

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.499	5.31	U
100-41-4	Ethylbenzene		0.797	5.31	U
108-88-3	Toluene		0.914	5.31	U
1330-20-7	Xylenes (total)		0.744	5.31	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.88	29.46	92.4	85 - 120	
Dibromofluoromethane	31.88	32.54	102	80 - 125	
1,2-Dichloroethane-d4	31.88	33.15	104	75 - 140	
Toluene-d8	31.88	34.01	107	85 - 115	

ANALYSIS DATA SHEET

SB-07-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-15	File ID:	0324715.D
Sampled:	03/29/11 14:05	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 14:09
Solids:	77.91	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence: 1D09401	Calibration:	1081001	Instrument: MS-VOA6

Rev Qual
UJ 7a

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.689	7.33	U
100-41-4	Ethylbenzene		1.10	7.33	U
108-88-3	Toluene		1.26	7.33	U
1330-20-7	Xylenes (total)		1.03	7.33	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	43.96	35.50	80.8	85 - 120	*
Dibromofluoromethane	43.96	45.43	103	80 - 125	
1,2-Dichloroethane-d4	43.96	44.95	102	75 - 140	
Toluene-d8	43.96	52.90	120	85 - 115	*

ANALYSIS DATA SHEET

SB-07-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-15RE1	File ID:	0324715R.D
Sampled:	03/29/11 14:05	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 10:30
Solids:	77.91	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual R 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.657	6.99	U
100-41-4	Ethylbenzene		1.05	6.99	U
108-88-3	Toluene		1.20	6.99	U
1330-20-7	Xylenes (total)		0.979	6.99	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	41.95	35.42	84.4	85 - 120	*X
Dibromofluoromethane	41.95	44.92	107	80 - 125	
1,2-Dichloroethane-d4	41.95	46.25	110	75 - 140	
Toluene-d8	41.95	50.17	120	85 - 115	*

ANALYSIS DATA SHEET

SB-07-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-16	File ID:	0324716.D
Sampled:	03/29/11 14:10	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 14:34
Solids:	84.91	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.469	4.99	U
100-41-4	Ethylbenzene		0.749	4.99	U
108-88-3	Toluene		0.858	4.99	U
1330-20-7	Xylenes (total)		0.699	4.99	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.94	30.29	101	85 - 120	
Dibromofluoromethane	29.94	31.36	105	80 - 125	
1,2-Dichloroethane-d4	29.94	30.72	103	75 - 140	
Toluene-d8	29.94	32.22	108	85 - 115	

ANALYSIS DATA SHEET

SB-08-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-17	File ID:	0324717.D
Sampled:	03/29/11 14:35	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 14:58
Solids:	83.78	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual to U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.479	5.09	U
100-41-4	Ethylbenzene		0.764	5.09	U
108-88-3	Toluene		0.876	5.09	U
1330-20-7	Xylenes (total)		0.713	5.09	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.55	27.28	89.3	85 - 120	
Dibromofluoromethane	30.55	31.29	102	80 - 125	
1,2-Dichloroethane-d4	30.55	31.68	104	75 - 140	
Toluene-d8	30.55	33.24	109	85 - 115	

ANALYSIS DATA SHEET

SB-08-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-18	File ID:	0324718.D
Sampled:	03/29/11 14:45	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 15:22
Solids:	84.52	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.473	5.03	U
100-41-4	Ethylbenzene		0.755	5.03	U
108-88-3	Toluene		0.865	5.03	U
1330-20-7	Xylenes (total)		0.704	5.03	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.18	30.61	101	85 - 120	
Dibromofluoromethane	30.18	30.62	101	80 - 125	
1,2-Dichloroethane-d4	30.18	29.88	99.0	75 - 140	
Toluene-d8	30.18	31.20	103	85 - 115	

ANALYSIS DATA SHEET

SB-09-01

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-19 File ID: 0324719.D

Sampled: 03/29/11 15:00 Prepared: 03/31/11 00:00 Analyzed: 03/31/11 15:46

Solids: 91.32 Preparation: 5035 Dilution: 1

Batch: 1D04001 Sequence: 1D09401 Calibration: 1081001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Re Qual
71-43-2	Benzene		0.497	5.29	U	U
100-41-4	Ethylbenzene		0.793	5.29	U	U
108-88-3	Toluene	2.66	0.909	5.29	J	J
1330-20-7	Xylenes (total)		0.740	5.29	U	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.71	30.07	94.8	85 - 120	
Dibromofluoromethane	31.71	31.91	101	80 - 125	
1,2-Dichloroethane-d4	31.71	32.62	103	75 - 140	
Toluene-d8	31.71	33.86	107	85 - 115	

ANALYSIS DATA SHEET

SB-09-02

Laboratory: Empirical Laboratories, LLC SDG: 1103247

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103247-20 File ID: 0324720.D

Sampled: 03/29/11 15:10 Prepared: 03/31/11 00:00 Analyzed: 03/31/11 16:10

Solids: 80.66 Preparation: 5035 Dilution: 1

Batch: 1D04001 Sequence: 1D09401 Calibration: 1081001 Instrument: MS-VOA6

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.543	5.77	U
100-41-4	Ethylbenzene		0.866	5.77	U
108-88-3	Toluene		0.993	5.77	U
1330-20-7	Xylenes (total)		0.808	5.77	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.63	35.09	101	85 - 120	
Dibromofluoromethane	34.63	34.64	100	80 - 125	
1,2-Dichloroethane-d4	34.63	32.92	95.0	75 - 140	
Toluene-d8	34.63	35.87	104	85 - 115	

ANALYSIS DATA SHEET

SB-10-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-21	File ID:	0324721D.D
Sampled:	03/29/11 15:40	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 19:03
Solids:	68.32	Preparation:	5035	Dilution:	500
Batch:	1C31010	Sequence:	1D09103	Calibration:	1084002
Instrument:	MS-VOA3				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene	504	341	3630	S, J, D
100-41-4	Ethylbenzene	3780	545	3630	D
108-88-3	Toluene		624	3630	Q, U
1330-20-7	Xylenes (total)	23400	508	3630	D

J 10a

U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	43.56	47.06	108	85 - 120	
Dibromofluoromethane	43.56	46.02	106	80 - 125	S
1,2-Dichloroethane-d4	43.56	42.75	98.1	75 - 140	S
Toluene-d8	43.56	41.04	94.2	85 - 115	

ANALYSIS DATA SHEET

SB-10-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-22	File ID:	0324722.D
Sampled:	03/29/11 15:45	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 16:34
Solids:	81.50	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.522	5.56	U
100-41-4	Ethylbenzene		0.834	5.56	U
108-88-3	Toluene		0.956	5.56	U
1330-20-7	Xylenes (total)		0.778	5.56	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	33.34	33.93	102	85 - 120	
Dibromofluoromethane	33.34	33.64	101	80 - 125	
1,2-Dichloroethane-d4	33.34	34.06	102	75 - 140	
Toluene-d8	33.34	34.68	104	85 - 115	

ANALYSIS DATA SHEET

SB-11-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-23	File ID:	0324723D.D
Sampled:	03/29/11 16:10	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 19:27
Solids:	88.60	Preparation:	5035	Dilution:	50
Batch:	1C31010	Sequence:	1D09103	Calibration:	1084002
Instrument:	MS-VOA3				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		21.6	230	U
100-41-4	Ethylbenzene	147	34.5	230	J, D
108-88-3	Toluene		39.5	230	Q, U
1330-20-7	Xylenes (total)	758	32.2	230	D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	27.57	27.42	99.4	85 - 120	
Dibromofluoromethane	27.57	25.32	91.8	80 - 125	
1,2-Dichloroethane-d4	27.57	27.66	100	75 - 140	
Toluene-d8	27.57	28.60	104	85 - 115	

ANALYSIS DATA SHEET

SB-11-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103247
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103247-24	File ID:	0324724.D
Sampled:	03/29/11 16:15	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 16:59
Solids:	83.17	Preparation:	5035	Dilution:	1
Batch:	1D04001	Sequence:	1D09401	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	
71-43-2	Benzene	6.61	0.512	5.45		
100-41-4	Ethylbenzene	2.99	0.817	5.45	J	J
108-88-3	Toluene		0.937	5.45	U	U
1330-20-7	Xylenes (total)	17.3	0.762	5.45		

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.67	33.00	101	85 - 120	
Dibromofluoromethane	32.67	34.06	104	80 - 125	
1,2-Dichloroethane-d4	32.67	32.80	100	75 - 140	
Toluene-d8	32.67	33.76	103	85 - 115	

ANALYSIS DATA SHEET

SB-12-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-25RE1	File ID:	0324725R.D
Sampled:	03/29/11 16:40	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 10:54
Solids:	80.60	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.534	5.68	U
100-41-4	Ethylbenzene		0.852	5.68	U
108-88-3	Toluene		0.977	5.68	U
1330-20-7	Xylenes (total)		0.795	5.68	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.09	34.03	99.8	85 - 120	X
Dibromofluoromethane	34.09	35.05	103	80 - 125	
1,2-Dichloroethane-d4	34.09	34.26	101	75 - 140	
Toluene-d8	34.09	36.13	106	85 - 115	

ANALYSIS DATA SHEET

SB-12-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103247	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103247-26RE1	File ID:	0324726R.D
Sampled:	03/29/11 16:50	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 11:19
Solids:	90.89	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence: 1D09201	Calibration:	1081001	Instrument: MS-VOA6

Rev 2ucl u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.468	4.98	U
100-41-4	Ethylbenzene		0.747	4.98	U
108-88-3	Toluene		0.857	4.98	U
1330-20-7	Xylenes (total)		0.698	4.98	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.90	30.71	103	85 - 120	X
Dibromofluoromethane	29.90	30.95	104	80 - 125	
1,2-Dichloroethane-d4	29.90	30.46	102	75 - 140	
Toluene-d8	29.90	30.42	102	85 - 115	

ANALYSIS DATA SHEET

SB-13-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Solid	Laboratory ID:	1103258-02	File ID:	0325802.D
Sampled:	03/30/11 08:55	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 21:27
Solids:	91.51	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
				Instrument:	MS-VOA6

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.526	5.60	N, U
100-41-4	Ethylbenzene		0.840	5.60	N, U
108-88-3	Toluene		0.963	5.60	N, U
1330-20-7	Xylenes (total)		0.784	5.60	N, U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	33.59	30.14	89.7	85 - 120	
Dibromofluoromethane	33.59	34.19	102	80 - 125	
1,2-Dichloroethane-d4	33.59	35.06	104	75 - 140	
Toluene-d8	33.59	36.99	110	85 - 115	

ANALYSIS DATA SHEET

SB-13-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-03RE1	File ID:	0325803D.D
Sampled:	03/30/11 09:05	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 17:01
Solids:	80.24	Preparation:	5035	Dilution:	50
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene	183	26.2	279	J, D
100-41-4	Ethylbenzene	2190	41.9	279	D
108-88-3	Toluene		48.0	279	U
1330-20-7	Xylenes (total)	10500	39.1	279	D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	33.50	39.26	117	85 - 120	X
Dibromofluoromethane	33.50	33.51	100	80 - 125	
1,2-Dichloroethane-d4	33.50	34.17	102	75 - 140	
Toluene-d8	33.50	33.78	101	85 - 115	

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ANALYSIS DATA SHEET

SB-14-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-04	File ID:	0325804.D
Sampled:	03/30/11 09:30	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 21:52
Solids:	90.80	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
				Instrument:	MS-VOA6

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.474	5.04	U
100-41-4	Ethylbenzene	1.12	0.756	5.04	J
108-88-3	Toluene		0.867	5.04	U
1330-20-7	Xylenes (total)		0.706	5.04	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.26	26.19	86.5	85 - 120	
Dibromofluoromethane	30.26	31.59	104	80 - 125	
1,2-Dichloroethane-d4	30.26	30.94	102	75 - 140	
Toluene-d8	30.26	34.31	113	85 - 115	

ANALYSIS DATA SHEET

SB-14-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-05	File ID:	0325805.D
Sampled:	03/30/11 09:40	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 22:16
Solids:	38.08	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd UJ 7a

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		1.63	17.3	U
100-41-4	Ethylbenzene		2.60	17.3	U
108-88-3	Toluene		2.98	17.3	U
1330-20-7	Xylenes (total)		2.43	17.3	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	103.9	66.73	64.2	85 - 120	*
Dibromofluoromethane	103.9	109.1	105	80 - 125	
1,2-Dichloroethane-d4	103.9	108.5	104	75 - 140	
Toluene-d8	103.9	150.5	145	85 - 115	*

ANALYSIS DATA SHEET

SB-14-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-05RE1	File ID:	0325805R.D
Sampled:	03/30/11 09:40	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 09:41
Solids:	38.08	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd R. 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		1.85	19.7	U
100-41-4	Ethylbenzene		2.95	19.7	U
108-88-3	Toluene		3.38	19.7	U
1330-20-7	Xylenes (total)		2.75	19.7	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	117.9	88.74	75.2	85 - 120	*X
Dibromofluoromethane	117.9	128.0	109	80 - 125	
1,2-Dichloroethane-d4	117.9	122.1	104	75 - 140	
Toluene-d8	117.9	151.9	129	85 - 115	*

ANALYSIS DATA SHEET

SB-15-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-06	File ID:	0325806.D
Sampled:	03/30/11 10:10	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 22:40
Solids:	83.55	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.478	5.08	U
100-41-4	Ethylbenzene		0.762	5.08	U
108-88-3	Toluene		0.874	5.08	U
1330-20-7	Xylenes (total)		0.711	5.08	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.48	25.01	82.0	85 - 120	*
Dibromofluoromethane	30.48	30.91	101	80 - 125	
1,2-Dichloroethane-d4	30.48	30.42	99.8	75 - 140	
Toluene-d8	30.48	35.45	116	85 - 115	*

ANALYSIS DATA SHEET

SB-15-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-06RE2	File ID:	0325806D.D
Sampled:	03/30/11 10:10	Prepared:	04/02/11 00:00	Analyzed:	04/02/11 20:08
Solids:	83.55	Preparation:	5035	Dilution:	50
Batch:	1D02005	Sequence: 1D09402	Calibration:	1081001	Instrument: MS-VOA6

Rev Qual U 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		24.1	256	U
100-41-4	Ethylbenzene		38.4	256	U
108-88-3	Toluene		44.1	256	U
1330-20-7	Xylenes (total)		35.9	256	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.74	30.98	101	85 - 120	
Dibromofluoromethane	30.74	31.47	102	80 - 125	
1,2-Dichloroethane-d4	30.74	28.28	92.0	75 - 140	
Toluene-d8	30.74	31.87	104	85 - 115	

ANALYSIS DATA SHEET

SB-15-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-07RE1	File ID:	0325807R.D
Sampled:	03/30/11 10:15	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 11:43
Solids:	81.04	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.502	5.34	U
100-41-4	Ethylbenzene		0.801	5.34	U
108-88-3	Toluene		0.918	5.34	U
1330-20-7	Xylenes (total)		0.747	5.34	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.02	29.51	92.2	85 - 120	X
Dibromofluoromethane	32.02	33.32	104	80 - 125	
1,2-Dichloroethane-d4	32.02	32.17	100	75 - 140	
Toluene-d8	32.02	34.80	109	85 - 115	

ANALYSIS DATA SHEET

SB-16-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-08	File ID:	0325808.D
Sampled:	03/30/11 10:30	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 23:29
Solids:	85.95	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	
71-43-2	Benzene	143	0.440	4.68		J 7A
100-41-4	Ethylbenzene	533	0.701	4.68	E	R 16
108-88-3	Toluene	9.55	0.804	4.68		J 7A
1330-20-7	Xylenes (total)	1660	0.655	4.68	E	R 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	28.06	38.40	137	85 - 120	*
Dibromofluoromethane	28.06	32.24	115	80 - 125	
1,2-Dichloroethane-d4	28.06	33.39	119	75 - 140	
Toluene-d8	28.06	24.51	87.4	85 - 115	

Rev 2 nd

ANALYSIS DATA SHEET

SB-16-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-08RE1	File ID:	0325808D.D
Sampled:	03/30/11 10:30	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 16:36
Solids:	85.95	Preparation:	5035	Dilution:	50
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	
71-43-2	Benzene		24.1	256	U	R 16
100-41-4	Ethylbenzene	2290	38.4	256	D	
108-88-3	Toluene		44.0	256	U	R 16
1330-20-7	Xylenes (total)	4700	35.8	256	D	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.73	36.87	120	85 - 120	X
Dibromofluoromethane	30.73	30.92	101	80 - 125	
1,2-Dichloroethane-d4	30.73	30.36	98.8	75 - 140	
Toluene-d8	30.73	31.40	102	85 - 115	

ANALYSIS DATA SHEET

SB-16-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-09	File ID:	0325809D.D
Sampled:	03/30/11 10:40	Prepared:	03/31/11 00:00	Analyzed:	04/01/11 02:43
Solids:	76.43	Preparation:	5035	Dilution:	100
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene	58.9	47.4	504	J, D
100-41-4	Ethylbenzene	385	75.6	504	J, D
108-88-3	Toluene		86.7	504	U
1330-20-7	Xylenes (total)	1820	70.6	504	D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.24	32.03	106	85 - 120	
Dibromofluoromethane	30.24	30.54	101	80 - 125	
1,2-Dichloroethane-d4	30.24	29.03	96.0	75 - 140	
Toluene-d8	30.24	31.00	103	85 - 115	

ANALYSIS DATA SHEET

SB-17-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-10	File ID:	0325810.D
Sampled:	03/30/11 10:55	Prepared:	03/31/11 00:00	Analyzed:	03/31/11 23:53
Solids:	77.36	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
				Instrument:	MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q	Raw Qual
71-43-2	Benzene	1.83	0.517	5.50	J	J 7a
100-41-4	Ethylbenzene	28.9	0.824	5.50		J 7a
108-88-3	Toluene		0.945	5.50	U	UJ 7a
1330-20-7	Xylenes (total)	94.3	0.769	5.50		J 7a

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.97	31.68	96.1	85 - 120	
Dibromofluoromethane	32.97	35.13	107	80 - 125	
1,2-Dichloroethane-d4	32.97	36.15	110	75 - 140	
Toluene-d8	32.97	25.35	76.9	85 - 115	*

ANALYSIS DATA SHEET

SB-17-02

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-11 File ID: 0325811D.D

Sampled: 03/30/11 11:00 Prepared: 03/31/11 00:00 Analyzed: 04/01/11 03:07

Solids: 53.04 Preparation: 5035 Dilution: 100

Batch: 1D01001 Sequence: 1D09107 Calibration: 1081001 Instrument: MS-VOA6

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		100	1060	U
100-41-4	Ethylbenzene		160	1060	U
108-88-3	Toluene		183	1060	U
1330-20-7	Xylenes (total)	502	149	1060	J, D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	63.84	66.77	105	85 - 120	
Dibromofluoromethane	63.84	64.29	101	80 - 125	
1,2-Dichloroethane-d4	63.84	62.42	97.8	75 - 140	
Toluene-d8	63.84	65.72	103	85 - 115	

ANALYSIS DATA SHEET

SB-18-01

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-12	File ID:	0325812D.D
Sampled:	03/30/11 11:15	Prepared:	03/31/11 00:00	Analyzed:	04/01/11 03:31
Solids:	59.62	Preparation:	5035	Dilution:	100
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene	84.3	83.3	887	J, D
100-41-4	Ethylbenzene		133	887	U
108-88-3	Toluene		152	887	U
1330-20-7	Xylenes (total)	563	124	887	J, D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	53.19	55.35	104	85 - 120	
Dibromofluoromethane	53.19	52.82	99.3	80 - 125	
1,2-Dichloroethane-d4	53.19	54.56	103	75 - 140	
Toluene-d8	53.19	55.01	103	85 - 115	

ANALYSIS DATA SHEET

SB-18-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-13	File ID:	0325813D.D
Sampled:	03/30/11 11:25	Prepared:	03/31/11 00:00	Analyzed:	04/01/11 03:56
Solids:	80.61	Preparation:	5035	Dilution:	100
Batch:	1D01001	Sequence: 1D09107	Calibration:	1081001	Instrument: MS-VOA6

Rev
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J
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CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene	173	68.1	725	J, D
100-41-4	Ethylbenzene	276	109	725	J, D
108-88-3	Toluene		125	725	U
1330-20-7	Xylenes (total)	2590	101	725	D

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	43.48	45.96	106	85 - 120	
Dibromofluoromethane	43.48	43.72	101	80 - 125	
1,2-Dichloroethane-d4	43.48	43.48	100	75 - 140	
Toluene-d8	43.48	45.36	104	85 - 115	

ANALYSIS DATA SHEET

SB-19-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-14	File ID:	0325814.D
Sampled:	03/30/11 14:00	Prepared:	03/31/11 00:00	Analyzed:	04/01/11 00:17
Solids:	91.10	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
				Instrument:	MS-VOA6

Rev 2nd U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.458	4.87	U
100-41-4	Ethylbenzene		0.731	4.87	U
108-88-3	Toluene		0.838	4.87	U
1330-20-7	Xylenes (total)		0.682	4.87	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.25	31.28	107	85 - 120	
Dibromofluoromethane	29.25	30.28	104	80 - 125	
1,2-Dichloroethane-d4	29.25	29.77	102	75 - 140	
Toluene-d8	29.25	30.74	105	85 - 115	

ANALYSIS DATA SHEET

SB-19-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-15RE1	File ID:	0325815R.D
Sampled:	03/30/11 14:05	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 13:46
Solids:	83.85	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.619	6.58	U
100-41-4	Ethylbenzene		0.987	6.58	U
108-88-3	Toluene		1.13	6.58	U
1330-20-7	Xylenes (total)		0.921	6.58	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	39.49	34.57	87.5	85 - 120	X
Dibromofluoromethane	39.49	42.48	108	80 - 125	
1,2-Dichloroethane-d4	39.49	42.63	108	75 - 140	
Toluene-d8	39.49	47.51	120	85 - 115	*

Rev 2nd 5a 7a

ANALYSIS DATA SHEET

SB-20-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1103258
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Soil	Laboratory ID:	1103258-16	File ID:	0325816.D
Sampled:	03/30/11 14:15	Prepared:	03/31/11 00:00	Analyzed:	04/01/11 01:05
Solids:	77.08	Preparation:	5035	Dilution:	1
Batch:	1D01001	Sequence:	1D09107	Calibration:	1081001
Instrument:	MS-VOA6				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.601	6.40	U
100-41-4	Ethylbenzene		0.960	6.40	U
108-88-3	Toluene		1.10	6.40	U
1330-20-7	Xylenes (total)		0.896	6.40	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	38.38	33.21	86.5	85 - 120	
Dibromofluoromethane	38.38	40.06	104	80 - 125	
1,2-Dichloroethane-d4	38.38	40.43	105	75 - 140	
Toluene-d8	38.38	45.63	119	85 - 115	*

ANALYSIS DATA SHEET

SB-20-019

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-17 File ID: 0325817.D

Sampled: 03/30/11 14:15 Prepared: 03/31/11 00:00 Analyzed: 04/01/11 01:30

Solids: 69.39 Preparation: 5035 Dilution: 1

Batch: 1D01001 Sequence: 1D09107 Calibration: 1081001 Instrument: MS-VOA6

Raw Qual UJ 7a

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.649	6.90	U
100-41-4	Ethylbenzene		1.04	6.90	U
108-88-3	Toluene		1.19	6.90	U
1330-20-7	Xylenes (total)		0.966	6.90	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	41.41	32.93	79.5	85 - 120	*
Dibromofluoromethane	41.41	43.54	105	80 - 125	
1,2-Dichloroethane-d4	41.41	44.48	107	75 - 140	
Toluene-d8	41.41	52.04	126	85 - 115	*

ANALYSIS DATA SHEET

SB-20-019

Laboratory: Empirical Laboratories, LLC SDG: 1103258

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Soil Laboratory ID: 1103258-17RE1 File ID: 0325817R.D

Sampled: 03/30/11 14:15 Prepared: 04/01/11 00:00 Analyzed: 04/01/11 12:08

Solids: 69.39 Preparation: 5035 Dilution: 1

Batch: 1D01016 Sequence: 1D09201 Calibration: 1081001 Instrument: MS-VOA6

Rev 2 Used R 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.673	7.16	U
100-41-4	Ethylbenzene		1.07	7.16	U
108-88-3	Toluene		1.23	7.16	U
1330-20-7	Xylenes (total)		1.00	7.16	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	42.97	35.27	82.1	85 - 120	*X
Dibromofluoromethane	42.97	46.30	108	80 - 125	
1,2-Dichloroethane-d4	42.97	45.53	106	75 - 140	
Toluene-d8	42.97	51.64	120	85 - 115	*

ANALYSIS DATA SHEET

SB-20-02

Laboratory:	Empirical Laboratories, LLC		SDG:	1103258	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Soil	Laboratory ID:	1103258-18RE1	File ID:	0325818R.D
Sampled:	03/30/11 14:20	Prepared:	04/01/11 00:00	Analyzed:	04/01/11 13:21
Solids:	77.42	Preparation:	5035	Dilution:	1
Batch:	1D01016	Sequence:	1D09201	Calibration:	1081001
Instrument:	MS-VOA6				

Rew Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	MDL	MRL	Q
71-43-2	Benzene		0.653	6.94	U
100-41-4	Ethylbenzene		1.04	6.94	U
108-88-3	Toluene		1.19	6.94	U
1330-20-7	Xylenes (total)		0.972	6.94	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	41.67	42.74	103	85 - 120	X
Dibromofluoromethane	41.67	44.12	106	80 - 125	
1,2-Dichloroethane-d4	41.67	43.16	104	75 - 140	
Toluene-d8	41.67	43.28	104	85 - 115	

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

14208

Send Results to:	Send Invoice to:
Name DOUG HAWN	Name
Company SES	Company
Address 1006 FLOYD CULLER	Address
City OAK RIDGE	City
State, Zip TN	State, Zip
Phone (865) 481-7637	Phone
Fax	Fax
E-mail DHAWN@SESCPROENV.COM	E-mail

Project No./Name: BLDG 419

Sampler's (Signature): William McNeal

Analysis Requirements: BTEX ONLY (VOC 8260) | PAH 8270C, DRO 8015

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: 1236

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	Comments	No. of Bottles	Lab Use Only Containers/Pres.
1103247-01	03/29/11 0950	SB-01-01	SOIL	ON VOC SAMPLES BTEX ONLY	4	1M+30
-02	LAB PREPPED	TRIP	WATER	LAB PROVIDED	2	2 VIALS
-03	03/29/11 0955	SB-01-02	SOIL	ON VOC SAMPLES BTEX ONLY	4	1M+30
-04	03/29/11 1035	SB-02-01				
-05	03/29/11 1040	SB-02-02				
-06	03/29/11 1100	SB-04-01				
-07	03/29/11 1105	SB-04-02				
-08	03/29/11 1120	SB-03-01				
-09	03/29/11 1120	SB-03-019				
-10	03/29/11 1125	SB-03-02				
-11	03/29/11 1315	SB-05-01				
-12	03/29/11 1320	SB-05-02	SOIL	ON VOC SAMPLES BTEX ONLY	4	

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) William McNeal	Date/Time 03/29/11 1700	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time 3-30-11 08:30	Temperature 1.7 °C

REMARKS:

CALL DOUG HAWN UPON RECEIPT

** 48 HOUR TAT **

Details:

Page 1 of 3

Cooler No. 1 of 2

Date Shipped 03/29/11

Shipped By FEDEX

Turnaround 48 HOUR

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

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11103247

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

14209

Send Results to:
Name DOUG HAWN
Company SES
Address 1006 FLOYD CULLER
City OAK RIDGE
State, Zip TN
Phone (865) 481-7837
Fax
E-mail

Send Invoice to:
Name
Company
Address
City
State, Zip
Phone
Fax
E-mail

Project No./Name: BLDG 419

Sampler's (Signature): [signature]

Analysis Requirements:

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: 1236

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	VOC 8260 - BTEX ONLY	PAH 8270 - DRO 8015	Comments	No. of Bottles	Lab Use Only Containers/Pres.
1103247 -13	03/29/11 1340	SB-06-01	SOIL	x	x	BTEX ONLY ON ENCORE	4	1m 30
-14	03/29/11 1345	SB-06-02		x	x	BTEX ON VOC SAMPLE		
-15	03/29/11 1405	SB-07-01		x	x			
-16	03/29/11 1410	SB-07-02		x	x			
-17	03/29/11 1435	SB-08-01		x	x			
-18	03/29/11 1445	SB-08-02		x	x			
-19	03/29/11 1500	SB-09-01		x	x			
-20	03/29/11 1510	SB-09-02		x	x			
-21	03/29/11 1540	SB-10-01		x	x			
1107-30-11 22 ~~-23~~	03/29/11 1545	SB-10-02		x	x			
-23	03/29/11 1610	SB-11-01		x	x			
-24	03/29/11 1615	SB-11-02	SOIL	x	x	BTEX ONLY ON VOC SAMPLE	4	

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) [signature]	03/29/11 1700	
Relinquished by: (Signature)		
Received for Laboratory by: (Signature) [signature]	3-30-11 08:30	Temperature 1.7 °C

REMARKS:
CALL DOUG HAWN UPON RECEIPT

** 48 HOUR TAT **

Details:
Page 2 of 3
Cooler No. 1 of 2
Date Shipped 03/29/11
Shipped By FEDEX
Turnaround 48 HOUR

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

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1103247

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

14210

Send Results to:	Send Invoice to:
Name Doug Hawn	Name
Company 1006 Floydculler	Company
Address SES	Address
City Oak Ridge	City
State, Zip TN	State, Zip
Phone (865)481-7837	Phone
Fax	Fax
E-mail DHawn@SEECPODENV.com	E-mail
Project No./Name: BLDG 419	Sampler's (Signature): [signature]

Analysis Requirements: VOC 8260 BTEX ONLY; PAH 8270 DRO 8015

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: 1238

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	VOC 8260 BTEX ONLY	PAH 8270 DRO 8015	Comments	No. of Bottles	Lab Use Only Containers/Pres.
1103247-25	03/29/11 1640	SB-12-01	SOIL	x	x	BTEX ONLY	4	1m+30
-26	03/29/11 1650	SB-12-02	SOIL	x	x	BTEX ONLY	4	↓
-27	LAB PREPARED	TRIP BLANK	WATER	x			2	2JHg

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature) [signature]	Date/Time 03/29/11 1700	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature) [signature]	Date/Time 3-30-11 08:30	Temperature 1.7°C

REMARKS:

CALL DOUG HAWN UPON RECEIPT

* 48 TAT *

Details:

Page 3 of 3

Cooler No. 1 of 2

Date Shipped FEDEX

Shipped By 03/29/11

Turnaround 48 TAT

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

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1103247

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

14211

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

Send Results to:
Name DOUG HAWN
Company SES
Address 100c FLAPCULLER
City OAK RIDGE
State, Zip TN
Phone (865) 481-7837
Fax
E-mail DHAWN@SPECPACONV.COM

Send Invoice to:
Name
Company
Address
City
State, Zip
Phone
Fax
E-mail

Project No./Name: BLOG 419

Sampler's (Signature): Lilian McNeal

Analysis Requirements:
VOC 8260 - BTEX ONLY
PAH 8270, DRO 8015

Lab Use Only:

VOA Headspace	Y	(N)	NA
Field Filtered	Y	(N)	NA
Correct Containers	(Y)	N	NA
Discrepancies	Y	(N)	NA
Cust. Seals Intact	(Y)	N	NA
Containers Intact	(Y)	N	NA

Airbill #: 2514
CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix			Comments	No. of Bottles	Lab Use Only Containers/Pres.
1103258-01	~~3/30/11~~ LAB PREPARED	TRIP BLANK 9503	WATER	X		LAB PREPARED	2	2 JHy
-02	3/30/11 0855	SB-13-01	SOIL	X	X	+ MS/MSD	8	2m + L0
-03	3/30/11 0905	SB-13-02		X	X		4	1m + 30
-04	3/30/11 0930	SB-14-01		X	X		4	
-05	3/30/11 0940	SB-14-02		X	X		4	
-06	3/30/11 1010	SB-15-01		X	X		4	
-07	3/30/11 1015	SB-15-02		X	X		4	
-08	3/30/11 1030	SB-16-01		X	X		4	
-09	3/30/11 1040	SB-16-02		X	X		4	
-10	3/30/11 1055	SB-17-01		X	X		4	
-11	3/30/11 1100	SB-17-02		X	X		4	
-12	3/30/11 1115	SB-18-01	SOIL	X	X		4	

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) Lilian McNeal	Date/Time 3/30/11 1700	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time ~~5-31-11~~ 08:00	Temperature 2.4°C

REMARKS:
Please contact Doug Hawn upon receipt.

**48 HOUR TAT **

Details:
Page 1 of 2
Cooler No. 1 of 2
Date Shipped 3/30/11
Shipped By FEDEX
Turnaround 48Hr

1103258

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

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EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

14211

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

Send Results to:
Name DOUG HAWN
Company SES
Address 1006 FLOYD CULLER
City OAK RIDGE
State, Zip TN
Phone (865) 481-7837
Fax
E-mail DHAWN@SPECPROENV.COM

Send Invoice to:
Name
Company
Address
City
State, Zip
Phone
Fax
E-mail

Analysis Requirements:
VOC 8260 - BTEX ONLY
PAH 8270, DRO 8015

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: 2519
CAR #:

Project No./Name: BLDG 419
Sampler's (Signature): [signature]

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	VOC 8260 - BTEX ONLY	PAH 8270, DRO 8015	Comments	No. of Bottles	Lab Use Only Containers/Pres.
1103258-01	~~3/30/11~~ LAB PREPARED	TRIP BLANK 9503	WATER	X		LAB PREPARED	2	2 JHy
-02	3/30/11 0855	SB-13-01	SOIL	X	X	+ MS/MSD	8	2m + 60
-03	3/30/11 0905	SB-13-02		X	X		4	1m + 30
-04	03/30/11 0930	SB-14-01		X	X		4	
-05	3/30/11 0940	SB-14-02		X	X		4	
-06	3/30/11 1010	SB-15-01		X	X		4	
-07	3/30/11 1015	SB-15-02		X	X		4	
-08	3/30/11 1030	SB-16-01		X	X		4	
-09	3/30/11 1040	SB-16-02		X	X		4	
-10	3/30/11 1055	SB-17-01		X	X		4	
-11	3/30/11 1100	SB-17-02		X	X		4	
-12	3/30/11 1115	SB-18-01	SOIL	X	X		4	

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) [signature]	3/30/11 1700	
Relinquished by: (Signature)		
Received for Laboratory by: (Signature) [signature]	3-31-11 08:00	Temperature 2.4°C

REMARKS:
Please contact Doug Hawn upon receipt.

48 HOUR TAT

Details:
Page 1 of 2
Cooler No. 1 of 2
Date Shipped 3/30/11
Shipped By FEDEX
Turnaround 48Hr

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

1103258

9

1308051

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 • Nashville, TN 37228 • 615-345-1115 • (fax) 615-846-5426

Send Results to:	Send Invoice to:
Name Doug Hamm	Name
Company SCF	Company
Address 100c Floyd Culler Ct	Address
City Oak Ridge	City
State, Zip TN	State, Zip
Phone (865) 481-7837	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: Building 419	**Sampler's (Signature):**

Analysis Requirements: BTEX, MTBE (VOC 8260); PAH (8270D) LL; DRO (8015B)

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	BTEX, MTBE (VOC 8260)	DRO (8015B), PAH (8270D) LL	Comments	No. of Bottles	Lab Use Only Containers/Pres.
01	08/05/13 0900	TRIP 02187	WATER	X		LAB PREPARED	2	
02	08/05/13 0930	SB-25-0103	SOIL	X	X		4	
03	08/05/13 0930	SB-25-0708	SOIL	X	X		4	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time 08/05/13 1600	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time 08/06/13 0820	Temperature 4.3 int.

REMARKS:

LEVEL III DATA PACKAGE

CONTACT DOUG HAMM UPON RECEIPT

Details:

Page 1 of 1

Cooler No. 1 of 1

Date Shipped 08/05/13

Shipped By FEDEX

Turnaround NORMAL

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

1308012

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

1308012

Send Results to:	Send Invoice to:
Name Doug Hawn	Name
Company SCF	Company
Address 1006 Floyd Culler Ct	Address
City Oak Ridge	City
State, Zip TN	State, Zip
Phone (865)481-7837	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: Building 419	**Sampler's (Signature):** Mike McNeal

Analysis Requirements: BTEX, MTBE (VOC 8260); DRO (8015B), PAH (8270D) LL

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	BTEX, MTBE (VOC 8260)	DRO (8015B), PAH (8270D) LL	Comments	No. of Bottles	Lab Use Only Containers/Pres
01	07/30/13 1000	TRIP 02185	WATER	X		LAB PREPARED	2	
02	7/30/13 1100	SB-22-0103	SOIL	X	X		4	
03	7/30/13 1100	SB-229-0103	SOIL	X	X		4	
04	7/30/13 1100	SB-22-0708	SOIL	X	X		4	
05	7/31/13 0945	SB-23-0103	SOIL	X	X	+MS/MSD	8	
06	7/31/13 0945	SB-23-0708	SOIL	X	X		4	
07	7/31/13 1000	RS-01	WATER	X	X		5	
08	7/31/13 1345	SB-24-0103	SOIL	X	X		4	
09	7/31/13 1345	SB-24-1012	SOIL	X	X		4	
10	7/31/13 1400	FS-01	WATER	X	X		5	

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) Mike McNeal	7/31/13 1600	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time 8/1/13 0840	Temperature 4.9 INT

REMARKS:
LEVEL III DATA PACKAGE

CONTACT DOUG HAWN UPON RECEIPT

Details:
Page 1 of 1
Cooler No. 1 of 1
Date Shipped 7/31/13
Shipped By FED EX
Turnaround NORMAL

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

1308012

ANALYSIS DATA SHEET

SB-22-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-02RE1	File ID:	0801202A.D
Sampled:	07/30/13 11:00	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 00:58
Solids:	77.25	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
Instrument:	MS-VOA3				

Rw Qual R 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.30	2.61	5.22	U
100-41-4	Ethylbenzene		1.30	2.61	5.22	U
1634-04-4	Methyl t-Butyl Ether		1.30	2.61	5.22	U
108-88-3	Toluene		1.30	2.61	5.22	U
1330-20-7	Xylenes (total)		3.91	7.83	15.7	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.32	23.97	76.5	85 - 120	*
Dibromofluoromethane	31.32	36.59	117	80 - 125	
1,2-Dichloroethane-d4	31.32	36.01	115	75 - 140	
Toluene-d8	31.32	38.71	124	85 - 115	*

ANALYSIS DATA SHEET

SB-22-0103

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-02 File ID: 0801202D.D

Sampled: 07/30/13 11:00 Prepared: 08/02/13 00:00 Analyzed: 08/02/13 22:28

Solids: 77.25 Preparation: 5035A Dilution: 50

Batch: 3H02009 Sequence: 3H21701 Calibration: 3192002 Instrument: MS-VOA3

Rev Qual 45 79

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		71.7	143	287	U
100-41-4	Ethylbenzene		71.7	143	287	U
1634-04-4	Methyl t-Butyl Ether		71.7	143	287	U
108-88-3	Toluene		71.7	143	287	U
1330-20-7	Xylenes (total)		215	430	861	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.43	35.04	102	85 - 120	
Dibromofluoromethane	34.43	35.77	104	80 - 125	
1,2-Dichloroethane-d4	34.43	30.35	88.2	75 - 140	
Toluene-d8	34.43	29.07	84.4	85 - 115	*

ANALYSIS DATA SHEET

SB-229-0103

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-03RE1	File ID:	0801203A.D
Sampled:	07/30/13 11:00	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 01:27
Solids:	70.97	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
				Instrument:	MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.68	3.37	6.74	U
100-41-4	Ethylbenzene		1.68	3.37	6.74	U
1634-04-4	Methyl t-Butyl Ether		1.68	3.37	6.74	U
108-88-3	Toluene		1.68	3.37	6.74	U
1330-20-7	Xylenes (total)		5.05	10.1	20.2	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	40.41	35.42	87.6	85 - 120	
Dibromofluoromethane	40.41	46.15	114	80 - 125	
1,2-Dichloroethane-d4	40.41	46.34	115	75 - 140	
Toluene-d8	40.41	48.07	119	85 - 115	*

Re Qual U

ANALYSIS DATA SHEET

SB-22-0708

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-04RE1	File ID:	0801204A.D
Sampled:	07/30/13 11:00	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 01:56
Solids:	72.52	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
Instrument:	MS-VOA3				

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.28	2.56	5.13	U
100-41-4	Ethylbenzene		1.28	2.56	5.13	U
1634-04-4	Methyl t-Butyl Ether		1.28	2.56	5.13	U
108-88-3	Toluene		1.28	2.56	5.13	U
1330-20-7	Xylenes (total)		3.85	7.69	15.4	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.78	31.24	102	85 - 120	
Dibromofluoromethane	30.78	33.52	109	80 - 125	
1,2-Dichloroethane-d4	30.78	30.85	100	75 - 140	
Toluene-d8	30.78	31.40	102	85 - 115	

ANALYSIS DATA SHEET

SB-23-0103

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-05 File ID: 0801205D.D

Sampled: 07/31/13 09:45 Prepared: 08/02/13 00:00 Analyzed: 08/02/13 23:55

Solids: 69.74 Preparation: 5035A Dilution: 50

Batch: 3H02009 Sequence: 3H21701 Calibration: 3192002 Instrument: MS-VOA3

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		96.8	194	387	NU
100-41-4	Ethylbenzene		96.8	194	387	NU
1634-04-4	Methyl t-Butyl Ether		96.8	194	387	U
108-88-3	Toluene		96.8	194	387	NU
1330-20-7	Xylenes (total)		290	581	1160	NU

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	46.45	48.22	104	85 - 120	
Dibromofluoromethane	46.45	48.05	103	80 - 125	
1,2-Dichloroethane-d4	46.45	46.39	99.9	75 - 140	
Toluene-d8	46.45	40.10	86.3	85 - 115	

ANALYSIS DATA SHEET

SB-23-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-05RE1	File ID:	0801205A.D
Sampled:	07/31/13 09:45	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 02:25
Solids:	69.74	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
Instrument:	MS-VOA3				

Rev Qual R 16

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.81	3.63	7.26	U
100-41-4	Ethylbenzene		1.81	3.63	7.26	NU
1634-04-4	Methyl t-Butyl Ether		1.81	3.63	7.26	U
108-88-3	Toluene		1.81	3.63	7.26	NU
1330-20-7	Xylenes (total)		5.44	10.9	21.8	NU

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	43.54	34.23	78.6	85 - 120	*
Dibromofluoromethane	43.54	50.79	117	80 - 125	
1,2-Dichloroethane-d4	43.54	50.11	115	75 - 140	
Toluene-d8	43.54	54.02	124	85 - 115	*

ANALYSIS DATA SHEET

SB-23-0708

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-06RE1	File ID:	0801206A.D
Sampled:	07/31/13 09:45	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 02:54
Solids:	75.94	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
Instrument:	MS-VOA3				

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.25	2.49	4.98	U
100-41-4	Ethylbenzene		1.25	2.49	4.98	U
1634-04-4	Methyl t-Butyl Ether		1.25	2.49	4.98	U
108-88-3	Toluene		1.25	2.49	4.98	U
1330-20-7	Xylenes (total)		3.74	7.47	14.9	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.88	28.63	95.8	85 - 120	
Dibromofluoromethane	29.88	32.94	110	80 - 125	
1,2-Dichloroethane-d4	29.88	32.05	107	75 - 140	
Toluene-d8	29.88	29.83	99.8	85 - 115	

ANALYSIS DATA SHEET

SB-24-0103

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-08RE1	File ID:	0801208A.D
Sampled:	07/31/13 13:45	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 03:23
Solids:	89.95	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002
				Instrument:	MS-VOA3

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.17	2.34	4.67	U
100-41-4	Ethylbenzene		1.17	2.34	4.67	U
1634-04-4	Methyl t-Butyl Ether		1.17	2.34	4.67	U
108-88-3	Toluene		1.17	2.34	4.67	U
1330-20-7	Xylenes (total)		3.50	7.01	14.0	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	28.03	27.46	98.0	85 - 120	
Dibromofluoromethane	28.03	30.84	110	80 - 125	
1,2-Dichloroethane-d4	28.03	33.85	121	75 - 140	
Toluene-d8	28.03	28.39	101	85 - 115	

ANALYSIS DATA SHEET

SB-24-1012

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-09RE2	File ID:	0801209B.D
Sampled:	07/31/13 13:45	Prepared:	08/06/13 00:00	Analyzed:	08/07/13 06:18
Solids:	66.49	Preparation:	5035A	Dilution:	1
Batch:	3H06019	Sequence:	3H21902	Calibration:	3192002

Instrument: MS-VOA3

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.65	3.31	6.62	U
100-41-4	Ethylbenzene		1.65	3.31	6.62	U
1634-04-4	Methyl t-Butyl Ether		1.65	3.31	6.62	U
108-88-3	Toluene		1.65	3.31	6.62	U
1330-20-7	Xylenes (total)		4.96	9.93	19.9	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	%REC	QC LIMITS	Q
Bromofluorobenzene	39.72	33.75	85.0	85 - 120	
Dibromofluoromethane	39.72	35.17	88.5	80 - 125	
1,2-Dichloroethane-d4	39.72	46.98	118	75 - 140	
Toluene-d8	39.72	40.98	103	85 - 115	

ANALYSIS DATA SHEET

SB-25-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308051
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308051-02	File ID:	0805102A.D
Sampled:	08/05/13 09:30	Prepared:	08/13/13 00:00	Analyzed:	08/14/13 02:53
Solids:	79.29	Preparation:	5035A	Dilution:	1
Batch:	3H13015	Sequence:	3H22612	Calibration:	3192002
				Instrument:	MS-VOA3

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.43	2.86	5.71	U
100-41-4	Ethylbenzene		1.43	2.86	5.71	U
1634-04-4	Methyl t-Butyl Ether		1.43	2.86	5.71	U
108-88-3	Toluene		1.43	2.86	5.71	U
1330-20-7	Xylenes (total)		4.28	8.57	17.1	UXQ

U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.27	33.90	98.9	85 - 120	X
Dibromofluoromethane	34.27	36.67	107	80 - 125	
1,2-Dichloroethane-d4	34.27	40.37	118	75 - 140	
Toluene-d8	34.27	37.76	110	85 - 115	

ANALYSIS DATA SHEET

SB-25-0708

Laboratory:	Empirical Laboratories, LLC			SDG:	1308051
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308051-03	File ID:	0805103A.D
Sampled:	08/05/13 09:30	Prepared:	08/13/13 00:00	Analyzed:	08/14/13 03:22
Solids:	76.09	Preparation:	5035A	Dilution:	1
Batch:	3H13015	Sequence:	3H22612	Calibration:	3192002
Instrument:	MS-VOA3				

Rev Qual u

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.24	2.47	4.94	U
100-41-4	Ethylbenzene		1.24	2.47	4.94	U
1634-04-4	Methyl t-Butyl Ether		1.24	2.47	4.94	U
108-88-3	Toluene		1.24	2.47	4.94	U
1330-20-7	Xylenes (total)		3.71	7.41	14.8	UXQ

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.64	32.29	109	85 - 120	X
Dibromofluoromethane	29.64	31.11	105	80 - 125	
1,2-Dichloroethane-d4	29.64	34.09	115	75 - 140	
Toluene-d8	29.64	30.52	103	85 - 115	

ANALYSIS DATA SHEET

SB-22-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-02	File ID:	037F3701.D
Sampled:	07/30/13 11:00	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 04:13
Solids:	77.25	Preparation:	EXT_3546	Dilution:	5
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
				Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)		41.1	41.1	81.7	U

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.638	ND		35 - 140	*U

Reviewed
u

ANALYSIS DATA SHEET

SB-229-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-03	File ID:	038F3801.D
Sampled:	07/30/13 11:00	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 04:46
Solids:	70.97	Preparation:	EXT_3546	Dilution:	2
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
Instrument:	GL-GCFID2				

Rev 2nd J

CAS NO.	COMPOUND	CONC. (mg/Kg dry	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**18.3**	18.3	18.3	36.3	JD

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.818	0.8117	44.6	35 - 140	

ANALYSIS DATA SHEET

SB-22-0708

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-04RE1	File ID:	005F0501.D
Sampled:	07/30/13 11:00	Prepared:	08/12/13 11:14	Analyzed:	08/19/13 17:38
Solids:	72.52	Preparation:	EXT_3546	Dilution:	1
Batch:	3H08006	Sequence:	3H23220	Calibration:	3231002
Instrument:	GL-GCFID2				

Rev 2nd J

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**17.3**	8.99	8.99	17.9	J

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.790	1.276	71.3	35 - 140	

ANALYSIS DATA SHEET

SB-23-0103

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-05	File ID:	039F3901.D
Sampled:	07/31/13 09:45	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 05:19
Solids:	69.74	Preparation:	EXT_3546	Dilution:	5
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
Instrument:	GL-GCFID2				

Rev Qual J

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**46.0**	45.2	45.2	89.8	NJD

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	%REC	QC LIMITS	Q
o-Terphenyl	1.800	ND		35 - 140	*NU

ANALYSIS DATA SHEET

SB-23-0708

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-06RE1	File ID:	006F0601.D
Sampled:	07/31/13 09:45	Prepared:	08/12/13 11:14	Analyzed:	08/19/13 18:12
Solids:	75.94	Preparation:	EXT_3546	Dilution:	1
Batch:	3H08006	Sequence: 3H23220	Calibration:	3231002	Instrument: GL-GCFID2

Rev 2nd u

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)		8.61	8.61	17.1	U

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.714	1.085	63.3	35 - 140	

ANALYSIS DATA SHEET

SB-24-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-08	File ID:	034F3401.D
Sampled:	07/31/13 13:45	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 02:33
Solids:	89.95	Preparation:	EXT_3546	Dilution:	5
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004

Instrument: GL-GCFID2

Rev Qual J

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**39.7**	37.2	37.2	73.8	JD

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.480	0.9534	64.4	35 - 140	

ANALYSIS DATA SHEET

SB-24-1012

Laboratory:	Empirical Laboratories, LLC			SDG:	1308012
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308012-09	File ID:	035F3501.D
Sampled:	07/31/13 13:45	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 03:07
Solids:	66.49	Preparation:	EXT_3546	Dilution:	2
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
Instrument:	GL-GCFID2				

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**42.3**	19.2	19.2	38.1	D

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.910	0.7657	40.1	35 - 140	

ANALYSIS DATA SHEET

SB-25-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308051
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308051-02	File ID:	036F3601.D
Sampled:	08/05/13 09:30	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 03:40
Solids:	79.29	Preparation:	EXT_3546	Dilution:	2
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
				Instrument:	GL-GCFID2

Rev Qual

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**20.9**	16.7	16.7	33.2	JD

J

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.665	0.9255	55.6	35 - 140	

ANALYSIS DATA SHEET

SB-25-0708

Laboratory:	Empirical Laboratories, LLC			SDG:	1308051
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308051-03	File ID:	033F3301.D
Sampled:	08/05/13 09:30	Prepared:	08/12/13 11:14	Analyzed:	08/16/13 02:00
Solids:	76.09	Preparation:	EXT_3546	Dilution:	1
Batch:	3H08006	Sequence:	3H23108	Calibration:	3143004
Instrument:	GL-GCFID2				

Rev Qual J

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
11-84-7	Diesel Range Organics (C10-C28)	**10.6**	8.31	8.31	16.5	J

Total Target Analytes Reported: 1

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	1.653	1.125	68.0	35 - 140	

ANALYSIS DATA SHEET

SB-22-0103

Laboratory: Empirical Laboratories, LLC | SDG: 1308012

Client: SES, Inc. (S750) | Project: Fort Stewart

Matrix: Solid | Laboratory ID: 1308012-02 | File ID: 0801202.D

Sampled: 07/30/13 11:00 | Prepared: 08/08/13 15:14 | Analyzed: 08/16/13 19:57

Solids: 77.25 | Preparation: EXT_3546 | Dilution: 1

Batch: 3H07015 | Sequence: 3H22907 | Calibration: 3227002 | Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		2.16	4.30	8.61	U
208-96-8	Acenaphthylene	**9.13**	2.16	4.30	8.61	
120-12-7	Anthracene		2.16	4.30	8.61	U
56-55-3	Benzo(a)anthracene	**12.0**	2.16	4.30	8.61	
50-32-8	Benzo(a)pyrene	**14.8**	2.16	4.30	8.61	
205-99-2	Benzo(b)fluoranthene	**20.1**	2.16	4.30	8.61	
191-24-2	Benzo(g,h,i)perylene	**11.5**	2.16	4.30	8.61	
207-08-9	Benzo(k)fluoranthene	**21.8**	2.16	4.30	8.61	
218-01-9	Chrysene	**17.0**	2.16	4.30	8.61	
53-70-3	Dibenz(a,h)anthracene	**9.23**	2.16	4.30	8.61	
206-44-0	Fluoranthene	**18.5**	2.16	4.30	8.61	
86-73-7	Fluorene		2.16	4.30	8.61	U
193-39-5	Indeno(1,2,3-cd)pyrene	**12.1**	2.16	4.30	8.61	
91-20-3	Naphthalene		2.16	4.30	8.61	U
85-01-8	Phenanthrene		2.16	4.30	8.61	U
129-00-0	Pyrene	**29.4**	2.16	4.30	8.61	

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4304	2277	52.9	45 - 105	
Terphenyl-d14	4304	2420	56.2	30 - 125	

ANALYSIS DATA SHEET

SB-229-0103

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-03 File ID: 0801203.D

Sampled: 07/30/13 11:00 Prepared: 08/08/13 15:14 Analyzed: 08/16/13 20:23

Solids: 70.97 Preparation: EXT_3546 Dilution: 1

Batch: 3H07015 Sequence: 3H22907 Calibration: 3227002 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q	Rev Qual
83-32-9	Acenaphthene		2.33	4.66	9.32	U	U
208-96-8	Acenaphthylene	**4.68**	2.33	4.66	9.32	J	J
120-12-7	Anthracene		2.33	4.66	9.32	U	U
56-55-3	Benzo(a)anthracene		2.33	4.66	9.32	U	U
50-32-8	Benzo(a)pyrene		2.33	4.66	9.32	U	
205-99-2	Benzo(b)fluoranthene	**10.9**	2.33	4.66	9.32		
191-24-2	Benzo(g,h,i)perylene	**6.27**	2.33	4.66	9.32	J	J
207-08-9	Benzo(k)fluoranthene	**9.74**	2.33	4.66	9.32		
218-01-9	Chrysene	**5.71**	2.33	4.66	9.32	J	J
53-70-3	Dibenz(a,h)anthracene	**9.05**	2.33	4.66	9.32	J	J
206-44-0	Fluoranthene	**5.44**	2.33	4.66	9.32	J	J 17
86-73-7	Fluorene		2.33	4.66	9.32	U	U
193-39-5	Indeno(1,2,3-cd)pyrene	**4.93**	2.33	4.66	9.32	J	J
91-20-3	Naphthalene		2.33	4.66	9.32	U	U
85-01-8	Phenanthrene		2.33	4.66	9.32	U	U
129-00-0	Pyrene	**7.15**	2.33	4.66	9.32	J	J 17

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4660	2527	54.2	45 - 105	
Terphenyl-d14	4660	2547	54.7	30 - 125	

ANALYSIS DATA SHEET

SB-22-0708

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-04 File ID: 0801204.D

Sampled: 07/30/13 11:00 Prepared: 08/08/13 15:14 Analyzed: 08/16/13 20:50

Solids: 72.52 Preparation: EXT_3546 Dilution: 1

Batch: 3H07015 Sequence: 3H22907 Calibration: 3227002 Instrument: MS-BNA3

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		2.26	4.51	9.03	U
208-96-8	Acenaphthylene		2.26	4.51	9.03	U
120-12-7	Anthracene		2.26	4.51	9.03	U
56-55-3	Benzo(a)anthracene		2.26	4.51	9.03	U
50-32-8	Benzo(a)pyrene		2.26	4.51	9.03	U
205-99-2	Benzo(b)fluoranthene		2.26	4.51	9.03	U
191-24-2	Benzo(g,h,i)perylene		2.26	4.51	9.03	U
207-08-9	Benzo(k)fluoranthene		2.26	4.51	9.03	U
218-01-9	Chrysene		2.26	4.51	9.03	U
53-70-3	Dibenz(a,h)anthracene		2.26	4.51	9.03	U
206-44-0	Fluoranthene		2.26	4.51	9.03	U
86-73-7	Fluorene		2.26	4.51	9.03	U
193-39-5	Indeno(1,2,3-cd)pyrene		2.26	4.51	9.03	U
91-20-3	Naphthalene		2.26	4.51	9.03	U
85-01-8	Phenanthrene		2.26	4.51	9.03	U
129-00-0	Pyrene		2.26	4.51	9.03	U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4515	3015	66.8	45 - 105	
Terphenyl-d14	4515	3185	70.5	30 - 125	

ANALYSIS DATA SHEET

SB-23-0103

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-05 File ID: 0801205.D

Sampled: 07/31/13 09:45 Prepared: 08/08/13 15:14 Analyzed: 08/16/13 21:17

Solids: 69.74 Preparation: EXT_3546 Dilution: 1

Batch: 3H07015 Sequence: 3H22907 Calibration: 3227002 Instrument: MS-BNA3

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		2.38	4.74	9.49	U
208-96-8	Acenaphthylene	33.7	2.38	4.74	9.49	
120-12-7	Anthracene	14.5	2.38	4.74	9.49	
56-55-3	Benzo(a)anthracene	44.9	2.38	4.74	9.49	
50-32-8	Benzo(a)pyrene	68.3	2.38	4.74	9.49	N
205-99-2	Benzo(b)fluoranthene	65.8	2.38	4.74	9.49	N
191-24-2	Benzo(g,h,i)perylene	35.2	2.38	4.74	9.49	
207-08-9	Benzo(k)fluoranthene	74.8	2.38	4.74	9.49	
218-01-9	Chrysene	64.8	2.38	4.74	9.49	
53-70-3	Dibenz(a,h)anthracene	12.3	2.38	4.74	9.49	
206-44-0	Fluoranthene	75.1	2.38	4.74	9.49	N
86-73-7	Fluorene		2.38	4.74	9.49	U
193-39-5	Indeno(1,2,3-cd)pyrene	36.7	2.38	4.74	9.49	
91-20-3	Naphthalene	13.0	2.38	4.74	9.49	
85-01-8	Phenanthrene	19.9	2.38	4.74	9.49	
129-00-0	Pyrene	134	2.38	4.74	9.49	N

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4742	2897	61.1	45 - 105	
Terphenyl-d14	4742	2906	61.3	30 - 125	

ANALYSIS DATA SHEET

SB-23-0708

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-06 File ID: 0801206.D

Sampled: 07/31/13 09:45 Prepared: 08/08/13 15:14 Analyzed: 08/16/13 21:43

Solids: 75.94 Preparation: EXT_3546 Dilution: 1

Batch: 3H07015 Sequence: 3H22907 Calibration: 3227002 Instrument: MS-BNA3

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		2.10	4.19	8.39	U
208-96-8	Acenaphthylene		2.10	4.19	8.39	U
120-12-7	Anthracene		2.10	4.19	8.39	U
56-55-3	Benzo(a)anthracene		2.10	4.19	8.39	U
50-32-8	Benzo(a)pyrene		2.10	4.19	8.39	U
205-99-2	Benzo(b)fluoranthene		2.10	4.19	8.39	U
191-24-2	Benzo(g,h,i)perylene		2.10	4.19	8.39	U
207-08-9	Benzo(k)fluoranthene		2.10	4.19	8.39	U
218-01-9	Chrysene		2.10	4.19	8.39	U
53-70-3	Dibenz(a,h)anthracene		2.10	4.19	8.39	U
206-44-0	Fluoranthene		2.10	4.19	8.39	U
86-73-7	Fluorene		2.10	4.19	8.39	U
193-39-5	Indeno(1,2,3-cd)pyrene		2.10	4.19	8.39	U
91-20-3	Naphthalene		2.10	4.19	8.39	U
85-01-8	Phenanthrene		2.10	4.19	8.39	U
129-00-0	Pyrene		2.10	4.19	8.39	U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4194	2833	67.5	45 - 105	
Terphenyl-d14	4194	3029	72.2	30 - 125	

ANALYSIS DATA SHEET

SB-24-0103

Laboratory: Empirical Laboratories, LLC SDG: 1308012

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308012-08 File ID: 0801208.D

Sampled: 07/31/13 13:45 Prepared: 08/08/13 15:14 Analyzed: 08/16/13 22:10

Solids: 89.95 Preparation: EXT_3546 Dilution: 1

Batch: 3H07015 Sequence: 3H22907 Calibration: 3227002 Instrument: MS-BNA3

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q	
83-32-9	Acenaphthene	**5.03**	1.84	3.67	7.35	J	J
208-96-8	Acenaphthylene	**131**	1.84	3.67	7.35		
120-12-7	Anthracene	**54.3**	1.84	3.67	7.35		
56-55-3	Benzo(a)anthracene	**247**	1.84	3.67	7.35		
50-32-8	Benzo(a)pyrene	**312**	1.84	3.67	7.35		
205-99-2	Benzo(b)fluoranthene	**271**	1.84	3.67	7.35		
191-24-2	Benzo(g,h,i)perylene	**154**	1.84	3.67	7.35		
207-08-9	Benzo(k)fluoranthene	**254**	1.84	3.67	7.35		
218-01-9	Chrysene	**322**	1.84	3.67	7.35		
53-70-3	Dibenz(a,h)anthracene	**51.1**	1.84	3.67	7.35		
206-44-0	Fluoranthene	**370**	1.84	3.67	7.35		
86-73-7	Fluorene	**5.17**	1.84	3.67	7.35	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	**156**	1.84	3.67	7.35		
91-20-3	Naphthalene	**13.4**	1.84	3.67	7.35		
85-01-8	Phenanthrene	**68.6**	1.84	3.67	7.35		
129-00-0	Pyrene	**616**	1.84	3.67	7.35		

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	%R REC	QC LIMITS	Q
2-Fluorobiphenyl	3674	2657	72.3	45 - 105	
Terphenyl-d14	3674	2839	77.3	30 - 125	

ANALYSIS DATA SHEET

SB-24-1012

Laboratory:	Empirical Laboratories, LLC		SDG:	1308012	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Solid	Laboratory ID:	1308012-09	File ID:	0801209D.D
Sampled:	07/31/13 13:45	Prepared:	08/08/13 08:15	Analyzed:	08/18/13 18:38
Solids:	66.49	Preparation:	EXT_3546	Dilution:	5
Batch:	3H07016	Sequence: 3H23215	Calibration:	3217001	Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q	Req Qual
83-32-9	Acenaphthene		11.8	23.5	47.1	U	U
208-96-8	Acenaphthylene		11.8	23.5	47.1	U	U
120-12-7	Anthracene		11.8	23.5	47.1	U	U
56-55-3	Benzo(a)anthracene	**30.3**	11.8	23.5	47.1	JD	J
50-32-8	Benzo(a)pyrene		11.8	23.5	47.1	U	U
205-99-2	Benzo(b)fluoranthene	**12.4**	11.8	23.5	47.1	JD	J
191-24-2	Benzo(g,h,i)perylene		11.8	23.5	47.1	U	U
207-08-9	Benzo(k)fluoranthene		11.8	23.5	47.1	U	U
218-01-9	Chrysene		11.8	23.5	47.1	U	U
53-70-3	Dibenz(a,h)anthracene		11.8	23.5	47.1	U	U
206-44-0	Fluoranthene		11.8	23.5	47.1	U	U
86-73-7	Fluorene		11.8	23.5	47.1	U	U
193-39-5	Indeno(1,2,3-cd)pyrene		11.8	23.5	47.1	U	U
91-20-3	Naphthalene		11.8	23.5	47.1	U	U
85-01-8	Phenanthrene		11.8	23.5	47.1	U	U
129-00-0	Pyrene	**76.6**	11.8	23.5	47.1	D	U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4706	2421	51.4	45 - 105	
Terphenyl-d14	4706	2616	55.6	30 - 125	

ANALYSIS DATA SHEET

SB-25-0103

Laboratory:	Empirical Laboratories, LLC			SDG:	1308051
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Solid	Laboratory ID:	1308051-02	File ID:	0805102.D
Sampled:	08/05/13 09:30	Prepared:	08/16/13 17:16	Analyzed:	08/24/13 05:07
Solids:	79.29	Preparation:	EXT_3546	Dilution:	1
Batch:	3H09017	Sequence:	3H24007	Calibration:	3227002
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q	Rev Qual
83-32-9	Acenaphthene		1.98	3.95	7.91	U	U
208-96-8	Acenaphthylene	**5.04**	1.98	3.95	7.91	J	J
120-12-7	Anthracene	**2.78**	1.98	3.95	7.91	J	
56-55-3	Benzo(a)anthracene	**6.33**	1.98	3.95	7.91	J	
50-32-8	Benzo(a)pyrene	**7.00**	1.98	3.95	7.91	J	
205-99-2	Benzo(b)fluoranthene	**16.6**	1.98	3.95	7.91		
191-24-2	Benzo(g,h,i)perylene	**10.2**	1.98	3.95	7.91	B	UB 6a
207-08-9	Benzo(k)fluoranthene	**12.2**	1.98	3.95	7.91		
218-01-9	Chrysene	**17.0**	1.98	3.95	7.91		
53-70-3	Dibenz(a,h)anthracene	**3.89**	1.98	3.95	7.91	J	J
206-44-0	Fluoranthene	**16.9**	1.98	3.95	7.91		
86-73-7	Fluorene	**2.41**	1.98	3.95	7.91	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	**12.4**	1.98	3.95	7.91	B	UB 6a
91-20-3	Naphthalene	**6.48**	1.98	3.95	7.91	J	J
85-01-8	Phenanthrene	**12.8**	1.98	3.95	7.91		
129-00-0	Pyrene	**20.7**	1.98	3.95	7.91		

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3951	2525	63.9	45 - 105	
Terphenyl-d14	3951	2831	71.7	30 - 125	

ANALYSIS DATA SHEET

SB-25-0708

Laboratory: Empirical Laboratories, LLC SDG: 1308051

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Solid Laboratory ID: 1308051-03 File ID: 0805103.D

Sampled: 08/05/13 09:30 Prepared: 08/16/13 17:16 Analyzed: 08/24/13 05:33

Solids: 76.09 Preparation: EXT_3546 Dilution: 1

Batch: 3H09017 Sequence: 3H24007 Calibration: 3227002 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q	Rev Qual
83-32-9	Acenaphthene		2.15	4.30	8.61	U	U
208-96-8	Acenaphthylene		2.15	4.30	8.61	U	U
120-12-7	Anthracene		2.15	4.30	8.61	U	U
56-55-3	Benzo(a)anthracene		2.15	4.30	8.61	U	U
50-32-8	Benzo(a)pyrene		2.15	4.30	8.61	U	U
205-99-2	Benzo(b)fluoranthene		2.15	4.30	8.61	U	U
191-24-2	Benzo(g,h,i)perylene	**4.89**	2.15	4.30	8.61	JB	UB Ca
207-08-9	Benzo(k)fluoranthene		2.15	4.30	8.61	U	U
218-01-9	Chrysene		2.15	4.30	8.61	U	U
53-70-3	Dibenz(a,h)anthracene		2.15	4.30	8.61	U	U
206-44-0	Fluoranthene	**3.49**	2.15	4.30	8.61	J	J
86-73-7	Fluorene		2.15	4.30	8.61	U	U
193-39-5	Indeno(1,2,3-cd)pyrene	**3.92**	2.15	4.30	8.61	JB	UB Ca
91-20-3	Naphthalene		2.15	4.30	8.61	U	U
85-01-8	Phenanthrene	**3.03**	2.15	4.30	8.61	J	J
129-00-0	Pyrene	**5.64**	2.15	4.30	8.61	J	J

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4300	2843	66.1	45 - 105	
Terphenyl-d14	4300	3034	70.6	30 - 125	

Validation Report

Fort Campbell, KY
Building 419

Soils and Ground-water

Prepared by DataChek

May 3, 2011

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ACRONYMS AND ABBREVIATIONS

%	percent
%D	percent difference
BTEX	benzene, toluene, ethylbenzene, and xylenes
CB	calibration blank
CCAL	continuing calibration
CCV	continuing calibration verification
COC	chain of custody
DRO	diesel range organic
EPH	extractible petroleum hydrocarbons
ER	equipment rinsate
FD	field duplicate
GRO	gasoline range organic
ICAL	initial calibration
ICL	instrument calibration limit
IS	internal standard
J	estimated value
LCS	laboratory control sample
MB	method blank
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
MTBE	methyl tert butyl ether
PAH	polyaromatic hydrocarbon
PARCC	precision, accuracy, representativeness, comparability, completeness
PRO	petroleum range organics
QC	quality control
R	rejected
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
RSD	relative standard deviation
SDG	sample delivery group
TB	trip blank
TPH	total petroleum hydrocarbons
TCE	trichloroethene
U	not detected
UJ	not detected; associated value is an estimate
VPH	volatile petroleum hydrocarbons
VOC	volatile organic compound

1. INTRODUCTION

Forty-two soil and 7 ground-water samples from the Building 419 at Fort Campbell, KY (FTC) were validated in April/May 2011. All the samples have the following label: Stage_3_Validation_Manual (S3VM). Empirical Labs, Nashville, TN, produced all the analytical data as follows:

- BTEX by SW846 8260B;
- PAHs by SW846 8270C; and
- GRO/DRO by SW846 8015M.

Table 1-1 Number of Samples per Analyte Group

Parameter	Media	No. of Samples	SDGs
BTEX	Soil	42	2
	Water	7	1
PAHs	Soil	42	2
	Water	7	1
DRO	Soil	42	2

2. PROCEDURES

The sample data were validated following the logic identified in *The CLP National Functional Guidelines for Superfund Organic Methods Data Review (June 2008)*. For the DRO where the analytical method is not addressed by the CLP guidelines, the validation was based on the method requirements and technical judgment, following the logic of the CLP validation guidelines.

The data validation qualifiers (Table 5-1) applied by the reviewer were recorded in a column adjacent and to the right of the laboratory results. A data validation reason code was also added to each of the reviewer's qualifiers to provide the user with a means to identify which results were qualified and the reason for the qualifiers (Table 5-2). All data requiring a validation qualifier were labeled as "S3VM" according to *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (January, 2009).*

3. SUMMARY OF DATA VALIDATION FINDINGS

This data validation report reflects the data validation findings for samples associated with the Building 419 at Ft Campbell. The validated data set consisted of 42 soil and 7 ground-water samples and was validated at EPA Stage 3. Overall the data was of excellent quality, and all measurements required to

satisfy the project quality control (QC) objectives (precision, accuracy, representativeness, comparability, and completeness) were met. Each of these measures and specific data qualifications are discussed below.

Precision: Precision is a measure of the agreement between duplicate sample measurements of the same quantity and is reflected in the relative percent difference (RPD) between spikes and the RPD for the field duplicate analysis. Precision for the FTC data for both media groups was measured at 95.6 percent.

Accuracy: Accuracy is measured by the results from the recovery of known amounts of compounds or elements from laboratory control samples (LCS), matrix spikes (MS), and surrogate recoveries. The overall measure of accuracy for all analytes for FTC for both groups was calculated by comparing the number of spike recoveries that exceeded the laboratory limits by the total number of LCS, MS and surrogate spikes. Overall accuracy was measured at 94.0 percent.

Representativeness: The measures of representativeness – sample handling, analytical blank analysis, field blanks – were met for all SDGs. Designated analytical protocols were followed. Overall, no major problems were identified resulting from analytical failure.

Comparability: All data were analyzed using appropriate approved methods of analysis. All data results were reported correctly and in standard units

Completeness: Completeness is the amount of valid data compared to the planned amount and is expressed as a percent of the usable data points divided by the total number of analytes for each parameter analyzed. Out of a total of 1120 data points, no data points were rejected, resulting in a completeness of 100 percent.

Several sample results for the organic compounds were assigned "J" qualifiers by the laboratory, which is standard practice, because the concentrations were quantified between the method detection limit and the contract reporting detection limit. Due to the uncertainty associated with this region of quantification, the validation reviewer retained the "J" qualifiers assigned by the laboratory.

Data validation summaries, which function as worksheets for the validation task, are included for each parameter in each data package. The following section highlights the key findings of the data validation for each analysis.

4. ANALYSIS-SPECIFIC DATA VALIDATION SUMMARIES

4.1 BTEX BY SW846 8260B

Forty-two soil and 7 ground-water samples were analyzed for the BTEX array of volatile organic compounds. Overall, the data are of good quality and are usable as reported by the laboratory. Data were reviewed for the following:

Holding Times/Sample Condition. Holding times were met for all sample analyses. All samples were received in acceptable condition.

Initial Calibration and Continuing Calibration. The initial calibration (ICAL) and continuing calibration (CCAL) standards associated with the project samples met QC criteria.

Blanks. No contaminants were present in the method or field blanks.

Surrogate Recoveries. Samples SB-04-01 and SB-07-01(SDG 1103247) and samples SB-14-02, SB-16-01, SB-17-01 and SB-19-02 (SDG 1103258) had low recoveries for the bfb surrogate. The compounds from these samples were qualified as "UJ". The other data that was reviewed had all the surrogate recoveries within the QC limits.

Internal Standards. All internal standards for the ground-water and soil samples met the QC criteria of +200%/-50% for the area count recoveries except for the following. Sample SB-10-01(SDG 1103247). A low recovery in the fluorobenzene standard resulted in a "J" qualifier for benzene in that sample. All the internal standard area count recoveries were below the QC limit for sample SB-04-01(SDG 1103247), but a reanalysis was performed and all the recoveries were acceptable. The original results were rejected in favor of the reanalysis results. All retention times were within the limits as well.

Matrix Spike/Matrix Spike Duplicate. The MS/MSD recoveries from SDG 1103258 were outside the QC limits but all LCS/LCSD and all other criteria were acceptable so no qualifiers were added.

Laboratory Control Sample. The LCS/LCSD recoveries for both soil and ground-water were within the QC limits, and no qualifiers were required.

Field Duplicates. The field duplicate analyses for the ground-water and soil samples were within the QC limit.

Quantification. All results were acceptable as qualified. The results for ethylbenzene and xylene in sample SB-16-01 (SDG 1103258) exceeded the instrument calibration limits. A dilution was analyzed and the results were within the limits. The dilution results for these 2 compounds were accepted and the original results rejected.

4.2 PAHs BY SW846 8270C

Forty-two soil and 7 ground-water samples was analyzed for the PAH semi-volatile compounds. Overall, the data are of good quality and are usable as qualified. Data were reviewed for the following:

Holding Times/Sample Condition. Technical holding time criteria were met for all samples. All samples were received in acceptable condition.

Initial and Continuing Calibration. The results for the ICAL and CCAL analysis were within the QC limits except for the opening continuing calibration (CCV) % difference for pyrene (SDG 1103247). That result was above the QC limits and all results for samples associated with that CCV were qualified as "UJ/J".

Blanks. The presence of 1-methylnaphthalene and 2-methylnaphthalene in the rinsate blank associated with the ground-water samples, resulted in "U" qualifiers for these 2 compounds in sample MW-04-04. No contaminants were noted in any of the method or field blanks associated with the soil samples..

Surrogate Recoveries. The surrogate recovery for samples SB-10-01 and SB-03-02 (1103247) was above the QC limit, but all compounds were non-detects so no qualifiers were required. In ground-water samples, MW-02-02, MW-03-03 and MW-04-04 low recoveries resulted in "UJ" qualifiers added to the results. This was due to matrix interference and the laboratory reported the formation of an emulsion during the preparation of the samples. In SDG 1103258 high recoveries for the nitrobenzene-d5 surrogate in samples SB-13-02, SB-16-01 and SB-16-02 resulted in "J" qualifiers for all detects in those samples.

Internal Standards. Low recoveries for the internal standard perylene-d12 area count recoveries resulted in "UJ/J" qualifiers for associated compounds in samples SB-13-02, SB-14-01, SB-14-02, SB-16-01 and SB-17-01. All other internal standards area recoveries and retention times are within the QC limits.

Matrix Spike/Matrix Spike Duplicates. Benzo(b)fluoranthene had a high recovery in the 1103258 MS/MSD and was qualified as "J" in samples SB-13-01, SB-14-01 and SB-15-02. Benzo(a)anthracene

had a low MS recovery in SDG 1104178. The associated MSD results along with the other QC criteria were within the QC limits, no additional qualifiers were required.

Laboratory Control Sample. The LCS results for benzo(b) fluoranthene was above the QC limits in SDG1103247. Samples SB-05-01 and SB-09-01 had that compound qualified as "J". In SDG 1103258 the following compounds had high recoveries and the associated samples were qualified as "J":

- anthracene—SB-13-01, SB-14-01;
- benzo(b)fluoranthene—SB-13-01, SB-14-01, SB-15-02; and
- fluorene-- SB-14-01, SB-16-01, SB-16-02, SB-17-01, SB-17-02 and SB-18-01.

Field Duplicates. The field duplicate analyses were acceptable for the soil samples, no duplicates were analyzed for the water samples.

Quantification. All results were acceptable as qualified.

4.3 DRO BY SW846 8015B.

Overall, the data are of good quality and are usable as reported. Forty-two soil samples were analyzed for GRO/DRO and the data were reviewed for the following:

Holding Times/Sample Condition. Technical holding time criteria were met for all samples. All samples were received in acceptable condition.

Initial and Continuing Calibration. All initial calibration verification results were within acceptable limits. The results for the continuing calibration verifications (CCV) were also acceptable and no qualifiers were required.

Surrogate Recoveries. A high surrogate recovery in sample SB-11-01 (SDG1103247) resulted in a "J" qualifier for DRO in that sample.

Blanks. No compounds were present in the method blanks.

Matrix Spike/Matrix Spike Duplicates. The MS/ MSD spikes were acceptable for the soil samples.

Laboratory Control Sample (LCS). No qualifiers were required since the LCS/LCSD recoveries were within the QC limits.

Field Duplicates. The soil field duplicate RPD were within the QC limits.

Quantification. All results were acceptable as qualified.

5. DATA QUALIFIER DEFINITIONS

5.1 DATA QUALIFIER DEFINITIONS

Table 5-1 Data Qualifier Definitions

Qualifier	Definition
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.
U	The analyte was analyzed for, but was not detected above the reported sample quantification limit or the reported analyte value was not detected above 5x or 10x the level reported in laboratory or field blanks.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. J- denotes a low bias for the sample results and J+ for a high bias.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

5.2 DATA VALIDATION REASON CODES

During the review process, a data validation reason code was added to each of the reviewer's qualifiers to allow the user to identify which results were qualified and the reason(s) for the qualifiers. Reason codes are listed and defined in Table 5-2.

Table 5-2 Data Validation Reason Codes

Reason Code	Definition
01	Sample received outside of 4+/-2 degrees Celsius
01A	Improper sample preservation
02	Holding time exceeded
02A	Extraction
02B	Analysis
03	Instrument performance – outside criteria
03A	BFB
03B	DFTPP

03C	DDT and/or Endrin % breakdown exceeds criteria
03D	Retention time windows
03E	Resolution
04	Initial calibration results outside specified criteria
04A	Compound mean RRF QC criteria not met
04B	Individual % RSD criteria not met
04C	Correlation coefficient >0.995
05	Continuing calibration results outside specified criteria
05A	Compound mean RRF QC criteria not met
05B	Compound % D QC criteria not met
06	Result qualified as a result of the 5x/10x blank correction
06A	Method or preparation blank
06B	ICB or CCB
06C	ER
06D	TB
06E	FB
07	Surrogate recoveries outside control limits
07A	Sample
07B	Associated method blank or LCS
08	MS/MSD/Duplicate results outside criteria
08A	MS and/or MSD recovery not within control limits (accuracy)
08B	% RPD outside acceptance criteria (precision)
09	Post digestion spike outside criteria (GFAA)
10	Internal standards outside specified control limits
10A	Recovery
10B	Retention time
11	Laboratory control sample recoveries outside specified limits
11A	Recovery
11B	% RPD (if run in duplicate)
12	Interference check standard
13	Serial dilution
14	Tentatively identified compounds
15	Quantification
16	Multiple results available; alternate analysis preferred
17	Field duplicate RPD criteria is exceeded
18	Percent difference between original and second column exceeds QC criteria
19	Professional judgment was used to qualify the data
20	Pesticide clean-up checks
21	Target compound identification
22	Radiological calibration

23	Radiological quantification
24	Reported result and/or lab qualifier revised to reflect validation findings

% = percent
%D = percent difference
BFB = bromofluorobenzene
CCB = continuing calibration blank
DFTPP = decafluorotriphenylphosphine
ER = equipment rinsate
FB = field blank
GFAA = graphite furnace atomic absorption
ICB = initial calibration blank
LCS = laboratory control sample
MS = matrix spike
MSD = matrix spike duplicate
QC = quality control
RPD = relative percent difference
RRF = relative response factor
RSD = relative standard deviation
TB = trip blank

6. REFERENCES

EPA (U.S. Environmental Protection Agency), June 2008. OSWER 9240.1-48. *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01).*

EPA (U.S. Environmental Protection Agency), January 2009. OSWER 9200-1-85. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. (EPA-540/R-08-005).*

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
Due to matrix in the samples seen during screening, samples 1103247-21 and -23 were analyzed from the Methanol vials only.

The surrogate Bromofluorobenzene exceeded criteria with a negative bias in samples 1103247-06 and -15. The surrogate Toluene-d8 exceeded criteria with a positive bias in samples 1103247-06 and -15. Both samples were re-analyzed with both surrogates repeating these results.

The batch spike associated to batch 1C31010 exceeded criteria with a positive bias for

Toluene.

The internal standard Fluorobenzene exceeded criteria with a negative bias in samples 103247-21 and -06. Sample 1103247-06 was re-analyzed with Fluorobenzene within criteria; however, sample 1103247-21 was not re-analyzed since it was already analyzed at a dilution from the Methanol vial. The internal standard 1,4-Dichlorobenzene-d4 exceeded criteria with a negative bias in samples 1103247-06, -06RE1, 15, and -15RE1; however, the internal standard 1,4-Dichlorobenzene-d4 is not associated to the compounds reported. The internal standard Chlorobenzene-d5 exceeded criteria with a negative bias in sample 1103247-06. Sample 1103247-06 was re-analyzed with Chlorobenzene-d5 within criteria.

The continuing calibration verification 1D09201-CCV1 exceeded criteria with a positive bias for Bromofluorobenzene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The surrogate Nitrobenzene-d5 exceeded criteria with a positive bias in sample 1103247-21 and in 1C30020-BS1. The surrogate 2-Fluorobiphenyl exceeded criteria with a positive bias in 1C30020-BLK1 and –BS1. The surrogate Terphenyld-14 exceeded criteria with a positive bias in 1103247-10.

The batch spike associated to batch 1C30011 exceeded criteria with a positive bias for Benzo(b)fluoranthene. The batch spikes associated to batch 1C30013 exceeded relative percent difference criteria for 2-Methylnaphthalene. The batch spike associate to batch 1C30020 exceeded criteria with a positive bias for Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Chrsyene, Fluorene, 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene, and Phenanthrene.

The continuing calibration verifications exceeded criteria in 1D09108-CCV1 with a positive bias for Pyrene and Terphenyl-d14 and in 1D09303-CCV1 with a positive bias for Benzo(b)fluoranthene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8105B DRO:
The surrogate o-Terphenyl exceeded criteria with a positive bias in sample 1103247-23. The surrogate o-Terphenyl exceeded the retention time window in 1C30012-BSD1.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix.

EQL: The estimated quantitation limit (EQL), also known as Reporting Limit **(RL),** is defined as the estimated concentration above which quantitative results can be obtained with a specific degree of confidence. Empirical Laboratories defines the EQL to be at or near the lowest standard of the calibration curve.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound.

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL.

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the MDL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
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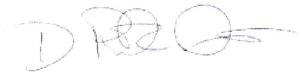
BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified

concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Sample Delivery Group Case Narrative

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Changes to the Revision
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Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
After initial screening, some samples were analyzed from the Methanol vial due to matrix or high concentrations of target analytes.

The matrix spikes associated to sample 1103258-02 exceeded criteria with a negative bias and exceeded relative percent difference criteria for Benzene, Ethylbenzene, Toluene, and Xylene(total).

The continuing calibration verification 1D09201-CCV1 exceeded criteria with a positive bias for Bromofluorobenzene.

The surrogate Bromofluorobenzene exceeded criteria with a negative bias in samples 1103258-05, -06, and -17 and exceeded criteria with a positive bias in sample 1103258-08. The surrogate Toluene-d8 exceeded criteria with a negative bias in the sample 1103258-10 and exceeded criteria with a positive bias in samples 1103258-05, -15RE1, -16, and -17. Samples 1103258-05, -06, and -17 were re-analyzed with all results repeated.

The internal standard 1,4-Dichlorobenzene-d4 exceeded criteria with a negative bias in sample 1103258-05, -06, -17, -05RE1, -17RE1, and -15RE1; however, 1,4-Dichlorobenzene-d4 is not associated to the reported compounds. The internal standards Fluorobenzene, Chlorobenzene-d5, and 1,4-Dichlorobenzene-d4 exceeded criteria with a negative bias in 1D01001-MSD1.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The surrogate Nitrobenzene-d5 exceeded criteria with a positive bias in samples 1103258-03, -08, -09, and -14. The surrogate Terphenyl-d14 exceeded criteria with a positive bias in samples 1103258-04.

The batch spike associated to batch 1C31013 exceeded criteria with a positive bias for Acenaphthene, Anthracene, Benzo(b)fluoranthene, and Fluorene.

The matrix spikes associated to sample 1103258-02 exceeded criteria with a positive bias for Benzo(b)fluoranthene, Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene.

The internal standard Perylene-d12 exceeded criteria with a negative bias in samples 1103258-03, -04, -05, -08, and -10.

The continuing calibration verification 1D09303-CCV1 exceeded criteria with a positive bias for Benzo(b)fluoranthene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8015B DRO:
The surrogate o-Terphenyl was diluted out in samples 1103258-03RE1 and -08RE1.

The matrix spike associated to sample 1103258-02 exceeded criteria with a negative bias for Diesel Range Organics.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix.

EQL: The estimated quantitation limit (EQL), also known as Reporting Limit **(RL),** is defined as the estimated concentration above which quantitative results can be obtained with a specific degree of confidence. Empirical Laboratories defines the EQL to be at or near the lowest standard of the calibration curve.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound.

H1: The result was analyzed outside of the EPA recommended holding time.

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H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL.

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the MDL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified

concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.

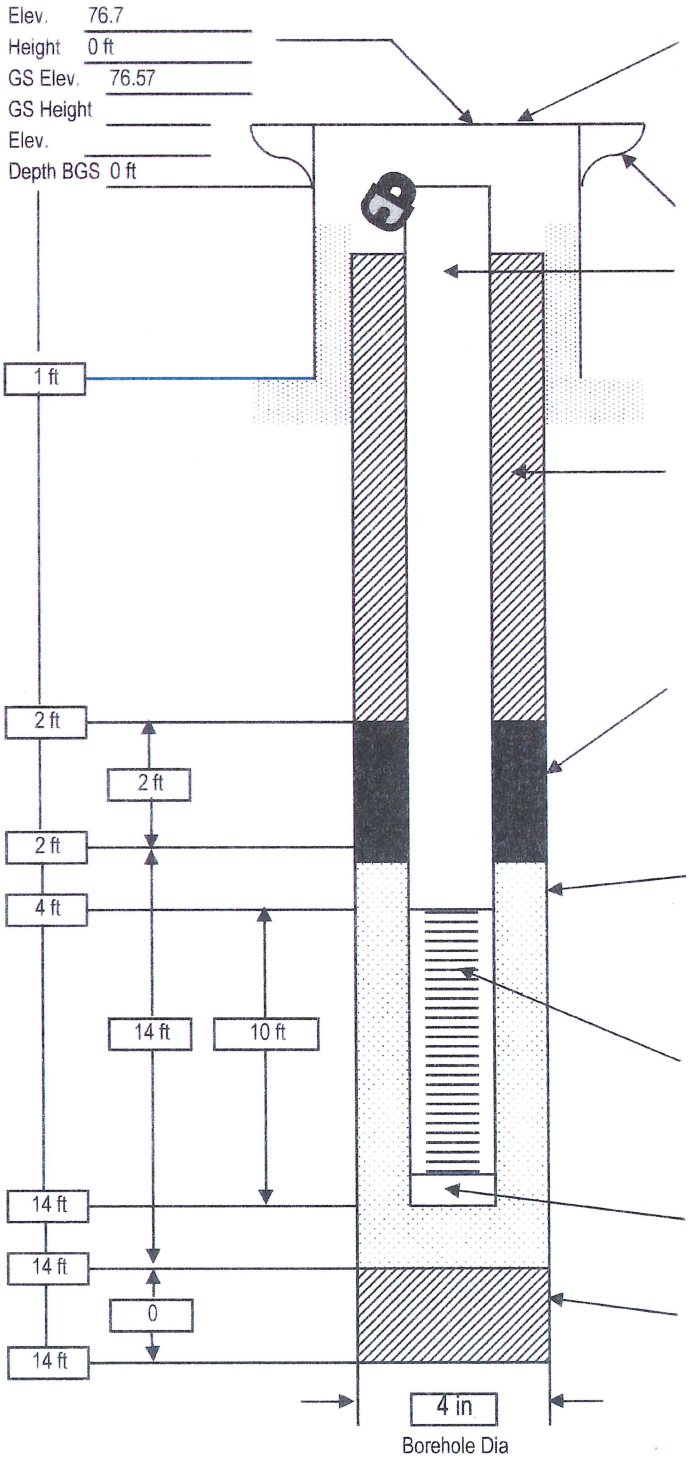


Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

APPENDIX VI
MONITOR WELL SCHEMATICS

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 01	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 4/6/2011	End Date 4/6/2011 Time: 8:15 AM	
Built By: James Chambers	Well Coordinates: N: 681051.5 E: 829762.92	



PROTECTIVE CASING
Material/Type: Schedule 40 PVC
Diameter: 2 inch
Watertight O-Ring: ☑ Yes ☐ No
Breathes with Vadose Zone: ☐ Yes ☑ No

SURFACE PAD
Composition & Size: concrete

RISER PIPE
Type: Schedule 40 PVC
Diameter: 2 inch
Total Length (TOC to TOS): 14 ft
Ventilated Cap: ☐ Yes ☑ No
O-Rings for Threads: ☑ Yes ☐ No

GROUT
Composition & Amount: bentonite pellets, 1/4 bags
Tremied: ☑ Yes ☐ No
Interval BGS: 0 -2 ft

CENTRALIZERS: ☑ Yes ☑ No
Depth(s): N/A

SEAL
Type: bentonite pellets
Source: Enviroplug
Setup/Hydration Time: 1 hour
Volume Fluid Added: 0
Tremied: ☐ Yes ☑ No

FILTER PACK
Type: DSI Number 1 sand
Amount Used: 4 1/2 bags
Tremied: ☑ Yes ☐ No
Source: Driller's Service Inc.
Gr. Size Dist: number 1

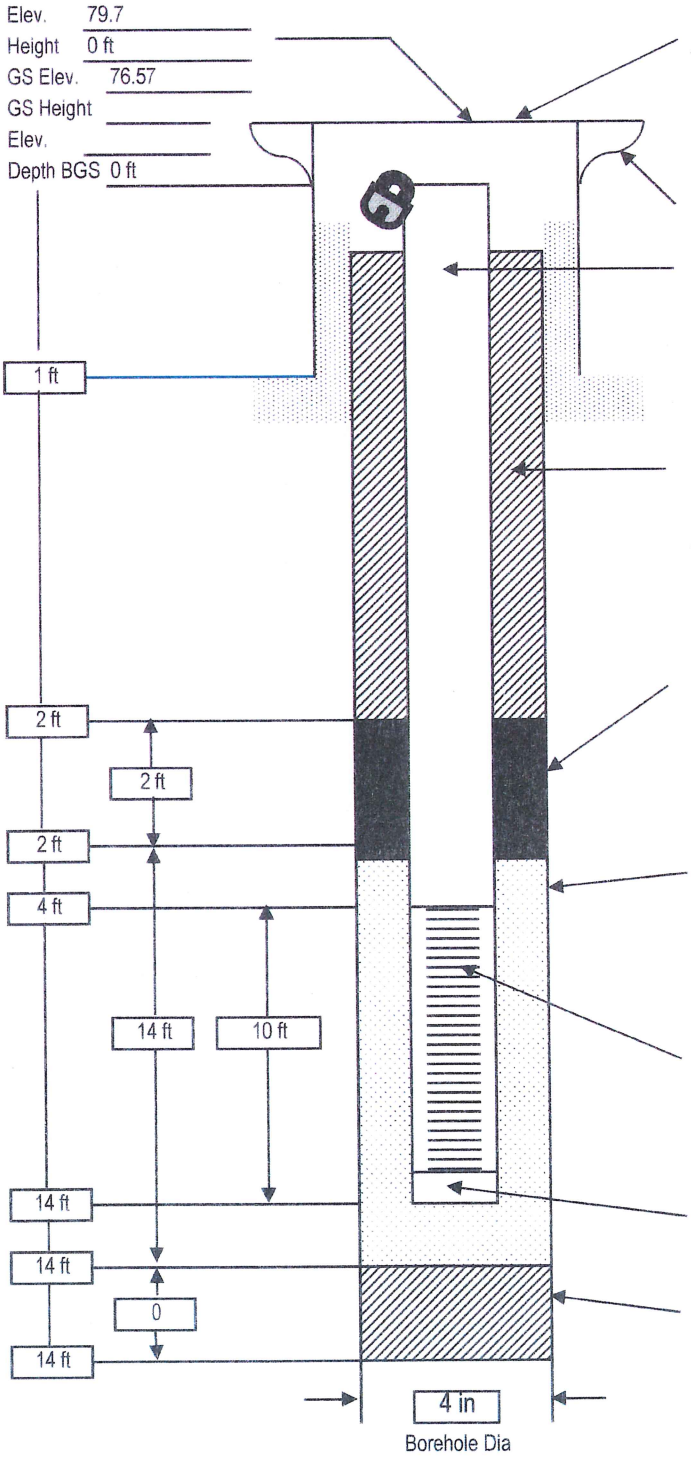
SCREEN
Type: Factory Cut Schedule 40 PVC
Diameter: 2 in
Slot Size: 0.010 in
Interval BGS: 4 - 14 feet

SUMP
Interval BGS: N/A
Type of Bottom Cap: N/A

BACKFILL PLUG
Material: N/A
Setup/Hydration Time: N/A
Tremied: ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 02	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 4/6/2011	End Date 4/6/2011 Time: 11:00 AM	
Built By: James Chambers	Well Coordinates: N: 680839.28 E: 829687.69	



PROTECTIVE CASING
Material/Type Schedule 40 PVC
Diameter 2 inch
Watertight O-Ring ☑ Yes ☐ No
Breathes with Vadose Zone ☐ Yes ☑ No

SURFACE PAD
Composition & Size concrete

RISER PIPE
Type Schedule 40 PVC
Diameter 2 inch
Total Length (TOC to TOS) 14 ft
Ventilated Cap ☐ Yes ☑ No
O-Rings for Threads ☑ Yes ☐ No

GROUT
Composition & Amount bentonite pellets, 1/4 bags
Tremied ☑ Yes ☐ No
Interval BGS 0 -2 ft
CENTRALIZERS ☑ Yes ☑ No
Depth(s) N/A

SEAL
Type bentonite pellets, 1/4 bag
Source Enviroplug
Setup/Hydration Time 1 hour
Volume Fluid Added 0
Tremied ☐ Yes ☑ No

FILTER PACK
Type DSI Number 1 sand
Amount Used 4 bags
Tremied ☑ Yes ☐ No
Source Driller's Service Inc.
Gr. Size Dist number 1

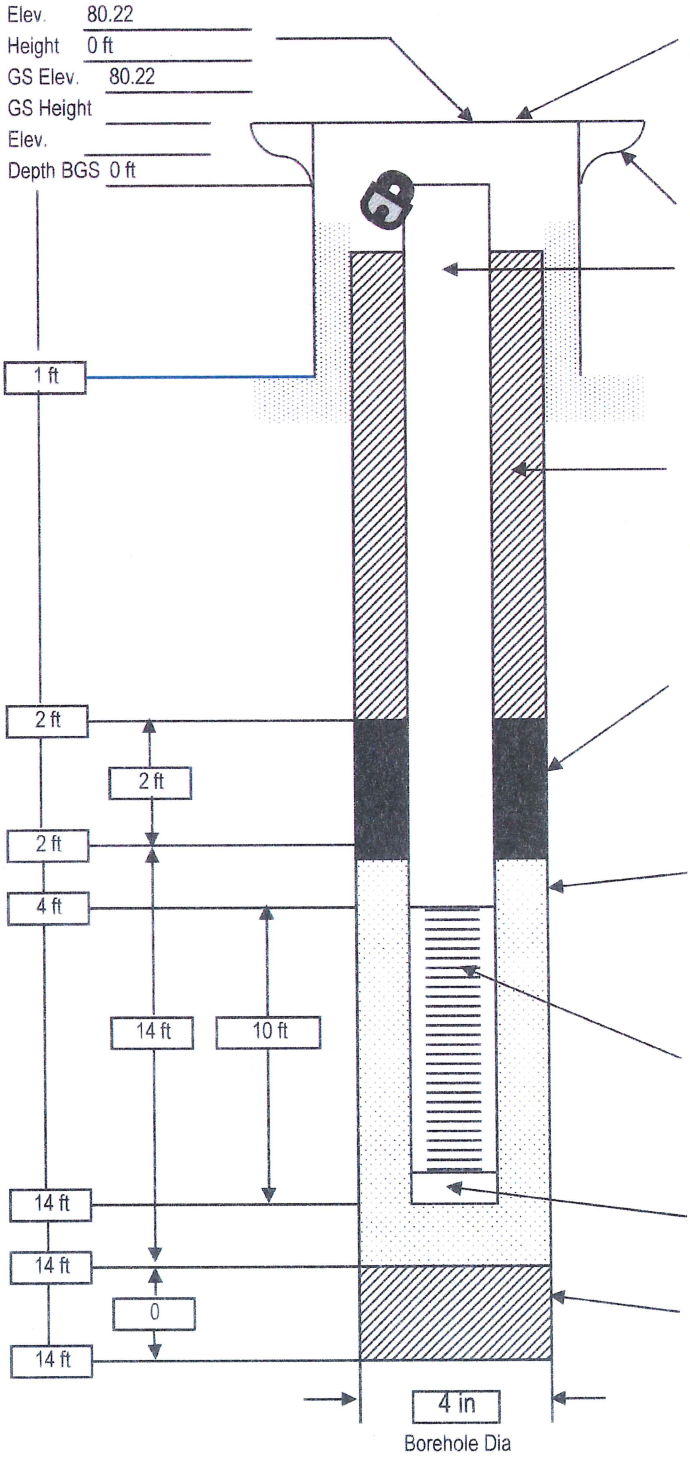
SCREEN
Type Factory Cut Schedule 40 PVC
Diameter 2 in
Slot Size 0.010 in
Interval BGS 4 - 14 feet

SUMP
Interval BGS N/A
Type of Bottom Cap N/A

BACKFILL PLUG
Material N/A
Setup/Hydration Time N/A
Tremied ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 03	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 4/6/2011	End Date 4/6/2011 Time: 1:00 PM	
Built By: James Chambers	Well Coordinates: N: 680902.11 E: 829692.71	



PROTECTIVE CASING
Material/Type: Schedule 40 PVC
Diameter: 2 inch
Watertight O-Ring: ☑ Yes ☐ No
Breathes with Vadose Zone: ☐ Yes ☑ No

SURFACE PAD
Composition & Size: concrete

RISER PIPE
Type: Schedule 40 PVC
Diameter: 2 inch
Total Length (TOC to TOS): 14 ft
Ventilated Cap: ☐ Yes ☑ No
O-Rings for Threads: ☑ Yes ☐ No

GROUT
Composition & Amount: bentonite pellets, 1/4 bag
Tremied: ☑ Yes ☐ No
Interval BGS: 0 -2 ft

CENTRALIZERS: ☑ Yes ☑ No
Depth(s): N/A

SEAL
Type: bentonite pellets, 1/4 bag
Source: Enviroplug
Setup/Hydration Time: 1 hour
Volume Fluid Added: 0
Tremied: ☐ Yes ☑ No

FILTER PACK
Type: DSI Number 1 sand
Amount Used: 4 1/2 bags
Tremied: ☑ Yes ☐ No
Source: Driller's Service Inc.
Gr. Size Dist: number 1

SCREEN
Type: Factory Cut Schedule 40 PVC
Diameter: 2 in
Slot Size: 0.010 in
Interval BGS: 4 - 14 feet

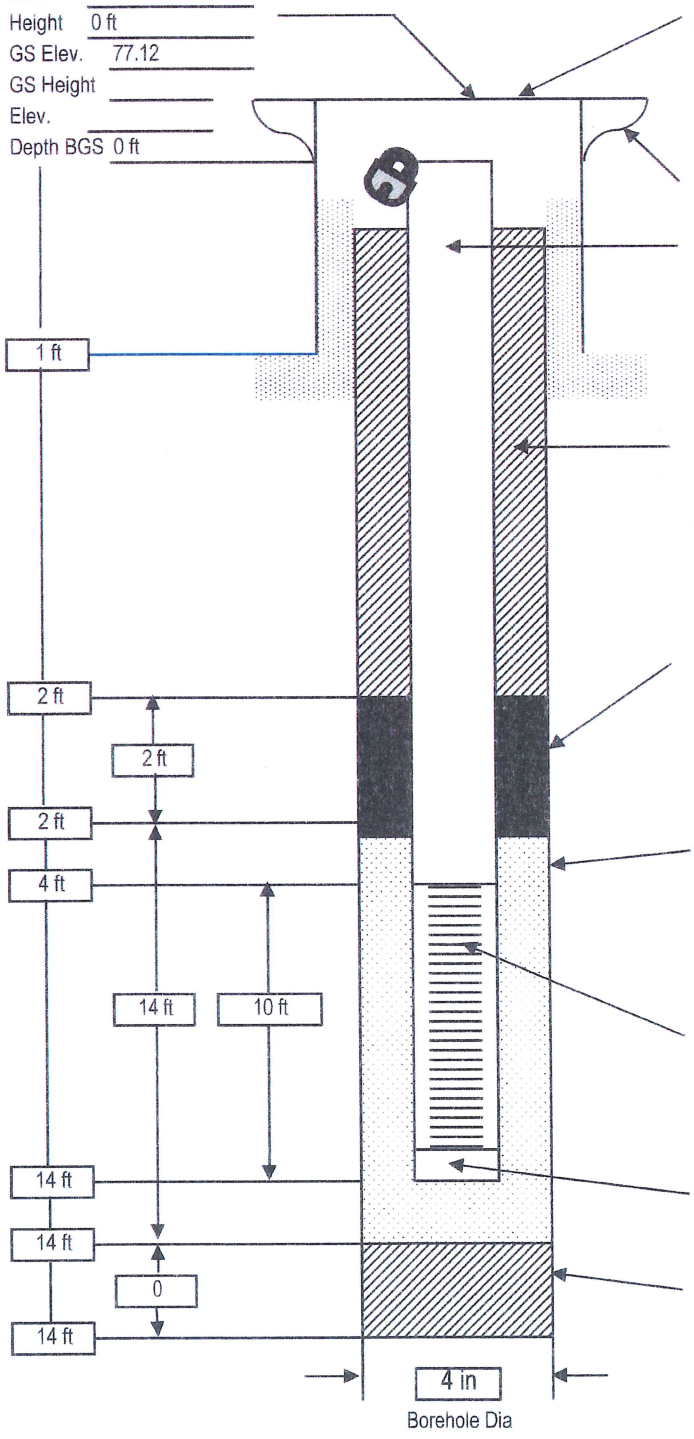
SUMP
Interval BGS: N/A
Type of Bottom Cap: N/A

BACKFILL PLUG
Material: N/A
Setup/Hydration Time: N/A
Tremied: ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 04	Installation: Fort Stewart	Site: Building 419	
Project No.: E0209.0007		Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC		Drilling Contractor: Major Drilling	
Start Date: 4/6/2011		End Date 4/6/2011	Time: 3:00 PM
Built By: James Chambers		Well Coordinates: N: 680878.76	E: 829795.4

Elev. 77.12
Height 0 ft
GS Elev. 77.12
GS Height
Elev.
Depth BGS 0 ft



PROTECTIVE CASING
Material/Type Schedule 40 PVC
Diameter 2 inch
Watertight O-Ring ☑ Yes ☐ No
Breathes with Vadose Zone ☐ Yes ☑ No

SURFACE PAD
Composition & Size concrete

RISER PIPE
Type Schedule 40 PVC
Diameter 2 inch
Total Length (TOC to TOS) 14 ft
Ventilated Cap ☐ Yes ☑ No
O-Rings for Threads ☑ Yes ☐ No

GROUT
Composition & Amount bentonite pellets, 1/4 bag
Tremied ☑ Yes ☐ No
Interval BGS 0 -2 ft

CENTRALIZERS ☑ Yes ☑ No
Depth(s) N/A

SEAL
Type bentonite pellets, 1/4 bag
Source Enviroplug
Setup/Hydration Time 1 hour
Volume Fluid Added 0
Tremied ☐ Yes ☑ No

FILTER PACK
Type DSI Number 1 sand
Amount Used 4 1/2 bags
Tremied ☑ Yes ☐ No
Source Driller's Service Inc.
Gr. Size Dist number 1

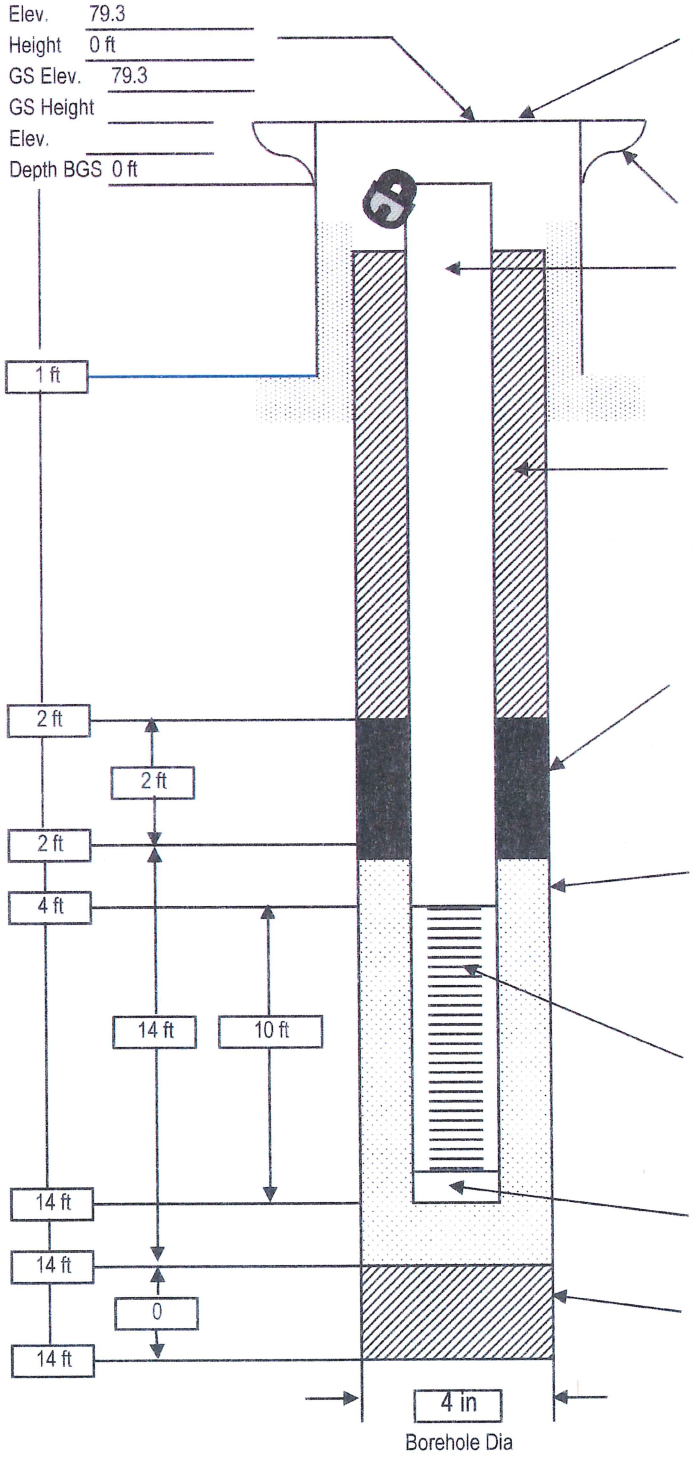
SCREEN
Type Factory Cut Schedule 40 PVC
Diameter 2 in
Slot Size 0.010 in
Interval BGS 4 - 14 feet

SUMP
Interval BGS N/A
Type of Bottom Cap N/A

BACKFILL PLUG
Material N/A
Setup/Hydration Time N/A
Tremied ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 05	Installation: Fort Stewart	Site: Building 419	
Project No.: E0209.0007		Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC		Drilling Contractor: Major Drilling	
Start Date: 4/7/2011		End Date 4/7/2011	Time: 10:30 AM
Built By: James Chambers		Well Coordinates: N: 680958.13	E: 829826.7



PROTECTIVE CASING
Material/Type: Schedule 40 PVC
Diameter: 2 inch
Watertight O-Ring: ☑ Yes ☐ No
Breathes with Vadose Zone: ☐ Yes ☑ No

SURFACE PAD
Composition & Size: concrete

RISER PIPE
Type: Schedule 40 PVC
Diameter: 2 inch
Total Length (TOC to TOS): 14 ft
Ventilated Cap: ☐ Yes ☑ No
O-Rings for Threads: ☑ Yes ☐ No

GROUT
Composition & Amount: bentonite pellets, 1/4 bag
Tremied: ☑ Yes ☐ No
Interval BGS: 0 -2 ft

CENTRALIZERS: ☑ Yes ☑ No
Depth(s): N/A

SEAL
Type: bentonite pellets, 1/4 bag
Source: Enviroplug
Setup/Hydration Time: 1 hour
Volume Fluid Added: 0
Tremied: ☐ Yes ☑ No

FILTER PACK
Type: DSI Number 1 sand
Amount Used: 4 1/2 bags
Tremied: ☑ Yes ☐ No
Source: Driller's Service Inc.
Gr. Size Dist: number 1

SCREEN
Type: Factory Cut Schedule 40 PVC
Diameter: 2 in
Slot Size: 0.010 in
Interval BGS: 4 - 14 feet

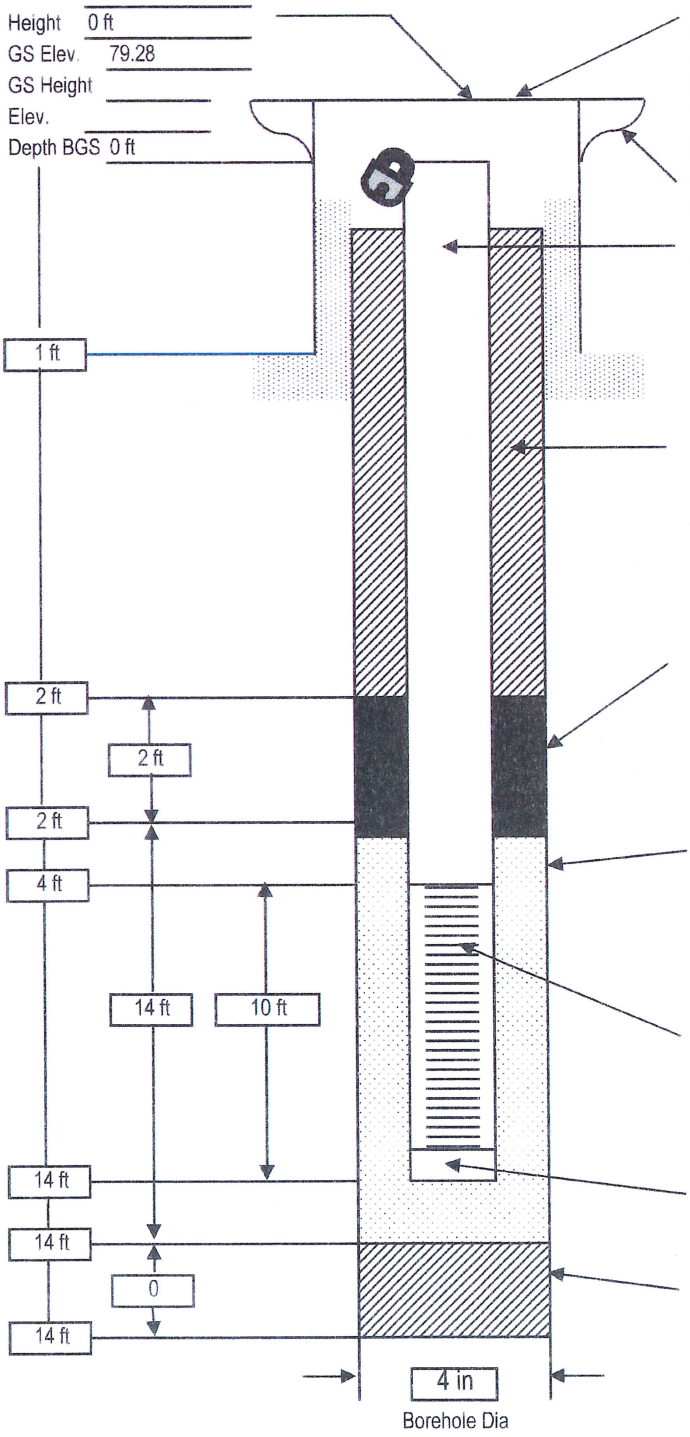
SUMP
Interval BGS: N/A
Type of Bottom Cap: N/A

BACKFILL PLUG
Material: N/A
Setup/Hydration Time: N/A
Tremied: ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 06	Installation: Fort Stewart	Site: Building 419	
Project No.: E0209.0007		Client/Project: USACE	
Contractor: SpecPro Environmental Services, LLC		Drilling Contractor: Major Drilling	
Start Date: 4/7/2011		End Date 4/7/2011	Time: 1:00 PM
Built By: James Chambers		Well Coordinates: N: 680977.33	E: 829827.41

Elev. 79.28
Height 0 ft
GS Elev. 79.28
GS Height
Elev.
Depth BGS 0 ft



PROTECTIVE CASING
Material/Type: Schedule 40 PVC
Diameter: 2 inch
Watertight O-Ring: ☑ Yes ☐ No
Breathes with Vadose Zone: ☐ Yes ☑ No

SURFACE PAD
Composition & Size: concrete

RISER PIPE
Type: Schedule 40 PVC
Diameter: 2 inch
Total Length (TOC to TOS): 14 ft
Ventilated Cap: ☐ Yes ☑ No
O-Rings for Threads: ☑ Yes ☐ No

GROUT
Composition & Amount: bentonite pellets, 1/4 bag
Tremied: ☑ Yes ☐ No
Interval BGS: 0 -2 ft

CENTRALIZERS ☑ Yes ☑ No
Depth(s): N/A

SEAL
Type: bentonite pellets, 1/4 bag
Source: Enviroplug
Setup/Hydration Time: 1 hour
Volume Fluid Added: 0
Tremied: ☐ Yes ☑ No

FILTER PACK
Type: DSI Number 1 sand
Amount Used: 4 1/2 bags
Tremied: ☑ Yes ☐ No
Source: Driller's Service Inc.
Gr. Size Dist: number 1

SCREEN
Type: Factory Cut Schedule 40 PVC
Diameter: 2 in
Slot Size: 0.010 in
Interval BGS: 4 - 14 feet

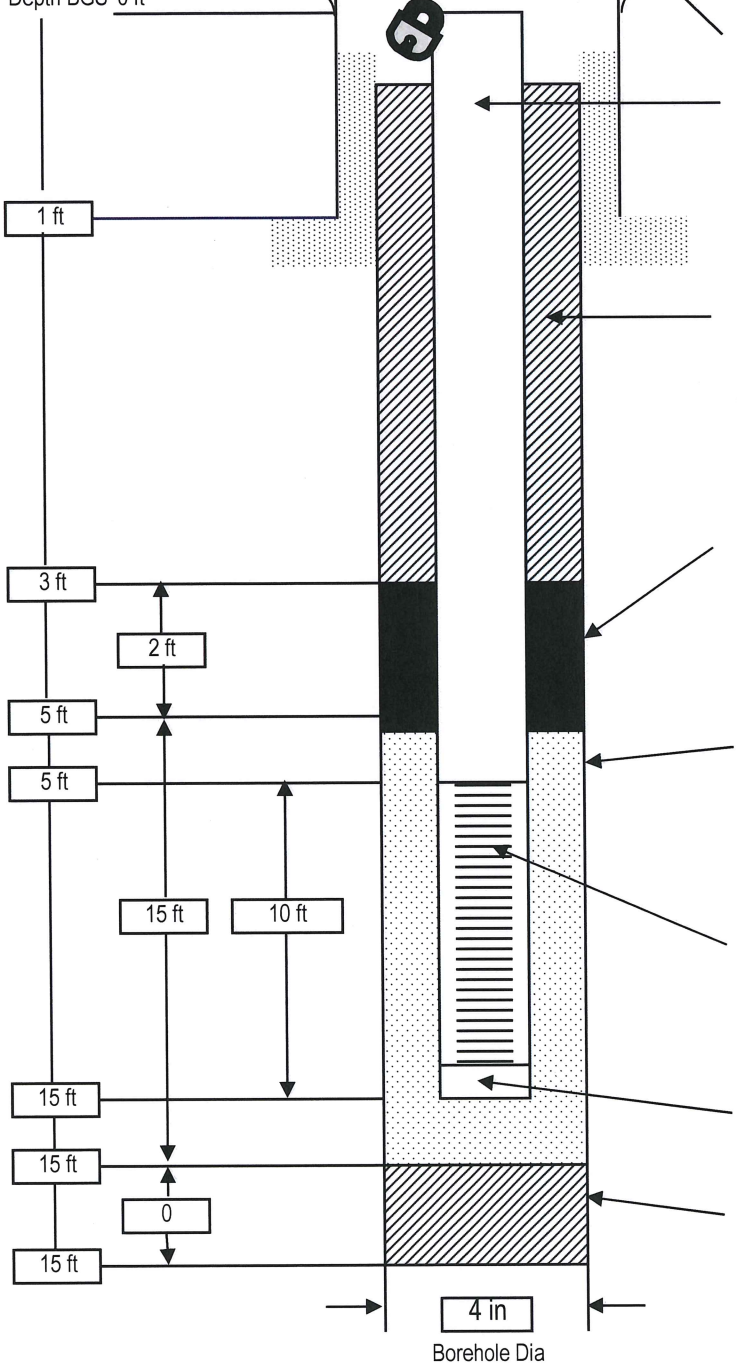
SUMP
Interval BGS: N/A
Type of Bottom Cap: N/A

BACKFILL PLUG
Material: N/A
Setup/Hydration Time: N/A
Tremied: ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 07	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 7/30/2013	End Date 7/30/2013 Time: 4:40 PM	
Built By: Ken Burkhead	Well Coordinates: N: 680955.72 E: 829896.35	

Elev. 78.74
Height 0 ft
GS Elev. 79.09
GS Height
Elev.
Depth BGS 0 ft



PROTECTIVE CASING
Material/Type Schedule 40 PVC
Diameter 2 inch
Watertight O-Ring ☑ Yes ☐ No
Breathes with Vadose Zone ☑ Yes ☑ No

SURFACE PAD
Composition & Size concrete

RISER PIPE
Type Schedule 40 PVC
Diameter 2 inch
Total Length (TOC to TOS) 15 ft
Ventilated Cap ☐ Yes ☑ No
O-Rings for Threads ☑ Yes ☐ No

GROUT
Composition & Amount bentonite pellets, 2/3 bag
Tremied ☑ Yes ☐ No
Interval BGS 0 -2 ft

CENTRALIZERS ☑ Yes ☑ No
Depth(s) N/A

SEAL
Type bentonite pellets, 2/3 bag
Source Enviroplug
Setup/Hydration Time 1 hour
Volume Fluid Added 0
Tremied ☐ Yes ☐ No

FILTER PACK
Type DSI Number 1 sand
Amount Used 5 bags
Tremied ☑ Yes ☐ No
Source Driller's Service Inc.
Gr. Size Dist number 1

SCREEN
Type Factory Cut Schedule 40 PVC
Diameter 2 in
Slot Size 0.010 in
Interval BGS 5 - 15 feet

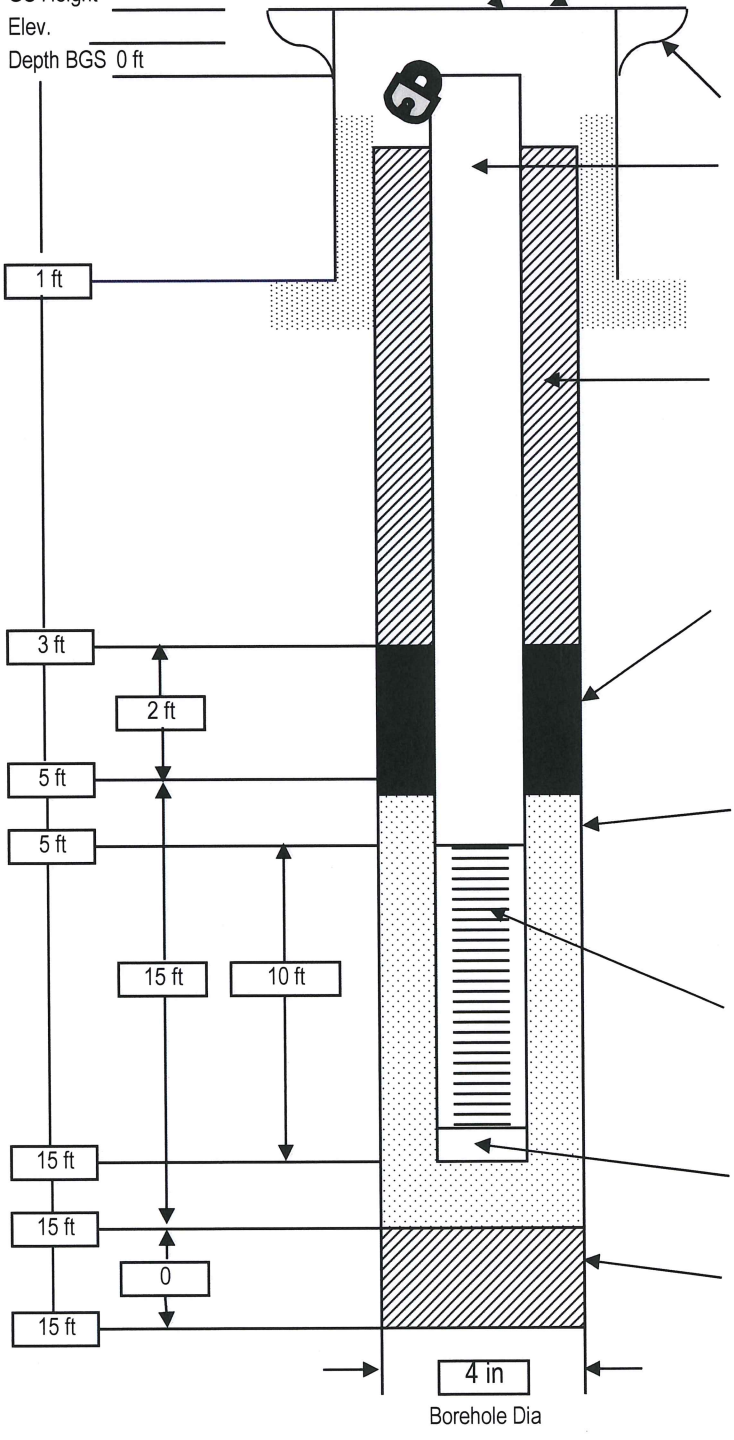
SUMP
Interval BGS N/A
Type of Bottom Cap N/A

BACKFILL PLUG
Material N/A
Setup/Hydration Time N/A
Tremied ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 08	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 7/31/2013	End Date 7/31/2013 Time: 11:45am	
Built By: Ken Burkhead	Well Coordinates: N: 680784.04 E: 830057.54	

Elev. 79.9
Height 0 ft
GS Elev. 80.15
GS Height
Elev.
Depth BGS 0 ft



PROTECTIVE CASING
Material/Type Schedule 40 PVC
Diameter 2 inch
Watertight O-Ring ☑ Yes ☐ No
Breathes with Vadose Zone ☑ Yes ☑ No

SURFACE PAD
Composition & Size concrete

RISER PIPE
Type Schedule 40 PVC
Diameter 2 inch
Total Length (TOC to TOS) 15 ft
Ventilated Cap ☐ Yes ☑ No
O-Rings for Threads ☑ Yes ☐ No

GROUT
Composition & Amount bentonite pellets, 2/3 bag
Tremied ☑ Yes ☐ No
Interval BGS 0 -3 ft

CENTRALIZERS ☑ Yes ☑ No
Depth(s) N/A

SEAL
Type bentonite pellets, 2/3 bag
Source Enviroplug
Setup/Hydration Time 1 hour
Volume Fluid Added 0
Tremied ☐ Yes ☑ No

FILTER PACK
Type DSI Number 1 sand
Amount Used 5 bags
Tremied ☑ Yes ☐ No
Source Driller's Service Inc.
Gr. Size Dist number 1

SCREEN
Type Factory Cut Schedule 40 PVC
Diameter 2 in
Slot Size 0.010 in
Interval BGS 5-15 feet

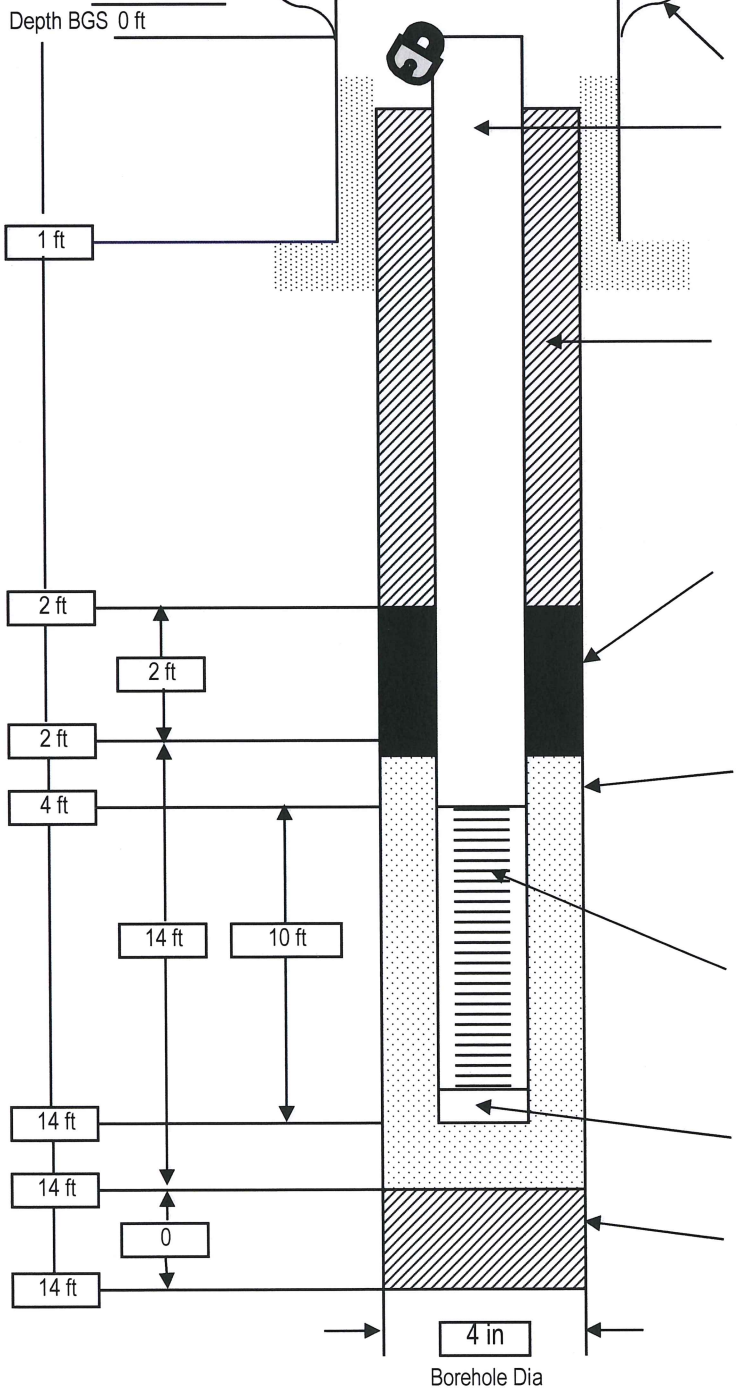
SUMP
Interval BGS N/A
Type of Bottom Cap N/A

BACKFILL PLUG
Material N/A
Setup/Hydration Time N/A
Tremied ☐ Yes ☐ No

MONITOR WELL CONSTRUCTION LOG - Standard Flush Mount

Well No.: MW - 09A	Installation: Fort Stewart	Site: Building 419
Project No.: E0209.0007	Client/Project: USACE	
Contractor: SpecPro Environmental Services, .LLC	Drilling Contractor: Major Drilling	
Start Date: 7/31/2013	End Date 7/31/2013 Time: 3:15 PM	
Built By: Ken Burkhead	Well Coordinates: N: 6800650.14 E: 829638.51	

Elev. 80.3
Height 0 ft
GS Elev. 80.54
GS Height
Elev.
Depth BGS 0 ft



PROTECTIVE CASING
Material/Type Schedule 40 PVC
Diameter 2 inch
Watertight O-Ring ☑ Yes ☐ No
Breathes with Vadose Zone ☐ Yes ☑ No

SURFACE PAD
Composition & Size concrete

RISER PIPE
Type Schedule 40 PVC
Diameter 2 inch
Total Length (TOC to TOS) 14 ft
Ventilated Cap ☐ Yes ☑ No
O-Rings for Threads ☑ Yes ☐ No

GROUT
Composition & Amount bentonite pellets, 1/2 bag
Tremied ☑ Yes ☐ No
Interval BGS 0 -2 ft

CENTRALIZERS ☑ Yes ☑ No
Depth(s) N/A

SEAL
Type bentonite pellets, 1/2 bag
Source Enviroplug
Setup/Hydration Time 1 hour
Volume Fluid Added 0
Tremied ☐ Yes ☑ No

FILTER PACK
Type DSI Number 1 sand
Amount Used 5 bags
Tremied ☑ Yes ☐ No
Source Driller's Service Inc.
Gr. Size Dist number 1

SCREEN
Type Factory Cut Schedule 40 PVC
Diameter 2 in
Slot Size 0.010 in
Interval BGS 4 - 14 feet

SUMP
Interval BGS N/A
Type of Bottom Cap N/A

BACKFILL PLUG
Material N/A
Setup/Hydration Time N/A
Tremied ☐ Yes ☐ No

APPENDIX VII
GROUNDWATER LABORATORY RESULTS

ANALYSIS DATA SHEET

MW-01-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-03	File ID:	0417803.D
Sampled:	04/12/11 12:10	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 14:50
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence:	1D11029	Calibration:	1110001
Instrument:	MS-VOA5				

Raw Qual U

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.60	102	75 - 120	
Dibromofluoromethane	30.00	29.20	97.3	85 - 115	
1,2-Dichloroethane-d4	30.00	30.11	100	70 - 120	
Toluene-d8	30.00	31.09	104	85 - 120	

ANALYSIS DATA SHEET

MW-02-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-02	File ID:	0417802.D
Sampled:	04/12/11 09:40	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 14:24
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence:	1D11029	Calibration:	1110001
Instrument:	MS-VOA5				

Rev 2nd

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.31	101	75 - 120	
Dibromofluoromethane	30.00	29.17	97.2	85 - 115	
1,2-Dichloroethane-d4	30.00	30.93	103	70 - 120	
Toluene-d8	30.00	31.78	106	85 - 120	

ANALYSIS DATA SHEET

MW-03-03

Laboratory:	Empirical Laboratories, LLC		SDG:	1104178	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Ground Water	Laboratory ID:	1104178-01	File ID:	0417801.D
Sampled:	04/12/11 09:40	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 13:57
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence:	1D11029	Calibration:	1110001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.56	102	75 - 120	
Dibromofluoromethane	30.00	30.15	101	85 - 115	
1,2-Dichloroethane-d4	30.00	32.33	108	70 - 120	
Toluene-d8	30.00	31.05	103	85 - 120	

Raw Qual

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ANALYSIS DATA SHEET

MW-04-04

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-07RE1	File ID:	0417807D.D
Sampled:	04/12/11 16:40	Prepared:	04/20/11 00:00	Analyzed:	04/20/11 17:03
Solids:		Preparation:	5030B	Dilution:	2
Batch:	1D20010	Sequence:	1D11102	Calibration:	1110001

Instrument: MS-VOA5

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene	3.67	0.280	2.00	D
100-41-4	Ethylbenzene	19.8	0.300	2.00	D
108-88-3	Toluene	0.839	0.380	2.00	J, D
1330-20-7	Xylenes (total)	112	0.440	2.00	D

J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.15	101	75 - 120	
Dibromofluoromethane	30.00	28.71	95.7	85 - 115	
1,2-Dichloroethane-d4	30.00	29.72	99.1	70 - 120	
Toluene-d8	30.00	31.49	105	85 - 120	

ANALYSIS DATA SHEET

MW-05-05

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-04	File ID:	0417804.D
Sampled:	04/12/11 14:25	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 15:17
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence:	1D11029	Calibration:	1110001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

Rev 2nd U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.40	105	75 - 120	
Dibromofluoromethane	30.00	30.40	101	85 - 115	
1,2-Dichloroethane-d4	30.00	31.26	104	70 - 120	
Toluene-d8	30.00	32.37	108	85 - 120	

ANALYSIS DATA SHEET

MW-05-059

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-05	File ID:	0417805.D
Sampled:	04/12/11 14:25	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 15:43
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence:	1D11029	Calibration:	1110001
				Instrument:	MS-VOA5

Rev 2nd u

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.70	102	75 - 120	
Dibromofluoromethane	30.00	29.60	98.7	85 - 115	
1,2-Dichloroethane-d4	30.00	31.45	105	70 - 120	
Toluene-d8	30.00	30.64	102	85 - 120	

ANALYSIS DATA SHEET

MW-06-06

Laboratory:	Empirical Laboratories, LLC		SDG:	1104178	
Client:	SES, Inc. (S750)		Project:	FTS UST 2008-2010	
Matrix:	Ground Water	Laboratory ID:	1104178-06	File ID:	0417806.D
Sampled:	04/12/11 14:50	Prepared:	04/19/11 00:00	Analyzed:	04/19/11 16:10
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1D19005	Sequence: 1D11029	Calibration:	1110001	Instrument: MS-VOA5

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
100-41-4	Ethylbenzene		0.150	1.00	U
108-88-3	Toluene		0.190	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.38	101	75 - 120	
Dibromofluoromethane	30.00	29.93	99.8	85 - 115	
1,2-Dichloroethane-d4	30.00	31.14	104	70 - 120	
Toluene-d8	30.00	31.19	104	85 - 120	

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13934

Send Results to:
Name Doug Hawn
Company SES
Address 1006 Fieldcrest Rd 2R
City Oak Ridge
State, Zip TN 37830
Phone 865-481-7837
Fax 481-0290
E-mail

Send Invoice to:
Name
Company
Address SAME
City
State, Zip
Phone
Fax
E-mail

Project No./Name: Building 419

Sampler's (Signature): Doug Hawn

Analysis Requirements: BTEX; GA PAHs; VOCs

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #: 1180

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	BTEX	GA PAHs	VOCs	Comments	No. of Bottles	Lab Use Only Containers/Pres.
1104178-01	4-12-11 0940	MW-03-03	GW	X	X			5	3 VOA + 1 H
-02	4-12-11 0910	MW-02-02	GW	X	X			5	
-03	4-12-11 1210	MW-01-01	GW	X	X			5	
-04	4-12-11 1425	MW-05-05	GW	X	X			5	
-05	4-12-11 1425	MW-05-05D	GW	X	X			5	
-06	4-12-11 1450	MW-06-06	GW	X	X			5	
↓	4-12-11 1450	MW-06-06 MS/D	GW	X	X			5	
-07	4-12-11 1640	MW-04-04	GW	X	X			5	
-08	4-12-11 1550	419-RS01	Ris.	X	X			5	↓
-09	LAB	419-Trip-B	Blank			X		2	2 VOA

	Date/Time	Received By: (Signature)
Sample Kit Prep'd by: (Signature)		
Relinquished by: (Signature) Doug Hawn	4-13-11 1630	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time 4-14-11 08:45	Temperature

REMARKS:

Details:
Page 1 of 1
Cooler No. 1 of 3
Date Shipped 4-13-11
Shipped By Fed-Ex
Turnaround Normal

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

10

1104178

ANALYSIS DATA SHEET

MW-01-01

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-03	File ID:	0417803.D
Sampled:	04/12/11 12:10	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 03:35
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002

Instrument: MS-BNA4

RW Qual U

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0463	0.185	U
208-96-8	Acenaphthylene		0.0463	0.185	U
120-12-7	Anthracene		0.0463	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.185	U
218-01-9	Chrysene		0.0463	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.185	U
206-44-0	Fluoranthene		0.0463	0.185	U
86-73-7	Fluorene		0.0463	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.185	U
91-20-3	Naphthalene		0.0463	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	U
129-00-0	Pyrene		0.0463	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	18.51	40.0	34 - 167	
Terphenyl-d14	46.30	20.49	44.3	34 - 167	

ANALYSIS DATA SHEET

MW-02-02

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-02	File ID:	0417802.D
Sampled:	04/12/11 09:40	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 03:10
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0472	0.189	U
208-96-8	Acenaphthylene		0.0472	0.189	U
120-12-7	Anthracene		0.0472	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
50-32-8	Benzo(a)pyrene		0.0472	0.189	U
205-99-2	Benzo(b)fluoranthene		0.0472	0.189	U
191-24-2	Benzo(g,h,i)perylene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	U
206-44-0	Fluoranthene		0.0472	0.189	U
86-73-7	Fluorene		0.0472	0.189	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0472	0.189	U
90-12-0	1-Methylnaphthalene		0.0472	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	U
85-01-8	Phenanthrene		0.0472	0.189	U
129-00-0	Pyrene		0.0472	0.189	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	8.605	18.2	34 - 167	*
Terphenyl-d14	47.17	4.670	9.90	34 - 167	*

Rev Qnc
WS 7a

ANALYSIS DATA SHEET

MW-03-03

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-01	File ID:	0417801.D
Sampled:	04/12/11 09:40	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 02:45
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0463	0.185	U
208-96-8	Acenaphthylene		0.0463	0.185	U
120-12-7	Anthracene		0.0463	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.185	U
218-01-9	Chrysene		0.0463	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.185	U
206-44-0	Fluoranthene		0.0463	0.185	U
86-73-7	Fluorene		0.0463	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.185	U
91-20-3	Naphthalene		0.0463	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	U
129-00-0	Pyrene	0.0563	0.0463	0.185	J

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	15.38	33.2	34 - 167	*
Terphenyl-d14	46.30	6.514	14.1	34 - 167	*

Rev Qual
UJ 7a

7a

ANALYSIS DATA SHEET

MW-04-04

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-07	File ID:	0417807.D
Sampled:	04/12/11 16:40	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 06:04
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002
				Instrument:	MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q	Rev Qual
83-32-9	Acenaphthene		0.0463	0.185	U	UJ 7a
208-96-8	Acenaphthylene		0.0463	0.185	U	
120-12-7	Anthracene		0.0463	0.185	U	
56-55-3	Benzo(a)anthracene		0.0463	0.185	U	
50-32-8	Benzo(a)pyrene		0.0463	0.185	U	
205-99-2	Benzo(b)fluoranthene		0.0463	0.185	U	
191-24-2	Benzo(g,h,i)perylene		0.0463	0.185	U	
207-08-9	Benzo(k)fluoranthene		0.0463	0.185	U	
218-01-9	Chrysene		0.0463	0.185	U	
53-70-3	Dibenz(a,h)anthracene		0.0463	0.185	U	
206-44-0	Fluoranthene		0.0463	0.185	U	
86-73-7	Fluorene		0.0463	0.185	U	
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.185	U	
90-12-0	1-Methylnaphthalene	0.414	0.0463	0.185		U 6C
91-57-6	2-Methylnaphthalene	0.110	0.0463	0.185	J	U 6C
91-20-3	Naphthalene		0.0463	0.185	U	UJ 7a
85-01-8	Phenanthrene		0.0463	0.185	U	UJ 7a
129-00-0	Pyrene	0.139	0.0463	0.185	J	J 7a

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	7.022	15.2	34 - 167	*
Terphenyl-d14	46.30	2.250	4.86	34 - 167	*

ANALYSIS DATA SHEET

MW-05-05

Laboratory: Empirical Laboratories, LLC SDG: 1104178

Client: SES, Inc. (S750) Project: FTS UST 2008-2010

Matrix: Ground Water Laboratory ID: 1104178-04 File ID: 0417804.D

Sampled: 04/12/11 14:25 Prepared: 04/18/11 14:45 Analyzed: 04/24/11 03:59

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1D16012 Sequence: 1D11510 Calibration: 1112002 Instrument: MS-BNA4

Rw Qual U

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0463	0.185	U
208-96-8	Acenaphthylene		0.0463	0.185	U
120-12-7	Anthracene		0.0463	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.185	U
218-01-9	Chrysene		0.0463	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.185	U
206-44-0	Fluoranthene		0.0463	0.185	U
86-73-7	Fluorene		0.0463	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.185	U
91-20-3	Naphthalene		0.0463	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	U
129-00-0	Pyrene		0.0463	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	29.80	64.4	34 - 167	
Terphenyl-d14	46.30	39.57	85.5	34 - 167	

ANALYSIS DATA SHEET

MW-05-059

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-05	File ID:	0417805.D
Sampled:	04/12/11 14:25	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 04:25
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002

Instrument: MS-BNA4

Res Qual u

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0467	0.187	U
208-96-8	Acenaphthylene		0.0467	0.187	U
120-12-7	Anthracene		0.0467	0.187	U
56-55-3	Benzo(a)anthracene		0.0467	0.187	U
50-32-8	Benzo(a)pyrene		0.0467	0.187	U
205-99-2	Benzo(b)fluoranthene		0.0467	0.187	U
191-24-2	Benzo(g,h,i)perylene		0.0467	0.187	U
207-08-9	Benzo(k)fluoranthene		0.0467	0.187	U
218-01-9	Chrysene		0.0467	0.187	U
53-70-3	Dibenz(a,h)anthracene		0.0467	0.187	U
206-44-0	Fluoranthene		0.0467	0.187	U
86-73-7	Fluorene		0.0467	0.187	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0467	0.187	U
90-12-0	1-Methylnaphthalene		0.0467	0.187	U
91-57-6	2-Methylnaphthalene		0.0467	0.187	U
91-20-3	Naphthalene		0.0467	0.187	U
85-01-8	Phenanthrene		0.0467	0.187	U
129-00-0	Pyrene		0.0467	0.187	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	29.66	63.5	34 - 167	
Terphenyl-d14	46.73	43.52	93.1	34 - 167	

ANALYSIS DATA SHEET

MW-06-06

Laboratory:	Empirical Laboratories, LLC			SDG:	1104178
Client:	SES, Inc. (S750)			Project:	FTS UST 2008-2010
Matrix:	Ground Water	Laboratory ID:	1104178-06	File ID:	0417806.D
Sampled:	04/12/11 14:50	Prepared:	04/18/11 14:45	Analyzed:	04/24/11 04:49
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1D16012	Sequence:	1D11510	Calibration:	1112002

Instrument: MS-BNA4

RW Qual u

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.100	0.400	U
208-96-8	Acenaphthylene		0.100	0.400	U
120-12-7	Anthracene		0.100	0.400	U
56-55-3	Benzo(a)anthracene		0.100	0.400	N, U
50-32-8	Benzo(a)pyrene		0.100	0.400	U
205-99-2	Benzo(b)fluoranthene		0.100	0.400	U
191-24-2	Benzo(g,h,i)perylene		0.100	0.400	N, U
207-08-9	Benzo(k)fluoranthene		0.100	0.400	U
218-01-9	Chrysene		0.100	0.400	U
53-70-3	Dibenz(a,h)anthracene		0.100	0.400	N, U
206-44-0	Fluoranthene		0.100	0.400	U
86-73-7	Fluorene		0.100	0.400	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.100	0.400	N, U
90-12-0	1-Methylnaphthalene		0.100	0.400	U
91-57-6	2-Methylnaphthalene		0.100	0.400	U
91-20-3	Naphthalene		0.100	0.400	U
85-01-8	Phenanthrene		0.100	0.400	U
129-00-0	Pyrene		0.100	0.400	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	100.0	69.62	69.6	34 - 167	
Terphenyl-d14	100.0	78.97	79.0	34 - 167	

1308087

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13563

12

Send Results to:	Send Invoice to:
Name DOUG HAWN	Name
Company SCF	Company
Address 1006 FLOYD CULLER	Address
City OAK RIDGE	City
State, Zip TN, 37830	State, Zip
Phone (865)481-7837	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: RLDG - 419	**Sampler's (Signature):**

Analysis Requirements: VOC (8260) - BTEX, MTBE; PAH (8270D) - LL

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	VOC (8260) - BTEX, MTBE	PAH (8270D) - LL	Comments	No. of Bottles	Lab Use Only Containers/Pres.
05	08/08/13 0800	TRIP 022269	WATER	X	*	VOC ONLY LAB PREPARED	2	
06	08/08/13 0845	FB-01	WATER	X	X	FB-01	5	
07	08/08/13 1032	MW-09A D.H.	WATER	X	X			

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time 08/08/13 1700	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time 8/9/13 0930	Temperature 2.3 INT	

REMARKS:

LEVEL III DATA PACKAGE

Contact Doug Hawn upon receipt

Details:

Page 1 of 1

Cooler No. 1 of

Date Shipped 08/08/13

Shipped By FedEx

Turnaround NORMAL

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

1308087

1308087

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

13143

11

Send Results to:	Send Invoice to:
Name DOUG HAUN	Name
Company SLF	Company
Address 1006 FLOYD CULLER	Address
City OAK RIDGE	City
State, Zip TN	State, Zip
Phone (865) 481-7837	Phone
Fax	Fax
E-mail	E-mail
Project No./Name: BLDG 419	Sampler's (Signature):

Analysis Requirements: VOC (8260) BTEX, MTBE; PAH (8270D) - LL

Lab Use Only:

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals Intact	Y	N	NA
Containers Intact	Y	N	NA

Airbill #:

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	VOC (8260) BTEX, MTBE	PAH (8270D) - LL	Comments	No. of Bottles	Lab Use Only Containers/Pres.
01	08/08/13 0900	TRIP 022608	WATER	X		LAB PREPARED	2	
02	08/08/13 0930	MW-7	↓	X	X	MS/MSD	10	
03	08/08/13 1230	MW-8	↓	X	X		5	
04	08/08/13 1230	MW-89	WATER	X	X		5	

	Date/Time		
Sample Kit Prep'd by: (Signature)		Received By: (Signature)	
Relinquished by: (Signature)	08/08/13 1700	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	8/9/13 0830	Temperature 2.2 INT. 2.8 [illegible] 8/9/13	

REMARKS:

* LEVEL III DATA PACKAGE

CONTACT DOUG HAUN UPON RECEIPT

Details:

Page 1 of 1

Cooler No. 1 of 1

Date Shipped 08/08/13

Shipped By FEDEX

Turnaround NORMAL

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

1308087

ANALYSIS DATA SHEET

MW-7

Laboratory:	Empirical Laboratories, LLC		SDG:	1308087	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Water	Laboratory ID:	1308087-02	File ID:	0808702.D
Sampled:	08/08/13 09:30	Prepared:	08/10/13 15:45	Analyzed:	08/10/13 15:45
Solids:		Preparation:	5030B	Dilution:	1
Batch:	3H10001	Sequence:	3H22402	Calibration:	3205001
Instrument:	MS-VOA5				

Rev Qual U

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.63	95.4	75 - 120	
Dibromofluoromethane	30.00	30.04	100	85 - 115	
1,2-Dichloroethane-d4	30.00	29.20	97.3	70 - 120	
Toluene-d8	30.00	29.84	99.5	85 - 120	

ANALYSIS DATA SHEET

MW-8

Laboratory:	Empirical Laboratories, LLC			SDG:	1308087
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Water	Laboratory ID:	1308087-03	File ID:	0808703.D
Sampled:	08/08/13 12:30	Prepared:	08/10/13 16:13	Analyzed:	08/10/13 16:13
Solids:		Preparation:	5030B	Dilution:	1
Batch:	3H10001	Sequence:	3H22402	Calibration:	3205001
Instrument:	MS-VOA5				

Raw Qual

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.81	96.0	75 - 120	
Dibromofluoromethane	30.00	29.35	97.8	85 - 115	
1,2-Dichloroethane-d4	30.00	29.31	97.7	70 - 120	
Toluene-d8	30.00	30.18	101	85 - 120	

ANALYSIS DATA SHEET

MW-89

Laboratory: Empirical Laboratories, LLC SDG: 1308087

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Water Laboratory ID: 1308087-04 File ID: 0808704.D

Sampled: 08/08/13 12:30 Prepared: 08/10/13 16:40 Analyzed: 08/10/13 16:40

Solids: Preparation: 5030B Dilution: 1

Batch: 3H10001 Sequence: 3H22402 Calibration: 3205001 Instrument: MS-VOA5

Rev 2 ref

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

u ↓

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.66	95.5	75 - 120	
Dibromofluoromethane	30.00	30.06	100	85 - 115	
1,2-Dichloroethane-d4	30.00	29.57	98.6	70 - 120	
Toluene-d8	30.00	30.03	100	85 - 120	

ANALYSIS DATA SHEET

D-H

MW-9 A

Laboratory:	Empirical Laboratories, LLC			SDG:	1308087
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Water	Laboratory ID:	1308087-07	File ID:	0808707.D
Sampled:	08/08/13 10:30	Prepared:	08/10/13 17:08	Analyzed:	08/10/13 17:08
Solids:		Preparation:	5030B	Dilution:	1
Batch:	3H10001	Sequence:	3H22402	Calibration:	3205001
Instrument:	MS-VOA5				

Rev Qual

U

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 5

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.24	94.1	75 - 120	
Dibromofluoromethane	30.00	30.20	101	85 - 115	
1,2-Dichloroethane-d4	30.00	29.49	98.3	70 - 120	
Toluene-d8	30.00	29.65	98.8	85 - 120	

ANALYSIS DATA SHEET

MW-7

Laboratory: Empirical Laboratories, LLC SDG: 1308087

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Water Laboratory ID: 1308087-02 File ID: 0808702.D

Sampled: 08/08/13 09:30 Prepared: 08/15/13 13:38 Analyzed: 08/22/13 23:25

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 3H15004 Sequence: 3H23805 Calibration: 3217001 Instrument: MS-BNA4

Raw Qual

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene	**0.0633**	0.0500	0.100	0.200	J
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.100	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	31.86	63.7	50 - 110	
Terphenyl-d14	50.00	33.06	66.1	50 - 135	

ANALYSIS DATA SHEET

MW-8

Laboratory:	Empirical Laboratories, LLC		SDG:	1308087	
Client:	SES, Inc. (S750)		Project:	Fort Stewart	
Matrix:	Water	Laboratory ID:	1308087-03	File ID:	0808703.D
Sampled:	08/08/13 12:30	Prepared:	08/15/13 13:38	Analyzed:	08/23/13 00:54
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	3H15004	Sequence:	3H23805	Calibration:	3217001	Instrument:	MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene	**0.0474**	0.0463	0.0926	0.185	J
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0926	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Rev Qual

U

J

U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	31.13	67.2	50 - 110	
Terphenyl-d14	46.30	27.00	58.3	50 - 135	

ANALYSIS DATA SHEET

MW-89

Laboratory: Empirical Laboratories, LLC SDG: 1308087

Client: SES, Inc. (S750) Project: Fort Stewart

Matrix: Water Laboratory ID: 1308087-04 File ID: 0808704.D

Sampled: 08/08/13 12:30 Prepared: 08/15/13 13:38 Analyzed: 08/23/13 01:24

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 3H15004 Sequence: 3H23805 Calibration: 3217001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q	Rev Qual
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U	U
206-44-0	Fluoranthene	**0.0556**	0.0463	0.0926	0.185	J	J
86-73-7	Fluorene		0.0463	0.0926	0.185	U	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U	U
85-01-8	Phenanthrene		0.0926	0.185	0.370	U	U
129-00-0	Pyrene	**0.0582**	0.0463	0.0926	0.185	J	J

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.86	66.7	50 - 110	
Terphenyl-d14	46.30	23.92	51.7	50 - 135	

ANALYSIS DATA SHEET

D.H.

MW-9A

Laboratory:	Empirical Laboratories, LLC			SDG:	1308087
Client:	SES, Inc. (S750)			Project:	Fort Stewart
Matrix:	Water	Laboratory ID:	1308087-07	File ID:	0808707.D
Sampled:	08/08/13 10:30	Prepared:	08/15/13 13:38	Analyzed:	08/23/13 02:24
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	3H15004	Sequence:	3H23805	Calibration:	3217001
				Instrument:	MS-BNA4

Rev Qual

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0481	0.0962	0.192	U
208-96-8	Acenaphthylene		0.0481	0.0962	0.192	U
120-12-7	Anthracene		0.0481	0.0962	0.192	U
56-55-3	Benzo(a)anthracene		0.0481	0.0962	0.192	U
50-32-8	Benzo(a)pyrene		0.0481	0.0962	0.192	U
205-99-2	Benzo(b)fluoranthene		0.0481	0.0962	0.192	U
191-24-2	Benzo(g,h,i)perylene		0.0481	0.0962	0.192	U
207-08-9	Benzo(k)fluoranthene		0.0481	0.0962	0.192	U
218-01-9	Chrysene		0.0481	0.0962	0.192	U
53-70-3	Dibenz(a,h)anthracene		0.0481	0.0962	0.192	U
206-44-0	Fluoranthene		0.0481	0.0962	0.192	U
86-73-7	Fluorene		0.0481	0.0962	0.192	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0481	0.0962	0.192	U
91-20-3	Naphthalene		0.0481	0.0962	0.192	U
85-01-8	Phenanthrene		0.0962	0.192	0.385	U
129-00-0	Pyrene		0.0481	0.0962	0.192	U

Total Target Analytes Reported: 16

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	48.08	41.62	86.6	50 - 110	
Terphenyl-d14	48.08	36.88	76.7	50 - 135	

Validation Report

Fort Stewart
Soils and
Groundwater Sampling
Building 419
Ft Stewart, Georgia

Prepared by DataChek

September 8, 2013

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ACRONYMS AND ABBREVIATIONS

%	Percent
%D	percent difference
BTEX	benzene, toluene, ethylbenzene, and xylenes
CB	calibration blank
CCAL	continuing calibration
CCV	continuing calibration verification
COC	chain of custody
DRO	diesel range organic
EPH	extractible petroleum hydrocarbons
ER	equipment rinsate
FD	field duplicate
GRO	gasoline range organic
ICAL	initial calibration
ICL	instrument calibration limit
IS	internal standard
J	estimated value
LCS	Laboratory control sample
MB	method blank
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
MTBE	methyl tert butyl ether
PAH	polynuclear aromatic hydrocarbon
PARCC	precision, accuracy, representativeness, comparability, completeness
PRO	petroleum range organics
QC	quality control
R	Rejected
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
RSD	relative standard deviation
SDG	sample delivery group
TB	trip blank
TPH	total petroleum hydrocarbons
TCE	Trichloroethene
U	not detected
UJ	not detected; associated value is an estimate
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon

1. INTRODUCTION

The data validation of 9 soil and 4 ground-water samples from the Building 419 site sampling project, Fort Stewart, GA was completed in September 2013. Level III data validation was performed on all samples collected during the sampling activities. All the samples have the following label: Stage_3_Validation_Manual (S3VM). The chemical parameters for which the samples were analyzed are identified below:

- BTEX/MTBE Organic Compounds (VOC) by SW846 8260B;
- PAH Semi-Volatile Organic Compounds (SVOC) by SW846 8270C; and
- DRO/GRO (Soils) by SW846 8015M.

Empirical Laboratories, Nashville, TN, produced the analytical data and the sample numbers for each analyte group are shown below:

Analyte Group	*Method*	*Medium*	*Number of Samples*	*Number of SDGs*
BTEX/MTBE	SW846 8260B	Soils	9	2
		Ground-water	4	1
PAHs	SW846 8270C	Soils	9	2
		Ground-water	4	1
DRO	SW846 8015M	Soils	9	2

2. PROCEDURES

The validation of the BTEX/MTBE and the PAH sample data followed the logic identified in *The CLP National Functional Guidelines for Organic Data Review (June 2008)*. For the DRO where the analytical method is not specifically addressed by the CLP guidelines, the validation was based on the method requirements and technical judgment, following the logic of the CLP validation guidelines. The data were labeled according to *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (January, 2009).*

The data validation qualifiers (Table 5-1) applied by the reviewer were recorded in a column adjacent and to the right of the laboratory results. A data validation reason code was also added to each of the reviewer's qualifiers to provide the user with a means to identify which results were qualified and the reason for the qualifiers (Table 5-2).

3. SUMMARY OF DATA VALIDATION FINDINGS

This data validation report reflects the data validation findings for samples associated with the Turner Air Field site sampling. The validated data set consisted of 9 soil and 4 ground-water samples and was validated at Level III. Overall the data was of excellent quality, and all measurements required to satisfy the project quality control (QC) objectives (precision, accuracy, representativeness, comparability, and completeness) were met. Each of these measures and specific data qualifications are discussed below.

Precision: Precision is a measure of the agreement between duplicate sample measurements of the same quantity and is reflected in the relative percent difference (RPD) between spikes and the RPD for the field duplicate analysis. Precision for the Turner Air Field site samples was measured at:
Soils: 96.6 %.
Ground-water: 100%
Total: 98.0 %

Accuracy: Accuracy is measured by the results from the recovery of known amounts of compounds or elements from laboratory control samples (LCS), matrix spikes (MS), and surrogate recoveries. The overall measure of accuracy was calculated by comparing the number of spike recoveries that exceeded the laboratory limits by the total number of LCS, MS and surrogate spikes. For all analyte groups accuracy was measured at:
Soils: 89.2 %
Ground-water: 100%
Total: 92.6 %

Representativeness: The measures of representativeness – sample handling, analytical blank analysis, field blanks – were met for all sites. Designated analytical protocols were followed. Holding times were met for all analyses. Overall, no major problems were identified resulting from analytical failure.

Comparability: All data were analyzed using appropriate approved methods of analysis. All data results were reported correctly and in standard units

Completeness: Completeness is the amount of valid data compared to the planned amount and is expressed as a percent of the usable data points divided by the total number of analytes for each parameter analyzed.
Soils: 212 data points 0 rejected 100%.

Ground-water: 84 data points 0 rejected 100%
Total: 296 data points 0 rejected 100%.

Several sample results for the both the organic and inorganic compounds/elements were assigned a "J" qualifier by the laboratory, which designated that the sample concentration was between the method detection limit and the reporting limit. Due to the uncertainty associated with this region of quantification, the validation reviewer retained the "J" qualifier to indicate an estimated quantity.

Data validation summaries, which function as worksheets for the validation task, are included for each parameter in each data package. The following section highlights the key findings of the data validation for each analysis.

4. ANALYSIS-SPECIFIC DATA VALIDATION SUMMARIES

4.1 BTEX/MTBE BY SW846 8260B

4.1.1 SOILS

Nine soil samples were analyzed for BTEX/MTBE organic compounds. Overall, the data are of good quality and are usable as reported by the laboratory with the exceptions noted below. Data were reviewed for the following:

Holding Times/Sample Condition. Holding times were met for all sample analyses. All samples were received in acceptable condition.

Initial Calibration and Continuing Calibration. All initial calibrations (ICAL) met the QC criteria. The continuing calibration verification (CCVs) percent difference for xylene associated with SDG 1308051 was above the laboratory QC limit, but below the guidelines limit of 30%. The reviewer did not add qualifiers to the sample results. The other SDG results were within the project QC criteria.

Blanks. No contaminants were present in any of the method, or calibration blanks. No qualifiers were added.

Surrogate Recoveries. In SDG 1308012 the original surrogate results for samples SB-22-0103 and SB-23-0103 had surrogate recoveries outside the QC limits. Both samples had dilutions analyzed and the

surrogate result for SB-23-0103was acceptable. The original sample results were rejected. Sample SB-22-0103 had a low toluene-d8 recovery in the diluted sample and all results were qualified as "UJ". Sample SB-229-0103 had a high toluene-d8 recovery, but all sample results were non-detects and no qualifiers were required..

Matrix Spike/Matrix Spike Duplicate (MS /MSD). The MS recoveries were below the QC criteria in SDG 1308012 for the BTEX compounds, and the MSD recoveries for toluene, ethylbenzene and xylene were also below the criteria. Since all the other QC criteria were acceptable no qualifier was required.

Laboratory Control Sample (LCS). All LCS/LCSD recoveries were within the QC limits except the LCSD for xylene in SDG 1308051. The LCS for this compound was acceptable and the compound was a non-detect in both samples. No qualifiers were required.

Internal Standards (IS). In SDG 1308012, 1,4-dce-d4 internal standard was below the QC limit for 4 of the samples. However none of the reported compounds were associated with that standard and no qualifiers were needed. All other IS area count recoveries were within the QC limits as were the retention times. No qualifiers were required.

Field Duplicates. The field duplicate RPD were within the QC limits .

Quantification. All sample results were acceptable as qualified.

4.1.2 GROUND-WATER

Four ground-water samples were analyzed for the full array of volatile organic compounds. Overall, the data are of good quality and are usable as reported by the laboratory with the exceptions noted below. Data were reviewed for the following:

Holding Times/Sample Condition. Holding times were met for all sample analyses. All samples were received in acceptable condition

Initial Calibration and Continuing Calibration. All initial calibrations (ICAL) and continuing calibration (CCALs) associated with the project samples met the QC criteria.

Blanks. None of the QC blanks in the SDG had detected compounds and no qualifiers were needed.

Surrogate Recoveries. All surrogates recoveries were within the limits for sample.

Matrix Spike/Matrix Spike Duplicate (MS /MSD). All the MS/MSD recoveries were acceptable.

Laboratory Control Sample (LCS). All LCS/LCSD recoveries were within the QC limits.

Internal Standards (IS). All IS area count recoveries were within the QC limits as were the retention times. No qualifiers were required.

Field Duplicates. The field duplicate RPDs were within the QC limits.

Quantification. All samples were acceptable as reported.

4.2 PAHs BY SW846 8270C

4.2.1 SOILS

Nine soil samples were analyzed for PAH semi-volatile organic compounds. Overall, the data are of good quality and are usable as reported by the laboratory with the exceptions noted below. Data were reviewed for the following:

Holding Times/Sample Condition. Holding times were met for all sample analyses. All samples were received in acceptable condition.

Initial Calibration and Continuing Calibration. All initial calibrations (ICAL) and continuing calibration (CCALs) percent differences associated with the project samples met the QC criteria.

Blanks. In SDG 1308051, benzo(ghi)perylene and indeno(123-cd)pyrene were present in the method blank. In the samples these compounds were at levels <5X the blank amount so the results in both samples were qualified as "UB". No contaminants were present in the other SDG's (1308012) method or calibration blanks and no qualifiers were required

Surrogate Recoveries. All the surrogate recoveries were within the QC limits and no qualifiers were added to the sample results.

Matrix Spike/Matrix Spike Duplicate (MS /MSD). Four compounds had high recoveries for the SDG 1308012 MS, but all were within the limit for the MSD. These compounds were not qualified since all the other QC criteria were within the limits.

Laboratory Control Sample (LCS). The LCS/LCSD recoveries were within the QC limits so no qualifiers were required.

Internal Standards (IS). All IS area count recoveries were within the QC limits. The retention times were acceptable for all samples.

Field Duplicates. In SFG 1308012 high field duplicate RPDs for fluoranthene and pyrene resulted in "J" qualifiers for those two compounds in samples SB-22-0103 and SB-229-0103.

Quantification. All samples results are acceptable as qualified.

4.2.2 GROUND-WATER

Four ground-water samples were analyzed for the full array of semi-volatile organic compounds. . A number of the samples required dilutions to bring all compound results into the instrument calibration limits. Overall, the data are of good quality and are usable as reported by the laboratory with the exceptions noted below. Data were reviewed for the following:

Holding Times/Sample Condition. Holding times were met for all sample analyses. All samples were received in acceptable condition.

Initial Calibration and Continuing Calibration. All initial calibrations (ICAL) and continuing calibration (CCALs) associated with the project samples met the QC criteria.

Blanks. None of the QC blanks associated with the SDGs had detected compounds and no qualifiers were needed.

Surrogate Recoveries. All recovery of the surrogates were within the QC criteria

Matrix Spike/Matrix Spike Duplicate (MS /MSD). The MS/MSD results were acceptable and the other QC criteria were within limits. As such no qualifiers were added

Laboratory Control Sample (LCS). All LCS/LCSD recoveries were within the QC limits.

Internal Standards (IS). All IS area count recoveries were within the QC limits as were the retention times. No qualifiers were required.

Field Duplicates. The field duplicate RPDs were within the QC limits.

Quantification. All samples were acceptable as reported.

4.3 DRO BY SW 846 8015M

4.3.1 SOILS

Overall, the data are of good quality and are usable as reported. The nine soil samples were analyzed for Diesel range organics (DRO). Data were reviewed for the following:

Holding Times/Sample Condition. All samples were received in acceptable conditions.

Initial and Continuing Calibration. The ICAL and CCAL analyses were within the QC limits.

Blanks. No contamination was noted in the calibration or method blanks.

Surrogate Recoveries. Surrogate results were diluted out in samples SB-22-0103 and SB-23-0103 (SDG 1308012). All the other sample results were within limits so no qualifiers were needed.

Matrix Spike/Matrix Spike Duplicates/Duplicates. The MS/MSD results (SDG 1308012) were below the QC limits but since all other QC criteria, no qualifiers were added.

Laboratory Control Sample (LCS). All the LCS/LCSD recoveries and the RPDs were within the QC limits, so no qualifiers were required.

Field Duplicates. The RPDs in the field duplicate analysis were acceptable.

Quantification. All results were acceptable as qualified

5. DATA QUALIFIER DEFINITIONS

5.1 DATA QUALIFIER DEFINITIONS

Table 5-1 Data Qualifier Definitions

Qualifier	Definition
R	The reported sample results are rejected due to the following: • Severe deficiencies in the supporting quality control data. • Anomalies noted in the sampling and/or analysis process that could affect the validity of the reported data. • The presence or absence of the constituent cannot be verified based on the data provided. • To indicate not to use a particular result in the event of a reanalysis.
U	The analyte was analyzed for, but was not detected above the reported sample quantification limit.
UB	Indicates that the analyte was found in the associated method blank as well as the sample at above the QC level. Sample results were qualified in accordance with the CLP guidelines for contamination found in the blanks.
IJ	The compound/analyte was positively identified; but the result was below the lowest calibration limit (>MDL but <RDL).
J	The reported value is an estimated concentration of the constituent detected in the sample. One or more of the associated QC criteria was outside the stated limits.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

5.2 DATA VALIDATION REASON CODES

During the review process, a data validation reason code was added to each of the reviewer's qualifiers to allow the user to identify which results were qualified and the reason(s) for the qualifiers. Reason codes are listed and defined in Table 5-2.

Table 5-2 Data Validation Reason Codes

Reason Code	Definition
01	Sample received outside of 4+/-2 degrees Celsius
01A	Improper sample preservation

02	Holding time exceeded
02A	Extraction
02B	Analysis
03	Instrument performance – outside criteria
03A	BFB
03B	DFTPP
03C	DDT and/or Endrin % breakdown exceeds criteria
03D	Retention time windows
03E	Resolution
04	Initial calibration results outside specified criteria
04A	Compound mean RRF QC criteria not met
04B	Individual % RSD criteria not met
04C	Correlation coefficient >0.995
05	Continuing calibration results outside specified criteria
05A	Compound mean RRF QC criteria not met
05B	Compound % D QC criteria not met
06	Result qualified as a result of the 5x/10x blank correction
06A	Method or preparation blank
06B	ICB or CCB
06C	ER
06D	TB
06E	FB
07	Surrogate recoveries outside control limits
07A	Sample
07B	Associated method blank or LCS
08	MS/MSD/Duplicate results outside criteria
08A	MS and/or MSD recovery not within control limits (accuracy)
08B	% RPD outside acceptance criteria (precision)
09	Post digestion spike outside criteria (GFAA)
10	Internal standards outside specified control limits
10A	Recovery
10B	Retention time
11	Laboratory control sample recoveries outside specified limits
11A	Recovery
11B	% RPD (if run in duplicate)
12	Interference check standard
13	Serial dilution
14	Tentatively identified compounds
15	Quantification
16	Multiple results available; alternate analysis preferred
17	Field duplicate RPD criteria is exceeded
18	Percent difference between original and second column exceeds QC criteria
19	Professional judgment was used to qualify the data
20	Pesticide clean-up checks
21	Target compound identification

22	Radiological calibration
23	Radiological quantification
24	Reported result and/or lab qualifier revised to reflect validation findings

% = percent
%D = percent difference
BFB = bromofluorobenzene
CCB = continuing calibration blank
DFTPP = decafluorotriphenylphosphine
ER = equipment rinseate
FB = field blank
GFAA = graphite furnace atomic absorption
ICB = initial calibration blank
LCS = laboratory control sample
MS = matrix spike
MSD = matrix spike duplicate
QC = quality control
RPD = relative percent difference
RRF = relative response factor
RSD = relative standard deviation
TB = trip blank

6. REFERENCES

EPA (U.S. Environmental Protection Agency), June 2008. OWSER 9240.1-48 *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA-540-R-08-01).*

EPA (U.S. Environmental Protection Agency), January 2009. OSWER 9200-1-85. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. (EPA-540/R-08-005).*

ANALYTICAL DATA PACKAGE
SDG # 1308012

PROJECT NAME: FTS-UST 208/209 IDWs
PROJECT LOCATION: FORT STEWART, GA

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Original Report Date: August 26, 2013
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 236

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

L-A-B Accredited Certificate Number L2226

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following surrogates exceeded criteria:
Bromofluorobenzene with a negative bias in 1308012-02RE1 and -05RE1
Dibromofluoromethane with a negative bias in 3H06019-MS1
Toluene-d8 with a negative bias in 1308012-02 and with a positive bias in 1308012-02RE1, -03RE1, -05RE1
Note – Samples 1308012-02 and -05 include a analysis from the Methanol vial due to low/high surrogate biases.

The following matrix spikes exceeded criteria:
3H02009-MS1/MSD1 (1308012-05) with a negative bias for Benzene, Ethylbenzene, Toluene, and Xylenes (total)
3H06019-MS1/MSD1 (1308012-05RE1) with a negative bias for Ethylbenzene, Toluene, and Xylenes (total)

The following internal standards exceeded criteria:
1,4-Dichlorobenzene-d4 with a negative bias in 1308012-02RE1, -03RE1, -05RE1, -06RE1, and 3H06019-MS1; note – reported compounds are associated to this internal standard

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D PAH:
Note – Sample 1308012-09 is analyzed at a 5x only due to apparent sample matrix in the sample extract. No lower analysis was able to be performed.

The following matrix spikes exceeded criteria:
3H07015-MS2 (1308012-05) with a positive bias for Benzo(a)pyrene, Benzo(b)fluoranthene, Fluoranthene, and Pyrene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8015C DRO:
Note – Samples 1308012-02 (5x), -03 (2x), -05 and associated matrix spikes (5x), -08 (5x), and -09 (2x) were analyzed at the dilutions indicated due to apparent sample matrix in the sample extracts. No lower analyses were able to be performed. The surrogate o-Terphenyl was diluted out in samples 1308012-02, -05, 3H08006-MS1, and –MSD1.

The following matrix spikes exceeded criteria:
3H08006-MS1/MSD1 (1308012-05) with a negative bias for Diesel Range Organics

The following initial calibration verifications exceeded criteria:
3H23113-ICV1 with a positive bias for Diesel Range Organics

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound.

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ.

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters

BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations



ANALYTICAL DATA PACKAGE
SDG # 1308051

PROJECT NAME: FORT STEWART
PROJECT LOCATION: FORT STEWART, GA

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Original Report Date: August 29, 2013
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THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

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Sample Delivery Group Case Narrative

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All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Headspace was observed in sample Trip 02187.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

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A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following surrogates exceeded criteria:
Bromofluorobenzene with a positive bias in 3H13015-BS1 and –BLK1

The following batch spikes exceeded criteria:
3H13015-BSD1 with a positive bias for Xylenes (total)

The following continuing calibration verifications exceeded criteria:
3H22612-CCV1 with a positive bias for Xylenes (total) and Bromofluorobenzene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D PAH:
The following blank have positive results:
3H09017-BLK2 for Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8015C DRO:
Note – Sample 1308051-02 was analyzed at a 2x only due to apparent sample matrix in the sample extracts. No lower analysis was able to be performed.

The following initial calibration verifications exceeded criteria:
3H23113-ICV1 with a positive bias for Diesel Range Organics

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
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Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ANALYTICAL DATA PACKAGE
SDG # 1308087

PROJECT NAME: FORT STEWART
PROJECT LOCATION: FORT STEWART, GA

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Original Report Date: August 29, 2013
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 87

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

L-A-B Accredited Certificate Number L2226

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
No anomalies or deviations are noted.

SW8270D PAH:
No anomalies or deviations are noted.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. For Metals, the qualifier indicates that the serial dilution was outside of the control limits and the compound should be considered estimated due to the presence of interference.

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ.

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity or an approved technical designee is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
No anomalies or deviations are noted.

SW8270C:
The surrogates 2-Fluorobiphenyl and Terphenyl-d14 exceeded criteria with a negative bias in samples 1104178-01, -02, and -07. Samples 1104178-02 and 1104178-07 recovered less than 10% for Terphenyl-d14. Due to this recovery, sample 1104178-02 was reanalyzed and recovery was confirmed. Matrix was apparent in the chromatogram for sample 1104178-02. The formation of an emulsion was noted in the extraction log for these samples. Chromatograms are included for samples 1104178-02

and 1104178-07.

The matrix spikes associated to sample 1104178-06 exceeded recovery criteria with a negative bias for Benzo(a)anthracene and exceeded relative percent difference criteria for Benzo(g,h,i)perylene, Dibenz(a,h)anthracene, and Indeno(1,2,3-cd)pyrene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix.

EQL: The estimated quantitation limit (EQL), also known as Reporting Limit **(RL),** is defined as the estimated concentration above which quantitative results can be obtained with a specific degree of confidence. Empirical Laboratories defines the EQL to be at or near the lowest standard of the calibration curve.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound.

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL.

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the MDL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified

concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

APPENDIX VIII
UST CLOSURE FORM, CLOSURE FIGURES, AND CLOSURE DOCUMENATION

16 Foundation Drive | Savannah, GA 31408 | Office: 912-966-0686 Fax: 912-966-0076
Emergency Response: 1-800-852-8878
www.swsefr.com

Date: 03-05-08

SWS Project Summary Report

SWS Project #SAV0801267

Location: Bldg. 419 - Ft. Stewart – Hinesville, GA

Scope of Work:: Removal of Fuel Oil Contaminated Soil

SWS was contacted by Craig Christopher to look into cleaning up a Fuel Oil Spill that occurred when a fuel return line coming from the boiler in Building 419 & leading to an Underground Storage Tank (U.S.T.) developed a leak. It is uncertain exactly how long the line was leaking, but it was not discovered until the fuel began to seep out of cracks in the Asphalt & Concrete in the area behind building 419 where the U.S.T. was located. SWS came to the site & met with Craig Christopher to find out what the cleanup would require & also what Ft. Stewart would like to have done so a Job Proposal could be created per Craig Christopher's request.

January 15, 2008 the Job Proposal was given to Craig Christopher & later approved on January 18th. On January 24th, SWS came to the site with Whitaker labs & took boring samples & installed temporary monitoring wells to find out the extent of the contamination. On February 1st SWS began to mob in the equipment needed for the Soil Remediation. A 1000gal temporary fuel tank was also brought to the site so that the boiler could be used during the remediation.

On February 4th, SWS began removing the Asphalt & Concrete in the proposed dig area. The Concrete & Asphalt was disposed of by Ft. Stewart. During the removal, part of the U.S.T. was exposed & was found to run underneath a Concrete Slab that we originally were trying to save. After the Concrete & Asphalt was removed, we used our Vacuum Truck to transfer the fuel into the temporary fuel storage tank. After the fuel was transferred, construction fence was put up around the hole & the site was secured until we returned on the next day.

On February 5th, we began the soil removal. During the digging, a Terra Cotta Sewage pipe was damaged. Soil removal was stopped so that the pipe was not damaged any further. The sewage was not leaking out into the hole so the damaged section was covered

so that dirt would not fall into the pipe & the site was secured for the day. The pipe was repaired the next day. Twelve loads of contaminated soil were removed. On February 6th, we resumed digging & removed twelve more loads of contaminated soil.

On February 7th, we returned to the site to finish digging the proposed area. We could not dig any soil from the South Wall due to the wall caving in & compromising the stability of the cooling tower. We were at 8' feet and fuel was coming up from the bottom of the hole. Craig Christopher had us finish digging the proposed area and take samples of the walls & the bottom. SWS was finished with what we could do, Craig had the hole backfilled.

If there are any questions or concerns, I can be reached at any of the numbers below, or through e-mail.

Thank You,

Brian Clark
SWS First Response
16 Foundation Dr.
Savannah, GA
Office 912-966-0686
Cell 912-313-3329
mailto:brian.clark@swsefr.com

Analytical Environmental Services, Inc.

Date: *27-Feb-08*

CLIENT: Whitaker Labs
Project: Former PX
Lab ID: 0802C16-001

Client Sample ID: NORTH WALL
Collection Date: 2/7/2008 1:00:00 PM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
POLYAROMATIC HYDROCARBONS		**SW8270C**		**(SW3550)**			Analyst: **MC**
Naphthalene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Acenaphthylene	1.2	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
1-Methylnaphthalene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
2-Methylnaphthalene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Acenaphthene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Fluorene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Phenanthrene	1.0	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Anthracene	1.1	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Fluoranthene	3.0	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Pyrene	5.1	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Benz(a)anthracene	2.3	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Chrysene	2.6	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Benzo(b)fluoranthene	1.6	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Benzo(k)fluoranthene	1.6	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Benzo(a)pyrene	1.8	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Dibenz(a,h)anthracene	BRL	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Benzo(g,h,i)perylene	1.0	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Indeno(1,2,3-cd)pyrene	0.84	0.69		mg/Kg-dry	96651	2	2/22/2008 3:58 PM
Surr: 2-Fluorobiphenyl	84.4	59-120		%REC	96651	2	2/22/2008 3:58 PM
Surr: 4-Terphenyl-d14	90.4	63.9-120		%REC	96651	2	2/22/2008 3:58 PM
Surr: Nitrobenzene-d5	107	48.2-120		%REC	96651	2	2/22/2008 3:58 PM
VOLATILE ORGANICS		**SW8260B**		**(SW5035)**			Analyst: **PV**
Benzene	0.0014	0.0006		mg/Kg-dry	96644	1	2/21/2008 5:48 PM
Toluene	0.0043	0.0006		mg/Kg-dry	96644	1	2/21/2008 5:48 PM
Ethylbenzene	0.0022	0.0006		mg/Kg-dry	96644	1	2/21/2008 5:48 PM
Xylenes, Total	0.010	0.0011		mg/Kg-dry	96644	1	2/21/2008 5:48 PM
Surr: 4-Bromofluorobenzene	71.5	54.6-144		%REC	96644	1	2/21/2008 5:48 PM
PERCENT MOISTURE		**D2216**					Analyst: **VRA**
Percent Moisture	4.74	0		wt%		1	2/25/2008 5:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	E	Estimated (Value above quantitation range)
BRL	Below Reporting Limit	S	Surrogate Recovery outside accepted recovery limits
H	Holding times for preparation or analysis exceeded	Narr	See Case Narrative
N	Analyte not NELAC certified	NC	Not Confirmed
B	Analyte detected in the associated Method Blank		

Analytical Environmental Services, Inc.

Date: *27-Feb-08*

CLIENT: Whitaker Labs
Project: Former PX
Lab ID: 0802C16-002

Client Sample ID: SOUTH WALL
Collection Date: 2/7/2008 1:00:00 PM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
POLYAROMATIC HYDROCARBONS		**SW8270C**		**(SW3550)**			Analyst: **MC**
Naphthalene	1.9	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Acenaphthylene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
1-Methylnaphthalene	5.2	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
2-Methylnaphthalene	4.4	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Acenaphthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Fluorene	2.0	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Phenanthrene	2.2	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Pyrene	0.88	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Benz(a)anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Chrysene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Benzo(b)fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Benzo(k)fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Benzo(a)pyrene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Dibenz(a,h)anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Benzo(g,h,i)perylene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Indeno(1,2,3-cd)pyrene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 4:31 PM
Surr: 2-Fluorobiphenyl	105	59-120		%REC	96651	2	2/22/2008 4:31 PM
Surr: 4-Terphenyl-d14	84.1	63.9-120		%REC	96651	2	2/22/2008 4:31 PM
Surr: Nitrobenzene-d5	98.0	48.2-120		%REC	96651	2	2/22/2008 4:31 PM
VOLATILE ORGANICS		**SW8260B**		**(SW5035)**			Analyst: **PV**
Benzene	0.0049	0.0005		mg/Kg-dry	96644	1	2/21/2008 3:11 PM
Toluene	0.024	0.0005		mg/Kg-dry	96644	1	2/21/2008 3:11 PM
Ethylbenzene	BRL	0.0005		mg/Kg-dry	96644	1	2/21/2008 3:11 PM
Xylenes, Total	2.9	0.056		mg/Kg-dry	96656	50	2/21/2008 3:44 PM
Surr: 4-Bromofluorobenzene	895	54.6-144	S	%REC	96644	1	2/21/2008 3:11 PM
Surr: 4-Bromofluorobenzene	126	54.6-144		%REC	96656	50	2/21/2008 3:44 PM
PERCENT MOISTURE		**D2216**					Analyst: **VRA**
Percent Moisture	11.1	0		wt%		1	2/25/2008 5:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
BRL	Below Reporting Limit
H	Holding times for preparation or analysis exceeded
N	Analyte not NELAC certified
B	Analyte detected in the associated Method Blank
E	Estimated (Value above quantitation range)
S	Surrogate Recovery outside accepted recovery limits
Narr	See Case Narrative
NC	Not Confirmed

Analytical Environmental Services, Inc.

Date: *27-Feb-08*

CLIENT: Whitaker Labs
Project: Former PX
Lab ID: 0802C16-003

Client Sample ID: EAST WELL
Collection Date: 2/7/2008 1:00:00 PM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
POLYAROMATIC HYDROCARBONS		**SW8270C**		**(SW3550)**			Analyst: **MC**
Naphthalene	1.1	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Acenaphthylene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
1-Methylnaphthalene	2.7	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
2-Methylnaphthalene	2.6	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Acenaphthene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Fluorene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Phenanthrene	0.85	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Anthracene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Fluoranthene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Pyrene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Benz(a)anthracene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Chrysene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Benzo(b)fluoranthene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Benzo(k)fluoranthene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Benzo(a)pyrene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Dibenz(a,h)anthracene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Benzo(g,h,i)perylene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Indeno(1,2,3-cd)pyrene	BRL	0.79		mg/Kg-dry	96651	2	2/22/2008 5:03 PM
Surr: 2-Fluorobiphenyl	107	59-120		%REC	96651	2	2/22/2008 5:03 PM
Surr: 4-Terphenyl-d14	95.3	63.9-120		%REC	96651	2	2/22/2008 5:03 PM
Surr: Nitrobenzene-d5	180	48.2-120	S	%REC	96651	2	2/22/2008 5:03 PM
VOLATILE ORGANICS		**SW8260B**		**(SW5035)**			Analyst: **PV**
Benzene	0.0064	0.0006		mg/Kg-dry	96644	1	2/21/2008 3:41 PM
Toluene	0.031	0.0006		mg/Kg-dry	96644	1	2/21/2008 3:41 PM
Ethylbenzene	0.033	0.0006		mg/Kg-dry	96644	1	2/21/2008 3:41 PM
Xylenes, Total	3.6	0.085		mg/Kg-dry	96656	50	2/21/2008 4:46 PM
Surr: 4-Bromofluorobenzene	95.7	54.6-144		%REC	96656	50	2/21/2008 4:46 PM
Surr: 4-Bromofluorobenzene	716	54.6-144	S	%REC	96644	1	2/21/2008 3:41 PM
PERCENT MOISTURE		**D2216**					Analyst: **VRA**
Percent Moisture	16.7	0		wt%		1	2/25/2008 5:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
BRL	Below Reporting Limit
H	Holding times for preparation or analysis exceeded
N	Analyte not NELAC certified
B	Analyte detected in the associated Method Blank
E	Estimated (Value above quantitation range)
S	Surrogate Recovery outside accepted recovery limits
Narr	See Case Narrative
NC	Not Confirmed

Analytical Environmental Services, Inc.

Date: *27-Feb-08*

CLIENT: Whitaker Labs
Project: Former PX
Lab ID: 0802C16-004

Client Sample ID: WEST WALL
Collection Date: 2/7/2008 1:00:00 PM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
POLYAROMATIC HYDROCARBONS		**SW8270C**		**(SW3550)**			Analyst: **MC**
Naphthalene	BRL	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Acenaphthylene	4.6	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
1-Methylnaphthalene	BRL	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
2-Methylnaphthalene	BRL	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Acenaphthene	BRL	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Fluorene	BRL	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Phenanthrene	0.91	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Anthracene	3.2	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Fluoranthene	5.2	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Pyrene	9.3	0.76		mg/Kg-dry	96651	2	2/22/2008 5:35 PM
Benz(a)anthracene	5.6	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Chrysene	5.3	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Benzo(b)fluoranthene	7.2	0.76		mg/Kg-dry	96651	2	2/22/2008 5:35 PM
Benzo(k)fluoranthene	1.5	0.76		mg/Kg-dry	96651	2	2/22/2008 5:35 PM
Benzo(a)pyrene	4.6	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Dibenz(a,h)anthracene	0.54	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Benzo(g,h,i)perylene	1.9	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Indeno(1,2,3-cd)pyrene	1.7	0.38		mg/Kg-dry	96651	1	2/22/2008 7:12 PM
Surr: 2-Fluorobiphenyl	82.4	59-120		%REC	96651	1	2/22/2008 7:12 PM
Surr: 4-Terphenyl-d14	83.5	63.9-120		%REC	96651	1	2/22/2008 7:12 PM
Surr: Nitrobenzene-d5	83.9	48.2-120		%REC	96651	1	2/22/2008 7:12 PM
VOLATILE ORGANICS		**SW8260B**		**(SW5035)**			Analyst: **PV**
Benzene	BRL	0.0007		mg/Kg-dry	96644	1	2/21/2008 5:23 PM
Toluene	0.0011	0.0007		mg/Kg-dry	96644	1	2/21/2008 5:23 PM
Ethylbenzene	0.0023	0.0007		mg/Kg-dry	96644	1	2/21/2008 5:23 PM
Xylenes, Total	0.0097	0.0013		mg/Kg-dry	96644	1	2/21/2008 5:23 PM
Surr: 4-Bromofluorobenzene	61.4	54.6-144		%REC	96644	1	2/21/2008 5:23 PM
PERCENT MOISTURE		**D2216**					Analyst: **VRA**
Percent Moisture	12.8	0		wt%		1	2/25/2008 5:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	E	Estimated (Value above quantitation range)
BRL	Below Reporting Limit	S	Surrogate Recovery outside accepted recovery limits
H	Holding times for preparation or analysis exceeded	Narr	See Case Narrative
N	Analyte not NELAC certified	NC	Not Confirmed
B	Analyte detected in the associated Method Blank		

Analytical Environmental Services, Inc.

Date: *27-Feb-08*

CLIENT: Whitaker Labs
Project: Former PX
Lab ID: 0802C16-005

Client Sample ID: MIDDLE BOTTOM
Collection Date: 2/7/2008 1:00:00 PM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
POLYAROMATIC HYDROCARBONS		**SW8270C**		**(SW3550)**			Analyst: **MC**
Naphthalene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Acenaphthylene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
1-Methylnaphthalene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
2-Methylnaphthalene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Acenaphthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Fluorene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Phenanthrene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Pyrene	0.82	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Benz(a)anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Chrysene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Benzo(b)fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Benzo(k)fluoranthene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Benzo(a)pyrene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Dibenz(a,h)anthracene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Benzo(g,h,i)perylene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Indeno(1,2,3-cd)pyrene	BRL	0.74		mg/Kg-dry	96651	2	2/22/2008 6:07 PM
Surr: 2-Fluorobiphenyl	104	59-120		%REC	96651	2	2/22/2008 6:07 PM
Surr: 4-Terphenyl-d14	77.8	63.9-120		%REC	96651	2	2/22/2008 6:07 PM
Surr: Nitrobenzene-d5	118	48.2-120		%REC	96651	2	2/22/2008 6:07 PM
VOLATILE ORGANICS		**SW8260B**		**(SW5035)**			Analyst: **PV**
Benzene	0.0016	0.0005		mg/Kg-dry	96644	1	2/21/2008 4:32 PM
Toluene	0.0065	0.0005		mg/Kg-dry	96644	1	2/21/2008 4:32 PM
Ethylbenzene	0.0035	0.0005		mg/Kg-dry	96644	1	2/21/2008 4:32 PM
Xylenes, Total	0.17	0.058		mg/Kg-dry	96656	50	2/21/2008 1:39 PM
Surr: 4-Bromofluorobenzene	85.1	54.6-144		%REC	96656	50	2/21/2008 1:39 PM
Surr: 4-Bromofluorobenzene	211	54.6-144	S	%REC	96644	1	2/21/2008 4:32 PM
PERCENT MOISTURE		**D2216**					Analyst: **VRA**
Percent Moisture	10.4	0		wt%		1	2/25/2008 5:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
BRL	Below Reporting Limit
H	Holding times for preparation or analysis exceeded
N	Analyte not NELAC certified
B	Analyte detected in the associated Method Blank
E	Estimated (Value above quantitation range)
S	Surrogate Recovery outside accepted recovery limits
Narr	See Case Narrative
NC	Not Confirmed

APPENDIX IX
CONTAMINATED SOIL DISPOSAL MANIFESTS

Please print or type
Form designed for use on elite (12-pitch) typewriter.

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number

GENERATOR

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1.					
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name — Signature — Month — Day — Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month — Day — Year

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

GC Labels • Printed in the USA
1-800-997-6966

GENERATOR'S/SHIPPER'S INITIAL COPY

Reorder Part# MANIFEST-CGNHW
913-897-6966

APPENDIX X
SITE RANKING FORM

SITE RANKING FORM

Facility Name: Building 419
County: Liberty **Facility ID #:** NA

Ranked by: J. Williams
Date Ranked: October 29, 2013

SOIL CONTAMINATION

A. Total Regulated PAHs
Maximum concentration at the site
(Assume <0.660 mg/kg if only gasoline was stored on site)

_____	≤ 0.0660	= 0
_____	0.066-0.99 mg/kg	= 10
X*	1-10 mg/kg	= 25
_____	> 10 mg/kg	= 50

* Pyrene 5.850 mg/kg, Sample SB-14-01 March 2011

B. Total Benzene –
Maximum Concentration found on site

_____	≤ 0.005 mg/kg	= 0
_____	> 0.005 - 0.05 mg/kg	= 1
X*	0.05 – 0.99 mg/kg	= 10
_____	1 – 9.9 mg/kg	= 25
_____	10 – 49.9 mg/kg	= 40
_____	≥ 50 mg/kg	= 50

* Sample SB-10-01 March 2011

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

_____	> 50' bls	= 1
_____	> 25' bls	= 2
_____	> 10' bls	= 5
X	≤ 25' bls	= 10

Fill in the blanks: **(A. 25 + B. 10) = (35) x (C. 10) = (D. 350)**

GROUNDWATER CONTAMINATION

E. Free product (non-aqueous-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
X	For every additional inch, add another 100 points	= 1,000 + (36.02 x 100) = 4,602

F. Dissolved Benzene –
Maximum concentration at the site
(One well must be located at the source of the release.

X	≤ 5 µg/L	= 0
_____	> 5-100 µg/L	= 5
_____	> 100-1,000 µg/L	= 50
_____	> 1,000 – 5,000 µg/L	= 250

Fill in the blanks: (E. 4,602) + (F. 0) = (G. 4,602)

Facility Name: Building 419, Fort Stewart **County:** Liberty **Facility ID #:** NA

POTENTIAL RECEPTORS

Distance from nearest contaminant plume boundary to the nearest hydraulically connected point of withdrawal for water supply. This distance must be field-verified. **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

_____	Impacted	= 2,000
_____	≤ 500'	= 500
_____	> 500' – ¼ mi	= 25
X*	> ¼ mi – 1 mi	= 10
_____	> 1 mi – 2 mi	= 2
_____	> 2 mi	= 0

For lower susceptibility areas only:
_____ > 1 mi = 0
.* Nearest Public water supply 1,800 ft.

I. Non-Public

_____	Impacted	= 1, 000
_____	≤ 100'	= 500
_____	> 100' – 500'	= 25
_____	> 500' – ¼ mi	= 5
X*	> ¼ mi – ½ mi	= 2
_____	> ½ mi	= 0

For lower susceptibility areas only:
_____ > ¼ mi = 0
* Nearest non-public water supply = 2,000 ft.

J. Distance from the nearest contaminant plume boundary to down gradient surface waters **OR UTILITY TRENCES & VAULTS** (Must be field verified)

_____	Impacted	= 500
X*	≤ 500'	= 50
_____	> 500' – 1,000'	= 5
_____	> 1,000'	= 2

* nearest downgradient surface water = 50 ft

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

_____	Impacted	= 500
_____	≤ 500'	= 50
_____	> 500' – 1,000'	= 5
X	> 1,000'	= 2

Fill in the blanks: (H. 10) + (I. 2) + (J. 50) + (K. 2) = L. 64

(G. 4,602) x (L. 64) = M. 294,528

(M.294,528) + (D. 350) = N. 294,878

P. SUSCEPTIBILITY AREA MULITIPLIER

_____ If site is located in a Low Ground – Water Pollution Susceptibility Area = 0.5

X 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

X No = 0

Fill in the blanks: (N. 294,878 x (P. 1) = (294,878) + (Q. 0)

Environmental Sensitivity Score = 294,878
ENVIRONMENTAL SENSITIVITY SCORE

OTHER GEOLOGIC AND HYDROGEOLOGIC DATA

The following information is presented to provide supplemental information to Item H of the Site Ranking Form; it provides detailed information relating to the geologic and hydrogeologic conditions at Fort Stewart, which supports Fort Stewart's determination that the water withdrawal point(s) at Fort Stewart are not hydraulically connected to the surficial aquifer.

1.0 REGIONAL AND LOCAL GEOLOGY

Fort Stewart is within the coastal plain physiographic province. This province is typified by nine southeastward dipping strata that increase in thickness from 0 feet at the fall line, approximately 150 miles inland from the Atlantic coast, to approximately 4,200 feet at the coast. State geologic records describe a probably petroleum exploration well (the No. 1 Jelks-Rogers) in the region as encountering crystalline basement rocks at a depth of 4,254 feet below ground surface (BGS). This well provides the most complete record for Cretaceous, Tertiary, and Quaternary sedimentary strata in the region.

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

State geologic records contain information regarding a well drilled in October 1942, 1.8 miles north of Flemington at Liberty Field of Camp Stewart (now known as Fort Stewart). This well is believed to be an artesian well approximately ¼ mile north of the runway at Wright Army Airfield within the Fort Stewart Military Reservation. The log for this well describes a 410-foot section, the lowermost 110 feet of which consisted predominantly of limestone sediments, above which 245 feet of dark green phosphatic clay typical of the Hawthorn Group was encountered. The uppermost portion of the section was found to be Quaternary-age interbedded sands and clays. The top 15 feet of these sediments was described as sandy clay (Herrick and Vochis 1963).

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

2.0 REGIONAL AND LOCAL HYDROGEOLOGY

The hydrogeology in the vicinity of Fort Stewart is dominated by two aquifers referred to as the Principal Artesian and the Surficial aquifers. The Principal Artesian Aquifer is the lowermost hydrologic unit and extends from South Carolina through Georgia, Alabama, and most of Florida. Known elsewhere as the Floridan, this aquifer is composed primarily of Tertiary-age limestone, including the Bug Island Formation, the Ocala Group, and the Suwannee Limestone. These formations are approximately 800 feet thick, and groundwater from this aquifer is used primarily for drinking water (Arora 1984).

The uppermost hydrologic unit is the surficial aquifer, which consists of sand and clay ranging from 55 to 150 feet in thickness. This aquifer is primarily used for domestic lawn and agricultural irrigation. The top of the water table ranges approximately 2 feet to 10 feet BGS (Geraghty and Miller 1993). The base of the aquifer corresponds to the top of the underlying dense clay of the Hawthorn Group. The Hawthorn Group was not encountered during drilling at this site but is believed to be 40 feet to 50 feet BGS; thus, the effective aquifer thickness would be approximately 35 feet to 45 feet. Soil surveys for Liberty and Long counties describe the occurrence of a perched water table within the Stilson loamy sands present within Fort Stewart (Looper 1980).

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

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

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

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

Groundwater encountered at all the underground storage tank (UST) investigation sites is part of the Surficial Aquifer system. Based on the fact that all public and non-public water supply wells draw water from the Principal (Floridan) Aquifer, and that the Hawthorn confining unit separates the Principal Aquifer from the Surficial Aquifer, it is concluded that there is no hydraulic interconnection between the Surficial Aquifer (and associated groundwater plumes, if applicable) located beneath former UST sites and identified water supply withdrawal points at Fort Stewart.

3.0 REFERENCES

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

Geraghty and Miller, 1993. *RCRA Facility Investigation Work Plan, Fort Stewart, Georgia.*

Herrick, S. M., and R. C. Vochis 1963. *Subsurface Geology of the Georgia Coastal Plain,* Georgia. Geologic Survey Information Circular 25.

Looper, Edward E., 1980. *Soil Survey of Liberty and Long Counties, Georgia,* U.S. Department of Agriculture, Soil Conservation Service.

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

APPENDIX XI
PUBLIC NOTIFICATION

After the newspaper notice has been published, an affidavit of publication will be provided.

APPENDIX XII
GUST TRUST FUND REIMBURSEMENT INFORMATION

REIMBURSEMENT APPLICATION

Fort Stewart is a federally owned facility and has funded the investigation for the former Underground Storage Tank (UST) site, Building 419, using U.S. Department of Defense Environmental Restoration Account Funds.

Application for Georgia UST Trust Fund reimbursement is not being pursued at this time.