Final
Completion Report
for Interim Remedial Action
at the 260th Quartermaster Motor Pool Building 1345,
Underground Storage Tanks 25 and 26,
Facility ID #9-025008,
Hunter Army Airfield
Savannah, Georgia

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Savannah District

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CERTIFICATION

I hereby certify that the information contained in this completion report entitled *Completion Report for Interim Removal Action at the 260th Quartermaster Motor Pool Building 1345, Underground Storage Tanks 25 and 26, Facility ID #9-025008, Hunter Army Airfield Savannah, Georgia,* dated May 2007, and all the attachments are true, accurate, and complete, to the best of my knowledge and belief.

Jeffrey C. Williams, PE	Date
Ambrose J. Madaj, III, PG	Date

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Acronyms and Abbreviations

%D	percent difference
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
CAP	corrective action plan
CAPE	CAPE Environmental, Inc.
CLP	contract laboratory program
DNR	Department of Natural Resources (Georgia)
DRO	diesel range organic
ft	foot/feet
GA	Georgia
GUST	Georgia Underground Storage Tank (regulations)
HAAF	Hunter Army Airfield
IDW	investigation derived waste
in.	inch(es)
IRA	interim remedial action
J	estimated value due to quality control criteria
LCS	laboratory control sample
mg/kg	milligram per kilogram
MS	matrix spike
MTBE	methyl tertbutyl ether
NA	not applicable
NL	not listed
NRC	no regulatory criteria
ORC®	Oxygen Release Compound®
PAH	polynuclear aromatic hydrocarbon
PG	professional geologist
ppm	parts per million
QC	quality control
RPD	relative percent difference
SAIC	Science Applications International Corporation
STEP	Solutions To Environmental Problems, Inc.
STL	soil threshold level
TPH	total petroleum hydrocarbons
U	not detected at laboratory detection limit shown
µg/kg	micrograms per kilogram
UJ	analyte analyzed for but not detected, associated value is estimated
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

1. INTRODUCTION

Solutions To Environmental Problems, Inc. (STEP) under contract with the U.S. Army Corps of Engineers, Savannah District, performed interim remedial action (IRA) at 260th Quartermaster Motor Pool Building 1345, Underground Storage Tanks (USTs) 25 and 26 (Facility ID #9-025008), Hunter Army Airfield (HAAF), Savannah, Georgia. This work was accomplished in accordance with *Final Work Plan, for Interim Removal Action at the 260th Quartermaster Motor Pool Building 1345, Underground Storage Tanks 25 and 26, Facility ID #9-025008, Hunter Army Airfield Savannah, Georgia and Semi-Annual Sampling, UST Corrective Action Plan Part B, AAFFS Bryan Village Shoppette, Building 7336, Georgia UST Facility ID #0890037, Fort Stewart, Georgia* (STEP, December 2006), hereinafter referred to as the work plan.

2. SITE BACKGROUND

HAAF is located on 5,400 acres of land in Chatham County, Georgia, within the southwest portion of the city of Savannah as shown in Figure 2-1. The installation is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River. Presently, HAAF serves as an aircraft support base for the U.S. Coast Guard and a U. S. Army military base, Fort Stewart, which is located 50 miles to the west. Former USTs 25 and 26, Georgia UST Facility I.D. #9-025008, were located near Building 1345 at HAAF. The location of the Former USTs 25 and 26 site is indicated on Figure 2-1.

3. PREVIOUS INVESTIGATIONS

The tanks and piping associated with Former USTs 25 and 26, Georgia UST Facility I.D. #9-025008, were closed in place in 1998, and a Georgia Corrective Action Plan (CAP) Part A investigation was performed in 1999. The results of the CAP-Part A investigation are discussed in *CAP-Part A Report for USTs 25 & 26, Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia* (Earth Tech, March 1999). The CAP-Part A investigation was supplemented with a CAP-Part B investigation conducted by Science Applications International Corporation (SAIC), and the results of that investigation are reported in *Corrective Action Plan – Part B, Underground Storage Tanks 25 & 26, Facility ID #9-025008, Building1343, Hunter Army Airfield, Georgia* (SAIC, February 2000). The CAP-Part B report

Figure 2-1 Site Location Map, Former USTs 25 and 26

recommended that four of the shallow monitoring wells (AF-02, AF-05, AF-07, and AF-12) be sampled on a semiannual basis for benzene, toluene, ethylbenzene, and xylenes (BTEX) and that the three deep monitoring wells (AF-40, AF-41, and AF-42) be sampled on a semiannual basis for volatile organic compounds.

Additional field investigations were conducted in 2000 and 2001 to determine the horizontal and vertical extent of the trichloroethylene plume. The results of those investigations are documented in *Corrective Action Plan-Part B, Addendum 1, Underground Storage Tanks 25 & 26 Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia* (SAIC, June 2001).

Groundwater monitoring at the site has been conducted since 2000 and reported in various "Monitoring Only Reports" prepared by SAIC. In response to the data, conclusions, and recommendations presented in *Third Annual Monitoring Only Report, Underground Storage Tanks 25 & 26, Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia* (SAIC, July 2003), the CAP-Part B report was revised to address free product recovery [see *Corrective Action Plan-Part B, Addendum 2, Underground Storage Tanks 25 & 26 Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia* (SAIC, April 2003)], and, subsequently, STEP conducted multi-phase extraction activities at wells AF-07, AF-12, and 260-MW-01 in September 2004 to remove free product in those wells [see *Project Summary for Corrective Action at 260th Quartermaster Motor Pool, Building 1343, USTs 25 and 26, Georgia UST Facility ID No. 9-025008, Hunter Army Airfield, Savannah, Georgia* (STEP, November 2005).

As a result of the recommendations contained in *Fourth Annual Monitoring Only Report, Underground Storage Tanks 25 & 26, Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia,* (SAIC, May 2004), the tanks and piping were excavated and removed from the site and 100 pounds of Oxygen Release Compound® (ORC®) were applied to the excavation in April 2006 [see *Final Closure Report, Former 260th Quartermaster Motor Pool, 3rd AVN BDE, Hunter Army Airfield, USTs 25 & 26, Building 1343, 3rd Infantry Division, Fort Stewart, Georgia* (CAPE, August, 2006)].

4. INTERIM REMOVAL ACTIVITIES

In an attempt to more rapidly remediate the free product historically found in the two wells (AF-07 and AF-12), this current IRA was implemented to remove wells AF-07 and AF-12 and the contaminated soil/free product around them in a single excavation for each well. This IRA included replacing the removed wells with new pre-packed wells and backfilling the pits with gravel to allow any residual free product to migrate to and collect in the new wells. Installation of 4-inch diameter wells to replace the ¾-inch PVC wells currently at the site was required because standard free product removal systems are not readily adaptable to wells with inside diameters of less than 2 inches. Because AF-40 (a deep well) is immediately adjacent to groundwater well AF-07, plugging and abandonment of well AF-40 was required to facilitate removal of well AF-07.

STEP performed the following tasks in meeting the objectives of the scope of work for the IRAs at USTs 25 and 26:

- abandoned one deep monitoring well (AF-40);
- removed monitoring wells AF-12 and AF-07:
  - cut, removed, and disposed of concrete covering an approximately 12 ft by 12 ft area around each well; and
  - excavated a 6 ft by 6 ft area surrounding each well to a depth of 9.5 ft;
- collected soil samples from the four walls and the floor of each excavation;
- submitted the soil samples to an analytical laboratory for chemical analysis of the soil samples for characterization of each excavation;
- applied ORC® to the floor and four side walls of each excavation;
- installed one new monitoring well with pre-pack screen in the center of each excavation; and
- characterized and properly disposed the investigation derived waste (IDW).

4.1 INTERIM REMOVAL ACTIVITIES AT THE USTS 25 AND 26 SITE

STEP conducted IRA field activities at USTs 25 and 26 from 20 March through 12 April 2007. The IRA centered on two wells (AF-07 and AF-12) that have consistently reported free product. The IRAs are described in this section and photographic documentation of the field work is provided in Appendix A. Figure 4-1 shows the areas excavated and the well locations.

Figure 4-1 Site Map, Former USTs 25 and 26

Before field work began, Fort Stewart personnel obtained the required dig permit and utility clearance and utility locations were marked at the site.

Because the scope of work called for excavating a 6 ft by 6 ft area centered on each well, and a deep well (well AF-40) was within the excavation area for well AF-07, plugging and abandonment of AF-40 was required to prevent the possibility of contamination migrating to the deeper zone. On 20 March 2007, Boart-Longyear Drilling Company mobilized to the site and over-drilled the well. The total depth of the well was measured at 30.0 feet below ground surface (bgs); therefore, the drilling rig over-drilled the well to a total depth of 34 feet bgs to ensure removal of all well materials. Cuttings were containerized for disposal and staged at the site. The hole was plugged with a cement/bentonite/grout mixture and tremied from the bottom of the hole to completely fill the void from the over-drilling activities. Well abandonment activities were conducted under the supervision of Jim Madaj, PG.

Before well removal activities began at wells AF-07 and AF-12, STEP personnel used an interface probe to measure the depth of free product and the water level in each well. These measurements were taken on 3 April 2007. In well AF-07, the water was measured at 4.43 feet bgs with no free product, and in well AF-12, water was measured at 4.40 feet bgs with no free product.

Wells AF-07 and AF-12 were in a developed area covered with concrete; therefore, removal of the concrete was required to gain access to the wells. In accordance with the work plan, a 12-ft x 12-ft area centered on each well was measured, and the concrete was marked and saw-cut. The concrete was sized and then removed with a backhoe and skid steer loader. Concrete debris was placed in nearby roll-off containers and then transported to and disposed at Sand Dollar Recycling in Savannah, Georgia. The areas excavated and the well locations are shown on Figure 4-1.

4.1.1 Well AF-07

On 3 April 2007, excavation activities began at well AF-07. After the concrete was removed, a trackhoe proceeded to remove grayish brown, sandy soil to a depth of 6 feet bgs, where the soil was moist, indicating that groundwater had been encountered. Soil sampling was accomplished from the bucket of the trackhoe immediately above the moist soil (see Figure 4-1 for sample locations). During excavation, a metal conduit was uncovered, and care was taken not to disturb the conduit. Well AF-07 was removed by excavating the well riser, screen, sand, and bentonite seal. The final dimensions of the excavation were 6 ft x 6 ft x 9.5 ft deep to remove the well components and potentially contaminated soil. All excavated

soil and the well materials were placed in plastic-lined, construction debris roll-off containers. This material was considered IDW and was characterized and disposed accordingly.

STEP used a backhoe to excavate a sump near the center of the pit for installation of the new 4-inch diameter well, well AF-07R, which replaces AF-07. The well, constructed with a 10-foot long pre-packed well screen and riser pipe, was positioned inside the excavation using suitable supports, and gravel backfill (#57 stone) was carefully placed around the well to above the well screen. Once the well was installed, a mixture of 400 pounds of ORC® and water was applied to the pit sidewalls and bottom. STEP used a backhoe to place the remaining backfill, also #57 stone, to within 6 inches of ground surface, and the backfill was compacted using the bucket of the backhoe. The remaining 6 inches of the excavation were filled with crusher-run stone to blend with the surrounding concrete. The well was completed with a flush-mount bolted cover within a 2 ft x 2 ft concrete pad that was 6 inches thick.

Figure 4-2, the well installation diagram for well AF-07R, shows that this well has a total depth of 12.04 feet below the top of the concrete surface with a 4 inch bottom cap, 10 feet of screen, and 1.54 feet of riser. An expandable locking cap is at the top of the well, and the surface is finished with a flush-mount cover and bolted lid within a 2 ft by 2 ft by 6 in. thick concrete pad. The well was checked on 16 May 2007; depth to water was 6.17 feet bgs with no free product.

4.1.2 Well AF-12

Excavation activities began at well AF-12 on 10 April 2007. After the concrete was removed, STEP used a trackhoe to remove grayish brown, sandy soil to a depth of 6 feet bgs, where the soil was very moist, indicating that groundwater had been encountered. The excavation sidewalls and pit bottom were sampled immediately above the moist soil, in accordance with the work plan (see Figure 4-1 for sample locations). During excavation, a 2-inch diameter pipe (thought to be a water line) was uncovered, and care was taken not to disturb the piping. Well AF-12 was removed by excavating the well riser, screen, sand, and bentonite seal. Dimensions of the excavation were 6 ft x 6 ft x 9.5 ft deep. All excavated soil and the well materials were placed in plastic-lined, construction debris roll-off containers. This material was considered IDW and was characterized and disposed accordingly.

Figure 4-2 Groundwater Monitoring Well AF-07R

STEP used a trackhoe to excavate a sump near the center of the pit for installation of the new 4-inch diameter well, well AF-12R, which replaces AF-12. The well, constructed with a 10-foot long pre-packed well screen and riser pipe, was positioned inside the excavation using suitable supports, and gravel backfill (#57 stone) was carefully placed around the well to above the well screen. Once the well was installed, a mixture of 400 pounds of ORC® and water was applied to the pit sidewalls and bottom. The trackhoe was used to place the remaining backfill, also #57 stone, in the excavation to within 6 inches of the ground surface, and the backfill was compacted using the bucket of the trackhoe. The top 6 inches of the excavation were filled with crusher-run stone to blend with the surrounding concrete. The well was completed with a flush-mount bolted cover within a 2 ft x 2 ft concrete pad that was 6 inches thick.

Figure 4-3, the well installation diagram for well AF-12R, shows that this well has a total depth of 12.71 feet below the top of the concrete surface with a 4 inch bottom cap, 10 feet of screen, and 2.33 feet of riser. An expandable locking cap is at the top of the well, and the surface is finished with a flush-mount cover and bolted lid within a 2 ft by 2 ft by 6 in. thick concrete pad. The well was checked on 16 May 2007; depth to water was 6.21 feet bgs with no free product.

4.2 DISPOSAL OF INVESTIGATION DERIVED WASTE

All IDW was properly disposed in accordance with state and federal regulations. The soil IDW was stored in two, plastic-lined, roll-off containers. The containers were covered with tarps, and each container was properly labeled. One sample was taken from each container and the two samples were composited. The sample, designated as TCLP-01, was shipped to the analytical laboratory for analyses to determine whether it was hazardous or not. It was determined the soil in each container was not hazardous; therefore, the containers were manifested by Public Works Business Center personnel, transported to Superior Landfill in Savannah, Georgia, and disposed. Copies of the waste manifests and waste characterization Form 1s are provided in Appendix B.

4.3 SAMPLING EFFORTS

As stated previously, when excavation was complete, the bottom and sidewalls of each excavation were sampled. The samples were field screened using a photoionization detector; the results of the field screening for the samples are presented in Table 4-1 and Table 4-2.

Figure 4-3 Groundwater Monitoring Well AF-12R

Table 4-1 Field Screening Results for Samples from the AF-07 Excavation

Sample	Depth (ft-bgs)	Location	Field Screening Result Total VOCs (ppm)
07093U01	6	East sidewall	843
07093U02	6	South sidewall	524
07093U03	6	North sidewall	1,679
07093U04	6	West sidewall	3,025
07093U05	6	Pit bottom	4,223

bgs = below ground surface
ft = feet
ppm = parts per million
VOC = volatile organic compound
Field screening conducted with a photoionization detector.

Table 4-2 Field Screening Results for Samples from the AF-12 Excavation

Sample	Depth (ft-bgs)	Location	Field Screening Result Total VOCs (ppm)
070100U0101	6	Pit bottom	305
070100U0102	6	West bottom	410
070100U0103	6	North sidewall	487
070100U0104	6	East sidewall	174
070100U0105	6	South sidewall	352

bgs = below ground surface
ft = feet
ppm = parts per million
VOC = volatile organic compound
Field screening conducted with a photoionization detector.

These samples were analyzed for BTEX, methyl tertbutyl ether (MTBE), polynuclear aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH) diesel range organics (DRO).

4.4 RESULTS OF CONFIRMATORY SAMPLING

4.4.1 Data Validation

DataChek, LLC validated the analytical results in accordance with the approved work plan.

The sample data were validated following the logic identified in *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, October 1999) for all areas. For those analytical methods not addressed by the contract laboratory program (CLP) guidelines, the

validation was based on the method requirements and technical judgment, following the logic of the CLP validation guidelines.

This data validation report reflects the data validation findings for samples associated with UST 25/26. The validated data set consisted of 11 soil 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 UST 25/26 was measured at 95.3 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 UST 25/26 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 97.5 percent.

Representativeness: The measures of representativeness – sample handling, analytical blank analysis, field blanks – were met for all sites. Some compounds were present in the associated QC blanks and were qualified as "U" or not detected according to the 5x/10x rule. 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. Out of a total of 267 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 reporting limit. Due to the uncertainty associated with this region of quantification, the validation reviewer retained the "J" qualifiers assigned by the laboratory to indicate an estimated quantity.

The data validation qualifiers (Table 4-3) applied by the reviewer were recorded in a column adjacent and to the right of the laboratory results, as shown on the validated laboratory Form 1s in Appendix C.

Table 4-3 Data Qualifier Definitions

Qualifier	Definition
B	Indicates that the analyte is found in the associated method blank as well as the sample at above the QC level.
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.
UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

QC = quality control

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. The reason codes used by the validator and the definitions for those codes are found in Table 4-4.

Table 4-4 Data Validation Reason Codes

Reason Code	Definition
05B	Compound % D QC criteria not met
06A	Method or preparation blank
07A	Sample
10A	Recovery
16	Multiple results available; alternate analysis preferred
17	Field duplicate RPD criteria is exceeded

%D = percent difference RPD = relative percent difference
QC = quality control

4.4.2 Validated Analytical Results

The analytical results of the BTEX and MTBE and the TPH DRO analyses are presented in Tables 4-5 and 4-6, respectively. The analytical results of the PAH analyses are presented in Tables 4-7 and 4-8.

Table 4-5 Analytical Results for BTEX and MTBE Analyses, USTs 25 and 26
Units are micrograms per kilogram (µg/kg)

Sample	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
(Samples from AF-07 Excavation)					
07093U01	10,000 J	530 UJ	16,000 J	530 UJ	530 UJ
07093U02	180 J	82 U	1,000	93 J	260 U
07093U02D[1]	91 J	110 U	750	110 J	260 U
07093U03	6,000	580 U	21,000	1,200 U	1,200 U
07093U04	670 J	440 U	25,000	1,500	1,100 U
07093U05	4,200	1,100 U	21,000	390 J	1,100 U
(Samples from AF-12 Excavation)					
070100U0101	1,000 U	230 U	280 J	1,000 U	1,000 U
070100U0102	990 U	200 U	480 J	990 U	990 UJ
070100U0103	1,000 U	190 U	320 J	1,000 U	1,000 UJ
070100U0104	110 J	210 U	830 J	1,100 U	1,100 UJ
070100U0105	270 U	51 U	270 U	270 U	270 UJ
GUST Estimated Laboratory Detection Limits[2]	**5**	**5**	**5**	**5**	**NL**
GA STL[3]	**8**	**6,000**	**10,000**	**700,000**	**NL**

[1]Sample 07093U02D was a duplicate sample of sample 07093U02

[2]Estimated laboratory detection limits are from Table 2, "Laboratory Estimated Quantitation Limits for Soil and Groundwater Samples" of GUST-9 (GA DNR, November 2001)

[3]Soil threshold levels from Table A, Column 2 (Average or Higher Groundwater Pollution Susceptibility Area) of Rules of Georgia Department of Natural Resources Environmental Protection Division, Chapter 391-3-15—Underground Storage Tank Management, Section 391-3-15.09, "Release Response and Corrective Action for UST Systems Containing Petroleum, Amended." (GA DNR, October 2001).

BTEX = benzene, toluene, ethylbenzene, and xylenes
DNR = Department of Natural Resources
GA = Georgia
GUST = Georgia Underground Storage Tank (regulations)
J = estimated due to quality control criteria
MTBE = methyl tertbutyl ether
NL = not listed
STL = soil threshold levels
U = not detected at reporting limit shown
UJ = analyzed for but not detected, associated value estimated
UST = underground storage tank

Benzene, ethylbenzene, and xylenes were reported with concentrations exceeding the Georgia Underground Storage Tank (regulations) (GUST) Estimated Laboratory Detection Limits, and benzene and ethylbenzene were reported at concentrations exceeding the Georgia soil threshold level. Due to the elevated concentrations of benzene and ethylbenzene, the laboratory could not reach the low reporting limits for the other parameters.

Table 4-6 Analytical Results for TPH DRO Analyses, USTs 25 and 26
Units are milligrams per kilogram (mg/kg)

Sample	TPH DRO
(Samples from AF-07 Excavation)	
07093U01	38,000
07093U02	1,000 J
07093U02D[1]	1,700 J
07093U03	12,000
07093U04	1,500
07093U05	11,000
(Samples from AF-12 Excavation)	
070100U0101	19,000
070100U0102	19,000
070100U0103	20,000
070100U0104	8,600
070100U0105	1,600
GUST Estimated Laboratory Detection Limits[2]	10
GA STL[3]	NRC

[1]Sample 07093U02D was a duplicate sample of sample 07093U02

[2]Estimated laboratory detection limits are from Table 2, "Laboratory Estimated Quantitation Limits for Soil and Groundwater Samples" of GUST-9 (GA DNR, November 2001)

[3]Soil threshold levels from Table A, Column 2 (Average or Higher Groundwater Pollution Susceptibility Area) of Rules of Georgia Department of Natural Resources Environmental Protection Division, Chapter 391-3-15—Underground Storage Tank Management, Section 391-3-15.09, "Release Response and Corrective Action for UST Systems Containing Petroleum, amended." (GA DNR, October 2001)

DRO = diesel range organics
GA = Georgia
GUST = Georgia underground storage tank (regulations)
J = estimated due to quality control criteria
NRC = no regulatory criteria
STL = soil threshold level
TPH = total petroleum hydrocarbon
UST = underground storage tank

As Table 4-6 shows, all samples reported concentrations of TPH DRO above the GUST-9 estimated laboratory detection limits.

Table 4-7 Analytical Results for PAH Analyses - Samples from AF-07 Excavation

Units are micrograms per kilogram (µg/kg)

Analyte	07093U01	07093U02	07093U02D[1]	07093U03	07093U04	07093U05	GUST Estimated Laboratory Detection Limits[2]	GA STL[3]
Acenaphthene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Acenaphthylene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Anthracene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Benzo(a)anthracene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Benzo(b)fluoranthene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Benzo(k)fluoranthene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Benzo(g,h,i)perylene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Benzo(a)pyrene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Chrysene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Dibenz(a,h)anthracene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Fluoranthene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Fluorene	8,400 U	160 U	500 J	8,600 U	370 U	1,800 U	660	NA
Indeno(1,2,3-cd)pyrene	8,400 U	160 U	170 UJ	8,600 U	370 U	1,800 U	660	NA
Naphthalene	34,000	740	880 J	20,000	4,500	13,000	660	NA
Phenanthrene	28,000	1,000	1,100 J	24,000	1,300	14,000	660	NA
Pyrene	2,800 J	97 J	140 J	2,900 J	160 J	1,600 J	660	NA
2-Methylnaphthalene	120,000	3,100 J	3,900 J	74,000	7,000	42,000	NRC	NRC
1-Methylnaphthalene	80,000	1,900	2,400 J	54,000	3,800	32,000	NRC	NRC

[1]Sample 07082U02D was a duplicate sample of sample 07082U02

[2]Estimated laboratory detection limits are from Table 2, "Laboratory Estimated Quantitation Limits for Soil and Groundwater Samples" of GUST-9 (GA DNR, November 2001)

[3]Soil threshold levels from Table A, Column 2 (Average or Higher Groundwater Pollution Susceptibility Area) of Rules of Georgia Department of Natural Resources Environmental Protection Division, Chapter 391-3-15—Underground Storage Tank Management, Section 391-3-15.09, "Release Response and Corrective Action for UST Systems Containing Petroleum, Amended." (GA DNR, October 2001)

DNR = Department of Natural Resources
GA = Georgia
GUST = Georgia Underground Storage Tank (regulations)
J = estimated due to quality control criteria
NA = Not applicable. The health-based threshold level exceeds the expected soil concentration under free product conditions.
NRC = no regulatory criteria
PAH = polynuclear aromatic hydrocarbon
STL = soil threshold level
U = not detected at method detection limit shown
UJ = analyzed for but not detected, associated value is estimated.

The results show the analytes naphthalene, phenanthrene, and pyrene exceeded the GUST Estimated Laboratory Detection Limits. Due to the elevated concentrations of naphthalene, phenanthrene, and pyrene, the laboratory could not reach the low reporting limits for the other parameters.

Table 4-8 Analytical Results for PAH Analyses - Samples from AF-12 Excavation

Units are micrograms per kilogram (µg/kg)

Analyte	070100U0101	070100U0102	070100U0103	070100U0104	070100U0105	GUST Estimated Laboratory Detection Limits[1]	GA STL[2]
Acenaphthene	1,800 U	1,700 U	1,700 U	1,800 U	170 U	660	NA
Acenaphthylene	1,800 U	1,700 U	1,700 U	1,800 U	170 U	660	NA
Anthracene	1,800 U	1,700 U	1,700 U	1,800 U	170 U	660	NA
Benzo(a)anthracene	1,800 U	1,700 U	1,700 UJ	1,800 U	52 J	660	NA
Benzo(b)fluoranthene	1800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Benzo(k)fluoranthene	1,800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Benzo(g,h,i)perylene	1,800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Benzo(a)pyrene	1,800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Chrysene	1,800 U	1,700 U	1,700 UJ	1,800 U	50 J	660	NA
Dibenz(a,h)anthracene	1,800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Fluoranthene	1,800 U	1,700 U	1,700 U	1,800 U	170 U	660	NA
Fluorene	1,800 U	8,400	11,000	1,800 U	170 U	660	NA
Indeno(1,2,3-cd)pyrene	1,800 U	1,700 U	1,700 UJ	1,800 U	170 U	660	NA
Naphthalene	18,000	19,000	26,000	12,000	360	660	NA
Phenanthrene	30,000	20,000	32,000	19000	2200	660	NA
Pyrene	4,900	2,800	5,200 J	3,200	520	660	NA

[1]Estimated laboratory detection limits are from Table 2, "Laboratory Estimated Quantitation Limits for Soil and Groundwater Samples" of GUST-9 (GA DNR, November 2001)

[2]Soil threshold levels from Table A, Column 2 (Average or Higher Groundwater Pollution Susceptibility Area) of Rules of Georgia Department of Natural Resources Environmental Protection Division, Chapter 391-3-15—Underground Storage Tank Management, Section 391-3-15.09, "Release Response and Corrective Action for UST Systems Containing Petroleum, Amended." (GA DNR, October 2001)

DNR = Department of Natural Resources
GA = Georgia
GUST = Georgia Underground Storage Tank (regulations)
J = estimated due to quality control criteria
NA = Not applicable. The health-based threshold level exceeds the expected soil concentration under free product conditions.
PAH = polynuclear aromatic hydrocarbon
STL = soil threshold level
U = not detected at method detection limit shown
UJ = analyzed for but not detected, value shown is estimated

The results show the analytes naphthalene, phenanthrene, and pyrene exceeded the GUST Estimated Laboratory Detection Limits. Due to the elevated concentrations of naphthalene, phenanthrene, and pyrene, the laboratory could not reach the low reporting limits for the other parameters.

5. CONCLUSIONS

The soil layer that potentially contained free-product, which surrounded each well, has been removed; however, soil samples collected after the removal effort was complete reported concentrations of contaminants in the soil exceeding acceptable levels. ORC® was applied to each excavation to allow continued remediation of the petroleum contaminants.

STEP recommends monitoring of the groundwater at the site to determine the adequacy of the removal effort and the effectiveness of the ORC® application. Monitoring of the groundwater should be conducted no sooner than six months after the ORC® application.

Under a separate task order, STEP will collect one groundwater sample from four shallow wells (AF-02, AF-05, AF-07R, and AF-12R) and two deep wells (AF-41 and AF-68) on a semiannual basis for a period of one year (two sampling events). Within six months of completion of this IRA, STEP will develop the newly installed monitoring wells (Well AF-07R and AF-12R) and conduct the first semiannual monitoring event for the groundwater at USTs 25 and 26. The second sampling event will be conducted approximately six months after the first sampling event is completed. Groundwater samples collected from the shallow wells will be analyzed for BTEX and the groundwater samples collected from the deep monitoring wells will be analyzed for VOCs. Upon completion of the semiannual monitoring, STEP will prepare the semiannual reports and the annual report for the site.

6. REFERENCES

CAPE, August, 2006. *Final Closure Report, Former 260th Quartermaster Motor Pool, 3rd AVN BDE, Hunter Army Airfield, USTs 25 & 26, Building 1343, 3rd Infantry Division, Fort Stewart, Georgia.*

Earth Tech, March 1999. *CAP-Part A Report for USTs 25 & 26, Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia*.

GDNR (Georgia Department of Natural Resources, Environmental Protection Division), November 2001. *Underground Storage Tank (UST) Closure Guidance Document, Petroleum Releases.*

GDNR, October 2001. "Release Response and Corrective Action for UST Systems Containing Petroleum. Amended." *Rules of the Georgia Department of Natural Resources* 391-3-15.09.

SAIC (Science Applications International Corporation), February 2000. *Corrective Action Plan – Part B, Underground Storage Tanks 25 & 26, Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia.*

SAIC, June 2001. *Corrective Action Plan-Part B, Addendum 1, Underground Storage Tanks 25 & 26 Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia*.

SAIC, April 2003. *Corrective Action Plan-Part B, Addendum 2, Underground Storage Tanks 25 & 26 Facility ID #9-025008, Building 1343, Hunter Army Airfield, Georgia.*

STEP, November 2005. *Project Summary for Corrective Action at 260th Quartermaster Motor Pool, Building 1343, USTs 25 and 26, Georgia UST Facility ID No. 9-025008, Hunter Army Airfield, Savannah, Georgia.*

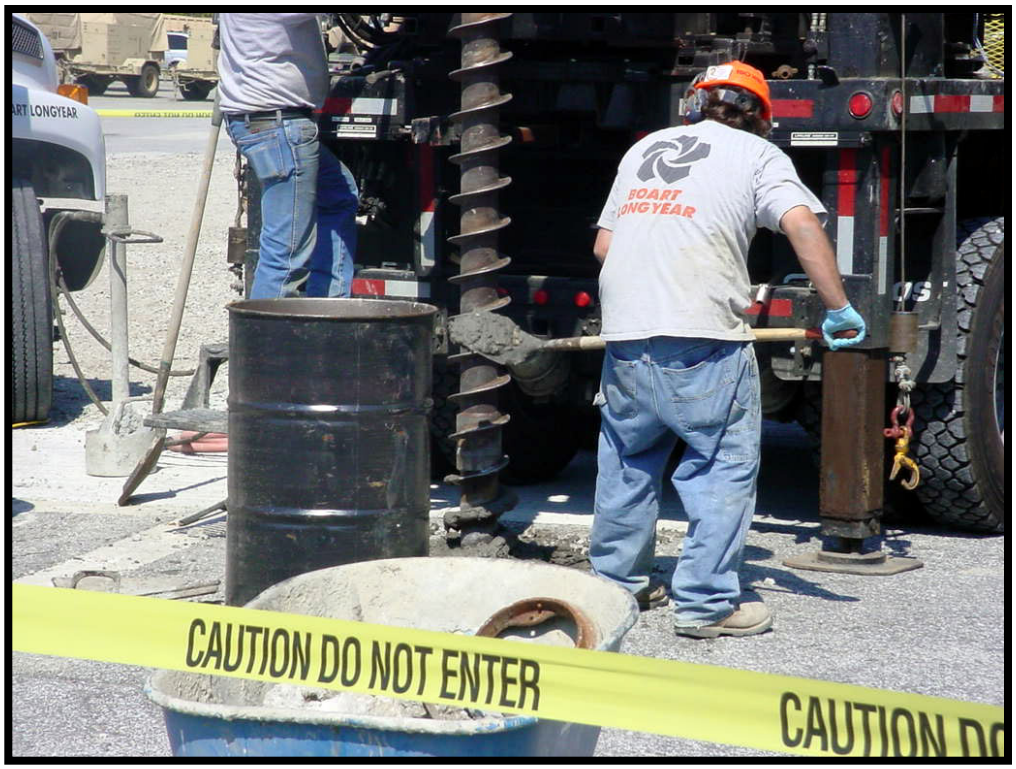
STEP, December 2006. *Final Work Plan, for Interim Removal Action at the 260th Quartermaster Motor Pool Building 1345, Underground Storage Tanks 25 and 26, Facility ID #9-025008, Hunter Army Airfield Savannah, Georgia and Semi-Annual Sampling, UST Corrective Action Plan Part B, AAFFS Bryan Village Shoppette, Building 7336, Georgia UST Facility ID #0890037, Fort Stewart, Georgia.*

USEPA (U.S. Environmental Protection Agency), October 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.*

APPENDIX A

Photographs

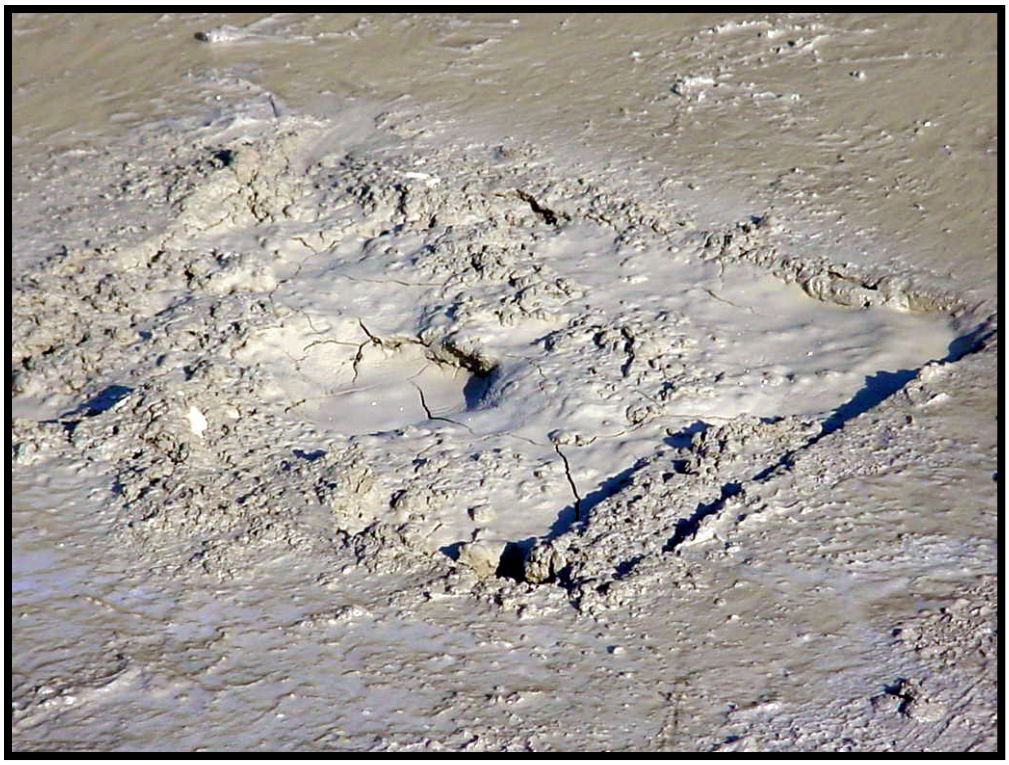
Former UST Sites 25 and 26



Abandonment of Well AF-40

Grouting well AF-40 with Tremie Pipe

Former UST Sites 25 and 26



Well AF-40 Abandoned

Cutting concrete

Former UST Sites 25 and 26

Removing concrete

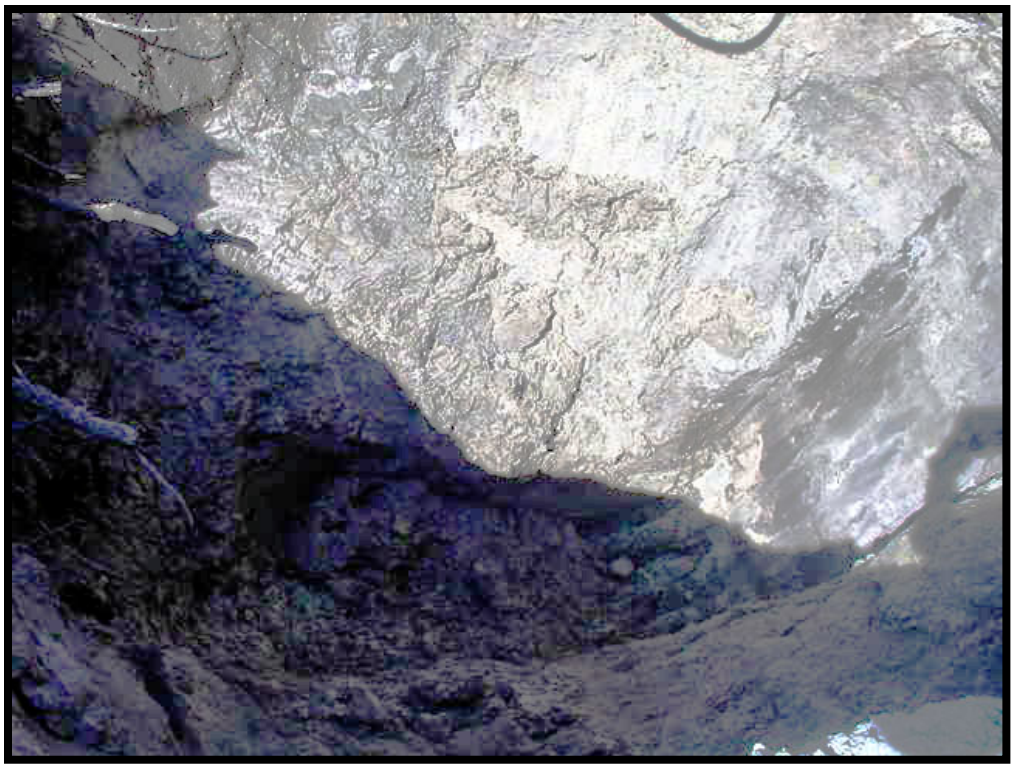
Placing concrete in roll-off for disposal

Former UST Sites 25 and 26

Excavating Well AF-07

Well AF-07 Excavation

Former UST Sites 25 and 26



Excavation with ORC applied

Well AF-07R in place

Former UST Sites 25 and 26

Backfilling around well AF-07R

Finishing well pad at AF-07R

Former UST Sites 25 and 26

Covered roll-off ready for transporting

Excavating well AF-12

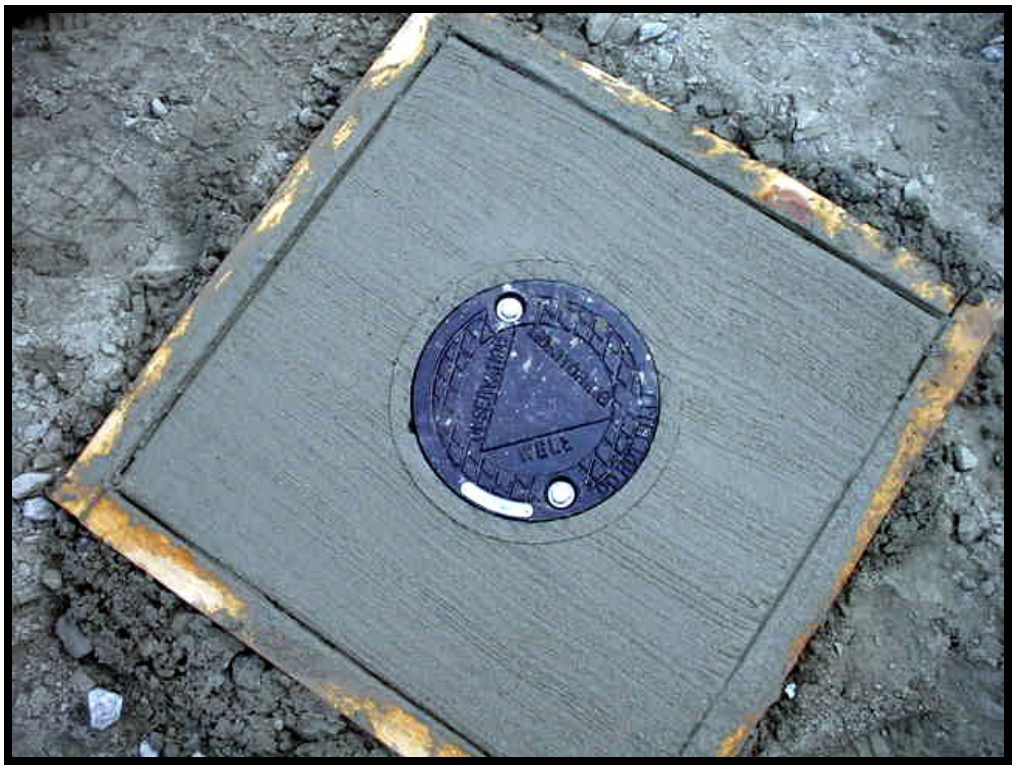
Former UST Sites 25 and 26

Excavation at well AF-12

ORC applied at well AF-12R

Former UST Sites 25 and 26

Excavation backfilled at well AF-12R



Finishing well pad at AF-12R

APPENDIX B

Waste Characterization and Waste Manifests

SES

Environmental and Construction Services
An 8(a) Alaska Native Company

May 4, 2007

Ms. Theresa Curtis
Atlantic Waste Services
125 B, Pine Meadow Drive
Pooler, Georgia 31322

Re: Waste Profile for "Petroleum Contaminated soil," STEP / SES, Fort Stewart Georgia

Dear Ms. Curtis:

Attached is one waste profile sheet for petroleum contaminated soil generated from the clean-up of two separate removal actions conducted recently. One site is at Fort Stewart, Georgia and one site is at the Hunter Army Airfield, Savannah, Georgia. The contaminated soil was placed into waste roll-off containers provided by Atlantic Waste Services.

We have attached the soil laboratory analysis that represents the containers at each site. Sample 39 TCLP is a composite sample of the containers from the UST site at Fort Stewart and Sample TCLP01 is a composite sample of the containers from the UST site at Hunter Army Airfield. The attached analysis indicates the soil to be non-hazardous.

The "Generator's Nonhazardous Waste Profile Sheet" from Waste Management has been filled out and signed by the proper official for the generator (US Army).

Once the landfill approves the waste, we hope to have Atlantic Waste to transport the containers to the landfill as soon as possible. If things work out, we are looking at the week of May 14th. As before, we are requesting the landfill billing the cost to Atlantic Waste, and Atlantic Waste billing us with the bill for the remainder of the cost for the roll-off containers. Please let me know when the landfill approves accepting the waste so we can make arrangements for someone to be down there to coordinate the necessary waste manifesting. Thank you.

Sincerely,
SES, LLC

Jeffrey C. Williams, PE
Project Manager

Attachments

cc: Project Files

Reader File

1006 Floyd Culler Court • Oak Ridge, TN 37830 • 865 481 7837 • fax 865 481 0290 • www.specproenv.com

Generator's Nonhazardous Waste Profile Sheet

Requested Disposal Facility ______________ Profile Number
☐ Renewal for Profile Number ______________ Waste Approval Expiration Date ______________

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: US ARMY FORT STEWART
2. Site Address: 1550 FRANK COCHRAN DRIVE
3. City/ZIP: FORT STEWART /31314-4927
4. State: GEORGIA
5. County: LIBERTY
6. Contact Name/Title: Randy Powell-Jones /Env. SPEC
7. Email Address: RANDY.Powell-Jones@stewart.army.mil
8. Phone: 912-315-5109 9. FAX: 912-315-5148
10. NAICS Code: ______________
11. Generator USEPA ID #: GA9210020872
12. State ID# (if applicable): ______________

B. Customer Information ☐ **same as above** P. O. Number: ______________

1. Customer Name: ATLANTIC WASTE SERVICES
2. Billing Address: 125B Pine Meadow DR.
3. City, State and ZIP: Pooler, GA 31322
4. Contact Name: THERESA CURTIS
5. Contact Email: ______________
6. Phone: 912-964-2000 FAX: 912-964-2009
7. Transporter Name: ATLANTIC WASTE SERVICES
8. Transporter ID # (if appl.): ______________
9. Transporter Address: 125B Pine Meadow DR.
10. City, State and ZIP: Pooler GA 31322

C. Waste Stream Information

1. DESCRIPTION
   a. Common Waste Name: DIESEL Fuel Contaminated Soil & Cleanup Debris State Waste Code(s): ______________
   b. Describe Process Generating Waste or Source of Contamination:
      Cleanup of Diesel in Soil
   c. Typical Color(s): GRAY / BROWN / BLACK
   d. Strong Odor? ☐ Yes ☒ No Describe: ______________
   e. Physical State at 70°F: ☒ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: ______________
   f. Layers? ☐ Single layer ☐ Multi-Layer ☒ NA
   g. Water Reactive? ☐ Yes ☒ No If Yes, Describe: ______________
   h. Free Liquid Range (%): ______ to ______ ☒ NA(solid)
   i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☒ NA(solid) ☐ Actual: ______
   j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☒ NA(solid) ☐ Actual: ______
   k. Flammable Solid ☐ Yes ☒ No
   L. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents (Total Composition Must be ≥ 100%)	Concentration %	Constituents (Total Composition Must be ≥ 100%)	Concentration %
1. soil	90-100	4.	
2. diesel Fuel	1-10	5.	
3. debris	1-5	6.	

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☒ Event ☐ Base/Ongoing (Check One)
   b. Estimated Annual Quantity: 200 ☐ Tons ☒ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): ______
   c. Shipping Frequency: ______ Units per ☐ Month ☐ Quarter ☐ Year ☒ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☒ No
   e. USDOT Shipping Description (if applicable): ______________
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): NORMAL LANDFILL PPE

Generator's Nonhazardous Waste Profile Sheet

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☒ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☒ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☒ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☒ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☒ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☒ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☒ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☒ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☒ No
7. Does the waste contain asbestos? ☐ Yes ☒ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☒ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ☒ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: Sample TCLP 01 and 39 TCLP (Full TCLP, RCI) # Pages: 11
   - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☐ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: Randy Powell-Jones Title: Environ. Prot. Specialist

Company Name: U.S. Army Name (Print): Randy Powell-Jones

Date: 5/3/07

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation Approval Decision: ☐ Approved ☐ Not Approved

☐ Non-hazardous solidification ☐ Other: _____ Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval: _____

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ Date: _____

State Authorization (If Required): _____ Date: _____

Empirical Laboratories

ANALYTICAL REPORT NOTES, TERMS AND QUALIFIERS (INORGANIC)

Notes:

The metals and cyanide reporting limits (RLs) have been statistically determined to be no less than three standard deviations as defined in 40 CFR 136, Appendix B, Revision 1.11. All other reporting limits are referenced from the specific analytical method.

Terms:

NA Not Applicable

NR Not Requested

Qualifiers:

B The reported value is less than the practical quantitation limit (PQL, project defined) but greater than or equal to the MDL.

E The reported value is estimated due to the presence of matrix interference.

N Predigested spike recovery not within control limits.

* RPD or absolute difference for Duplicate analysis not within control limits.

** Reference Standard Methods 19th edition.

(1) pH analyzed outside USEPA specified holding time. pH must be measured immediately after sample collection.

(2) The sample pH did not meet the preservation guidelines. Therefore the pH was adjusted upon receipt.

(3) Reference Standard Methods 17th edition for the distillation method.

(4) The sample was analyzed out of the USEPA holding time.

(5) The sample was received in the laboratory out of the USEPA holdiog time.

(6) The shipping cooler temperature exceeded 6°C upon receipt to Empirical Laboratories.

(7) Analysis was subcontracted

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TCLP 01

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V04096

Matrix: (soil/water) WATER Lab Sample ID: 0704096-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0409601T

Level: (low/med) LOW Date Sampled: 04/10/07 11:05

% Moisture: not dec. _____ Date Analyzed: 04/19/07 01:57

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

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

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

CAS NO.	COMPOUND	SQL	TCLP Regulatory Limit	CONC	Q
71-43-2	Benzene	0.010	0.50	<0.010	U
78-93-3	2-Butanone	0.10	200	<0.10	U
56-23-5	Carbon tetrachloride	0.010	0.50	<0.010	U
108-90-7	Chlorobenzene	0.010	100	<0.010	U
67-66-3	Chloroform	0.010	6.0	<0.010	U
106-46-7	1,4-Dichlorobenzene	0.010	7.5	<0.010	U
107-06-2	1,2-Dichloroethane	0.010	0.50	<0.010	U
75-35-4	1,1-Dichloroethene	0.010	0.70	<0.010	U
127-18-4	Tetrachloroethene	0.010	0.70	<0.010	U
79-01-6	Trichloroethene	0.010	0.50	<0.010	U
75-01-4	Vinyl chloride	0.020	0.20	<0.020	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TCLP 01

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.B04096

Matrix: (soil/water) WATER Lab Sample ID: 0704096-01

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 0409601T

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 04/10/07 11:05

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 04/13/07

Concentrated Extract Volume: 1000.0(uL) Date Analyzed: 04/18/07 20:56

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
121-14-2	2,4-Dinitrotoluene	0.050	0.13	<0.050	U
118-74-1	Hexachlorobenzene	0.050	0.13	<0.050	U
87-68-3	Hexachlorobutadiene	0.050	0.50	<0.050	U
67-72-1	Hexachloroethane	0.050	3.0	<0.050	U
108-39-4	3-Methylphenol	0.050	200	<0.050	U
106-44-5	4-Methylphenol	0.050	200	<0.050	U
95-48-7	2-Methylphenol	0.050	200	<0.050	U
98-95-3	Nitrobenzene	0.050	2.0	<0.050	U
87-86-5	Pentachlorophenol	0.20	100	<0.20	U
110-86-1	Pyridine	0.20	5.0	<0.20	U
95-95-4	2,4,5-Trichlorophenol	0.050	400	<0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	2.0	<0.050	U

FORM 1
PESTA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TCLP 01

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4096 SAS No.: NA SDG No.: STE.P04096

Matrix: (soil/water) TCLP Lab Sample ID: 0704096-01

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 014F1401

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 04/10/07 11:05

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:04/17/07

Concentrated Extract Volume: 10.0(mL) Date Analyzed: 04/18/07 17:22

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
57-74-9	Chlordane	0.00050	0.030	<0.00050	U
72-20-8	Endrin	0.00010	0.020	<0.00010	U
58-89-9	Gamma-BHC	0.00010	0.40	<0.00010	U
76-44-8	Heptachlor	0.00010	0.0080	<0.00010	U
1024-57-3	Heptachlor Epoxide	0.00010	0.0080	<0.00010	U
72-43-5	Methoxychlor	0.00010	10	<0.00010	U
8001-35-2	Toxaphene	0.010	0.50	<0.010	U

FORM 1
HERB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TCLP 01

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4096 SAS No.: NA SDG No.: STE.H04096

Matrix: (soil/water) TCLP Lab Sample ID: 0704096-01

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 006R0201

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 04/10/07 11:05

Extraction: (SepF/Cont/Sonc/Soxh) SEPP Date Extracted: 04/17/07

Concentrated Extract Volume: 10.0(mL) Date Analyzed: 04/23/07 20:14

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q
94-75-7	2,4-D	0.0025	0.0050		U
93-72-1	2,4,5-TP (Silvex)	0.00025	0.00050		U

Empirical Laboratories

CLIENT: SES LLC
DATE RECEIVED: 04/11/07
DATE REPORTED: 04/30/07

EMPIRICAL LABORATORIES SAMPLE NUMBER					0704096-01
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					TCLP 01 04/10/07 11:05:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Barium-TCLP	100	0.050	1311/6010B	mg/L	0.346
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.020	1311/6010B	mg/L	<0.020
Lead-TCLP	5.0	0.015	1311/6010B	mg/L	0.0267
Mercury-TCLP	0.20	0.00080	1311/7470A	mg/L	<0.00080
Selenium-TCLP	1.0	0.030	1311/6010B	mg/L	<0.030
Silver-TCLP	5.0	0.010	1311/6010B	mg/L	<0.010
Initial pH - TCLP	NA	NA	1311	Units	8.4
Final pH - TCLP	NA	NA	1311	Units	4.9
Cyanide	250	0.13	9012A	mg/kg (as Rec'd)	<0.13
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	7.8 @ 21°C
Reactive Sulfide	500	10	Chap 7.3.4.2	mg/kg (as Rec'd)	<10

See attached page for definitions of terms and qualifiers.

EMPIRICAL LABORATORIES

D. Rick Davis
Vice President

227 French Landing Drive ▪ Suite 550 ▪ Nashville, TN 37228 ▪ Tel (615) 345-1115 ▪ Fax (615) 846-5426

Empirical Laboratories

CLIENT: STEP, Inc.
DATE RECEIVED: 03/24/07
DATE REPORTED: 04/09/07

EMPIRICAL LABORATORIES SAMPLE NUMBER					0703252-09
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					39TCLP 03/20/07 12:25:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Barium-TCLP	100	0.050	1311/6010B	mg/L	0.202
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.020	1311/6010B	mg/L	<0.020
Lead-TCLP	5.0	0.015	1311/6010B	mg/L	0.0799
Mercury-TCLP	0.20	0.00080	1311/7470A	mg/L	<0.00080
Selenium-TCLP	1.0	0.030	1311/6010B	mg/L	<0.030
Silver-TCLP	5.0	0.010	1311/6010B	mg/L	<0.010
Initial pH - TCLP	NA	NA	1311	Units	7.8
Final pH - TCLP	NA	NA	1311	Units	5.0
Cyanide	250	0.13	9012A	mg/kg (as Rec'd)	<0.13
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	6.4 @ 22°C
Reactive Sulfide	500	19	Chap.7.3.4.2	mg/kg (as Rec'd)	<19

See attached page for definitions of terms and qualifiers.

EMPIRICAL LABORATORIES

Betty DeVille for

D. Rick Davis
Vice President

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

39TCLP

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V03252

Matrix: (soil/water) WATER Lab Sample ID: 0703252-09

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0325209T

Level: (low/med) LOW Date Sampled: 03/23/07 12:25

% Moisture: not dec. _____ Date Analyzed: 03/28/07 09:00

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

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

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

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
71-43-2	Benzene	0.010	0.50	<0.010	U
78-93-3	2-Butanone	0.10	200	<0.10	U
56-23-5	Carbon tetrachloride	0.010	0.50	<0.010	U
108-90-7	Chlorobenzene	0.010	100	<0.010	U
67-66-3	Chloroform	0.010	6.0	0.0017	JB
106-46-7	1,4-Dichlorobenzene	0.010	7.5	<0.010	U
107-06-2	1,2-Dichloroethane	0.010	0.50	<0.010	U
75-35-4	1,1-Dichloroethene	0.010	0.70	<0.010	U
127-18-4	Tetrachloroethene	0.010	0.70	<0.010	U
79-01-6	Trichloroethene	0.010	0.50	0.0054	J
75-01-4	Vinyl chloride	0.020	0.20	<0.020	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

39TCLP

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.B03252

Matrix: (soil/water) WATER Lab Sample ID: 0703252-09

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 0325209T

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 03/23/07 12:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:03/28/07

Concentrated Extract Volume: 1000.0(uL) Date Analyzed: 03/30/07 09:08

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
121-14-2	2,4-Dinitrotoluene	0.050	0.13	<0.050	U
118-74-1	Hexachlorobenzene	0.050	0.13	<0.050	U
87-68-3	Hexachlorobutadiene	0.050	0.50	<0.050	U
67-72-1	Hexachloroethane	0.050	3.0	<0.050	U
108-39-4	3-Methylphenol	0.050	200	<0.050	U
106-44-5	4-Methylphenol	0.050	200	<0.050	U
95-48-7	2-Methylphenol	0.050	200	<0.050	U
98-95-3	Nitrobenzene	0.050	2.0	<0.050	U
87-86-5	Pentachlorophenol	0.20	100	<0.20	U
110-86-1	Pyridine	0.20	5.0	<0.20	U
95-95-4	2,4,5-Trichlorophenol	0.050	400	<0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	2.0	<0.050	U

FORM 1
HERB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

39TCLP

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 3252 SAS No.: NA SDG No.: STE.H03252

Matrix: (soil/water) TCLP Lab Sample ID: 0703252-09

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 008R0301

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 03/23/07 12:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:04/02/07

Concentrated Extract Volume: 10.0(mL) Date Analyzed: 04/03/07 15:53

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
94-75-7	2,4-D	0.0050	10	<0.0050	U
93-72-1	2,4,5-TP (Silvex)	0.00050	1.0	<0.00050	U

FORM 1
PESTA ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

39TCLP

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 3252 SAS No.: NA SDG No.: STE.P03252

Matrix: (soil/water) TCLP Lab Sample ID: 0703252-09

Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 017F1701

% Moisture: _____ decanted: (Y/N)___ Date Sampled: 03/23/07 12:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:03/30/07

Concentrated Extract Volume: 10.0(mL) Date Analyzed: 04/02/07 18:15

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/kg) MG/L

CAS NO.	COMPOUND	EQL	TCLP Regulatory Limit	CONC	Q
57-74-9	Chlordane	0.00050	0.030	<0.00050	U
72-20-8	Endrin	0.00010	0.020	<0.00010	U
58-89-9	Gamma-BHC	0.00010	0.40	<0.00010	U
76-44-8	Heptachlor	0.00010	0.0080	<0.00010	U
1024-57-3	Heptachlor Epoxide	0.00010	0.0080	<0.00010	U
72-43-5	Methoxychlor	0.00010	10	<0.00010	U
8001-35-2	Toxaphene	0.010	0.50	<0.010	U

Atlantic
waste services

NON-HAZARDOUS WASTE MANIFEST

GENERATOR

Generator Name: [illegible] US EPA ID#: [illegible]

Billing Address: [illegible]

Site Address: [illegible]

County of Origin: [illegible] Phone: [illegible]

Description of Waste	Total Quantity	Profile Number	Unit of Measure	Container Type
[illegible]	1	[illegible]	30	PC
		[illegible]		
		[illegible]		

Special Handling Instructions

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

[illegible] [illegible] 11/19/07
Generator Authorized Agent Name Signature Date Shipped

TRANSPORTER

Transporter Name: DOT#:

Address: Truck Number:

Name of Authorized Agent Signature Date Delivered

DISPOSAL FACILITY

Site Name:

Address:

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent Signature Date Received

White - Original Yellow - Transporter Pink - Disposal Facility Gold - Customer

Atlantic
waste services

NON-HAZARDOUS WASTE MANIFEST

GENERATOR

Generator Name: Hunter Army Airfield US EPA ID#: 58-0430465

Billing Address:

Site Address: Lightning Rd

County of Origin: Chatham Phone:

Description of Waste	Total Quantity	Profile Number	Unit of Measure	Container Type
Contaminated Soil	1	[redacted]	30	ROL
		10PH4GA		

Special Handling Instructions

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Ryan Powell-Jones — Generator Authorized Agent Name

Signature — 10 May 05 — Date Shipped

TRANSPORTER

Transporter Name: Atlantic Waste Services DOT#: 995413

Address: 125 E Pine Meadow Dr Truck Number: 101

James C. Edwards — Name of Authorized Agent

Signature — 5-16-05 — Date Delivered

DISPOSAL FACILITY

Site Name:

Address

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent — Signature — Date Received

White - Original Yellow - Transporter Pink - Disposal Facility Gold - Customer

Atlantic
waste services

NON-HAZARDOUS WASTE MANIFEST

GENERATOR

Generator Name: Hunter Army Airfield — US EPA ID#: SS-2430965

Billing Address: Atlantic Waste Services 125B Pine Meadow Dr Hinesville GA

Site Address: Lt Storey Rd

County of Origin: Chatham — Phone:

Description of Waste	Total Quantity	Profile Number	Unit of Measure	Container Type
Contaminated Soil	1	[redacted]	20	ROL
		100194GA		

Special Handling Instructions

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations

Randy Powell-Jones — Signature — 5-16-17
Generator Authorized Agent Name — Date Shipped

TRANSPORTER

Transporter Name: Atlantic Waste Services — DOT#: 995418

Address: 125B Pine Meadow Dr — Truck Number: 101

James F. Edwards — Signature — 5-16-17
Name of Authorized Agent — Date Delivered

DISPOSAL FACILITY

Site Name:

Address

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent — Signature — Date Received

White - Original Yellow - Transporter Pink - Disposal Facility Gold - Customer

APPENDIX C

Confirmatory Sampling, Analytical Form 1s

APPENDIX C

Confirmatory Sampling, Analytical Form 1s

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 227 French Landing Drive. Suite 550 • Nashville, TN 37228 • 615-345-1115 • (fax) 615-846-5426

37856

Send Results to:	Send Invoice to:	Analysis Requirements:	Lab Use Only:
Name [illegible]	Name Same		VOA Headspace Y (N) NA
Company [illegible]	Company		Field Filtered Y (N) NA
Address [illegible]	Address		Correct Containers (Y) N NA
City Oak Ridge	City		Discrepancies Y (N) NA
State, Zip TN 37830	State, Zip		Cust. Seals Intact (Y) N NA
Phone [illegible]	Phone		Containers Intact (Y) N NA
Fax [illegible]	Fax		Airbill #: [illegible] UPS
E-mail [illegible]	E-mail		CAR #:
Project No./Name: [illegible]	Sampler's (Signature): [signature]	BTEX, [illegible], [illegible], DRO	

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	BTEX	[illegible]	[illegible]	DRO	Comments	No. of Bottles	Lab Use Only Container/Pres.
0704024 -01	4/3/07 1410	07093U01	Soil	X	X	X	X	All soil	4	3Ø / H
-02	4/3/07 1412	07093U02	Soil	X	X	X	X	samples	4	
-10	4/3/07 1412	07093U02 D	Soil	X	X	X	X	have	4	
-02	4/3/07 1412	07093U02 MS/MSD	Soil	X	X	X	X	STRONG	4	
-03	4/3/07 1418	07093U03	Soil	X	X	X	X	petroleum	4	
-04	4/3/07 1420	07093U04	Soil	X	X	X	X	odor	4	
-05	4/3/07 1425	07093U05	Soil	X	X	X	X		4	
-06	4/3/07 1525	QCFS01	WATER	X	X	X	X		7	4, 3Ø, H2
-07	4/3/07 1515	QCRS01	WATER	X	X	X	X	+	7	
-08	LAB	TB 4463	WATER	X	X				2	2Ø - H2
-09	LAB	TB 4464	WATER	X	X				2	

Sample Kit Prepared by: (Signature)	Date/Time	Received By: (Signature)	REMARKS	Details
[signature]			Level III DATA PACKAGE	Page 1 of 1
Relinquished by: (Signature) [signature]	Date/Time 4/3/07 1600	Received By: (Signature)	*Call Doug Hall upon Receipt	Cooler No 1 of 2
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	+ 1 Amber received broken	Date Shipped 4/3/07
Received for Laboratory by: (Signature) [signature]	Date/Time 4/4/07 0900	Temperature 2.3°C		Shipped By UPS
				Turnaround STANDARD

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

F00004

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U01

Lab Name: EMPIRICAL LABS Contract: STDP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.VC4024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-01

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 04024D1D

Level: (low/med) MED Date Sampled: 04/03/07 14:25

% Moisture: not dec. 0 Date Analyzed: 04/10/07 10:53

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 40.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	CONC	Q
71-43-2	Benzene	650	9100	8700	JD
100-41-4	Ethylbenzene	7400	9100	14000	D
1634-04-4	MTBE	590	9100		UD
108-88-3	Toluene	2600	9100	12000	JD
1330-20-7	Xylene(Total)	1300	9100		UD

* should be reported from lesser dilution.
4/10/07

Empirical Laboratories

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093001

Lab Name: [illegible]PIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-01

Sample wt/vol: 5.5 (g/ml) G Lab File ID: 0402401D

Level: (low/med) MED Date Sampled: 04/03/07 14:15

% Moisture: not dec. 14 Date Analyzed: 04/12/07 12:44

GC Column: DB-VRX ID: 0.75 (mm) Dilution Factor: 2.0

Soil Extract Volume: 5000(ul) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG			
		RL	CONC	Q	
71-43-2	Benzene	530	10000	D	
[illegible]100-41-4	Ethylbenzene	530	10000	D	
1634-04-4	MTBE	530		UD	
108-88-3	Toluene	530		UD	
1330-20-7	Xylene (total)	530		UD	

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07033U02

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: CTE.VD4024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-02

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 0402402D

Level: (low/med) MED Date Sampled: 04/03/07 14:17

% Moisture: not dec. 11 Date Analyzed: 04/12/07 11:29

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

Soil Extract Volume: 1000(uL) Soil Aliquot Volume: 100(uL)

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

CAS NO.	COMPOUND	IDL	RL	CONC	Q
71-43-2	Benzene	24	260	190	J
100-41-4	Ethylbenzene	39	260	1000	
1634-04-4	MTBE	17	260		U
108-88-3	Toluene	45	260	82	JB
1330-20-7	Xylene (Total)	36	260	93	J

FORM I VOA

Empirical Laboratories

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093D02D

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.V04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 04024103D

Level: (low/med) MED Date Sampled: 04/03/07 14:17

% Moisture: not dec. 13 Date Analyzed: 04/12/07 12:07

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

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 200(uL)

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

CAS NO.	COMPOUND	CRDL	RL	CONC	Q	M
71-43-2	Benzene	25	200	91	J	P
100-41-4	Ethylbenzene	25	200	750		
1634-04-4	MTBE	25	200		U	
108-88-3	Toluene	25	200	110	JB	P
1330-20-7	Xylene (total)	37	600	110	J	P

FORM 1 VOA

Empirical Laboratories

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093B03

Lab Name: ENPIRICAL LABS Contract: STEP

Lab Code: ELAB Case No.: NA SAS No.: NA SDG No.: SIE.V04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-03

Sample wt/vol: 4.9 (g/mL) G Lab File ID: 0402403D

Level: (low/med) MED Date Received: 04/03/07 14:18

% Moisture: not dec. 15 Date Analyzed: 04/12/07 13:22

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	CRDL	Q	CONC	Q
71-43-2	Benzene		200		6000	D
100-41-4	Ethylbenzene		200		23000	D
1634-04-4	MTBE		200			UD
108-88-3	Toluene		200		590	JBD
1330-20-7	Xylene (Total)		200			UD

FORM I VOA

Empirical Laboratories

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07053004

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: EMPEN Case No.: NA SAS No.: NA SDG No.: STE.V04074

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-04

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 04024040

Level: (low/med) MED Date Sampled: 04/03/07 14:20

% Moisture: not dec. 20 Date Analyzed: 04/12.07 21:00

GC Column: DB-VRX ID: 0.22 (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	M
		VAL	RL	CRQL		
71-43-2	Benzene	110	1100	670	JD	P
100-41-4	Ethylbenzene	170	1100	25000	D	P
1634-04-4	MTBE	72	1100		UD	P
108-88-3	Toluene	1.8	1100	440	JBD	P
1330-20-7	Xylene(total)	1.8	1100	1000	D	P

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U05

Lab Name: EMPIRICAL LABS Contract: STRP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: SIE.V04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-05

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 0402405D

Level: (low/med) MED Date Sampled: 04/03/07 14:25

% Moisture: not dec. 17 Date Analyzed: 04/12/07 14:38

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: 1000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	100	4000 D
100-41-4	Ethylbenzene	100	21000 D
1634-04-4	MTBE	70	UD
108-88-3	Toluene	100	UD
1330-20-7	Xylene (total)	100	390 JD

FORM I VOA

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093001

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STEL04024

Matrix: (soil/water) SOIL Lab Sample ID: 07/04024-01

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 017R0101

% Moisture: 14 decanted: (Y/N) N Date Sampled: 04/03/07 14:15

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 01:59

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Silica Cleanup: (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG Q				
		MDL	RL	CONC	Q	
11-81-7	Diesel Range Organics	5.8	5.8	10000	J	*

FORM I DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U01DL

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STE.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-01DL

Sample wt/vol: 10.0 (g/ml) G Lab File ID: 02/R0101

% Moisture: 14 decanted: (Y/N) N Date Sampled: 04/03/07 14:15

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted:04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 15:44

Injection Volume: 1.0(uL) Dilution Factor: 500.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG DRY WT. MDL	RL	CONC	Q
11-84-7--	----Diesel Range Organics	2900	5000	29000	D

FORM I - DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U02

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: . Case No.: 4024 SAS No.: NA SDG No.: STE.D04074

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-02

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 013R0101

% Moisture: 21 decanted: (Y/N) N Date Sampled: 04/01/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 10:02

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	MDL	RL	CONC	Q	Peak
11 84 7	-----Diesel Range Organics_____		5.6	5.6	1000	E	1

FORM I DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070F3U02DL

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STS.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 070A024-020L

Sample wt/vol: 10.((g/mL) G Lab File ID: 028R010:

% Moisture: 11 decanted: (Y/N) N Date Sampled: 04/03/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/16/07 16:27

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: ug/L or ug/Kg) MG/KG

CAS NO.	COMPOUND	MDL	RL	CONC	Q	
11-84-9	-(Diesel Range Organics)	110	110	1000	D	

FORM I DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U02D

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: SITE.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-10

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 025R0101

% Moisture: 13 decanted: (Y/N) N Date Sampled: 04/03/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 14:18

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG

CAS NO.	ANALYTE	MDL	RL	CONC	Q	
11-84-7	Diesel Range Organics	5.6	11.	16.00	M	

FORM 1 DRO

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FORM I
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U02DDL

Lab Name: EMPIRICAL LABS Contract: STMP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STE.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-10DL

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 032R0101

% Moisture: 13 decanted: (Y/N) N Date Sampled: 04/05/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 19:18

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	C
		MDL	RL	CONC		
11 84-7	Diesel Range Organics	110	110	1700	D	7

FORM I DRO

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FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U03

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STEP04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-03

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 02250301

% Moisture: 15 decanted: (Y/N) N Date Sampled: 04/03/07 14:18

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 19:10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Silica Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG MDL	RL	CONC	Q
11-84-7	--Diesel Range Organics	5.8	5.8	6.0	B

FORM I DRO

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FORM I
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U03DL

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STE.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-03DL

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 029R010I

% Moisture: 15 decanted: (Y/N) N Date Sampled: 04/03/07 14:18

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 17:09

Injection Volume: 1.0(uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG

CAS NO.	COMPOUND	MDL	RL	CONC	Q	Raw Chart
11 84-7	Diesel Range Organics	1200	1300	12000	U	

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FORM I

DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093004

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STE.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-04

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 023R010I

% Moisture: 20 decanted: (Y/N) N Date Sampled: 04/03/07 14:20

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 12:53

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG MDL	RL	CONC	Q
11-07-7	---Diesel Range Organics	4.0	6.0	1500	M E

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FORM I
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U04DL

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STE.504024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-04DL

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 030R0101

% Moisture: 20 decanted: (Y/N) N Date Sampled: 04/03/07 14:20

Extraction: (SepF/ConL/Sonc/Soxh) SONI Date Extracted: 04/10/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 17:52

Injection Volume: 1.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: NA Silica Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG DL.	RL.	CONC	Q
11 84-4	Diesel Range Organics	120	12U	1500	D

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FORM I
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U05

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: STN.004024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-05

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 024R0101

% Moisture: 17 decanted: (Y/N) N Date Sampled: 04/03/07 14:25

Extraction: (Sep/Cont/Sonc/Soxh) SOXH Date Extracted: 04/13/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 13:36

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG dry

CAS NO.	COMPOUND	MDL	RL	CONC	Q	C
11 84 7	Diesel Range Organics	5.5	8.9	7400	E	D

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FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U05DL

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4024 SAS No.: NA SDG No.: ST5.D04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-05DL

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 03180101

% Moisture: 17 decanted: (Y/N) N Date Sampled: 04/03/07 14:25

Extraction: (Sep/Cont/Sonc/Soxt): SOXH Date Extracted: 04/12/07

Concentrated Extract Volume: 0.5(mL) Date Analyzed: 04/13/07 10:35

Injection Volume: 1.0(uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG

CAS NO.	COMPOUND	MDL	RL	CONC	Q
11-94-7	Diesel Range Organics	1200	2000	11000	D

FORM I DRO

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FORM I
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U01

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B04024

Matrix: (soil/water) SOIL Lab Sample ID: G704024-01

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 0402401D

% Moisture: 14 decanted: (Y/N) N Date Sampled: 04/03/07 14:15

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/13/07 14:39

Injection Volume: 0.5(uL) Dilution Factor: 50.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	CONC	Q	
83-32-9	Acenaphthene	1100	8400		UD	
208-96-8	Acenaphthylene	820	8400		UD	
120-12-7	Anthracene	1100	8400		UD	
56-55-3	Benzo(a)anthracene	1500	8400		UD	
205-99-2	Benzo(b)fluoranthene	1300	8400		UD	
207-08-9	Benzo(k)fluoranthene	1600	8400		UD	
191-24-2	Benzo(g,h,i)perylene	3000	8400		UD	
50-32-8	Benzo(a)pyrene	960	8400		UD	
218-01-9	Chrysene	1300	8400		UD	
53-70-3	Dibenz(a,h)anthracene	2500	8400		UD	
206-44-0	Fluoranthene	2200	8400		UD	
86-73-7	Fluorene	1100	8400		UD	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	8400		UD	
91-57-6	2-Methylnaphthalene	1100	8400	120000	D	
90-12-0	1-Methylnaphthalene	2700	8400	80000	D	
91-20-3	Naphthalene	1400	8400	94000	D	
85-01-8	Phenanthrene	960	8400	28000	D	
129-00-0	Pyrene	1700	8400	2800	JD	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093C02

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABS Case No.: NA SAS No.: NA SDG No.: STE.B04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-02

Sample wt/vol: 10.2 (g/mL) G Lab File ID: 0402402

% Moisture: 11 decanted: (Y/N) N Date Sampled: 04/03/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/13/07 13:28

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q
83-32-9	Acenaphthene	22	160		U
208-96-8	Acenaphthylene	16	160		U
120-12-7	Anthracene	22	160		U
56-55-3	Benzo(a)anthracene	30	160		U
205-99-2	Benzo(b)fluoranthene	26	160		U
207-08-9	Benzo(k)fluoranthene	32	160		U
191-24-2	Benzo(g,h,i)perylene	58	160		U
50-32-8	Benzo(a)pyrene	19	160		U
218-01-9	Chrysene	26	160		U
53-70-3	Dibenz(a,h)anthracene	50	160		U
206-44-0	Fluoranthene	44	160		U
86-73-7	Fluorene	22	160		U
193-39-5	Indeno(1,2,3-cd)pyrene	36	160		U
91-57-6	2-Methylnaphthalene	29	160	3100	
90-12-0	1-Methylnaphthalene	83	160	1900	
91-20-3	Naphthalene	27	160	740	
85-01-8	Phenanthrene	19	160	2000	
129-00-0	Pyrene	33	160	97	J

FORM I SV

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093002D

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.E04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-10

Sample wt/vol: 10.4 (g/mL) G Lab File ID: E402410

% Moisture: 13 Decanted: (Y/N) N Date Sampled: 04/03/07 14:17

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/13/07 14:04

Injection Volume: 0.5(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q	
83-32-9	Acenaphthene	22	370		U	
208-96-8	Acenaphthylene	16	370		U	
120-12-7	Anthracene	23	370		U	
56-55-3	Benzo(a)anthracene	30	370		U	
205-99-2	Benzo(b)fluoranthene	26	370		U	
207-08-9	Benzo(k)fluoranthene	33	370		U	
191-24-2	Benzo(g,h,i)perylene	59	370		U	
50-32-8	Benzo(a)pyrene	19	370		U	
218-01-9	Chrysene	26	370		U	
53-70-3	Dibenz(a,h)anthracene	50	370		U	
206-44-0	Fluoranthene	44	370		U	
86-73-7	Fluorene	22	370	500		
193-39-5	Indeno(1,2,3-cd)pyrene	38	370		U	
91-57-6	2-Methylnaphthalene	29	370	3900		
90-12-0	1-Methylnaphthalene	83	370	2400		
91-20-3	Naphthalene	27	370	880		
85-01-8	Phenanthrene	39	370	1100		
129-00-0	Pyrene	33	370	140	J	

FORM I

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U03

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-03

Sample wt/vol: 10.2 (g/mL) G Lab File ID: 0402403D

% Moisture: 15 decanted: (Y/N) N Date Sampled: 04/03/07 14:18

Extraction: (SepF/Cont/Sonc/Soxh) SONH Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/13/07 15:15

Injection Volume: 0.5(uL) Dilution Factor: 50.0

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

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q
83-32-9	Acenaphthene	1100	8600		UD
208-96-8	Acenaphthylene	840	8600		UD
120-12-7	Anthracene	1200	8600		UD
56-55-3	Benzo(a)anthracene	1600	8600		UD
205-99-2	Benzo(b)fluoranthene	1400	8600		UD
207-08-9	Benzo(k)fluoranthene	1700	8600		UD
191-24-2	Benzo(g,h,i)perylene	3000	8600		UD
50-32-8	Benzo(a)pyrene	980	8600		UD
218-01-9	Chrysene	1300	8600		UD
53-70-3	Dibenz(a,h)anthracene	2600	8600		UD
206-44-0	Fluoranthene	1000	8600		UD
86-73-7	Fluorene	1100	8600		UD
193-39-5	Indeno(1,2,3-cd)pyrene	3000	8600		UD
91-57-6	2-Methylnaphthalene	1500	8600	74000	D
90-12-0	1-Methylnaphthalene	4300	8600	54000	D
91-20-3	Naphthalene	1400	8600	20000	D
85-01-8	Phenanthrene	980	8600	24000	D
129-00-0	Pyrene	1700	8600	2900	JD

Empirical Laboratories

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07093U04

Lab Name EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.204024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-04

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 0402404D

% Moisture: 20 Decanted: (Y/N) N Date Sampled: 04/03/07 14:20

Extraction: (SepF/Cont/Sonc/Sxch) SONC Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/16/07 08:53

Injection Volume: 0.5(uL) Dilution Factor: 2.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	C	Q
83-32-9	Acenaphthene	41	370		UD
208-96-8	Acenaphthylene	6	370		UD
120-12-7	Anthracene	80	370		UD
56-55-3	Benzo(a)anthracene	47	370		UD
205-99-2	Benzo(b)fluoranthene	78	370		UD
207-08-9	Benzo(k)fluoranthene	72	370		UD
191-24-2	Benzo(g,h,i)perylene	130	370		UD
50-32-8	Benzo(a)pyrene	57	370		UD
218-01-9	Chrysene	51	370		UD
53-70-3	Dibenz(a,h)anthracene	110	370		UD
206-44-0	Fluoranthene	53	370		UD
86-73-7	Fluorene	45	370		UD
193-39-5	Indeno(1,2,3-cd)pyrene	85	370		UD
91-57-6	2-Methylnaphthalene	64	370	2600	D
90-12-0	1-Methylnaphthalene	380	370	2800	D
91-20-3	Naphthalene	60	370	1500	D
85-01-8	Phenanthrene	42	370	1200	D
129-00-0	Pyrene	73	370	160	JD

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
0:093U05

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B04024

Matrix: (soil/water) SOIL Lab Sample ID: 0704024-05

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0102405D

% Moisture: 17 decanted: (Y/N) N Date Sampled: 04/03/07 14:25

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/11/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/16/07 09:28

Injection Volume: 0.5(uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	CONC	Q	M
83-32-9	Acenaphthene	230	1800		UD	U
208-96-8	Acenaphthylene	170	1800		UD	
120-12-7	Anthracene	240	1800		UD	
56-55-3	Benzo(a)anthracene	320	1800		UD	
205-99-2	Benzo(b)fluoranthene	280	1800		UD	
207-08-9	Benzo(k)fluoranthene	350	1800		UD	
191-24-2	Benzo(g,h,i)perylene	630	1800		UD	
50-32-8	Benzo(a)pyrene	200	1800		UD	
218-01-9	Chrysene	280	1800		UD	
53-70-3	Dibenz(a,h)anthracene	240	1800		UD	
206-44-0	Fluoranthene	180	1800		UD	
86-73-7	Fluorene	330	1800		UD	
193-39-5	Indeno(1,2,3-cd)pyrene	410	1800		UD	J
91-57-6	2-Methylnaphthalene	310	1800	42000	D	
90-12-0	1-Methylnaphthalene	890	1800	32000	D	
91-20-3	Naphthalene	290	1800	13000	D	
85-01-8	Phenanthrene	200	1800	14000	D	
129-00-0	Pyrene	350	1800	1600	JD	J

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SHIP TO: 227 French Landing Drive, Suite 550 • Nashville, TN 37228 • 615-345-1115 • (fax) 615-846-5426

37492

Empirical Laboratories, LLC

Send Results to:	Send Invoice to:
Name Doug Hawn	Name SAME
Company SES	Company
Address 1006 Floyd Collier Ct	Address
City OAK Ridge	City
State, Zip TN 37830	State, Zip
Phone 865-481-7857	Phone
Fax 865-481-0290	Fax
E-mail D Hawn@Stepto.com	E-mail
Project No./Name: UST 25426	Sampler's (Signature):

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	(NA)	N	NA
Containers Intact	(Y)	N	NA

Airbill #: FEDEX

CAR #:

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	BTEX	MTBE	PAH	DRO	TCLP	PCL	Comments	No. of Bottles	Lab Use Only Containers/Pres.
0704095 -01	4/4/07 10:05 AM	070100 00101	soil	X	X	X	X				4	3 Gr, 1 AM
-02	4/4/07 10:08 AM	070100 00102	Soil	X	X	X	X				4	
-03	4/4/07 10:11 AM	070100 00103	Soil	X	X	X	X				4	
-04	4/4/07 10:13 AM	070100 00104	soil	X	X	X	X				4	
-05	4/4/07 10:15 AM	070100 00105	Soil	X	X	X	X				4	↓
0704096 -01	4/4/07 11:00 AM	TCLP 01	soil					X	X		2	2 AM
-02	4/4/07 11:00 AM	TCLP 02	soil					X	X	60 All other Samples	1	1 AM
0704095 -06	LAB	TRIP Blank 4607	WATER							0704096-01	1	1 5-VOA

Sample Kit Prep'd by: (Signature)	Date/Time 03/26/07	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time 4/6/07 1350	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time 4/6/07 0900	Temperature 5.5C	

REMARKS:

* LEVEL III DATA PACKAGE
* CALL DOUG HAWN UPON RECEIPT

Details:

Page ____ of ____

Cooler No. ____ of ____

Date Shipped ____

Shipped By ____

Turnaround ____

00004

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

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0101

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-01

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 0409501A

Level: (low/med) MED Date Sampled: 04/10/07 10:05

% Moisture: not dec. 18 Date Analyzed: 04/14/07 05:50

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q	Flag
71-43-2	Benzene	98	1000		UD	
100-41-4	Ethylbenzene	160	1000	280	JD	
1634-04-4	MTBE	67	1000		UD	
108-88-3	Toluene	180	1000	230	JBD	
1330-20-7	Xylene(Total)	150	1000		UD	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0102

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAIN Case No.: NA SAS No.: NA SDG No.: STE.V04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-02

Sample wt/vol: 5.9 (g/mL) G Lab File ID: 0409502A

Level: (low/med) MED Date Sampled: 04/10/07 10:08

% Moisture: not dec. 14 Date Analyzed: 04/14/07 06:35

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

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

CAS NO.	COMPOUND	MDL	RL	CONC	Q	Rep Limit
71-43-2	Benzene	53	990		UD	
100-41-4	Ethylbenzene	155	990	480	JD	E
1634-04-4	Methyl tert-butyl ether	83	990		UD	
108-88-3	Toluene	170	990	200	JBD	
1330-20-7	Xylene (total)	240	990		UD	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07010000103

Lab Name: [illegible] Contract: STEP

Lab Code: ELAN Case No.: NA SAS No.: NA SDG No.: STE.V04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704055-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0409503A

Level: (low/med) MED Date Sampled: 04/10/07 10:31

% Moisture, not dec. 15 Date Analyzed: 04/14/07 07:21

GC Column: DB-VRX ID: 0.[illegible] (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	15 U	UD	
100 41 4	Ethylbenzene	110	JD	
1634-04 4	MTBE	65 U	UD	
108-88 3	Toluene	270	JBD	
1330- 7	Xylene(total)	100 U	UD	

FORM I VOA

Empirical Laboratories

FORM I
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

[illegible]

Lab Name: EMPIRICAL LABS Contract: [illegible]

Lab Code: [illegible] Case No.: NA SAS No.: NA SDG No.: STE.V04055

Matrix: (soil/water) SOIL Lab Sample ID: 0704055-04

Sample wt/vol: 5.5 (g/mL) G Lab File ID: 0409504A

Level: (low/med) MED Date Received: 04/10/07 10:13

% Moisture: not dec. 16 Date Analyzed: 04/14/07 05:07

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 4.0

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100(uL)

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

CAS NO	COMPOUND	MDL	RL	CONC	Q	Rev. Qual
71-43-2	Benzene	[illegible]	1100	110	JD	[illegible]
100-41-4	Ethylbenzene	[illegible]	1100	840	JD	[illegible]
1634-04-4	MTBE	[illegible]	1100		UD	[illegible]
108-88-3	Toluene	190	1100	210	JBD	[illegible]
1330-20-7	Xylene(total)	[illegible]	1100		UD	[illegible]

FORM I VOA

Empirical Laboratories

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070109000105

Lab Name: EMPIRICAL LABS Contract: STET

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE W4095

Matrix: (soil/water) SOIL Lab Sample ID: W4095-05

Sample wt/vol: 5.4 (g/mL) G Lab File ID: W4736SA

Level: (low/med) LOW Date Received: 01/10/07 19:15

% Moisture: not dec. 14 Date Analyzed: 01/19/07 05:03

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

Soil Extract Volume: 5000(uL) Soil Aliquot Vol.: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION (UG/L or ug/Kg) UG/KG	Q
75-43-3	Dichloro...	25 U	
100-41-4	Ethylbenzene	20 U	
1634-04-4	Methyl tert-butyl ether	37 U	
108-88-3	Toluene	18 J	
1330-20-7	Xylene (total)	37 U	

FORM 1 VOA

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0101

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4095 SAS No.: NA SDG No.: S95.704095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-01

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 022R0101

% Moisture: 18 decanted: (Y/N) N Date Sampled: 04/10/07 10:05

Extraction: (Sep/Cont/Sonc/Soxh) SOXH Date Extracted: 04/16/07

Concentrated Extract Volume: 1.0(mL) Date Analyzed: 04/19/07 00:08

Injection Volume: 1.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: NA Silica Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG			
		MDL	RL	CONC	Q
11-84-7	Diesel Range Organics	1200	2000	19600	U

FORM 1 DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

0701000102

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4095 SAS No.: N SDG No.: STEP04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-02

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 02480101

% Moisture: 14 decanted: (Y/N) N Date Sampled: 04/10/07 10:08

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/16/07

Concentrated Extract Volume: 1.0 (mL) Date Analyzed: 04/19/07 01:34

Injection Volume: 1.0 (uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: NA Silica Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) MG/KG			Q
		MDL	RL	CONC	
31 84 7	Diesel Range Organics	2100	1100	19000	D

FORM I DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07010OU0103

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4095 SAS No.: NA SDG No.: STE.004095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-03

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 02GR0101

% Moisture: 16 Decanted: (Y/N) N Date Sampled: 04/10/07 10:11

Extraction: (SepF/Cont/Sonc/Soxh) SONI Date Extracted:04/16/07

Concentrated Extract Volume: 1 (mL) Date Analyzed: 04/19/07 03:01

Injection Volume: 1.0(uL) Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG

CAS NO.	COMPOUND	MDL	RL	CONC	Q
11-84-7----	Diesel Range Organics	1100	1100	12000	D

FORM 1 DRO

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0104

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4098 SAS No.: NA SDG No.: STEP04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-04

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 028R010

% Moisture: 16 decanted: (Y/N) N Date Sampled: 04/10/07 10:10

Extraction: (Sepf/Cont/Sonc/Soxh) SOXH Date Extracted: 04/16/07

Concentrated Extract Volume: 1.0(mL) Date Analyzed: 04/19/07 04:26

Injection Volume: 1.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	MDL	RL	CONC	Q
11-44-7	Diesel Range Organics		1200	1300	8600	U

FORM 1 (07/07)

Empirical Laboratories

FORM 1
DRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0105

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: Case No.: 4095 SAS No.: NA SDG No.: STE.D04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-05

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 030R0101

% Moisture: 13 decanted: (Y/N) N Date Sampled: 04/10/07 10:15

Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 04/16/07

Concentrated Extract Volume: 1.0(mL) Date Analyzed: 04/19/07 05:55

Injection Volume: 1.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG MDL	RL	CONC	Q
11-84-7	Diesel Range Organics	1100	1100	1600	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0101

Lab Name: EMPIRICAL LABS Contract: STE9

Lab Code: ELABS Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-01

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 04096010

% Moisture: 18 decanted: (Y/N) N Date Sampled: 04/10/07 10:05

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted 04/13/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/25/07 07:08

Injection Volume: 0.5(uL) Dilution Factor: 25.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: MDL	(ug/L or ug/Kg) UG/KG RL	CONC	Q
83-32-9	Acenaphthene	360	4400		UD
208-96-8	Acenaphthylene	130	4400		UD
120-12-7	Anthracene	600	4400		UD
56-55-3	Benzo(a)anthracene	800	4400		UD
205-99-2	Benzo(b)fluoranthene	690	4400		UD
207-08-9	Benzo(k)fluoranthene	860	4400		UD
191-24-2	Benzo(g,h,i)perylene	1500	4400		UD
50-32-8	Benzo(a)pyrene	500	4400		UD
218-01-9	Chrysene	680	4400		UD
53-70-3	Dibenz(a,h)anthracene	1300	4400		UD
206-44-0	Fluoranthene	1200	4400		UD
86-73-7	Fluorene	570	4400		UD
193-39-5	Indeno(1,2,3-cd)pyrene	1000	4400		UD
91-20-3	Naphthalene	710	4400	24000	D
85-01-8	Phenanthrene	500	4400	33000	D
129-00-0	Pyrene	870	4400	4700	D

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07010000101

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-01

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 0409501D

% Moisture: 18 decanted: (Y/N) N Date Sampled: 04/10/07 10:05

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/24/07 03:44

Injection Volume: 0.5(uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	CONC	Q
83-32-9	Acenaphthene	230	1900		UD
208-96-8	Acenaphthylene	170	1800		UD
120-12-7	Anthracene	240	1800		UD
56-55-3	Benzo(a)anthracene	320	1800		UD
205-99-2	Benzo(b)fluoranthene	280	1800		UD
207-08-9	Benzo(k)fluoranthene	340	1800		UD
191-24-2	Benzo(g,h,i)perylene	620	1800		UD
50-32-8	Benzo(a)pyrene	200	1800		UD
218-01-9	Chrysene	270	1800		UD
53-70-3	Dibenz(a,h)anthracene	530	1800		UD
206-44-0	Fluoranthene	470	1800		UD
86-73-7	Fluorene	230	1800		UD
193-39-5	Indeno(1,2,3-cd)pyrene	400	1800		UD
91-20-3	Naphthalene	280	1800	18000	D
85-01-8	Phenanthrene	200	1500	30000	D
129-00-0	Pyrene	300	1800	4900	D

FORM 1 SV

Empirical Laboratories

FORM I
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07310050102

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELARN Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-02

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 0409503D

% Moisture: 14 Decanted: (Y/N) N Date Sampled: 04/10/07 10:05

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/26/07 07:43

Injection Volume: 0.5(uL) Dilution Factor: 25.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q	M
		MDL	RL	CONC		
83-32-9	Acenaphthene	420	4200		UD	A
208-96-8	Acenaphthylene	420	4200		UD	
120-12-7	Anthracene	330	4200		UD	
56-55-3	Benzo(a)anthracene	270	4200		UD	
205-99-2	Benzo(b)fluoranthene	670	1300		UD	
207-08-9	Benzo(k)fluoranthene	830	1200		UD	
191-24-2	Benzo(g,h,i)perylene	1300	4200		UD	
50-32-8	Benzo(a)pyrene	490	4200		UD	
218-01-9	Chrysene	360	4200		UD	
53-70-3	Dibenz(a,h)anthracene	1100	1300		UD	
206-44-0	Fluoranthene	1100	4200		UD	
86-73-7	Fluorene	350	1200		UD	
193-39-5	Indeno(1,2,3-cd)pyrene	580	1200		UD	
91-20-3	Naphthalene	390	1200	20000	D	
85-01-8	Phenanthrene	490	4200	20000	D	
129-00-0	Pyrene	510	1100	3700	JD	A

Empirical Laboratories

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

070100U0102

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.S04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-02

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 04095S2D

% Moisture: 14 Decanted: (Y/N) N Date Sampled: 04/10/07 10:08

Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/24/07 04:26

Injection Volume: 0.5(uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MG/KG	Q
		MDL	RL			
83-32-9	Acenaphthene	770	1700		UD	
208-96-8	Acenaphthylene	170	1700		UD	
120-12-7	Anthracene	230	1700		UD	
56-55-3	Benzo(a)anthracene	210	1700		UD	
205-99-2	Benzo(b)fluoranthene	770	1700		UD	
207-08-9	Benzo(k)fluoranthene	330	1700		UD	
191-24-2	Benzo(g,h,i)perylene	900	1700		UD	
50-32-8	Benzo(a)pyrene	180	1700		UD	
218-01-9	Chrysene	700	1700		UD	
53-70-3	Dibenz(a,h)anthracene	500	1700		UD	
206-44-0	Fluoranthene	450	1700		UD	
86-73-7	Fluorene	700	1700	8400	D	
193-39-5	Indeno(1,2,3-cd)pyrene	350	1700		UD	
91-20-3	Naphthalene	280	1700	19000	D	
85-01-8	Phenanthrene	150	1700	20000	D	
129-00-0	Pyrene	340	1700	2800	D	

FORM I SV

Empirical Laboratories

FORM I
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

07010000103

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELAN Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-03

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 04008S3D

% Moisture: 15 Decanted: (Y/N) N Date Sampled: 01/10/07 10:11

Extraction: (SepF/Cont/Sonc/Sxhl) SONC Date Extracted 01/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 01/20/07 06:19

Injection Volume: 0.1(uL) Dilution Factor: 25.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	Q
95-95-4	2,4,5-Trichlorophenol	830	UJ
88-06-2	2,4,6-Trichlorophenol	830	UJ
120-83-2	2,4-Dichlorophenol	830	UJ
105-67-9	2,4-Dimethylphenol	830	UJ
51-28-5	2,4-Dinitrophenol	4300	UJ
121-14-2	2,4-Dinitrotoluene	830	UJ
606-20-2	2,6-Dinitrotoluene	830	UJ
91-58-7	2-Chloronaphthalene	830	UJ
95-57-8	2-Chlorophenol	830	UJ
91-57-6	2-Methylnaphthalene	830	UJ
95-48-7	2-Methylphenol	830	UJ
88-74-4	2-Nitroaniline	4300	UJ
91-94-1	3,3'-Dichlorobenzidine	1700	UJ
99-09-2	3-Nitroaniline	4300	UJ
534-52-1	4,6-Dinitro-2-methylphenol	4300	UJ
101-55-3	4-Bromophenyl-phenylether	830	UJ
59-50-7	4-Chloro-3-methylphenol	830	UJ
106-47-8	4-Chloroaniline	830	UJ
7005-72-3	4-Chlorophenyl-phenylether	830	UJ
106-44-5	4-Methylphenol	830	UJ
100-01-6	4-Nitroaniline	4300	UJ
100-02-7	4-Nitrophenol	4300	UJ
83-32-9	Acenaphthene	830	UJ
208-96-8	Acenaphthylene	830	UJ
120-12-7	Anthracene	830	UJ
56-55-3	Benzo(a)anthracene	830	UJ
205-99-2	Benzo(b)fluoranthene	830	UJ
207-08-9	Benzo(k)fluoranthene	830	UJ
191-24-2	Benzo(g,h,i)perylene	1700	UJ
50-32-8	Benzo(a)pyrene	830	UJ
218-01-9	Chrysene	830	UJ
53-70-3	Dibenz(a,h)anthracene	1700	UJ
206-44-0	Fluoranthene	1300	UJ
86-73-7	Fluorene	830	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	830	UJ
91-20-3	Naphthalene	830	UJ
85-01-8	Phenanthrene	830	UJ
129-00-0	Pyrene	830	UJ

FORM I (1/87)

FORM I
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

0701090003

Lab Name: EMPIRICAL LABS Contract: CLP

Lab Code: ELAEN Case No.: NA SAS No.: NA SDG No.: STE.204095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-03

Sample wt/vol: 19.3 (g/mL) G Lab File ID: 04095021

% Moisture: 15 Decanted: (Y/N) N Date Sampled: 04/10/07 10:11

Extraction: (SepF/Cont/Sonc/Soxh) SONH Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/24/07 04:55

Injection Volume: 0.5(uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)		UG/KG	Q	M
		MDL	RL	CONC		
83-32-9	Acenaphthene	330	1700		UD	U
208-96-8	Acenaphthylene	170	1700		UD	U
120-12-7	Anthracene	130	1700		UD	U
56-55-3	Benzo(a)anthracene	330	1700		UD	U
205-99-2	Benzo(b)fluoranthene	270	1700		UD	U
207-08-9	Benzo(k)fluoranthene	340	1700		UD	U
191-24-2	Benzo(g,h,i)perylene	330	1700		UD	U
50-32-8	Benzo(a)pyrene	200	1700		UD	U
218-01-9	Chrysene	260	1700		UD	U
53-70-3	Dibenz(a,h)anthracene	330	1700		UD	U
206-44-0	Fluoranthene	160	1700		UD	U
86-73-7	Fluorene	220	1700	11000	D	
193-39-5	Indeno(1,2,3-cd)pyrene	140	1700		UD	U
91-20-3	Naphthalene	200	1700	26000	D	
85-01-8	Phenanthrene	200	1700	32000	D	
129-00-0	Pyrene	150	1700	5200	D	J

FORM I SV

Empirical Laboratories

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

C70100U0104

Lab Name: EMPIRICAL LABS Contract: EVEP

Lab Code: ELAIN Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-04

Sample wt/vol: 10.2 (g/mL) G Lab File ID: 0409504D

% Moisture: 16 decanted: (Y/N) N Date Sampled: 04/10/07 10:13

Extraction: (SepF/Cont/Sonc/Soxh) SONH Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(uL) Date Analyzed: 04/26/07 08:54

Injection Volume: 0.5(uL) Dilution Factor: 25.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	RL	CONC	Q
83-32-9	Acenaphthene	440	4400		UD
208-96-8	Acenaphthylene	410	4400		UD
120-12-7	Anthracene	830	4400		UD
56-55-3	Benzo(a)anthracene	800	4400		UD
205-99-2	Benzo(b)fluoranthene	1100	4400		UD
207-08-9	Benzo(k)fluoranthene	860	4400		UD
191-24-2	Benzo(g,h,i)perylene	1500	4400		UD
50-32-8	Benzo(a)pyrene	1000	4400		UD
218-01-9	Chrysene	870	4400		UD
53-70-3	Dibenz(a,h)anthracene	1100	4400		UD
206-44-0	Fluoranthene	1700	4400		UD
86-73-7	Fluorene	470	4400		UD
193-39-5	Indeno(1,2,3-cd)pyrene	1000	4400		UD
91-20-3	Naphthalene	710	4400	14000	D
85-01-8	Phenanthrene	1400	4400	20000	D
129-00-0	Pyrene	800	4400	2400	JD

FORM I SV

Empirical Laboratories

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

97010030104

Lab Name: EMPIRICAL LABS Contract: STEP

Lab Code: ELPEN Case No.: NA SAS No.: NA SDG No.: STE 504095

Matrix: (soil/water) SOIL Lab Sample ID: 0704095-04

Sample wt/vol: 10.2 (g/mL) G Lab File ID: 04095040

% Moisture: 16 Decanted: (Y/N) N Date Sampled: 04/10/07 10:23

Extraction: (Sep/Cont/Sonc) SONC Date Extracted: 04/16/07

Concentrated Extract Volume: 500 (uL) Date Analyzed: 04/24/07 05:52

Injection Volume: 0.5 (uL) Dilution Factor: 30.0

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

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

CAS NO.	COMPOUND	MDL	PQL	CONC	Q	M
83-32-9	Acenaphthene	1000	3000		UD	
208-96-8	Acenaphthylene	1000	3000		UD	
120-12-7	Anthracene	1000	3000		UD	
56-55-3	Benzo(a)anthracene	1000	3000		UD	
205-99-2	Benzo(b)fluoranthene	1000	3000		UD	
207-08-9	Benzo(k)fluoranthene	1000	3000		UD	
191-24-2	Benzo(g,h,i)perylene	1000	3000		UD	
50-32-8	Benzo(a)pyrene	1000	3000		UD	
218-01-9	Chrysene	1000	3000		UD	
53-70-3	Dibenz(a,h)anthracene	1000	3000		UD	
206-44-0	Fluoranthene	1000	3000		UD	
86-73-7	Fluorene	1000	3000		UD	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	3000		UD	
91-20-3	Naphthalene	1000	3000	32000	D	
85-01-8	Phenanthrene	1000	3000	19000	D	
129-00-0	Pyrene	1000	3000	3200	D	

FORM I SV

Empirical Laboratories

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

07010600105

Lab Name: EMPIRICAL LABS Contract: STAP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B04095

Matrix: (soil/water): SOIL Lab Sample ID: 0704095-05

Sample wt/vol: 15.2 (g/mL) G Lab File ID: 0409505

% Moisture, 13 Decanted: (Y/N) N Date Sampled: 04/10/07 10:15

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/16/07

Concentrated Extract Volume: 500.0(mL) Date Analyzed: 04/24/07 05:06

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG MDL	PL	C CONC	Q	M
83-32-9	Acenaphthene	22	170		U	P
208-96-8	Acenaphthylene	16	170		U	P
120-12-7	Anthracene	23	170		U	P
56-55-3	Benzo(a)anthracene	33	170	82	J	P
205-99-2	Benzo(b)fluoranthene	27	170		U	P
207-08-9	Benzo(k)fluoranthene	15	170		U	P
191-24-2	Benzo(g,h,i)perylene	60	170		U	P
50-32-8	Benzo(a)pyrene	19	170		U	P
218-01-9	Chrysene	24	170	98	J	P
53-70-3	Dibenz(a,h)anthracene	31	170		U	P
206-44-0	Fluoranthene	15	170		U	P
86-73-7	Fluorene	16	170		U	P
193-39-5	Indeno(1,2,3-cd)pyrene	29	170		U	P
91-20-3	Naphthalene	27	170	260		P
85-01-8	Phenanthrene	19	170	400		P
129-00-0	Pyrene	34	170	420		P

FORM 1 - 1.

Empirical Laboratories

Draft Completion Report
for Interim Removal Activities at the 260th Quartermaster Motor Pool Building 1345,
Underground Storage Tanks 25 and 26,Facility ID #9-025008, Hunter Army Airfield
Savannah, Georgia
May 2007

Comments from: Fred Moser
Organization: Savannah District, US Army Corps of Engineers
Comments Dated: 30 July 2007

Comment 1: Table 4-5, Page 14. The value for MTBE is as follows for:
Sample 07093U04 is 1,100 U.

Response: Table 4-5 has been revised as requested.

Comment 2: Table 4-7, Page 16. The value for flouranthene is as follows for:
Sample 07093U02D is 170 UJ

The value for fluorene is as follows for;
Sample 07093U02D is 500 J.

Response: Table 4-7 has been revised as requested.

Comments from: Dale Kiefer
Organization: Fort Stewart Directorate of Public Works
Comments Dated: 13 June 2007

Comment 1: Page iii. In order to standardize the reports, request you make the following changes to the acronyms and abbreviations: EPA should be written as USEPA; the GUST definition should be indicated as Georgia Underground Storage Tank (regulations); the IRA definition is "Interim Remedial Action" note these changes should be made to the 'report cover' and throughout the report. Please make changes accordingly.

Response: The document has been revised as requested.

Comment 2: Page 2. The 'star' location indicated on the map is the location of the HAAF Bulk Fuel Tank Farm. The correct location for the star for the UST 25 & 26 location is approx. 3/8 inch south of the words "Wilson Blvd."

Response: Figure 2-1 has been revised as requested.