

Final Project Report

for Soil Remediation at Solid Waste Management Unit 15, Naval Support Activity Midsouth, Millington, Tennessee

August 2004

Submitted to:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
Under Contract No. N62467-02-D-0469

Prepared by:
STEP Inc.
1006 Floyd Culler Ct.
Oak Ridge, TN 37830





August 16, 2004

Remedial Project Manager
U.S. Navy
Southern Division
Naval Facilities Engineering Command
Attention: Jim Reed
2155 Eagle Drive
P.O. Box 190010
North Charleston, SC 29418

Subject: Contract No. N62467-02-D-0469, DO No. 0001
*Final Project Report for Soil Remediation at Solid Waste Management Unit 15,
Naval Support Activity Mid-South, Millington, Tennessee*
STEP Project Number: 114-115 114-001

Dear Mr. Reed:

Please find enclosed two hard copies and two compact disc copies of the *Final Project Report for Soil Remediation at Solid Waste Management Unit 15, Naval Support Activity Mid-South, Millington, Tennessee* for your records.

If you have any questions or need additional information, please do not hesitate to call me at 865-481-7837, extension 279.

Sincerely,

Roy Hoekstra, P.E.
Project Manager

Enclosure

cc: Roger Donovan, TDEC (2 Copies)
Jennifer Tufts, EPA (2 Copies)
Frank Novitzki, NSAM (2 Copies)
John Stedman, Ensafe (1 Copy)
Reader File
Project File

Final Project Report

**for Soil Remediation at Solid
Waste Management Unit 15,
Naval Support Activity Midsouth,
Millington, Tennessee**

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**Submitted to:
Department of the Navy
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Delivery Order 0001**

**Prepared by:
Solutions To Environmental Problems, Inc.
1006 Floyd Culler Court
Oak Ridge, TN 37830**

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List of Acronyms

BFI	Browning-Ferris Industries
BTEX	benzene, toluene, ethylbenzene, and xylene
ELAB	ELAB of Tennessee, Inc.
EPA	U. S. Environmental Protection Agency
EPH	extractable petroleum hydrocarbons
GRO	gasoline range organics
mg/kg	milligram per kilogram
mg/L	milligram per liter
MIDB	Millington Industrial Development Board
NPDES	National Pollution Discharge Elimination System
NSAM	Naval Support Activity Midsouth
PCB	polychlorinated biphenyl
PID	photoionization detector
POTW	publicly owned treatment works
ppm	part per million
PRG	preliminary remediation goals
RCRA	Resource Conservation and Recovery Act
ROICC	Resident Officer in Charge of Construction
STEP	Solutions To Environmental Problems, Inc.
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TAL	target analyte list
TCL	target compound list
TCLP	Toxicity Characteristic Leaching Procedure
TDEC	Tennessee Department of Environment and Conservation
TDSWM	Tennessee Division of Solid Waste Management
TDWPC	Tennessee Division of Water Pollution Control
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
yd ³	cubic yards

1. INTRODUCTION

Solutions To Environmental Problems, Inc. (STEP) under a contract task order with the U.S. Department of the Navy has performed a remedial action at Solid Waste Management Unit (SWMU) 15, Naval Support Activity Midsouth (NSAM), Millington, Tennessee. The remedial action included the excavation, transportation, and disposal of 57,168 tons of petroleum-contaminated soil, confirmatory sampling, backfilling, and site restoration. In addition, six monitoring wells located within the excavation area were abandoned. All work was accomplished for the Southern Division, Naval Facilities Engineering Command.

2. PURPOSE OF THIS REPORT

This project report is designed to describe activities conducted during the remedial action, present analyses of the confirmatory sampling, and present recommendations for future action. The remedial action was performed in compliance with applicable regulatory mandates pertaining to the environment, worker protection, and public health.

3. SITE BACKGROUND

3.1 SITE HISTORY

The NSAM site was originally established in 1917 as "Park Field" serving as a training center for pilots. After serving multiple purposes throughout the 1920s and 1930s, during which the site also served as a transient camp for unemployed workers, the site was re-commissioned for aviation purposes in 1942. Following the end of World War II, the site served as a Naval Air Station and in a support and logistics role for almost 50 years. In 1993, the site was given its current name and the Base Realignment and Closure Commission modified the base's primary mission to operational and logistical support while also transferring partial ownership to the Millington Industrial Development Board (MIDB).

As depicted on the location map shown in Figure 3-1, NSAM Millington is located approximately 18 miles north-northeast of Memphis, Tennessee.

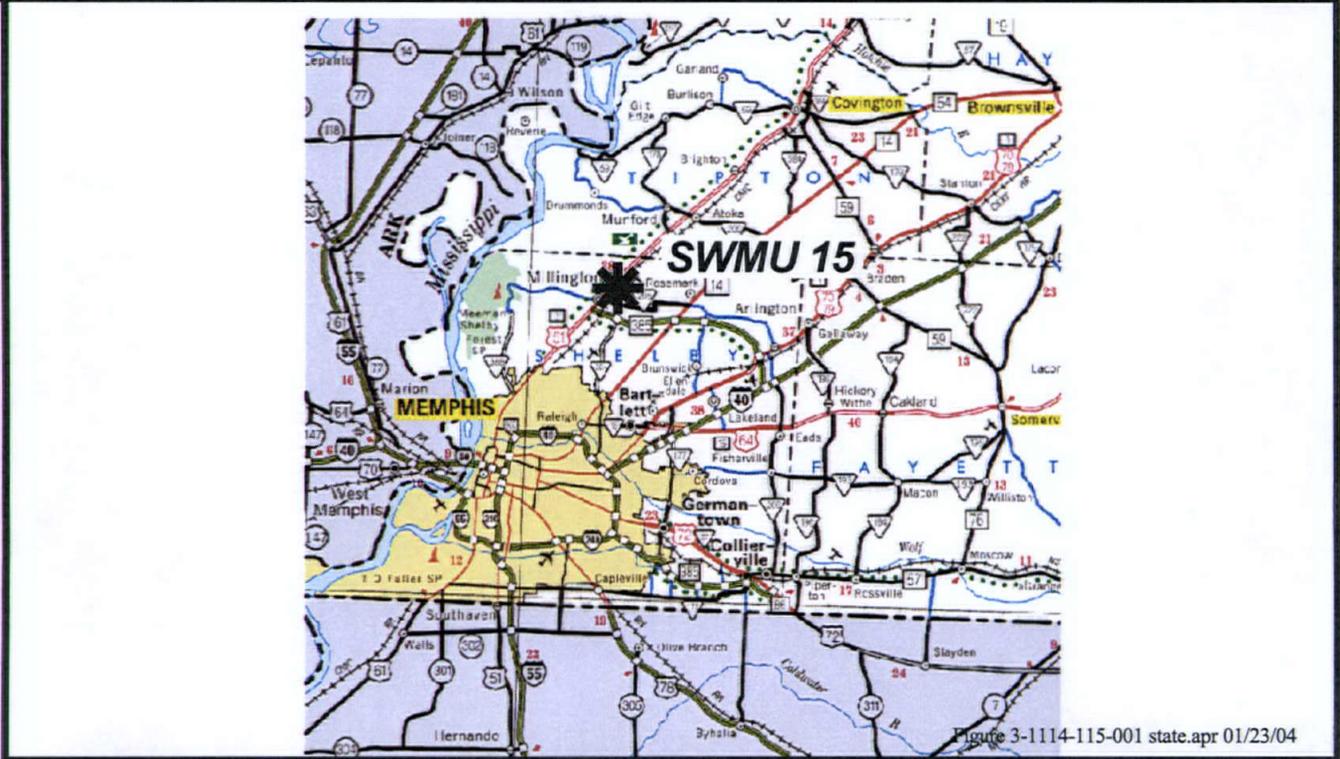


Figure 3-1114-115-001 state.apr 01/23/04

LEGEND

Prepared By: STEP, Inc.
 Job Title: Soil Remediation at
 Solid Waste Management Unit 15
 Naval Support Activity Midsouth
 Millington, Tennessee

Figure 3-1 Location Map

3.2 SITE-SPECIFIC DESCRIPTION

SWMU 15 is a former fuel farm encompassing approximately 40,000 square feet. The site consisted of 10 underground storage tanks (USTs) with capacities ranging from 10,000 to 25,000 gallons and their associated piping. The USTs were used to supply aviation fuel and lubricating oils to the nearby flight line and a truck loading station east of the SWMU. The 10 USTs were abandoned in 1986 and removed in 1991 and 1992 under the Navy's UST program. The excavations were sampled and the contaminated soils were left in place. A site map is shown in Figure 3-2.

3.3 PREVIOUS INVESTIGATIONS

Several investigations and sampling events have been conducted at the site. Extensive sampling was conducted in 1991 and 1992 during the UST removal and closure activities. In addition, a Resource Conservation and Recovery Act (RCRA) Facility Investigation was conducted by ENSAFE in 1999. These assessments revealed benzene and total petroleum hydrocarbon (TPH) concentrations above the appropriate site-specific cleanup levels of 100 milligrams per kilogram (mg/kg) for benzene and 500 mg/kg for TPH.

4. REMEDIATION OBJECTIVE/CLEANUP CRITERIA

As established in the project work plan, the objectives of this removal action performed by STEP were as follows:

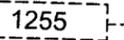
- excavate, transport, and dispose of the petroleum-contaminated soil from SWMU 15,
- perform confirmatory sampling of the soil after excavation to determine the effectiveness of the removal action, and
- backfill the excavation with material of appropriate permeability to create a sump to allow for future pumping of potentially contaminated groundwater.

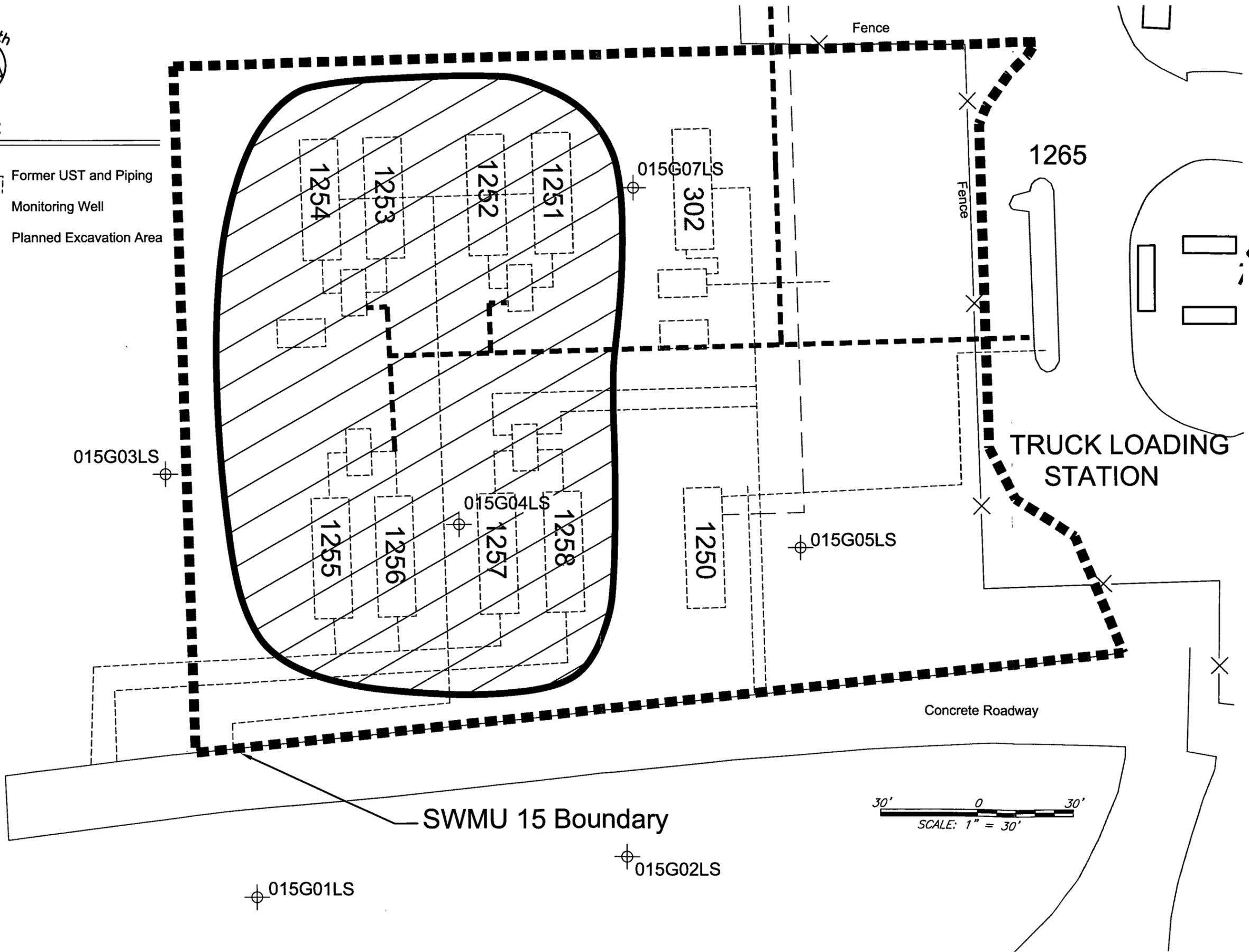
For the purposes of this removal action, the established cleanup levels were 100 mg/kg for benzene and 500 mg/kg for TPH. The planned excavation area is shown in Figure 3-3.

R:\114\114-115-001\graphics\Mill Sample Grid.dwg(1:1)(10/6/03)



Legend:

-  1255 Former UST and Piping
-  Monitoring Well
-  Planned Excavation Area



STEP Inc.
 Solutions To Environmental Problems
 1006 Floyd Culler Court
 Oak Ridge, Tennessee 37830
 (865)481-7837

Source: NSA Mid-South
 Job Title: Soil Remediation at
 Solid Waste Management Unit 15
 Naval Support Activity Midsouth
 Millington, Tennessee

Prepared For: Department
 of the Navy Southern
 Division

Figure 3-3 Planned Excavation Area

5. REGULATORY PERMITS/REQUIREMENTS

Prior to the start of fieldwork, all applicable and relevant permits were completed and approved by the appropriate state and local entities.

5.1 STORM WATER CONSTRUCTION PERMIT

A National Pollution Discharge Elimination System (NPDES) Storm Water Construction Permit was required since the area of disturbance for the excavation was one or more acres; therefore, a Notice of Intent form was submitted to the Tennessee Division of Water Pollution Control (TDWPC) a minimum of 30 days prior to mobilizing to the site. After processing the form, TDWPC issued a Notice of Coverage (NPDES Permit # TNR150879) under the Tennessee General NPDES Permit for Storm Water Discharges Associated with Construction Activity. The Notice of Coverage is included in Appendix A.

After the site has undergone final stabilization and all storm water discharges from the site authorized by this permit are eliminated, a Notice of Termination will be submitted to the TDWPC.

5.2 SPECIAL WASTE APPROVAL

The petroleum-contaminated soil from the site exceeded the allowable concentrations for benzene and TPH permitted by the Tennessee Department of Environment and Conservation (TDEC); therefore, the material was classified as a "Special Waste." Disposal of the material in a Subtitle D permitted landfill required a special waste approval from the Tennessee Division of Solid Waste Management (TDSWM). A Special Waste Evaluation application with the required attachments and a Special Waste Evaluation Fee Worksheet application with the proper fee were submitted to the TDSWM 30 days prior to mobilization. After processing the form, TDSWM issued an approval letter to Browning-Ferris Industries (BFI) for disposal of approximately 35,000 tons of contaminated soil as special waste at the BFI North Shelby Landfill.

During excavation activities, additional soil contamination outside the planned excavation was encountered. The disposal of contaminated soil in excess of 35,000 tons required the approval of TDSWM. After petitioning TDSWM, the special waste approval letter was amended by TDSWM to dispose of approximately 45,000 tons of petroleum-contaminated soil. As the excavation continued to

extend, removal of additional tonnage in excess of 45,000 tons was warranted; therefore, TDWSM increased the special waste limit to 65,000 tons. The special waste approvals are included in Appendix B.

5.3 REMEDIATION ACTIVITY PERMITS

Remediation activity permits were required for installation or abandonment of monitoring wells, recovery wells, deep soil borings, GeoProbe[®], or any activity associated with remediation in Shelby County. Since the soil remediation at SWMU 15 involved soil borings, GeoProbe[®], and well abandonments, applications for remediation activity permits (emergency and non-emergency) were submitted to the Memphis and Shelby County Health Department Water Quality Branch. After processing the applications, the Memphis and Shelby County Health Department issued permits for the soil borings and well abandonments. Remediation activity permits are included in Appendix C.

6. REMEDIATION ACTIVITIES

Activities performed during the course of this remedial action included:

- waste characterization and profiling,
- backfill/borrow material characterization,
- site preparation,
- well abandonment,
- excavation of contaminated soil,
- transportation and disposal of contaminated soil,
- confirmatory soil sampling,
- site surveying,
- backfilling the excavation, and
- site restoration.

On October 8, 2003, a preconstruction meeting was held at SWMU 15 with the Resident Officer in Charge of Construction – Memphis (ROICC), NSAM, and STEP to resolve outstanding issues. All field activities were coordinated with the ROICC Project Manager.

6.1 WASTE CHARACTERIZATION AND PROFILING

Prior to the start of excavation, waste characterization and profiling activities were conducted. As required by BFI for special waste, representative soil samples from SWMU 15 were collected for waste profiling. The BFI North Shelby Landfill waste acceptance protocols stipulated that analytical data used for waste characterization was not more than one year old. To comply with this requirement, waste characterization samples were collected prior to preparing the profile for the petroleum-contaminated soils.

To ensure representative samples of contaminated soil were collected, five soil boring locations (shown in Appendix G) were selected based on the data obtained during the previous site investigations and sampling events. A GeoProbe[®] was used to perform the soil borings. The soil borings were field screened using a photoionization detector (PID) to determine the most contaminated location within the boring. Four samples (015WCS01, 015WCS02, 015WCS03, and 015WCS05) were collected from the most contaminated areas within the soil borings. The soil samples were collected at a depth of 8 ft to 17 ft below ground surface. The samples were submitted to ELAB of Tennessee, Inc. (ELAB) and analyzed for Toxicity Characteristic Leaching Procedure metals, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). Based upon the analytical results, the contaminated soil did not meet the definition of a hazardous waste as defined in 40 *Code of Federal Regulations* Part 261. Analytical data for the waste characterization samples are included in Appendix D. The contaminated soil was profiled and accepted by BFI as shown in Appendix E.

6.2 BACKFILL/BORROW MATERIAL CHARACTERIZATION

To ensure that materials free of contaminants were used for backfilling, samples were collected from off-site coarse sand and borrow soil pits that provided the material. Sample 015BFSA01 was collected from the sand pit at Memphis Stone and Gravel located in Rosemark, Tennessee. Sample 015BFSA02 was collected from a borrow soil pit owned by MIDB located in Millington, Tennessee.

The sand and soil samples were submitted to ELAB and analyzed for the following:

- target compound list (TCL) VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B,
- TCL SVOCs by EPA Method 8270C,
- TPH by Tennessee-approved method,

- TCL Pesticides by EPA Method 8081A,
- herbicides by EPA Method 8151A,
- target analyte list (TAL) metals by EPA Methods 6010B/7471A,
- polychlorinated biphenyls (PCBs) by EPA Method 8082, and
- pH by EPA method 9045B.

The analytical results were compared to the EPA Region 4 Preliminary Remedial Goals (PRGs) for residential soil pathway and cancer endpoint. Based upon the analytical results from the coarse sand and borrow soil, arsenic exceeded its PRG (0.039 mg/kg) in both samples. In Sample 015BFSA01 (coarse sand), the concentration of arsenic was 1.9 mg/kg. Based upon conversations with ENSAFE regarding previous site investigations at NSAM, the background concentrations of arsenic ranged from 7.3 mg/kg to 14 mg/kg in surface samples (0-2 ft) and ranged from 1.7 mg/kg to 11.9 mg/kg in subsurface samples. Thus, the arsenic concentrations in Samples 015BFSA01 and 015BFSA02 from the off-site sources were consistent with the background concentrations at NSAM.

Herbicides, TAL metals, TPHs, PCBs, SVOCs, and VOCs did not exceed their respective PRGs in Samples 015BFSA01 and 015BFSA02. Analytical results for the borrow soil and coarse sand samples are included in Appendix F.

6.3 UTILITY IDENTIFICATION

Utility clearances for all underground and overhead utilities were obtained before intrusive activities began. Utilities and other potential underground interferences were marked with flagging or paint. Interruptions of utility services were kept at a minimum and were at such times and duration as approved by ROICC and NSAM.

6.4 SITE PREPARATION

On October 8, 2003, STEP mobilized to the site. Site preparations consisted of laying out the limits of the excavation with pin flags, removing the grass layer from the site, constructing a temporary haul road, and erecting orange construction fencing to delineate the limits of the construction area and to control access to the site. In addition, the section of fence north of the excavation was temporarily relocated to provide adequate space for construction activities. Erosion and sediment control measures (silt fence and

straw bales) were put into place before any ground disturbance occurred which would cause runoff from the excavation.

6.5 WELL ABANDONMENT

Before excavation activities began, two monitoring wells (15G04LS and 15G07LS) were filled and abandoned because of their location within the planned excavation. The Memphis and Shelby County Health Department verbally approved an emergency remediation activity permit (Permit # 03-173) for the fill and abandonment of these two wells and issued the hard copy permit on August 13, 2003. The wells were filled and abandoned on August 8, 2003. Monitoring wells 15G01LS, 15G02LS, 15G03LS, and 15G05LS, were also abandoned during excavation activities as discussed in Section 7.3. Well abandonments were performed in accordance with TDEC and Memphis and Shelby County Health Department well standards and regulations. Figure 6-1 shows all monitoring wells that were abandoned during this project. The remediation activity permit for monitoring wells 15G04LS and 15G07LS is included in Appendix C.

6.6 PRE-CONSTRUCTION SITE SURVEY

A complete civil site survey was performed before construction began. This survey established the existing contours, site boundaries, and other site features. The pre-construction site survey is included in Appendix G. The survey was performed by a registered land surveyor licensed in the state of Tennessee.

6.7 EXCAVATION OF CONTAMINATED SOILS

Using a tracked excavator, the contaminated soil was excavated in 40-ft sections and loaded in trucks for transportation and disposal. The excavation began on the north side of the site and progressed across the site in a southerly direction. As each 40-ft section of excavation was completed, the soil from the base or sidewall of the excavation was field screened using a PID and/or field infrared/TPH analyzer. In addition, field observations (i.e., soil discoloration and petroleum odor) were used to assist the removal of the contaminated soil.

When field screenings indicated clean material had been reached at the bottom or sidewall of the excavation for each 40-ft section, a representative sample was collected from the bottom or sidewall of the excavation to verify that the contaminated soil had been removed.

The confirmatory samples were analyzed on a 48-hour turnaround time. In areas where the analytical results indicated TPH or benzene concentrations exceeding the cleanup level, the area was over-excavated and resampled.

To ensure proper vehicular access to the excavation and compliance with appropriate excavation and trenching regulations promulgated by the Occupational Safety and Health Administration, the excavation was sloped on a 2:1 ratio. Given the nature of the soils (relatively firm silts, loams, and loesses), this slope ratio sufficiently stabilized the sidewalls of the excavation while allowing for efficient and safe access to the excavation.

As the excavation proceeded, partial surveys were performed to determine the volume of contaminated soil removed, extent of the excavation, and locations of confirmatory soil samples.

6.8 CONFIRMATORY SOIL SAMPLING

Soil sampling was performed to verify that the contaminated soil exceeding the project cleanup levels in each area had been excavated. Confirmatory soil samples were collected on 40-ft sections in the excavated area at a depth of 0-6 inches and along the corresponding sidewalls of the excavation. The soil samples were analyzed for the following:

- benzene, EPA Method 8260A,
- Tennessee Extractable Petroleum Hydrocarbons (EPH), and
- Tennessee Gasoline Range Organics (GRO).

All the samples were submitted to ELAB and analyzed on an expedited 48-hr turnaround time. The expedited turnaround time was used to assess whether material in excess of the project cleanup levels had been removed from each 40-ft section. If any confirmatory soil sample exceeded project cleanup levels, the “hot spot” area was over-excavated and resampled. Confirmatory soil sample locations are shown on Figure 6-2.

Millington Municipal Airport



Sample No.	Benzene	GRO	EPH
015SSB52	U	710	7.4J
See Note 5			

Sample No.	Benzene	GRO	EPH
015SSB55	13	1,100	U
See Note 5			

Legend:

- Contours (1 foot interval)
- Roadway
- Existing Fence line
- Confirmation Samples Below Cleanup Levels
- Confirmation Samples Exceeding Cleanup Levels
- Confirmation Samples from Over-Excavation Below Cleanup Levels
- Sample Collected from UST Pipe Spill
- Area Recommended for Further Sampling
- Initial Area of Excavation
- Approximate Limits of Excavation
- Existing Waterline
- Monitoring Well
- Samples from Previous Investigation

- Notes:**
- 1.) Topographic information developed, and provided by Allen and Hoshall, Inc. of Memphis Tennessee.
 - 2.) All sample results are shown in "milligrams per kilogram". U indicates the analyte was analyzed for but not detected. J indicates estimated data due to quality control criteria. D indicates the sample was diluted.
EPH = extractable petroleum hydrocarbons
GRO = gasoline range organics
THP = total petroleum hydrocarbons
PID = photo ionization detector
 - 3.) Sample collected from Over-Excavation.
 - 4.) Samples collected from spill from UST pipe.
 - 5.) Area identified from previous investigations recommended for further excavation (ENSAF, August 2001. *Corrective Measures Study Work Plan, Naval Support Activity Mid-South, Millington, Tennessee, Revision 2*).



000756 DAY

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NO.	DATE	APPR.	REVISION

STEP Inc.
Solutions To Environmental Problems
1006 Floyd Culler Court
Oak Ridge, Tennessee 37830
(865)481-7837

CHECKED	DATE	CLIENT APPROVAL	DATE

Excavation Area and Sample Location Map
Soil Remediation at SWMU 15 Naval Support Activity Midsouth
Millington, Tennessee

DRAWN As Noted	DATE August 5, 2004	DWG. NO.	REV. NO.
SCALE As Shown	Proj. No. 114-115 114-001	Figure 6-2	

Based upon the analytical results from the confirmatory samples, TPH-GRO exceeded the project cleanup level of 500 mg/kg in three samples. Benzene did not exceed its project cleanup level of 100 mg/kg in any samples. TPH-GRO, with concentrations of 780 mg/kg in Sample 015MT05B, 1,900 mg/kg in Sample 015MT07B, and 600 mg/kg in Sample 015MT20W, was in excess of the cleanup level. The two sections represented by Samples 015MT05B and 015MT07B were over-excavated and resampled. Analytical results from the resampling of these two sections showed Sample 015MT05B2 with a TPH-GRO concentration of 32 mg/kg and a non-detection of TPH-GRO in Sample 015MT07B2. Since the excavation activities were suspended as discussed in Section 7.2, the section represented by Sample 015MT20W was not over-excavated and resampled. The laboratory results were subjected to third party data validation. Table 6-1 presents the analytical results for the confirmatory soil samples. The validated laboratory forms for the confirmatory soil samples are included in Appendix H.

7. DELAYS, PROBLEMS ENCOUNTERED, AND UNEXPECTED FINDINGS

During the course of the removal action at SWMU 15, several expected and unexpected obstacles were encountered such as utility lines, abandoned UST pipes, concrete slabs and debris, and unexpected contamination.

7.1 UTILITIES

Prior to excavation intrusive activities, a sewer line and water line owned by the Navy were identified and marked on October 7, 2003. The 6-in. water line was located within the planned excavation area. The utility markings indicated the water line was connected to a fire hydrant located on Millington Airport Authority property outside the planned excavation area (west of SWMU 15). The line was marked with blue flagging leading into the excavation area from the east and west ends of SWMU 15. The flagging from each direction stopped in the middle of the excavation and did not connect. Approximately 40 ft of the water line was not marked and the markings from each direction were off-set.

Based upon discussions with the Navy maintenance contractor, the section of the water line not marked was believed to have been replaced with polyvinyl chloride piping and it was not detected with the pipe locating equipment. To determine if the water line was connected to the fire hydrant, the hydrant was opened by the Navy maintenance contractor and it was confirmed the water line was active. On

Table 6-1 Analytical Results for Confirmatory Soil Samples

Sample Number	Sample Location	TPH-EPH (mg/kg)	TPH-GRO (mg/kg)	BENZENE (mg/kg)
015MT01N	Northwest Sidewall	42	140	U
015MT01NDUP	Northwest Sidewall	40	49	U
015MT02N	North Middle Sidewall	11	13	U
015MT3N	Northeast Sidewall	U	14	U
015MT04W	West Sidewall	5.5	U	U
015MT05B	Bottom	11	780D	0.1J
015MT05B2	Bottom	U	32	0.0034J
015MT06B	Bottom	U	91	U
015MT07B	Bottom	U	1,900D	0.54
015MT07B2	Bottom	U	U	U
015MT08E	East Sidewall	U	5.6J	U
015MT09W	West Sidewall	U	U	U
015MT10B	Bottom	U	82	U
015MT11B	Bottom	U	U	U
015MT11BDUP	Bottom	U	U	U
015MT12B	Bottom	U	U	U
015MT13E	East Sidewall	U	U	U
015MT14W	West Sidewall	U	U	U
015MT14WDUP	West Sidewall	12	U	U
015MT15B	Bottom	14	10J	U
015MT16B	Bottom	U	U	U
015MT17B	Bottom	U	U	U
015MT18W	East Sidewall	6.4	U	U
015MT19W	West Sidewall	U	U	U
015MT20W	West Sidewall	U	600J	U
015MT21B	Bottom	U	44	U
015MT22B	Bottom	8.3	U	U
015MT23B	Bottom	8.1	U	U
015MT24B	Bottom	7.2	55	U
015MT24BDUP	Bottom	7.3	46	U
015MT25B	Bottom	U	37	U

Table 6-1 (Continued)

Sample Number	Sample Location	TPH-EPH (mg/kg)	TPH-GRO (mg/kg)	BENZENE (mg/kg)
015MT26W	East Sidewall	U	U	U
015MT27W	East Sidewall	U	U	U
015MT28B	Bottom	U	U	0.0058J
015MT29B	Bottom	8	51	U
015MT30B	Bottom	U	30	U
015MT31B	Bottom	5.6	U	0.0021J
015MT32B	Bottom	U	15	U
015MT33B	Bottom	U	15	0.02
015MT34B	Bottom	U	45	U
015MT35B	Bottom	U	9.6J	U
015MT36B	Bottom	U	100	U
015MT37B	Bottom	U	38	0.0027J
015MT37BDUP	Bottom	U	49	0.0048J
015MT38B	Bottom	U	29	U
015MT39B	Bottom	U	52	0.045

Note Bold values exceeded their respective project cleanup levels.

EPH = extractable petroleum hydrocarbons

D = the sample was diluted

GRO = gasoline range organics

J = estimated data due to quality control criteria

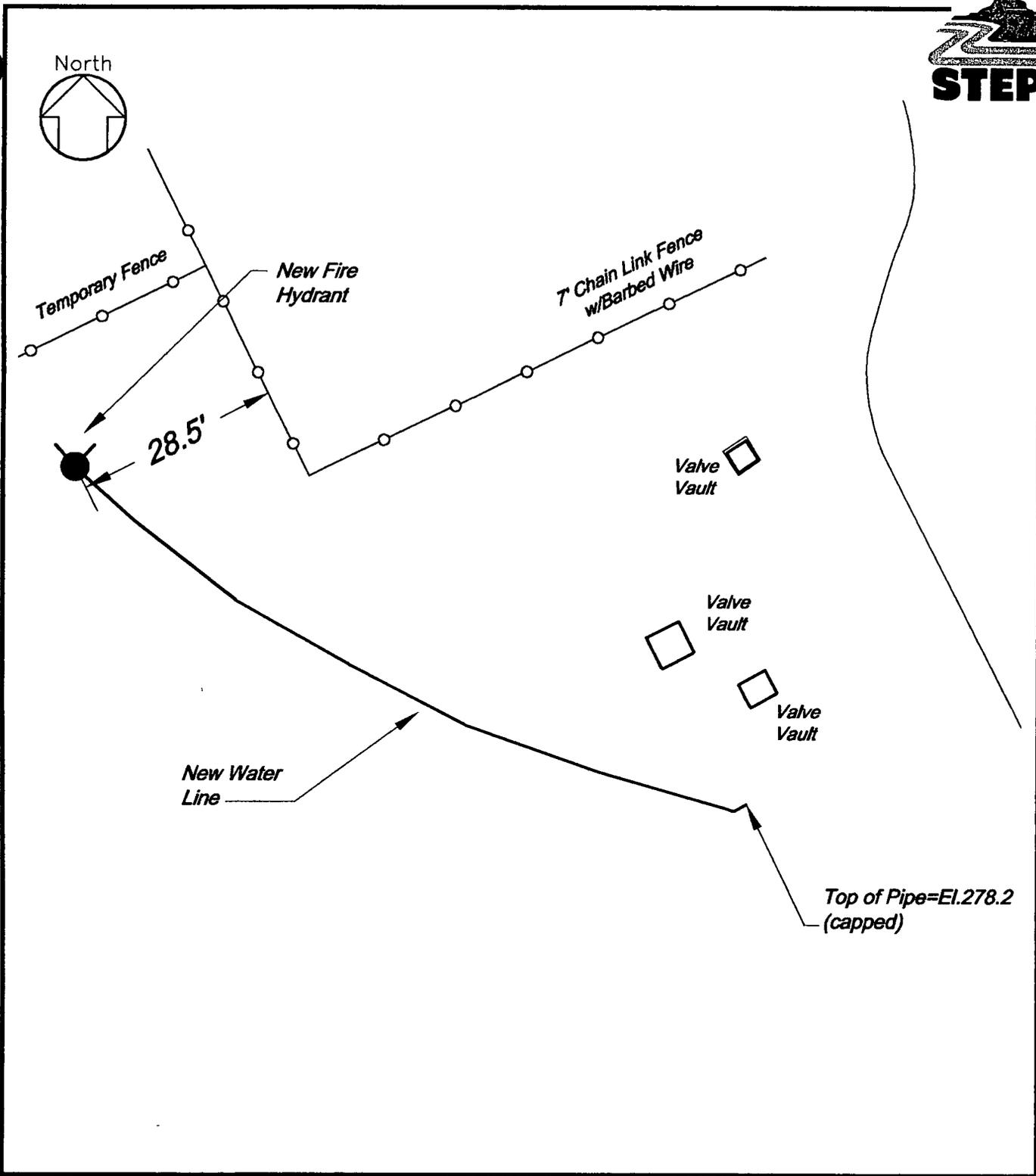
mg/kg = milligram per kilogram

TPH = total petroleum hydrocarbons

U = indicates the analyte was analyzed for but not detected

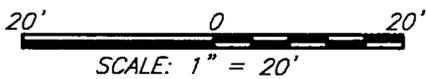
October 16, 2003, ROICC and NSAM concurred with locating and isolating the water line to ensure that excavation activities were not interrupted.

On October 20, 2003, the east and west ends of the water line (outside the planned excavation area) were capped and the section of pipe within the excavation area was isolated. Subsequently, excavation of this area revealed that the previous utility marking (east end) was actually an abandoned UST pipe (fuel line) as discussed in Section 7.3. The actual location of the east end of the water line was south of this utility marking. The location of the new water line and fire hydrant are shown on Figure 7-1.



R:\114114-4-graphics\millington water line Relocate.dwg(1)(06/25/04)

Legend



Prepared For Department of the Navy Southern Division

Source NSA Mid-South
Job Title Soil Remediation at Solid Waste Management Unit 15
Naval Support Activity Midsouth
Millington, Tennessee

Figure 7-1 Location of New Water Line

Secondly, the storm sewer line located on the west end of the SWMU was reportedly connected to the airplane washing area at the Millington Municipal Airport and was located outside the planned excavation. Also, rainwater from the airport runway allegedly discharged to this line. Because the soil contamination spread in a southwestern direction and outside the planned excavation, the storm sewer line was impacted. To prevent water from entering the excavation during rain events, the storm sewer line was severed and temporarily plugged at each end. On October 29, 2003, ROICC, Millington Municipal Airport Authority, and STEP agreed to monitor the airplane washing area during rain events and pump the sewer manhole to ensure water did not back up onto the airplane wash area and runway. The line was replaced during backfilling operations. Water did not buildup behind the plugs and storm water never flooded the airplane washing area or runway.

7.2 UNEXPECTED CONTAMINATION

The planned excavation involved the removal of approximately 35,000 tons of contaminated soil; however, as the amount of contaminated soil removed approached 35,000 tons, it was apparent that the volume of contaminated soil was more than estimated. PID readings and visual observations such as soil discoloration and petroleum odor revealed unexpected soil contamination outside the planned excavation. The additional contaminated soil was located southwest, south, and southeast of the planned excavation. On October 29, 2003, the ROICC Project Manager instructed STEP to continue excavation of the contaminated soil beyond 35,000 tons, but not to chase abandoned piping unless contamination was present. Excavation continued in a southerly direction.

The soil contamination extended south into the soil berm underneath the concrete road that was used for operation of the former railroad. STEP was instructed by ROICC to excavate soil contamination in the berm. The concrete road was broken into manageable pieces and disposed at the BFI Landfill as construction/demolition waste.

On November 11, 2003, all excavation activities associated with the removal of the contaminated soil were suspended due to the greater than expected amount of soil contamination and concerns of the excavation being subjected to the winter rainy season. The following activities were agreed upon with the ROICC and STEP:

- excavate any remaining contaminated soil up to the existing sidewalls at the south, southwest, and southeast sections of the excavation and then cease excavation;

- place plastic sheeting over the sidewalls (south, southwest, and southeast) where soil contamination remains;
- commence backfilling of the excavation with coarse sand and borrow soil; and
- perform site restoration (seed, fertilize, and straw).

Field screenings and observations (i.e., PID readings, soil discoloration, and odor) confirmed that soil contamination remained on the south, west, and southwest side walls. Field observations and screenings taken from different locations of the excavation sidewall were as follows:

- PID readings from the south wall ranged from 20 parts per million (ppm) to 2,236 ppm. Soil discoloration (greenish clay) and fuel odor were present.
- PID readings from the southwest wall were 2,074 ppm at monitoring well 015G01LS, 1,485 ppm approximately 10 ft south of monitoring well 015G01LS, 2,900 ppm at the exposed sewer pipe (southwest corner). Soil discoloration (greenish clay) and fuel odor were present.
- The PID reading from the west wall was 2,495 ppm. Soil discoloration (greenish clay) and fuel odor were present.

The extended excavation area and extent of remaining soil contamination are shown on Figure 6-2.

7.3 UNEXPECTED ABANDONED UST PIPING AND DEBRIS

During excavation activities, UST debris (i.e., abandoned piping, a concrete saddle, and anchor straps) were encountered. When such debris was encountered, the ROICC was notified. Contaminated UST piping was broken into manageable sections and loaded into trucks with the contaminated soil. The concrete saddle removed from the excavation was broken into manageable pieces and piled on site for disposal as construction/demolition waste. Also, several UST anchor straps were excavated and disposed as construction/demolition waste at the BFI North Shelby Landfill.

On October 15, 2003, an abandoned UST pipe was encountered during excavation. The UST pipe contained an unknown substance (liquid with a strong odor), which released into the excavation. The PID reading from the substance at the spill area was 560 ppm. The spill was isolated and contained with a temporary soil berm and absorbent material was placed on the substance. The spill was immediately reported to ROICC. Since the substance in the pipe was unknown, the spill area was over-excavated and the impacted soil was treated as a potential hazardous waste until an analysis of the substance was

performed. The section of the abandoned pipe within the excavation area was isolated and removed. The east end of the pipe outside the excavation area was grouted in-place.

The impacted soil from the spill was loaded in lined roll-off containers and covered. The roll-off containers were placed in a RCRA 90-day accumulation area until the laboratory analysis was completed. A sample of the unknown substance was collected and analyzed for TPH-GRO, lead, and VOCs. Analytical results for Sample 015MTUNK01 showed TPH GRO and lead with concentrations of 700,000 milligrams per liter (mg/l) and 2.26 mg/l respectively. Also, six VOCs (benzene, 2-butanone, ethylbenzene, styrene, toluene, and xylene) were detected in Sample 015MTUNK01. The concentrations of the VOCs were 180 mg/l for benzene, 1,100 mg/l for 2-butanone, 3,300 mg/l for ethylbenzene, 59 mg/l for styrene, 52,000 mg/l for toluene, and 18,000 mg/l for xylene.

Based upon the analytical results, the unknown liquid was determined to be a fuel mixture (non-hazardous). The impacted soil from the spill was disposed at the BFI North Shelby Landfill as special waste. Analytical data for the unknown substance sample is included in Appendix I.

Three soil samples were collected from the spill area and analyzed for TPH and benzene to ensure the contamination was removed. Based upon analytical results for Samples 015MTSP02A, 015MTSP02B, and 015MTSP020C, TPH-GRO, TPH-EPH and benzene concentrations were below the site cleanup levels. Analytical data for the impacted soil samples are included in Appendix J.

7.4 ADDITIONAL WELL ABANDONMENT

Since the extent of the soil contamination (southwestern and southeastern direction) outside the planned excavation was unexpected, several monitoring wells located within the expanded contamination area were abandoned. The ROICC was informed that monitoring wells 015G03LS and 015G05LS were located within the expanded contamination area. On October 29, 2003, STEP personnel spoke to the Memphis and Shelby County Health Department via telephone regarding excavation of monitoring wells 015G03LS and 015G05LS instead of performing a fill and abandonment. The depth of the excavation (approximately 20 ft) was the same as the depths of monitoring wells 015G03LS and 015G05LS (19 ft and 20 ft respectively). Because the depths of the wells and the excavation were the same, excavating the entire wells to depth would not impact the groundwater; therefore, the Memphis and Shelby County Health Department agreed that a remediation activity permit was necessary, since the wells were being excavated. A letter documenting this abandonment approach for monitoring wells 015G03LS and

015G05LS was submitted to the Memphis and Shelby County Health Department and is included in Appendix C.

In addition, the extent of soil contamination in a southerly direction impacted monitoring wells 015G01LS and 015G02LS. The ROICC was informed that these two wells were located within the expanded contamination area. An emergency remediation activity permit (Permit # 03-226) for fill and abandonment of these two wells was issued on November 12, 2003, by the Memphis and Shelby County Health Department. The remediation activity permit for monitoring wells 015G01LS and 015G02LS is included in Appendix C.

8. WASTE MANAGEMENT

Waste management activities consisted of segregation, transportation, and disposal of petroleum-contaminated and noncontaminated waste. The waste consisted mainly of petroleum-contaminated soil and debris, construction debris, wastewater, personal protective equipment, and construction waste (i.e., paper, rags, plastic). Noncontaminated waste (i.e., paper, plastic, trash) was segregated from contaminated waste and placed in proper containers for disposal. Waste was handled and managed in such a manner as to prevent spills and spread of contamination. All waste management, transportation, manifesting, and record keeping were performed in accordance with applicable federal, state, and local laws and regulations.

8.1 SOLID WASTE

The contaminated soil and debris (i.e., UST piping) was excavated and loaded directly into trucks for transportation to the BFI North Shelby Landfill. A nonhazardous waste manifest was completed for each load of waste leaving the site. The concrete from the removed roadway and the UST debris (i.e., concrete saddle and anchor straps) were segregated and disposed as construction/demolition waste at the BFI North Shelby Landfill. The total amount of contaminated soil/debris and concrete/UST debris removed from SWMU 15 were 57,168 tons and 322 tons, respectively. Waste transportation was performed in accordance with applicable Department of Transportation rules and regulations. Table 8-1 presents a daily waste log for solid waste removed from SWMU 15.

Table 8-1 Daily Totals of Solid Waste Removed

Date	Waste Type	Total Loads	Daily Total Weight (ton)	Cumulative Total Weight (ton)
10-13-03	Contaminated Soil	102	2,179.54	2,179.54
10-14-03	Contaminated Soil	9	204.5	2,384.04
10-15-03	Contaminated Soil	136	3,024.01	5,408.05
10-16-03	Contaminated Soil	122	2,442.76	7,850.81
10-18-03	Contaminated Soil	135	2,652.15	10,502.96
10-20-03	Contaminated Soil	118	2,645.6	13,148.56
10-21-03	Contaminated Soil	130	2,826.46	15,975.02
10-22-03	Contaminated Soil	112	2,312.34	18,287.36
10-23-03	Contaminated Soil	108	2,424.23	20,711.59
10-24-03	Contaminated Soil	99	2,274.81	22,986.4
10-25-03	Contaminated Soil	66	1,439.18	24,245.58
10-28-03	Contaminated Soil	125	2,604.86	27,030.44
10-29-03	Contaminated Soil	130	2,869.06	29,899.5
10-30-03	Contaminated Soil	120	2,789.21	32,688.71
10-31-03	Contaminated Soil	122	2,860.71	35,549.42
11-01-03	Contaminated Soil	118	2,511.93	38,061.35
11-03-03	Contaminated Soil	106	2,489.74	40,551.09
11-04-03	Contaminated Soil	111	2,503.35	43,054.44
11-05-03	Contaminated Soil	102	2,368.14	45,422.58
11-06-03	Contaminated Soil	107	2,354.47	47,777.05
11-07-03	Contaminated Soil	133	2,680.53	50,457.58
11-08-03	Contaminated Soil	148	2,873.62	53,331.2
11-10-03	Contaminated Soil	118	2,434.42	55,765.62
	Concrete/UST Debris	18	240.34	240.34
11-11-03	Contaminated Soil	70	1,401.89	57,167.51
	Concrete/UST Debris	6	81.11	321.45

8.2 LIQUID WASTE

Water that accumulated in the open excavation from rain events was either transferred to a temporary on-site storage tank (Baker Tank) for interim storage or discharged directly into the sanitary sewer. In addition, wastewater from the decontamination of sampling equipment was placed in the temporary storage tank. The discharge criteria established by the publicly owned treatment works (POTW) was 1.0 ppm for benzene, toluene, ethylbenzene, and xylene (BTEX) and 50 ppm for TPH.

Rainwater from the first major rain event that collected in the excavation was transferred to the temporary storage tank. Once the temporary tank was full, a representative sample was collected and submitted to ELAB. The wastewater sample was analyzed for BTEX and TPH.

Based upon the analytical results from the Sample 015MTWW01, BTEX and TPH did not exceed their respective discharge levels. Once the analytical results confirmed that the parameters were below the discharge levels, disposal of the wastewater was coordinated with the ROICC and the POTW. The wastewater was transferred into a vacuum truck and transported to the on-site oil/water separator (Navy owned) where approximately 9,200 gallons were discharged to the sanitary sewer system. Analytical results for the wastewater sample are included in Appendix K.

The second major rain event produced a large quantity of water in the excavation. Based upon the area of the excavation, the volume of water in the excavation was estimated at 50,000 gallons to 60,000 gallons. Because of the time (several days) it would take to remove this volume of water from the excavation to the temporary tank and to discharge it to the sanitary sewer through the oil/water separator by means of a vacuum truck, the ROICC, POTW, and STEP agreed to discharge the water directly to the sanitary sewer.

Process knowledge (i.e., analytical results from the first wastewater discharge, no visible oily sheen) was used to profile the wastewater prior to discharging to the sewer system.

9. BACKFILL AND SITE RESTORATION

Backfilling activities did not begin until the analytical results from the confirmatory soil samples verified the removal of the contaminated soil from each 40-ft section in the excavation. The excavation was backfilled with a combination of coarse sand and borrow soils from off-site sources.

Backfilling started on November 3, 2003, at the northern section of the excavation. The excavation was sloped to allow drainage to two sump areas in the base of the excavation. The excavation was backfilled up to a 5-ft layer (deepest part of the excavation) of coarse sand in the bottom. The coarse sand formed a layer of high permeability to allow free flow to the recovery sumps for future collection of the groundwater. On November 13, 2003, backfilling with borrow soil began at the site. A layer of geotextile fabric was placed between the coarse sand and borrow soil. As the excavation was backfilled with borrow soil, a sheep-foot compactor was used for compaction. In addition, the sewer line within the excavation area was replaced with corrugated piping. A schematic detailing the backfilled excavation is shown in Figure 9-1.

A total of 31,600 cubic yards (yd³) of backfill material (3,136 yd³ of coarse sand and 28,464 yd³ of borrow soil) were placed in the excavation. After the excavation was backfilled and graded for drainage, seed, fertilizer, and straw were applied to all disturbed areas.

After the excavation activities were completed and the site was backfilled and graded, a final survey was conducted to determine the contour lines of the site, total volume of contaminated soil removed, total volume of soil and sand backfilled, and the horizontal and vertical limits of the excavation. The post-construction survey is included in Appendix L. Photographs of the project activities are included in Appendix M.

10. ENVIRONMENTAL PROTECTION

During the remedial action, appropriate measures were taken to minimize impacts to the environment and natural resources. Erosion and sediment control measures (silt fence and straw bales) were put into place to prevent runoff from the excavation during rain events. In addition, a temporary soil berm was constructed around the excavation to prevent run-on into the excavation. Soil contaminated with oil or hydraulic fluid from heavy equipment leaks or spills were excavated and the soil was properly disposed.



114-115-114-001

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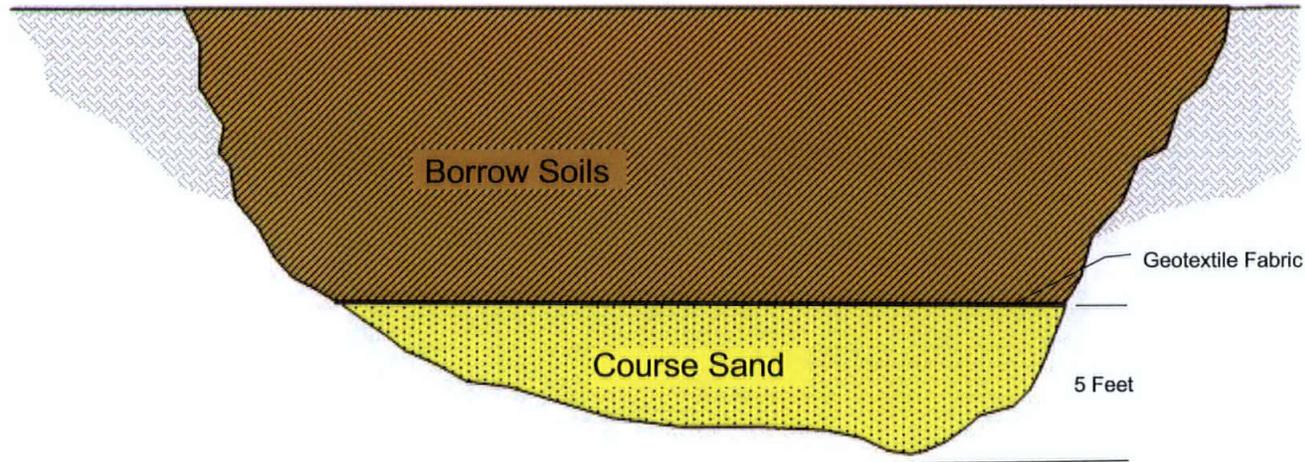


Figure 9-1 114-115-001 state.apr 01/23/04

Not to Scale

Prepared By: STEP, Inc.
Job Title: Soil Remediation at
Solid Waste Management Unit 15
Naval Support Activity Midsouth
Millington, Tennessee

Figure 9-1 Backfill Detail

08/05/04

11. CONCLUSIONS

The following conclusions are based upon the soil remediation at SWMU 15:

- A total of 57,157 tons of petroleum-contaminated soil and debris were removed from the site and disposed as special waste at the BFI North Shelby Landfill
- A total of 322 tons of concrete/UST debris were removed from the site and disposed as construction/demolition waste at the BFI North Shelby Landfill.
- Forty-one confirmatory soil samples were collected from the excavation area and analyzed for TPH-EPH, TPH-GRO, and benzene. Three samples reported concentrations of TPH-GRO in excess of the project cleanup level. In Samples 015MT05B, 015MT07B, and 015MT20W, the concentrations of TPH-GRO were 791 mg/kg, 1,900 mg/kg, and 600 mg/kg, respectively. The two sections represented by Samples 015MT05B and 015MT07B were over-excavated and resampled. Analytical results from the resampling of these two sections reported a TPH-GRO concentration of 32 mg/kg in Sample 015MT05B2 and a nondetection of TPH-GRO in Sample 015MT07B2. The section represented by Sample 015MT20W was not over-excavated because excavation activities were suspended. Results of the confirmatory soil sampling showed no concentrations of benzene in excess of its project cleanup level.
- Three samples were collected from the spill area in the excavation and analyzed for TPH-EPH, TPH-GRO, and benzene. Results of the impacted soil samples showed no concentrations of TPH-EPH, TPH-GRO, or benzene in excess of their respective cleanup levels.
- Six monitoring wells (015G01LS, 015G02LS, 015G03LS, 015G04LS, 015G05LS, and 015G07LS) were abandoned at the site.
- A total of 31,600 yd³ of material (3,136 yd³ of coarse sand and 28,464 yd³ of borrow soil) were used to backfill the excavation. Plastic sheeting was placed on the sidewalls where soil contamination remains.

12. RECOMMENDATIONS

As discussed in Section 7.2, field screenings and observations (i.e., soil discoloration and odor) detected soil contamination on the unexcavated southern, southeastern, and southwestern walls. In addition, two areas (outside the excavation area) identified from previous investigations showed concentrations of TPH-GRO in excess of project cleanup levels. Therefore, STEP recommends further sampling in these

areas to delineate any remaining contaminated soil. Areas recommended for further sampling are shown on Figure 6-2.

13. REFERENCES

ENSAFE, June 1999. *RCRA Facility Investigation Report, SWMU 15-N-94 Underground Tank Farm, Naval Support Activity Midsouth, Millington, Tennessee, Revision 3.*

ENSAFE, August 2001. *Corrective Measures Study Work Plan, Naval Support Activity Mid-South, Millington, Tennessee, Revision 2.*

EPA (U.S. Environmental Protection Agency), *Identification and Listing of Hazardous Waste, 40 Code of Federal Regulations (CFR) Part 261.*

EPA, *Standards Applicable to Generators of Hazardous Waste, 40 CFR Part 262.*

EPA, 1998. *Test Methods for Evaluating Solid Waste, Physical/Chemical Method, SW-846.* Shelby County Government, Division of Health Services, Ground Water Quality Control Board, *Shelby County Well Construction Code.*

STEP (Solutions to Environmental Problems, Inc.), September 2003. *Final Work Plan for Soil Remediation at Solid Waste Management Unit, Naval Support Activity Midsouth, Millington, Tennessee.*

TDEC (State of Tennessee Department of Environment and Conservation), Division of Solid Waste Management, May 2002. *Standard Operating Procedures for Special Waste Approval.*

TDEC, Water Quality Control Board, Division of Water Pollution Control, December 2000. *Solid Waste Processing and Disposal, Tennessee Rule Chapter 1200-4-10.*

TDEC, Division of Water Supply, June 2001. *Solid Waste Water Well Licensing Regulations and Well Construction Standards, Tennessee Rule Chapter 1200-4-9.*

TDEC, Division of Solid Hazardous Waste Management, August 2002. *Solid Waste Processing and Disposal, Tennessee Rule Chapter 1200-1-7.*

TDEC, Division of Water Pollution Control, March 2003. *General NPDES Permit for Storm Water Discharges from Construction Activities, Tennessee General Permit No. TNR10-0000.*

Appendix A
Notice of Coverage



ENVIRONMENTAL ASSISTANCE CENTER
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
SUITE E-645, PERIMETER PARK
2510 MT. MORIAH ROAD
MEMPHIS, TENNESSEE 38115-1520
PHONE (901) 368-7939 STATEWIDE 1-888-891-8332 FAX (901) 368-7979

September 25, 2003

LCDR S. M. Jones
Naval Support Activity Mid-South
5722 Integrity Drive
Millington, TN 380545045

**Re: TNCGP Tracking Number TNR150879
Soil Remediation at Solid Waste Management Unit 15
Shelby County**

Dear LCDR Jones:

This letter acknowledges receipt of the Notice of Intent (NOI) you submitted as application for coverage under the Tennessee Construction General Permit (TNCGP) TNR10-0000 for the above-referenced project. The enclosed Notice of Coverage (NOC), issued by the Division of Water Pollution Control (DWPC), summarizes the relevant information concerning your coverage, including the tracking number that has been assigned to this project.

The above-referenced site is located within the watershed of a stream that has been identified as impaired by siltation. Impaired streams are listed on the Tennessee 303(d) list. This list is periodically updated. Construction projects that potentially affect streams listed on the 303(d) list have special requirements outlined in the Part III.F of the TNCGP. These include at least weekly inspections of on-site erosion prevention and sediment controls, the submittal of quarterly inspection reports, the submission of a storm water pollution prevention plan (SWPPP) prior to commencement of construction activities, and other requirements outlined in the TNCGP.

You have submitted a SWPPP that meets the requirements of the TNCGP. Please note that no engineering review of the SWPPP has been performed and that the DWPC does not certify that the SWPPP adequately provides for the pollution prevention requirements at the above-referenced site, as described in the TNCGP. It is the responsibility of all site operators to design, implement, and maintain measures that are sufficient to prevent pollution at the site and to remain in compliance with the terms and conditions of the TNCGP.

The Division does not normally correspond with your contractor(s) who may be identified on the NOC as site operators. It is your responsibility to ensure the identification of contractors and that the required NOI(s) are submitted to this office prior to their beginning operations on-site. Only those meeting the requirements of Part II.B.1 of the TNCGP are required to submit a NOI.

The Division appreciates your attention to the TNCGP. We believe adherence to its requirements will make a difference to the quality of State waters. For complete details of specific permit requirements, please refer directly to the TNCGP. Additional information can be found on the web at <http://www.state.tn.us/environment/permits/conststrm.htm>, where you can also download copies of the NOI, TNCGP, and other useful forms and documents. If you have any questions, please contact me at (901) 368-7959. Thank you for your cooperation in protecting the waters of Tennessee.

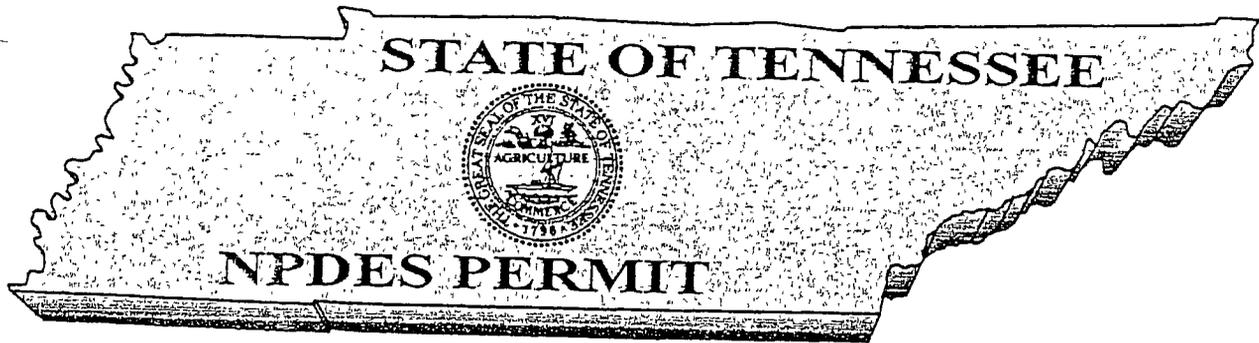
Sincerely,

A handwritten signature in cursive script that reads "Terry R. Templeton".

Terry R. Templeton, P.G.
Manager
Division of Water Pollution Control

Enclosures

cc: file - TDEC/WPC/EAC-M



Tracking No. TNR150879

General NPDES Permit for
**STORM WATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION ACTIVITY**

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street, 6th Floor, L&C Annex
Nashville, Tennessee 37243-1534

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.):

Name of the Construction Project: **Soil Remediation at Solid Waste Management Unit 15**
Construction Site Owner/Developer: **Naval Support Activity Mid-South**
and Contractor(s) (if applicable): **STEP, Inc.**

are authorized to discharge: **storm water associated with construction activity**
from facility location: **Naval Support Activity in Shelby County**
to receiving waters named: **North Fork Creek**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

Likely presence of threatened or endangered species in project vicinity or downstream: **NO**

Additional pollution prevention requirements, as described in the General Permit, Part III.F, for discharges into waters which the Department identifies as:

a) impaired by siltation: **YES** b) discharging into High Quality Waters: **NO**

Coverage under this general permit shall become effective on September 26, 2003, and shall be terminated upon approval of Notice of Termination, or the date of expiration of this General Permit.

Paul E. Davis

Paul E. Davis, Director
Division of Water Pollution Control
RDAs 2352 and 2366

Appendix B
Special Waste Approvals



ENVIRONMENTAL ASSISTANCE CENTER
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
SUITE E-645, PERIMETER PARK
2510 MT. MORIAH ROAD
MEMPHIS, TENNESSEE 38115-1520
PHONE (901) 368-7939 STATEWIDE 1-888-891-8332 FAX (901) 368-7979

September 9, 2003

Mr. Robert Shereles, Jr.
STEP
1006 Floyd Culler Court
Oak Ridge, TN 37830

RE: Special Waste Approval for Naval Support Activity Mid South, SWMU-15

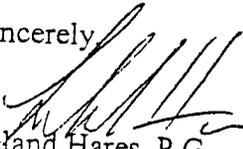
Dear Mr. Shereles:

This office has received a Special Waste Approval Request from you on behalf of NSAM, located in Millington, submitted according to Tennessee Rule Chapter 1200-1-7-.01(4). The request was for disposal of approximately 35,000 tons (one time only) of petroleum contaminated soil from excavation of soils at SWMU-15, the former fuel farm. After reviewing the analytical data submitted with the request it has been determined that the material is suitable for disposal at the Browning - Ferris Industries North Shelby (SNL791060224) or South Shelby (SNL791060135) Landfills.

Please be advised that the facility operator may refuse to accept any special waste, even if the Division has approved it.

If you have any questions please feel free to contact me at (901) 368-7950.

Sincerely,


Leland Hares, P.G.
TDEC/DSWM
Memphis Environmental Assistance Center

LH\79023252\ag

c: DSWM/NCO
BFI



September 16, 2003

Attn: Rob Sherles
Solutions to Environmental Problems
1006 Floyd Culler Court
Oak Ridge, TN 37830

RE: Approval of Special Waste Stream
BFI Waste Code: TN/ 040229/L42Y37963
Waste Description: Contaminated Soil

Dear Customer,

The preceding special waste stream has been approved for disposal of at our BFI Landfill. This BFI approval is valid through February 29, 2004. The State of Tennessee approval expires September 9, 2004. Please include the entire BFI Waste Code number on each manifest brought to the landfill, as an incomplete number could result in a delay and/or rejection of the load.

We appreciate the opportunity to be of service to you and your company. Should you have any questions or need additional information, please do not hesitate to give me a call.

Sincerely,

A handwritten signature in cursive script that reads "Tonya Lewis". The signature is written in black ink and is positioned above the printed name.

Tonya Lewis
Memphis Landfills



ENVIRONMENTAL ASSISTANCE CENTER
 TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 SUITE E-645, PERIMETER PARK
 2510 MT. MORIAH ROAD
 MEMPHIS, TENNESSEE 38115-1520
 PHONE (901) 368-7939 STATEWIDE 1-888-891-8332 FAX (901) 368-7979

September 9, 2003

Mr. Robert SHERELES, Jr.
 STEP
 1006 Floyd Culler Court
 Oak Ridge, TN 37830

Post-It® Fax Note	7671	Date	10/31/03	# of pages	1
To	Shanna	From	Leland		
Co./Dept	BFI	Co.	TDEC		
Phone #		Phone #			
Fax #	872-7205	Fax #			

RE: Special Waste Approval for Naval Support Activity Mid South, SWMU-15

Dear Mr. SHERELES:

This office has received a Special Waste Approval Request from you on behalf of NSAM, located in Millington, submitted according to Tennessee Rule Chapter 1200-1-7-.01(4). The request was for disposal of approximately 35,000 tons (one time only) of petroleum contaminated soil from excavation of soils at SWMU-15, the former fuel farm. After reviewing the analytical data submitted with the request it has been determined that the material is suitable for disposal at the Browning - Ferris Industries North Shelby (SNL791060224) or South Shelby (SNL791060135) Landfills.

Please be advised that the facility operator may refuse to accept any special waste, even if the Division has approved it.

If you have any questions please feel free to contact me at (901) 368-7950.

Sincerely,

Leland Hares, P.G.
 TDEC/DSWM
 Memphis Environmental Assistance Center

LH79023252\ag

c: DSWM/NCO
 BFI

~~Increased to 45,000 tons~~
 10/31/03



ENVIRONMENTAL ASSISTANCE CENTER
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
SUITE E-645, PERIMETER PARK
2510 MT. MORIAH ROAD
MEMPHIS, TENNESSEE 38115-1520
PHONE (901) 368-7979 STATEWIDE 1-866-801-8332 FAX (901) 368-7979

September 9, 2003

Mr. Robert Sereles, Jr.
STEP
1006 Floyd Culler Court
Oak Ridge, TN 37830

RE: Special Waste Approval for Naval Support Activity Mid South, SWMU-15

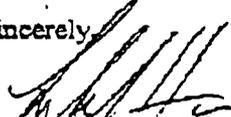
Dear Mr. Sereles:

This office has received a Special Waste Approval Request from you on behalf of NSAM, located in Millington, submitted according to Tennessee Rule Chapter 1200-1-7-.01(4). The request was for disposal of approximately 35,000 tons (one time only) of petroleum contaminated soil from excavation of soils at SWMU-15, the former fuel farm. After reviewing the analytical data submitted with the request it has been determined that the material is suitable for disposal at the Browning - Ferris Industries North Shelby (SNL791060224) or South Shelby (SNL791060135) Landfills.

Please be advised that the facility operator may refuse to accept any special waste, even if the Division has approved it.

If you have any questions please feel free to contact me at (901) 368-7950.

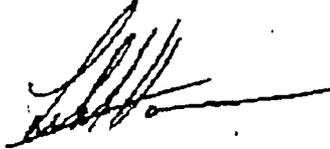
Sincerely,

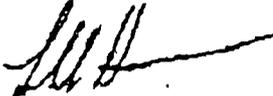

Leland Hares, P.G.
TDEC/DSWM
Memphis Environmental Assistance Center

LHV79023252\ag

cc: DSWM/NCO
BFI

INCREASED TO 45,000 tons
10/31/03


INCREASED to 65,000 TONS -
11/3/03



Appendix C
Remediation Activity Permits



MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

YVONNE S. MADLOCK
DIRECTOR

JOHN B. KIRKLEY, M.D.
INTERIM HEALTH OFFICER

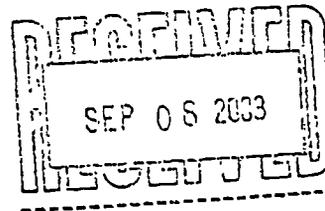


DR. WILLIE W. HERENTON
CITY OF MEMPHIS
MAYOR

A. C. WHARTON, JR.
SHELBY COUNTY
MAYOR

September 2, 2003

Mr. David McCray
Tri-State Testing Services, Inc.
6756 Buckles Cove
Memphis, TN 38133



RE: EMERGENCY FILL AND ABANDONMENT OF WELL At: NSA Mid-South (SWMU) 15
Naval Support Activity Mid-South Permit # 03-173 015G04LS & 015G07LS

Dear Mr. McCray:

This letter acknowledges the oral approval given by this office for the emergency fill and abandonment of the well at the above referenced location. The "CONSTRUCTION PERMIT" has been enclosed authorizing you to begin work at the earliest possible date. You will be expected to comply with all conditions indicated on the permit as well as the specifications outlined on the application. The permit must be maintained at the job site for the duration of the fill and abandonment process.

Your prompt attention and cooperation in this matter will be appreciated. In the meantime if you have any questions, please contact me at (901) 544-7741.

Sincerely,

Greg Parker, Supervisor
Water Quality Branch

BD: GP: lj

Enclosure

Mission

To promote, protect and improve the health and environment of all Shelby County residents.

814 JEFFERSON AVENUE • MEMPHIS, TENNESSEE 38105
PHONE 901-544-7600

MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT
WATER QUALITY BRANCH



MONITORING WELL CONSTRUCTION PERMIT

WELL DRILLING COMPANY Tri-State Testing Services

ADDRESS 6756 Buckles Cove Memphis, TN 38133

DATE ISSUED 8/13/03 EXPIRATION DATE 11/13/03 PERMIT # 03-173

DESCRIPTION OF WORK – Fill and Abandonment of a well: NSA Mid-South (SWMU) 15

Emergency Permit Naval Support Activity Mid-South 015G04LS&015G07LS

This permit is issued based on signed commitment by the driller and the owner of the well to fully comply with the requirements set forth in the approved application or as directed by the Memphis and Shelby County Health Department. Deviation from the approved application or any conditions set forth by the Health Department shall void this permit.

CONDITIONS:

1. The abandoned well shall be sealed only by a licensed well contractor.
2. All procedures used in sealing the well shall be witnessed by a representative of the Memphis and Shelby County Health department.
3. All water lines to the well are to be disconnected.
4. The well is to be dismantled in such a way that all working parts from inside the casing are removed.
5. Any obstructions found in the well are to be removed.
6. The empty casing is to be filled by one of two methods:
 - a. With a Portland Class A or quick setting cement in a ratio not over seven (7) gallons of water per ninety-four (94) pounds of cement.
 - b. A course-grained high solids non-drilling mud grade bentonite slurry such as Baroid Benseal, American Colloid or equal. The bentonite grout shall be mixed in accordance with the manufacturer's recommendations
7. The grout shall be pumped from the bottom of the well upward through a tremmie pipe in one continuous operation in order to avoid separation or dilution of the seal material. A return shall be seen at the top as the same consistency as the material that is pumped into the well.
8. Chlorine shall be added at the beginning and during the sealing process.
9. The well must be sealed within thirty days of receipt of this permit.
10. The Health Department shall be notified before procedures are to begin in sealing the well. This includes all dismantling procedures and lowering the pipe used for grouting.
11. Abandoned wells on this site shall be sealed as required by Chapter 29, Article III, Water Quality Control of the Code of Shelby County, Tennessee.

Diane L. Arnst, Manager
POLLUTION CONTROL

No authority is granted by this permit to construct, operate or maintain any well in violation of any law, statute, code, ordinance, rule or regulation of Memphis and Shelby County, Tennessee.

NON -TRANSFERABLE

POST OR FILE AT CONSTRUCTION SITE

15071112



MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

YVONNE S. MADLOCK
DIRECTOR

JOHN B. KIRKLEY, M.D.
INTERIM HEALTH OFFICER

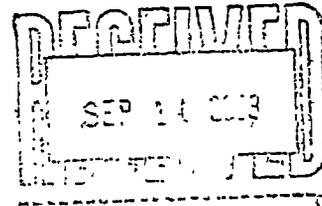


DR. WILLIE W. HERENTON
CITY OF MEMPHIS
MAYOR

A C WHARTON, JR.
SHELBY COUNTY
MAYOR

September 4, 2003

Mr. David McCray
Tri-State Testing Services
6756 Buckles Cove
Memphis, TN 38133



RE: EMERGENCY CONSTRUCTION OF GEOPROBE (S): NSA Mid-South (SWMU 15)
Permit # 03-174 Geoprobe/Direct Push

Dear Mr. McCray:

This letter acknowledges the oral approval given by this office for emergency construction of a geoprobe at the above referenced location. The "CONSTRUCTION PERMIT" documenting the procedure is enclosed. You are expected to comply with all conditions indicated on the permit as well as the specifications outlined on the application. The permit must be maintained at the job site for the duration of the construction process.

Your prompt attention and cooperation in this matter will be appreciated. In the meantime if you have any questions, please contact me at (901) 544-7741.

Sincerely,

Greg Parker, Supervisor
Water Quality Branch

BD: GP: ll

Enclosure

Mission

To promote, protect and improve the health and environment of all Shelby County residents.

MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT
WATER QUALITY BRANCH



MONITORING WELL CONSTRUCTION PERMIT

WELL DRILLING COMPANY Tri-State Testing Services

ADDRESS 6756 Buckles Cove Memphis, TN 38133

DATE ISSUED 8/13/03 EXPIRATION DATE 11/13/03 PERMIT NUMBER 03-174

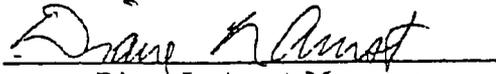
DESCRIPTION OF WORK Construction of Monitoring Wells: NSA Mid-South (SWMU 15)

Emergency Permit Naval Support Activity Mid-South

This permit is issued based on a signed commitment by the well driller and owner of the well that all work performed at this site will be in full compliance with the requirements outlined in the Shelby County Well Construction Code or as directed by the Water Quality Branch of the Memphis and Shelby County Health Department. Any deviation from the approved conditions outlined in this permit by the drilling company will void this permit immediately.

CONDITIONS:

1. Water used to drill these monitoring wells must be obtained from a potable source.
2. A protective device must be placed over the well opening by the well driller and it will be the owner's responsibility to maintain the integrity of this device
3. All applicable fees must be paid to the Memphis and Shelby County Health Department.
4. An annual fee of twenty (\$20.00) dollars per well will be assessed for all active monitoring wells at this location with the maximum annual fee not to exceed one hundred (\$100.00) dollars per site.
5. The Water Quality Branch shall be notified at least twenty-four (24) hours before construction of the monitoring wells.
6. Within thirty days after completion of the monitoring wells, a copy of the well logs must be submitted to the Water Quality Branch.
7. A copy of the sample results must be submitted to this office within sixty days of completion of the monitoring wells.
8. The driller shall comply with all requirements outlined in the Shelby County Well Construction Code.
9. The Water Quality Branch must be notified should the number of monitoring wells change from the number permitted.
10. Abandoned wells shall be properly sealed as required by Chapter 29, Article III, Water Quality Control of the Code of Shelby County, Tennessee.
11. This permit is valid only for the construction site referenced above.


Diane L. Arnst, Manager
POLLUTION CONTROL

No authority is granted by this permit to construct, operate or maintain any well in violation of any law, statute, code, ordinance, rule or regulation of Memphis and Shelby County, Tennessee.

NON-TRANSFERABLE

POST OR FILE AT INSTALLATION ADDRESS

GP 9/10/03



SOLUTIONS TO ENVIRONMENTAL PROBLEMS
1006 Floyd Culler Court • Oak Ridge Tennessee 37830
Telephone 865/481-7837 • Fax 865/481-0290

October 30, 2003

Mr. Greg Parker
Memphis and Shelby County Health Department
Pollution Control Section
814 Jefferson Avenue
Memphis, TN 38105

Subject: Monitoring Well Abandonment At Solid Waste Management Unit 15, Naval Support Activity Mid-South, Millington, TN

Dear Mr. Parker

In reference to the above-mentioned site, monitoring wells 015G03LS and 015G05LS at Solid Waste Management Unit 15 will need to be removed due to the excavation of petroleum-contaminated soil at the site. The depths of the wells are nineteen feet and twenty feet respectively. The depth of the excavation at the site is approximately twenty feet. Per our phone conversation on October 29, 2003 the monitoring wells will not have to be filled and abandoned since the wells will be excavated during the removal of the contaminated soil. Please find attached a copy of the site map showing the monitoring wells.

If you have any questions, please feel free to contact me at (865) 481-7837 ext. 234

Sincerely,

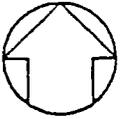
Robert Sherles
Environmental Engineer

cc: Frank Novitzki
Project Files
Reader File

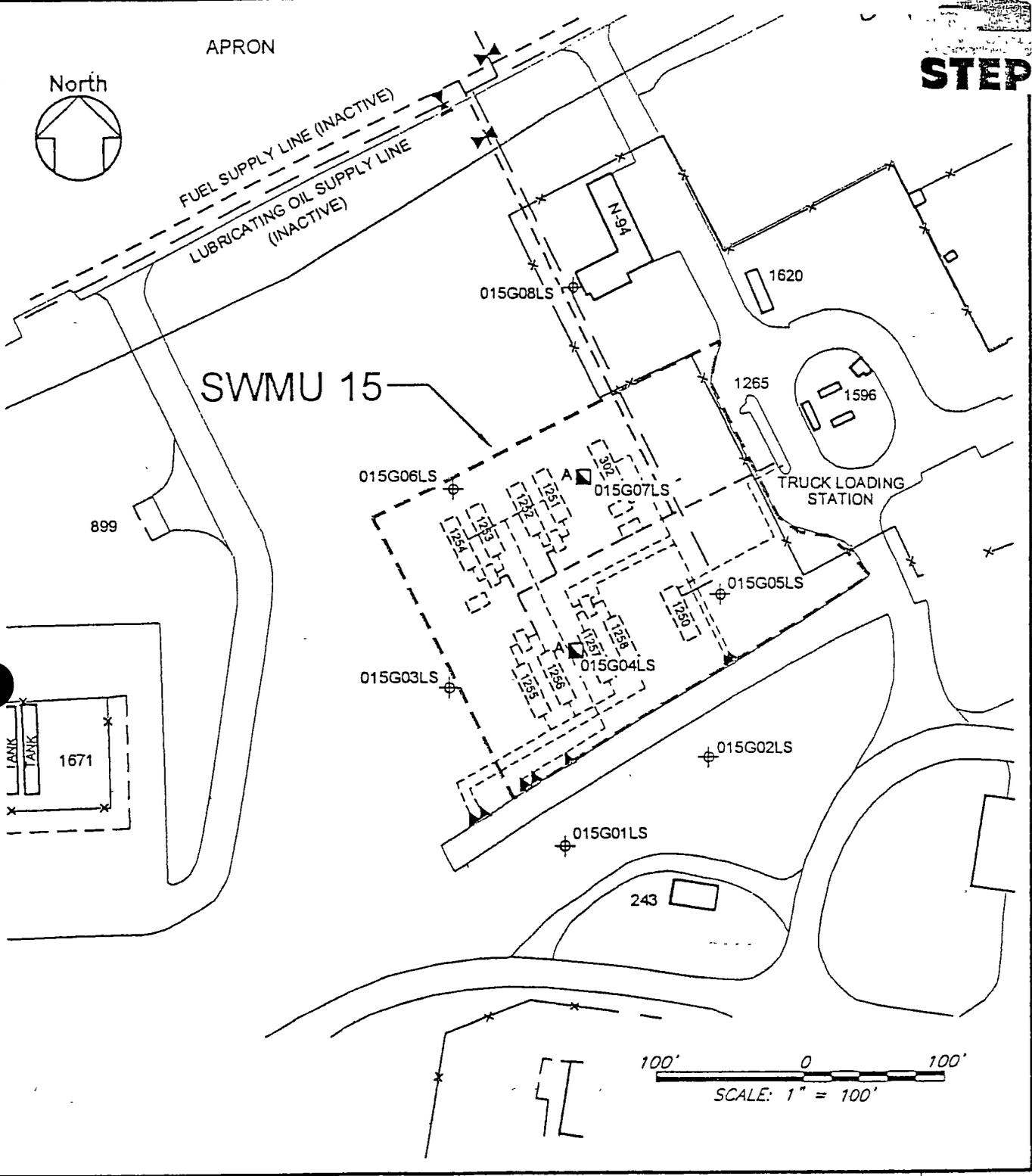
STEP

APRON

North

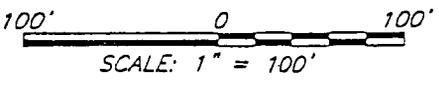


FUEL SUPPLY LINE (INACTIVE)
LUBRICATING OIL SUPPLY LINE
(INACTIVE)



SWMU 15

TRUCK LOADING STATION



Legend



FORMER UST AND PIPING



FILLED AND ABANDONED WELLS

Prepared For Department of the Navy Southern Division

Source NSA Mid-South Job Title Soil Remediation at Solid Waste Management Unit 15 Naval Support Activity Millington, Tennessee

Figure 0-0 SWMU 15 Millington Abandoned Wells

R 111411
/aphica/millington SWMU 15 abandoned dwg(1)(08/15/03)

E-6-819



MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

YVONNE S. MADLOCK
DIRECTOR

JOHN B. KIRKLEY, M.D.
INTERIM HEALTH OFFICER

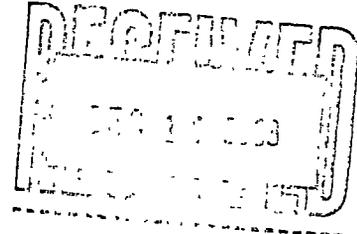


DR. WILLIE W. HERENTON
CITY OF MEMPHIS
MAYOR

A C WHARTON, JR.
SHELBY COUNTY
MAYOR

December 5, 2003

Tn State Testing, Inc.
Attn: David McCray
6756 Buckles Cove
Memphis, Tennessee 38133



RE: EMERGENCY FILL AND ABANDONMENT OF MONITORING WELL AT:
NSA Mid-South, SWMU 15(0.5 North of Navy Road)
Permit # 03-226 015G01LS And 015G02LS

Dear Mr. McCray:

This letter acknowledges the oral approval given by this office for the emergency fill and abandonment of the well at the above referenced location. The "CONSTRUCTION PERMIT" has been enclosed authorizing you to begin work at the earliest possible date. You will be expected to comply with all conditions indicated on the permit as well as the specifications outlined on the application. The permit must be maintained at the job site for the duration of the fill and abandonment process.

Your prompt attention and cooperation in this matter will be appreciated. In the meantime if you have any questions, please contact me at (901) 544-7741.

Sincerely,

Greg Parker, Supervisor
Water Quality Branch

GP: mm

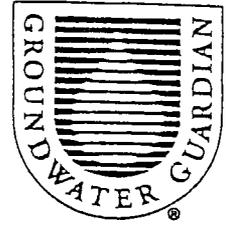
Enclosure

Mission

To promote, protect and improve the health and environment of all Shelby County residents.



WATER QUALITY CONTROL
Memphis and Shelby County Health Department
WATER WELL CONSTRUCTION PERMIT



WELL DRILLING COMPANY Tri-State Testing

ADDRESS 6756 Buckles Cove Memphis, Tennessee 38133

DATE ISSUED 11/12/03 EXPIRATION DATE 2/12/04 PERMIT # 03-226

DESCRIPTION OF WORK – Fill and Abandonment of a well: NSA Mid-South, SWMU 15

Emergency Permit Owner/Naval Support Activity Mid South 015G01LS And 015G02LS

This permit is issued based on signed commitment by the driller and the owner of the well to fully comply with the requirements set forth in the approved application or as directed by the Memphis and Shelby County Health Department. Deviation from the approved application or any conditions set forth by the Health Department shall void this permit.

CONDITIONS:

1. The abandoned well shall be sealed only by a licensed well contractor.
All procedures used in sealing the well shall be witnessed by a representative of the Memphis and Shelby County Health department.
3. All water lines to the well are to be disconnected.
4. The well is to be dismantled in such a way that all working parts from inside the casing are removed.
5. Any obstructions found in the well are to be removed.
6. The empty casing is to be filled by one of two methods:
 - a. With a Portland Class A or quick setting cement in a ratio not over seven (7) gallons of water per ninety-four (94) pounds of cement.
 - b. A course-grained high solids ~~non-drilling~~ mud grade bentonite slurry such as Baroid Benseal, American Colloid or equal. The bentonite grout shall be mixed in accordance with the manufacturer's recommendations.
7. The grout shall be pumped from the bottom of the well upward through a tremmie pipe in one continuous operation in order to avoid separation or dilution of the seal material. A return shall be seen at the top as the same consistency as the material that is pumped into the well.
8. Chlorine shall be added at the beginning and during the sealing process.
9. The well must be sealed within thirty days of receipt of this permit.
10. The Health Department shall be notified before procedures are to begin in sealing the well. This includes all dismantling procedures and lowering the pipe used for grouting.
11. Abandoned wells on this site shall be sealed as required by Chapter 29, Article III, Water Quality Control of the Code of Shelby County, Tennessee.


Diane L. Arnst, Manager
POLLUTION CONTROL

No authority is granted by this permit to construct, operate or maintain any well in violation of any law, statute, code, ordinance, rule or regulation of Memphis and Shelby County, Tennessee.

NON -TRANSFERABLE

POST OR FILE AT CONSTRUCTION SITE

Appendix D

Analytical Results for Waste Characterization Samples



CLIENT: STEP, Inc.
DATE RECEIVED: 08/14/03
DATE REPORTED: 08/19/03

ELAB SAMPLE NUMBER					0308086-01
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					015WCS01 8/13/03 10:05:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.050	1311/6010B	mg/L	0.0575
Barium-TCLP	100	0.050	1311/6010B	mg/L	1.44
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Lead-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Mercury-TCLP	0.20	0.020	1311/7470A	mg/L	<0.020
Selenium-TCLP	1.0	0.050	1311/6010B	mg/L	<0.050
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	0.11	9012A	mg/kg (as Rec'd)	<0.11 N
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	7.8 @ 25°C
Reactive Sulfide	500	25	Chap.7.3.4.2	mg/kg (as Rec'd)	50

See attached page for definition of terms and qualifiers.



CLIENT: STEP, Inc.

DATE RECEIVED: 08/14/03

DATE REPORTED: 08/19/03

ELAB SAMPLE NUMBER					0308086-02
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					015WCS02 8/13/03 10:46:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Barium-TCLP	100	0.050	1311/6010B	mg/L	1.08
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Lead-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Mercury-TCLP	0.20	0.020	1311/7470A	mg/L	<0.020
Selenium-TCLP	1.0	0.050	1311/6010B	mg/L	<0.050
Silver-TCLP	5.0	0.010	1311/6010B	mg/L	<0.010
Initial pH - TCLP	NA	NA	1311	Units	7.0
Final pH - TCLP	NA	NA	1311	Units	5.1
Cyanide	250	0.12	9012A	mg/kg (as Rec'd)	<0.12 N
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	7.0 @ 25°C
Reactive Sulfide	500	25	Chap.7.3.4.2	mg/kg (as Rec'd)	<25

See attached page for definitions of terms and qualifiers.



CLIENT: STEP, Inc.

DATE RECEIVED: 08/14/03

DATE REPORTED: 08/19/03

ELAB SAMPLE NUMBER					0308086-03
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					015WCS03 8/13/03 1:21:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Barium-TCLP	100	0.050	1311/6010B	mg/L	0.691
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Lead-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Mercury-TCLP	0.20	0.020	1311/7470A	mg/L	<0.020
Selenium-TCLP	1.0	0.050	1311/6010B	mg/L	<0.050
Silver-TCLP	5.0	0.010	1311/6010B	mg/L	<0.010
Initial pH - TCLP	NA	NA	1311	Units	7.4
Final pH - TCLP	NA	NA	1311	Units	5.0
Cyanide	250	0.12	9012A	mg/kg (as Rec'd)	<0.12 N
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	8.0 @ 25°C
Reactive Sulfide	500	25	Chap 7.3.4.2	mg/kg (as Rec'd)	40

See attached page for definitions of terms and qualifiers.



CLIENT: STEP, Inc.
 DATE RECEIVED: 08/14/03
 DATE REPORTED: 08/19/03

ELAB SAMPLE NUMBER					0308086-04
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE					015WCS04 8/13/03 1:54:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Arsenic-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Barium-TCLP	100	0.050	1311/6010B	mg/L	1.50
Cadmium-TCLP	1.0	0.010	1311/6010B	mg/L	<0.010
Chromium-TCLP	5.0	0.050	1311/6010B	mg/L	<0.050
Lead-TCLP	5.0	0.030	1311/6010B	mg/L	<0.030
Mercury-TCLP	0.20	0.020	1311/7470A	mg/L	<0.020
Selenium-TCLP	1.0	0.050	1311/6010B	mg/L	<0.050
Silver-TCLP	5.0	0.010	1311/6010B	mg/L	<0.010
Initial pH - TCLP	NA	NA	1311	Units	7.1
Final pH - TCLP	NA	NA	1311	Units	5.0
Cyanide	250	0.12	9012A	mg/kg (as Rec'd)	<0.12 N
Ignitability	<140	NA	1010	°F	>158
pH- Laboratory (1)	<2/>12.5	NA	9045B	Units	7.9 @ 25°C
Reactive Sulfide	500	25	Chap 7.3.4.2	mg/kg (as Rec'd)	35

See attached page for definitions of terms and qualifiers.

ELAB

Betty DeVill

D. Rick Davis
 Vice President

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B8086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-01
 Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 808601
 % Moisture: _____ decanted: (Y/N)____ Date Sampled: 08/13/03
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:08/15/03
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/17/03
 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) MG/L	Q
121-14-2-----	2,4-Dinitrotoluene	0.050	U
118-74-1-----	Hexachlorobenzene	0.050	U
87-68-3-----	Hexachlorobutadiene	0.050	U
67-72-1-----	Hexachloroethane	0.050	U
108-39-4-----	3-Methylphenol	0.050	U
106-44-5-----	4-Methylphenol	0.050	U
95-48-7-----	2-Methylphenol	0.050	U
98-95-3-----	Nitrobenzene	0.050	U
87-86-5-----	Pentachlorophenol	0.20	U
110-86-1-----	Pyridine	0.20	U
95-95-4-----	2,4,5-Trichlorophenol	0.050	U
88-06-2-----	2,4,6-Trichlorophenol	0.050	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS02

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B8086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-02
 Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 808602
 % Moisture: _____ decanted: (Y/N) _____ Date Sampled: 08/13/03
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 08/15/03
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/17/03
 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) MG/L Q

121-14-2-----	2,4-Dinitrotoluene	0.050	U
118-74-1-----	Hexachlorobenzene	0.050	U
87-68-3-----	Hexachlorobutadiene	0.050	U
67-72-1-----	Hexachloroethane	0.050	U
108-39-4-----	3-Methylphenol	0.050	U
106-44-5-----	4-Methylphenol	0.050	U
95-48-7-----	2-Methylphenol	0.050	U
98-95-3-----	Nitrobenzene	0.050	U
87-86-5-----	Pentachlorophenol	0.20	U
110-86-1-----	Pyridine	0.20	U
95-95-4-----	2,4,5-Trichlorophenol	0.050	U
88-06-2-----	2,4,6-Trichlorophenol	0.050	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS03

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B8086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-03
 Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 808603
 % Moisture: _____ decanted: (Y/N) _____ Date Sampled: 08/13/03
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 08/15/03
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/17/03
 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) MG/L	Q
121-14-2-----	2,4-Dinitrotoluene	0.050	U
118-74-1-----	Hexachlorobenzene	0.050	U
87-68-3-----	Hexachlorobutadiene	0.050	U
67-72-1-----	Hexachloroethane	0.050	U
108-39-4-----	3-Methylphenol	0.050	U
106-44-5-----	4-Methylphenol	0.050	U
95-48-7-----	2-Methylphenol	0.050	U
98-95-3-----	Nitrobenzene	0.050	U
87-86-5-----	Pentachlorophenol	0.20	U
110-86-1-----	Pyridine	0.20	U
95-95-4-----	2,4,5-Trichlorophenol	0.050	U
88-06-2-----	2,4,6-Trichlorophenol	0.050	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS04

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B8086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-04
 Sample wt/vol: 100.0 (g/mL) ML Lab File ID: 808604
 % Moisture: _____ decanted: (Y/N) _____ Date Sampled: 08/13/03
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 08/15/03
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/17/03
 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) MG/L	Q
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
108-39-4	3-Methylphenol	0.050	U
106-44-5	4-Methylphenol	0.050	U
95-48-7	2-Methylphenol	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.20	U
110-86-1	Pyridine	0.20	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V08086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-01
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0808601T
 Level: (low/med) LOW Date Sampled: 08/13/03
 % Moisture: not dec. _____ Date Analyzed: 08/15/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	Q
71-43-2	Benzene	0.010	U
78-93-3	2-Butanone	0.10	U
56-23-5	Carbon tetrachloride	0.010	U
108-90-7	Chlorobenzene	0.010	U
67-66-3	Chloroform	0.010	U
106-46-7	1,4-Dichlorobenzene	0.010	U
107-06-2	1,2-Dichloroethane	0.010	U
75-35-4	1,1-Dichloroethene	0.010	U
127-18-4	Tetrachloroethene	0.010	U
79-01-6	Trichloroethene	0.010	U
75-01-4	Vinyl chloride	0.020	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS02

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V08086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-02
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0808602T
 Level: (low/med) LOW Date Sampled: 08/13/03
 % Moisture: not dec. _____ Date Analyzed: 08/15/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	Q
71-43-2-----	Benzene	0.010	U
78-93-3-----	2-Butanone	0.10	U
56-23-5-----	Carbon tetrachloride	0.010	U
108-90-7-----	Chlorobenzene	0.010	U
67-66-3-----	Chloroform	0.010	U
106-46-7-----	1,4-Dichlorobenzene	0.010	U
107-06-2-----	1,2-Dichloroethane	0.010	U
75-35-4-----	1,1-Dichloroethene	0.010	U
127-18-4-----	Tetrachloroethene	0.010	U
79-01-6-----	Trichloroethene	0.010	U
75-01-4-----	Vinyl chloride	0.020	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS03

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V08086
 Matrix: (soil/water) WATER Lab Sample ID: 0308086-03
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0808603T
 Level: (low/med) LOW Date Sampled: 08/13/03
 % Moisture: not dec. _____ Date Analyzed: 08/15/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	Q
71-43-2	Benzene	0.010	U
78-93-3	2-Butanone	0.10	U
56-23-5	Carbon tetrachloride	0.010	U
108-90-7	Chlorobenzene	0.010	U
67-66-3	Chloroform	0.010	U
106-46-7	1,4-Dichlorobenzene	0.010	U
107-06-2	1,2-Dichloroethane	0.010	U
75-35-4	1,1-Dichloroethene	0.010	U
127-18-4	Tetrachloroethene	0.010	U
79-01-6	Trichloroethene	0.010	U
75-01-4	Vinyl chloride	0.020	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015WCS04

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V08086

Matrix. (soil/water) WATER

Lab Sample ID: 0308086-04

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

Lab File ID: 0808604T

Level: (low/med) LOW

Date Sampled: 08/13/03

% Moisture: not dec. _____

Date Analyzed: 08/15/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L		Q
71-43-2	Benzene	0.010	U	
78-93-3	2-Butanone	0.10	U	
56-23-5	Carbon tetrachloride	0.010	U	
108-90-7	Chlorobenzene	0.010	U	
67-66-3	Chloroform	0.010	U	
106-46-7	1,4-Dichlorobenzene	0.010	U	
107-06-2	1,2-Dichloroethane	0.010	U	
75-35-4	1,1-Dichloroethene	0.010	U	
127-18-4	Tetrachloroethene	0.010	U	
79-01-6	Trichloroethene	0.010	U	
75-01-4	Vinyl chloride	0.020	U	

Appendix E
BFI Waste Profile

Aug. 28. 2003 3:49PM ALLIED WASTE /SPCL WST DEPT

RECEIVED No. 9921 P 2/5

Page 1 of 2



GENERATOR WASTE PROFILE SHEET

SEP 25 2003

Requested Disposal Facility: BFI North Shelby Landfill
an Allied Waste Company

RESERVED MEMPHIS Waste Profile #
42437963
AWI Sales Rep: 1110
Date: 8-22-03

I. Generator Information

Generator Name: Naval Support Activity Mid-South			
Generator Site Address: 5722 Integrity Drive			
City: Millington	County: Shelby	State: TN	Zip: 38504-5045
State ID/Rec No: N/A	State Approval/Waste Code:	(if applicable)	SIC Code: N/A
Generator Mailing Address (if different): SAME			
City:	County:	State:	Zip:
Generator Contact Name: Danny Churney		Fax Number: 901-874-7022	
Phone Number: 901-874-5904			

II. Transporter Information

Transporter Name: R.L. Inman Trucking		Contact Name: R.L. Inman	
Transporter Address: P.O. Box 481, 8570 HWY 51 South			
City: Brighton	County: Shelby	State: TN	Zip: 38011
Phone Number: 901-837-3848	Fax Number: 901-837-4033	State Transportation Number: 1051041	

III. Billing Information

Bill To: Solutions to Environmental Problems, Inc.		Contact Name: Roy Hookstra	
Billing Address: 1006 Floyd Cutler Court			
City: Oak Ridge	State: TN	Zip: 37830	Phone Number: 865-481-7837

IV. Waste Stream Information

Name of Waste: Petroleum Contaminated Soil (Aviation fuel and lubricating oils)	
Process Generating Waste: Excavation of petroleum contaminated soil from SWMU 15, Naval Support Activity MidSouth	
Type of Waste: <input type="checkbox"/> INDUSTRIAL PROCESS WASTE or <input checked="" type="checkbox"/> POLLUTION CONTROL WASTE	
Physical State: <input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID <input type="checkbox"/> OTHER: _____	
Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER: _____	
Estimated Annual Volume: <input type="checkbox"/> CUBIC YARDS: _____ <input checked="" type="checkbox"/> TONS: 35,000 <input type="checkbox"/> GALLONS _____ <input type="checkbox"/> OTHER: _____	
Frequency: <input checked="" type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> DAILY <input type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> OTHER: _____	
Special Handling Instructions: None	

V. Representative Sample Certification

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?		<input checked="" type="checkbox"/> YES or <input type="checkbox"/> NO
Sample Date: 8-13-03	Type of Sample: <input type="checkbox"/> COMPOSITE SAMPLE <input checked="" type="checkbox"/> GRAB SAMPLE	
Laboratory: ELAB of Tennessee, Inc.		Sample ID Numbers: 15WC501 thru 15WC504
Sampler's Employer: Solutions to Environmental Problems, Inc.		
Sampler's Name (printed): Robert Sherles, Jr.	Signature: <i>Robert Sherles</i> 8/23/03	



GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #
L42437963

V. Physical Characteristics of Waste

Characteristic Component		% by Weight (mass)					
1. Petroleum Contaminated Soil		100					
2.							
3.							
4.							
5.							
Color	Odor (describe)	Free Liquids <input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	% Solids	pH:	Flash Point	Phenol	
Brown/Gray	Strong Petroleum Odor	Constant %	100	7.0-8.0	> 158 <input type="checkbox"/> <input checked="" type="checkbox"/>	N/A ppm	
<p>Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile</p>							
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlorobut, Ectoin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Salver as defined in 40 CFR 261.33?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.33?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other toxin as defined in 40 CFR 261.31?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Is this a regulated Toxic Material as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	
Is this waste generated at a Federal Superfund Clean Up Site?						<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or conditions pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste.

TONYA S. BARKER, SUN ENVIRENGR.
Authorized Representative Name and Title (Printed)

NAVISUPACT Mid-South
Company Name

Tonya S. Barker
Authorized Representative Signature

8-26-03
Date

VII. Allied Waste Decision

Approved Rejected Expiration: 2/29/04

Conditions: This approval is contingent upon receipt of a Notice of Special Waste Approval from the State of Tennessee Department of Environment and Conservation. The approval must be forwarded to the AWI Special Waste Dept to complete the file.

Rebecca Stein, Special Waste Coordinator Rebecca Stein 8/28/03
Name, Title Signature Date

Appendix F-1
Analyses for Borrow Soil

FORM 1
HERB ORGANICS ANALYSIS DATA SHEET

000115
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311027-01 SAS No.: NA SDG No.: STE.H11027-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311027-01
 Sample wt/vol: 10.0 (g/mL) G Lab File ID: 013F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 11/10/03
 Concentrated Extract Volume: 10 (mL) Date Analyzed: 11/11/03
 Injection Volume: 2.0 (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) UG/KG		Q	Req
94-75-7-----	2,4-D	62	U		u
94-82-6-----	2,4-DB	62	U		↓
93-72-1-----	2,4,5-TP (Silvex)	6.2	U		↓
93-76-5-----	2,4,5-T	6.2	U		↓
75-99-0-----	Dalapon	150	U		↓
1918-00-9-----	Dicamba	6.2	U		uJ 11a
120-36-5-----	Dichloroprop	62	U		↓
88-85-7-----	Dinoseb	31	U		↓
94-74-6-----	MCPA	6200	U		↓
93-65-2-----	MCP	6200	U		↓

USEPA - CLP

-1-

000007

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

015BFS002

Lab Name: ELAB of Tennessee, LLCContract: STEP, Inc.

Lab Code: _____

Case No.: _____

SAS No.: _____

SDG No.: 0311027Matrix (soil/water): SOILLab Sample ID: 0311027-01Level (low/med): LOWDate Received: 11/5/03% Solids: 81Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14400			P
7440-36-0	Antimony	2.3	U	N	P
7440-38-2	Arsenic	12.6			P
7440-39-3	Barium	219			P
7440-41-7	Beryllium	1.2	U		P
7440-43-9	Cadmium	0.23	U		P
7440-70-2	Calcium	1270			P
7440-47-3	Chromium	15.3			P
7440-48-4	Cobalt	9.6	B		P
7440-50-8	Copper	20.8			P
7439-89-6	Iron	24900			P
7439-92-1	Lead	14.0			P
7439-95-4	Magnesium	3000			P
7439-96-5	Manganese	1530			P
7439-97-6	Mercury	0.039	U		AV
7440-02-0	Nickel	25.8			P
7440-09-7	Potassium	1750			P
7782-49-2	Selenium	1.2	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	402	B		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	33.7			P
7440-66-6	Zinc	72.4			P

Revised

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Color Before: _____

Clarity Before: _____

Texture: _____

After: _____

Clarity After: _____

Artifacts: _____

Comments: pH - Laboratory = 7.6 @ 25°C

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

000079
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311027-01 SAS No.: NA SDG No.: STE.P11027-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311027-01
 Sample wt/vol: 15.6 (g/mL) G Lab File ID: 020F0301
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 11/05/03
 Concentrated Extract Volume: 5 (mL) Date Analyzed: 11/18/03
 Injection Volume: 2.0 (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) UG/KG	Q	Rev Qual
309-00-2	Aldrin	0.20	U	u
319-84-6	Alpha-BHC	0.20	U	
5103-71-9	Alpha-Chlordane	0.20	U	
319-85-7	Beta-BHC	0.20	U	
72-54-8	4,4'-DDD	0.39	U	
72-55-9	4,4'-DDE	0.39	U	
50-29-3	4,4'-DDT	0.39	U	
319-86-8	Delta-BHC	0.20	U	
60-57-1	Dieldrin	0.39	U	
959-98-8	Endosulfan I	0.20	U	
33213-65-9	Endosulfan II	0.39	U	
1031-07-8	Endosulfan Sulfate	0.39	U	
72-20-8	Endrin	0.39	U	
7421-93-4	Endrin Aldehyde	0.39	U	
53494-70-5	Endrin Ketone	0.39	U	
58-89-9	Gamma-BHC	0.20	U	
5103-74-2	Gamma-Chlordane	0.20	U	
76-44-8	Heptachlor	0.20	U	
1024-57-3	Heptachlor Epoxide	0.20	U	
72-43-5	Methoxychlor	2.0	U	
8001-35-2	Toxaphene	39	U	
12674-11-2	PCB-1016	20	U	
11104-28-2	PCB-1221	20	U	
11141-16-5	PCB-1232	20	U	
53469-21-9	PCB-1242	20	U	
12672-29-6	PCB-1248	20	U	
11097-69-1	PCB-1254	20	U	
11096-82-5	PCB-1260	20	U	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000049
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB Contract: STEP
Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B11027
Matrix: (soil/water) SOIL Lab Sample ID: 0311027-01
Sample wt/vol: 15.2 (g/mL) G Lab File ID: 1102701
% Moisture: 19 decanted: (Y/N) N Date Sampled: _____
Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 11/05/03
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/10/03
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	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qud
83-32-9	Acenaphthene	400 U		u
208-96-8	Acenaphthylene	400 U		u
98-86-2	Acetophenone	400 U		u J 5b
120-12-7	Anthracene	400 U		u J 5b
1912-24-9	Atrazine	400 U		u
100-52-7	Benzaldehyde	400 U		u
56-55-3	Benzo (a) anthracene	400 U		u
205-99-2	Benzo (b) fluoranthene	400 U		u
207-08-9	Benzo (k) fluoranthene	400 U		u
191-24-2	Benzo (g, h, i) perylene	400 U		u
50-32-8	Benzo (a) pyrene	400 U		u
111-91-1	bis (2-Chloroethoxy) methane	400 U		u
92-52-4	1, 1'-Biphenyl	400 U		u
111-44-4	bis (2-Chloroethyl) ether	400 U		u
108-60-1	bis (2-Chloroisopropyl) ether	400 U		u
117-81-7	Bis (2-ethylhexyl) phthalate	400 U		u
101-55-3	4-Bromophenyl-phenylether	400 U		u
85-68-7	Butylbenzylphthalate	400 U		u
105-60-2	Caprolactam	400 U		u
86-74-8	Carbazole	400 U		u J 5b
106-47-8	4-Chloroaniline	400 U		u
59-50-7	4-Chloro-3-methylphenol	400 U		u
91-58-7	2-Chloronaphthalene	400 U		u
95-57-8	2-Chlorophenol	400 U		u
7005-72-3	4-Chlorophenyl-phenylether	400 U		u
218-01-9	Chrysene	400 U		u
53-70-3	Dibenz (a, h) anthracene	400 U		u
132-64-9	Dibenzofuran	400 U		u
91-94-1	3, 3'-Dichlorobenzidine	400 U		u J 5b
120-83-2	2, 4-Dichlorophenol	400 U		u
84-66-2	Diethylphthalate	400 U		u
105-67-9	2, 4-Dimethylphenol	1600 U		u
131-11-3	Dimethylphthalate	400 U		u
84-74-2	Di-n-butylphthalate	400 U		u
534-52-1	4, 6-Dinitro-2-methylphenol	1600 U		u
51-28-5	2, 4-Dinitrophenol	4000 U		u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000151
 CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: 0311027-01 SAS No.: NA

SDG No.: STE.D11027-01

Matrix: (soil/water) SOIL

Lab Sample ID: 0311027-01

Sample wt/vol: 25.2 (g/mL) G

Lab File ID: 073F0101

% Moisture: 19 decanted: (Y/N) N

Date Sampled: 11/04/03

Extraction: (SepF/Cont/Sonc/Soxh) SONC

Date Extracted: 11/05/03

Concentrated Extract Volume: 1 (mL)

Date Analyzed: 11/08/03

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	Q	Revised
	-----Extractable Petroleum Hyd. ___	4.9	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000017
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11027

Matrix: (soil/water) SOIL

Lab Sample ID: 0311027-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1102701A

Level: (low/med) LOW

Date Sampled: 11/04/03

% Moisture: not dec. 19

Date Analyzed: 11/11/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
67-64-1	Acetone	42	J	
71-43-2	Benzene	6.2	U	
75-27-4	Bromodichloromethane	6.2	U	
75-25-2	Bromoform	6.2	U	
74-83-9	Bromomethane	12	U	
78-93-3	2-Butanone	62	U	
75-15-0	Carbon disulfide	6.2	U	
56-23-5	Carbon tetrachloride	6.2	U	
108-90-7	Chlorobenzene	6.2	U	
75-00-3	Chloroethane	12	U	
67-66-3	Chloroform	6.2	U	
74-87-3	Chloromethane	12	U	
110-82-7	Cyclohexane	12	U	
124-48-1	Dibromochloromethane	6.2	U	
96-12-8	1,2-Dibromo-3-chloropropane	12	U	
106-93-4	1,2-Dibromoethane	6.2	U	
95-50-1	1,2-Dichlorobenzene	6.2	U	
541-73-1	1,3-Dichlorobenzene	6.2	U	
106-46-7	1,4-Dichlorobenzene	6.2	U	
75-71-8	Dichlorodifluoromethane	12	U	
75-34-3	1,1-Dichloroethane	6.2	U	
107-06-2	1,2-Dichloroethane	6.2	U	
75-35-4	1,1-Dichloroethene	6.2	U	
156-59-2	cis-1,2-Dichloroethene	6.2	U	
156-60-5	trans-1,2-Dichloroethene	6.2	U	
78-87-5	1,2-Dichloropropane	6.2	U	
10061-01-5	cis-1,3-Dichloropropene	6.2	U	
10061-02-6	trans-1,3-Dichloropropene	6.2	U	
100-41-4	Ethylbenzene	6.2	U	
591-78-6	2-Hexanone	31	U	
98-82-8	Isopropylbenzene	6.2	U	
79-20-9	Methyl acetate	6.2	U	
108-87-2	Methyl cyclohexane	6.2	U	
75-09-2	Methylene chloride	17		
108-10-1	4-Methyl-2-pentanone	31	U	
1634-04-4	MTBE	6.2	U	

Revised
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u
u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000018
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11027
 Matrix: (soil/water) SOIL Lab Sample ID: 0311027-01
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1102701A
 Level: (low/med) LOW Date Sampled: 11/04/03
 % Moisture: not dec. 19 Date Analyzed: 11/11/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Req Qual
100-42-5	Styrene	6.2	U	u ↓ ✓
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U	
127-18-4	Tetrachloroethene	6.2	U	
108-88-3	Toluene	6.2	U	
120-82-1	1,2,4-Trichlorobenzene	6.2	U	
71-55-6	1,1,1-Trichloroethane	6.2	U	
79-00-5	1,1,2-Trichloroethane	6.2	U	
79-01-6	Trichloroethene	6.2	U	
76-13-1	Trichlorotrifluoroethane	6.2	U	
75-69-4	Trichlorofluoromethane	12	U	
75-01-4	Vinyl chloride	12	U	
1330-20-7	Xylene (total)	6.2	U	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000138
CLIENT SAMPLE NO.

015BFS002

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 0311027-01 SAS No.: NA SDG No.: STE.G11027-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311027-01
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 11/04/03
 % Moisture: not dec. 19 Date Analyzed: 11/10/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	u
	-----Gasoline Range Organics_____		12	U

Rev Q Incl
u



CLIENT: STEP, Inc.
DATE RECEIVED: 11/05/03
DATE REPORTED: 11/12/03

ELAB SAMPLE NUMBER				0311027-01
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE				015BFS002 11/4/03 2:20:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
pH- Laboratory (1)	NA	9045B	Units	7.6 @ 25°C

See attached page for definitions of terms and qualifiers.

ELAB

Betty DeVille for

D. Rick Davis
Vice President

Appendix F-2
Analyses for Coarse Sand

FORM 1
HERB ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000163**

015BFSA01

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0308098-01 SAS No.: NA SDG No.: STE.H08098-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 30.3 (g/mL) G Lab File ID: 007F0301
 % Moisture: 6 decanted: (Y/N) N Date Sampled: 08/14/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 08/20/03
 Concentrated Extract Volume: 10 (mL) Date Analyzed: 08/20/03
 Injection Volume: 2.0 (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) UG/KG		Q	Req'd
94-75-7	2,4-D	17	U		u
94-82-6	2,4-DB	17	U		↓
93-72-1	2,4,5-TP (Silvex)	1.7	U		↓
93-76-5	2,4,5-T	1.7	U		↓
75-99-0	Dalapon	44	U		uJ (la)
1918-00-9	Dicamba	1.7	U		u
120-36-5	Dichloroprop	17	U		↓
88-85-7	Dinoseb	8.7	U		↓
94-74-6	MCPA	1700	U		↓
93-65-2	MCPA	1700	U		↓

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

000120
CLIENT SAMPLE NO.

015BFSA01

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0308098-01 SAS No.: NA SDG No.: STE.P08098-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 15.6 (g/mL) G Lab File ID: 050F4801
 % Moisture: 6 decanted: (Y/N) N Date Sampled: 08/14/03
 Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 08/20/03
 Concentrated Extract Volume: 5 (mL) Date Analyzed: 08/20/03
 Injection Volume: 2.0 (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) UG/KG	Q	Rev Q ucl
309-00-2	Aldrin	0.34	U	u
319-84-6	Alpha-BHC	0.34	U	u
5103-71-9	Alpha-Chlordane	0.34	U	u
319-85-7	Beta-BHC	0.34	U	u
72-54-8	4,4'-DDD	0.68	U	u
72-55-9	4,4'-DDE	0.68	U	u
50-29-3	4,4'-DDT	0.68	U	u
319-86-8	Delta-BHC	0.34	U	u
60-57-1	Dieldrin	0.68	U	u
959-98-8	Endosulfan I	0.34	U	u
33213-65-9	Endosulfan II	0.68	U	u
1031-07-8	Endosulfan Sulfate	0.68	U	u
72-20-8	Endrin	0.68	U	u
7421-93-4	Endrin Aldehyde	0.68	U	u
53494-70-5	Endrin Ketone	0.68	U	u
58-89-9	Gamma-BHC	0.34	U	u
5103-74-2	Gamma-Chlordane	0.34	U	u
76-44-8	Heptachlor	0.34	U	u
1024-57-3	Heptachlor Epoxide	0.34	U	u
72-43-5	Methoxychlor	3.4	U	u
8001-35-2	Toxaphene	34	U	u
12674-11-2	PCB-1016	17	U	u
11104-28-2	PCB-1221	17	U	u
11141-16-5	PCB-1232	17	U	u
53469-21-9	PCB-1242	17	U	u
12672-29-6	PCB-1248	17	U	u
11097-69-1	PCB-1254	17	U	u
11096-82-5	PCB-1260	17	U	u

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000082**

015BFSA01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.B8098
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 15.5 (g/mL) G Lab File ID: 809801
 % Moisture: 6 decanted: (Y/N) N Date Sampled: 08/14/03
 Extraction: (SepF/Cont/Sonc/Soxh) SOXH Date Extracted: 08/20/03
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/21/03
 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	Q
83-32-9	Acenaphthene	340 U	
208-96-8	Acenaphthylene	340 U	
98-86-2	Acetophenone	340 U	
120-12-7	Anthracene	340 U	
1912-24-9	Atrazine	340 U	
100-52-7	Benzaldehyde	340 U	
56-55-3	Benzo(a) anthracene	340 U	
205-99-2	Benzo(b) fluoranthene	340 U	
207-08-9	Benzo(k) fluoranthene	340 U	
191-24-2	Benzo(g,h,i) perylene	340 U	
50-32-8	Benzo(a) pyrene	340 U	
111-91-1	bis(2-Chloroethoxy) methane	340 U	
92-52-4	1,1'-Biphenyl	340 U	
111-44-4	bis(2-Chloroethyl) ether	340 U	
108-60-1	bis(2-Chloroisopropyl) ether	340 U	
117-81-7	Bis(2-ethylhexyl) phthalate	340 U	
101-55-3	4-Bromophenyl-phenylether	340 U	
85-68-7	Butylbenzylphthalate	340 U	
105-60-2	Caprolactam	340 U	
86-74-8	Carbazole	340 U	
106-47-8	4-Chloroaniline	340 U	
59-50-7	4-Chloro-3-methylphenol	340 U	
91-58-7	2-Chloronaphthalene	340 U	
95-57-8	2-Chlorophenol	340 U	
7005-72-3	4-Chlorophenyl-phenylether	340 U	
218-01-9	Chrysene	340 U	
53-70-3	Dibenz(a,h) anthracene	340 U	
132-64-9	Dibenzofuran	340 U	
91-94-1	3,3'-Dichlorobenzidine	340 U	
120-83-2	2,4-Dichlorophenol	340 U	
84-66-2	Diethylphthalate	340 U	
105-67-9	2,4-Dimethylphenol	1400 U	
131-11-3	Dimethylphthalate	340 U	
84-74-2	Di-n-butylphthalate	340 U	
534-52-1	4,6-Dinitro-2-methylphenol	1400 U	
51-28-5	2,4-Dinitrophenol	3400 U	

Review

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FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000209
 CLIENT SAMPLE NO.

015BFSA01

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELAEN Case No.: 0308098-01 SAS No.: NA SDG No.: STE.D08098-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 028F0101
 % Moisture: 6 decanted: (Y/N) N Date Sampled: 08/14/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 08/19/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 08/20/03
 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	Q	Rev Qual
	-----Extractable Petroleum Hydrocarbons	4.2	U	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000035
CLIENT SAMPLE NO.

015BFSA01

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V08098

Matrix: (soil/water) SOIL

Lab Sample ID: 0308098-01

Sample wt/vol: 4.6 (g/mL) G

Lab File ID: 0809801B

Level: (low/med) LOW

Date Sampled: 08/14/03

% Moisture: not dec. 6

Date Analyzed: 08/21/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Revised
67-64-1	Acetone	190	B	✓	u 6a
71-43-2	Benzene	5.8	U		u
75-27-4	Bromodichloromethane	5.8	U		u
75-25-2	Bromoform	5.8	U		u
74-83-9	Bromomethane	12	U		u
78-93-3	2-Butanone	58	U		u 5b
75-15-0	Carbon disulfide	5.8	U		u
56-23-5	Carbon tetrachloride	5.8	U		u
108-90-7	Chlorobenzene	5.8	U		u
75-00-3	Chloroethane	12	U		u
67-66-3	Chloroform	5.8	U		u
74-87-3	Chloromethane	12	U		u
110-82-7	Cyclohexane	12	U		u 5b
124-48-1	Dibromochloromethane	5.8	U		u
96-12-8	1,2-Dibromo-3-chloropropane	12	U		u
106-93-4	1,2-Dibromoethane	5.8	U		u
95-50-1	1,2-Dichlorobenzene	5.8	U		u
541-73-1	1,3-Dichlorobenzene	5.8	U		u
106-46-7	1,4-Dichlorobenzene	5.8	U		u
75-71-8	Dichlorodifluoromethane	12	U		u
75-34-3	1,1-Dichloroethane	5.8	U		u
107-06-2	1,2-Dichloroethane	5.8	U		u
75-35-4	1,1-Dichloroethene	5.8	U		u
156-59-2	cis-1,2-Dichloroethene	5.8	U		u
156-60-5	trans-1,2-Dichloroethene	5.8	U		u
78-87-5	1,2-Dichloropropane	5.8	U		u
10061-01-5	cis-1,3-Dichloropropene	5.8	U		u
10061-02-6	trans-1,3-Dichloropropene	5.8	U		u
100-41-4	Ethylbenzene	5.8	U		u
591-78-6	2-Hexanone	29	U	✓	u 5b
98-82-8	Isopropylbenzene	5.8	U		u
79-20-9	Methyl acetate	5.8	U		u
108-87-2	Methyl cyclohexane	5.8	U		u
75-09-2	Methylene chloride	12	U	✓	u 5b
108-10-1	4-Methyl-2-pentanone	29	U	✓	u 5b
1634-04-4	MTBE	5.8	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000036
CLIENT SAMPLE NO.

015BFSA01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V08098
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 4.6 (g/mL) G Lab File ID: 0809801B
 Level: (low/med) LOW Date Sampled: 08/14/03
 % Moisture: not dec. 6 Date Analyzed: 08/21/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Qual
100-42-5	Styrene	5.8	U		u
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U		↓
127-18-4	Tetrachloroethene	5.8	U		↓
108-88-3	Toluene	5.8	1.3 JB		u 6a
120-82-1	1,2,4-Trichlorobenzene	5.8	U		u 5b
71-55-6	1,1,1-Trichloroethane	5.8	U		u
79-00-5	1,1,2-Trichloroethane	5.8	U		↓
79-01-6	Trichloroethene	5.8	U		
76-13-1	Trichlorotrifluoroethane	5.8	U		
75-69-4	Trichlorofluoromethane	12	U		
75-01-4	Vinyl chloride	12	U		
1330-20-7	Xylene (total)	5.8	U		↓

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000192
CLIENT SAMPLE NO.

015BFSA01

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0308098-01 SAS No.: NA SDG No.: STE.G08098-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0308098-01
 Sample wt/vol: 5.7 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 08/14/03
 % Moisture: not dec. 6 Date Analyzed: 08/19/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q
-----	Gasoline Range Organics	9.3	U	

Req'd
u



CLIENT: STEP, Inc.
DATE RECEIVED: 08/14/03
DATE REPORTED: 08/21/03

ELAB SAMPLE NUMBER				0308098-01	0308098-02	0308098-03
CLIENT SAMPLE DESCRIPTION/SAMPLING DATE				015BFSA01 8/14/03 8:30:00 AM	015BFS001 8/14/03 9:55:00 AM	015BFSA02 8/14/03 10:26:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC	CONC	CONC
pH- Laboratory (1)	NA	9045B	Units	7.7 @ 25°C	5.8 @ 25°C	6.9 @ 25°C

See attached page for definition of terms and qualifiers.

ELAB

Betty DeVille for

D. Rick Davis
Vice President

Appendix G
Pre-Construction Survey

Millington Municipal Airport

HORIZONTAL CONTROL

Horizontal Control: Horizontal coordinates used for this topographic survey are based on Tennessee State Plane Coordinates (NAD83).

Note: North as shown hereon is based upon Tennessee State Plane Coordinates (NAD83).

VERTICAL BENCHMARK

Vertical Benchmark: Elevations shown hereon are based upon Allen & Hoshall GPS Point 604.

GPS 604 is a P.K. Nail located at the southwest corner of the intersection of the east-west concrete drive and 1st Avenue. The elevation of GPS 604 is 283.75 feet referenced to the NSA-Millington vertical benchmark system.

GENERAL NOTES

This survey was requested by and performed for: STEP, INC.

The field information shown for this topographic survey was derived from random shots.

Date of field survey: September 30, 2003.

The contour interval for this survey is: 1 foot.

Prior to the excavation of the site, Tennessee one call should be contacted at 1-800-351-1111.

UTILITY DISCLAIMER

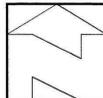
There may be non-visible underground utilities across this property or within streets that are not shown or noted hereon. Underground utilities shown hereon were copied from records obtained from others. The proper utility authorities should be contacted for more specific locations and information of underground utilities.

NAS Memphis Facilities
Bob Sipowich
(901)874-5909

CERTIFICATE OF SURVEY

"I hereby certify that this is a category 1 survey and the ratio of precision of the unadjusted survey is at least 1:10,000 as shown hereon."

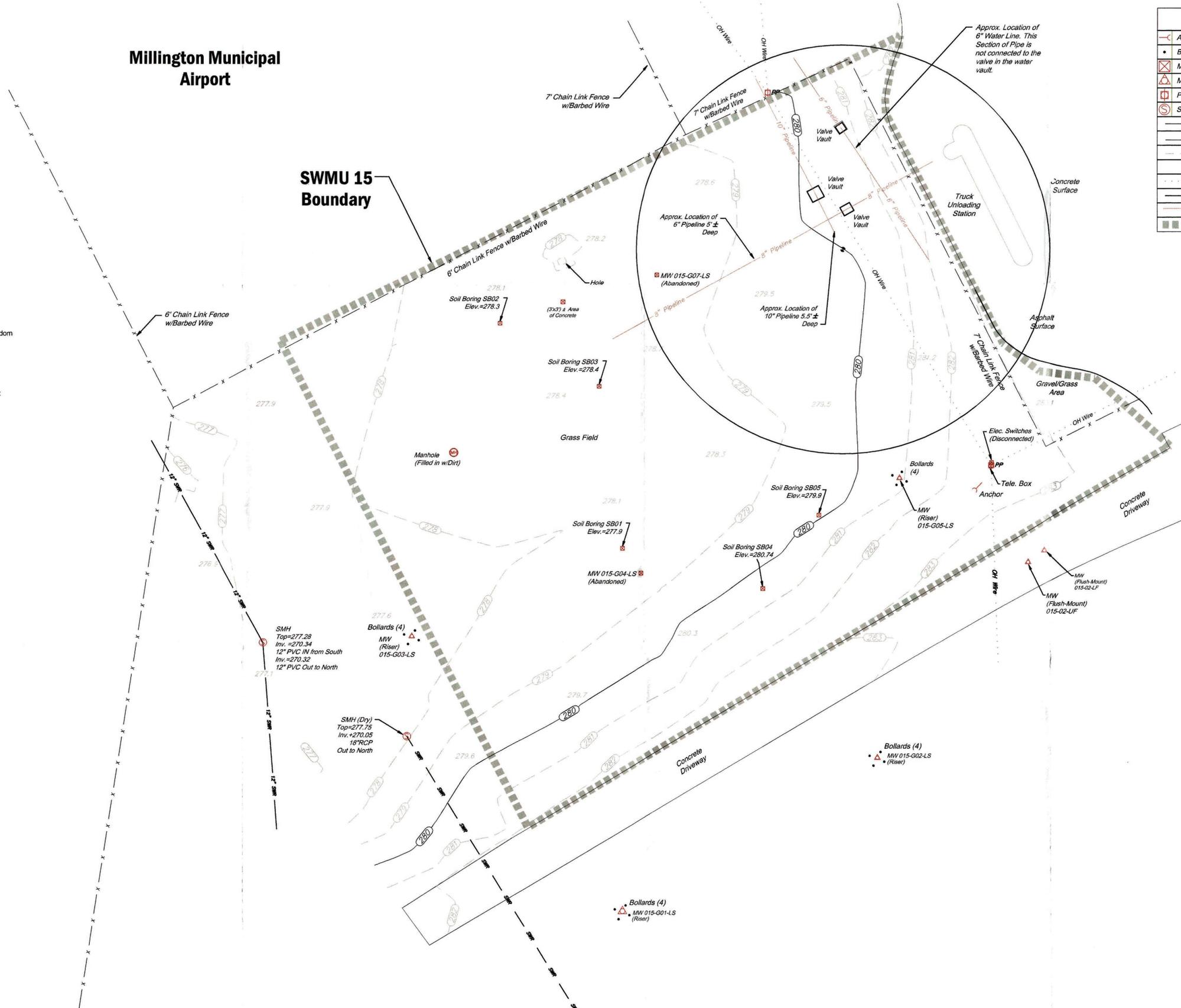
The word 'certify' or 'certicate' as shown and used hereon means an expression of professional opinion regarding the facts of the survey and does not constitute a warranty or guarantee, expressed or implied.



NAD 83

By: James B. Caughman, III, RLS License No. 1818, State of Tennessee
AllenHoshall, Inc.
1661 International Drive #100
Memphis, TN 38120
(901) 820-0820

SYMBOL LEGEND	
	Anchor
	Bollard
	Miscellaneous (Labeled)
	Monitoring Well
	Power Pole (PP)
	Sewer Manhole (SMH)
	Chain Link Fence
	Index Contour
	Intermediate Contour
	Spot Elevation
	Overhead Wire
	Sewer Line
	Pipeline
	SWMU 15 Boundary



TBM
P.K. Nail with yellow shiner at the intersection of the concrete drive and the north edge of the abandoned railroad tracks.
Elevation=283.75

TBM
Set CPS in PP
Elev.280.44



NO.	DATE	APPR.	REVISION

STEP Inc.
Solutions To Environmental Problems
1006 Floyd Culler Court
Oak Ridge, Tennessee 37830
(865)481-7837

CHECKED	DATE	CLIENT APPROVAL	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

Pre-Construction Survey

Soil Remediation at SWMU 15 Naval Support Activity Midsouth
Millington, Tennessee

DRAWN Allen and Hoshall, Inc., Memphis, Tennessee	DATE August 5, 2004	DWG. NO.	REV. NO.
SCALE As Shown	W.D. NO. 114-115 114-001	Appendix G	

00075002 Y

R:\114\114-113-001\Graphics\millington_pre-restoration.dwg (1:1)(01/23/04)

Appendix H-1
Analyses for Extractable Petroleum Hydrocarbons in
Confirmatory Soil Samples

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000083**

015MT05B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-02
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 007F0101
 % Moisture: 20 decanted: (Y/N) N Date Sampled: 10/20/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/21/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/22/03
 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	Q
	----Extractable Petroleum Hyd.		11

Review

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000079
 CLIENT SAMPLE NO.

015MT05B2

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D10222-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-01
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 006F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 10/24/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/27/03
 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		Q	Rw Qual
	-----Extractable Petroleum Hyd. ___	4.9	U		UJ 5b

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000084
 CLIENT SAMPLE NO.

015MT06B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-03
 Sample wt/vol: 25.4 (g/mL) G Lab File ID: 008F0101
 % Moisture: 20 decanted: (Y/N) N Date Sampled: 10/20/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/21/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/22/03
 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	Q	
	----Extractable Petroleum Hyd.	4.9	U	Re Q14 u

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000051
 CLIENT SAMPLE NO.

015MT07B2

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310231-01 SAS No.: NA SDG No.: STE.D10231-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310231-01
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: D1028319
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 10/25/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/28/03
 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	Q	
	-----Extractable Petroleum Hyd. ___	5.1	U	Rw Qual u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000086
 CLIENT SAMPLE NO.

015MT08E

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-05
 Sample wt/vol: 25.5 (g/mL) G Lab File ID: 010F0101
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 10/20/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/21/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/22/03
 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	Q	Rev Qual
	----Extractable Petroleum Hyd. _____	5.0	U	u

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000081
 CLIENT SAMPLE NO.

015MT09W

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D10222-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-03
 Sample wt/vol: 25.5 (g/mL) G Lab File ID: 008F0101
 % Moisture: 18 decanted: (Y/N) N Date Sampled: 10/24/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/27/03
 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	
	-----Extractable Petroleum Hyd.____	4.8	U

Q
Rev Qval
uJ 5b

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000080
 CLIENT SAMPLE NO.

015MT10B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D10222-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-02
 Sample wt/vol: 25.3 (g/mL) G Lab File ID: 007F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 10/24/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/27/03
 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	
-----	Extractable Petroleum Hyd. ___	4.9	U

Q Rvw Qual
 WJ 5b

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000062
 CLIENT SAMPLE NO.

015MT11B DUP

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10193-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310193-02
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: 083F0101
 % Moisture: 17 decanted: (Y/N) N Date Sampled: 10/22/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/23/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/24/03
 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	Q	Residual
	----Extractable Petroleum Hyd.	4.8	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000063**

015MT12B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10193-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310193-03
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 084F0101
 % Moisture: 18 decanted: (Y/N) N Date Sampled: 10/22/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/23/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/24/03
 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	Q	Req Qual
	----Extractable Petroleum Hyd.	4.9	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000064
 CLIENT SAMPLE NO.

015MT13E

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.D10193-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310193-04
 Sample wt/vol: 25.6 (g/mL) G Lab File ID: 085F0101
 % Moisture: 22 decanted: (Y/N) N Date Sampled: 10/22/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/23/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/24/03
 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	Q
	----Extractable Petroleum Hyd.	5.0	U

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FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000096
 CLIENT SAMPLE NO.

015MT14W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-01
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 044F0401
 % Moisture: 18 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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		Q
-----	Extractable Petroleum Hyd. ___	4.9	U	u

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FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000097
 CLIENT SAMPLE NO.

015MT14WDUP

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-02
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 046F0401
 % Moisture: 16 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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	Q
	-----Extractable Petroleum Hyd. ___	12	Q Rev 2/04

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000098
 CLIENT SAMPLE NO.

015MT15B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-04
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 039F0401
 % Moisture: 17 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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	Q	Per Qual
	-----Extractable Petroleum Hyd.____	14		

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

000052
 CLIENT SAMPLE NO.

015MT16B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310231-01 SAS No.: NA SDG No.: STE.D10231-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310231-02
 Sample wt/vol: 25.3 (g/mL) G Lab File ID: D1028320
 % Moisture: 20 decanted: (Y/N) N Date Sampled: 10/25/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/28/03
 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	Q	Rev Qual
	-----Extractable Petroleum Hyd.____	4.9	U	u

FORM 1
 TN-EPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000053**

015MT17B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310231-01 SAS No.: NA SDG No.: STE.D10231-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310231-03
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: D1028321
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 10/25/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/27/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/28/03
 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		Q
	-----Extractable Petroleum Hyd.____	5.0	U	<i>Raw Qual</i> u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000058**

015MT18W

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311020-01 SAS No.: NA SDG No.: STE.D11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-01
 Sample wt/vol: 25.5 (g/mL) G Lab File ID: 006F0101
 % Moisture: 22 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/06/03
 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	Q
	-----Extractable Petroleum Hyd. ___	6.4	Q Rev Qnd

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000099
 CLIENT SAMPLE NO.

015MT19W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-05
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 047F0101
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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		Q	Rev Qual
	-----Extractable Petroleum Hyd.____	5.0	U		u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000100
 CLIENT SAMPLE NO.

015MT20W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-06
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 043F0401
 % Moisture: 24 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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	Q
-----	Extractable Petroleum Hyd. ___	5.2	U

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FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000101
 CLIENT SAMPLE NO.

015MT21B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: SAS No.: NA SDG No.: STE.D11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-07
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 040F0401
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/02/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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		Q	Rev Qud
-----	Extractable Petroleum Hyd. ___	5.0	U		u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000059
 CLIENT SAMPLE NO.

015MT22B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311020-01 SAS No.: NA SDG No.: STE.D11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-02
 Sample wt/vol: 25.3 (g/mL) G Lab File ID: 007F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/06/03
 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	Q <i>RwQnd</i>
	-----Extractable Petroleum Hyd.____	8.3	

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 EPH ORGANICS ANALYSIS DATA SHEET

000060
 CLIENT SAMPLE NO.

015MT23B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311020-01 SAS No.: NA SDG No.: STE.D11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-03
 Sample wt/vol: 25.3 (g/mL) G Lab File ID: 008F0101
 % Moisture: 16 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/06/03
 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	Q
	-----Extractable Petroleum Hyd.____	8.1	

Rev 2 ucl

FORM 1
EPH ORGANICS ANALYSIS DATA SHEET

000053
CLIENT SAMPLE NO.

015MT24B

Lab Name: ELAB Contract: STEP, INC.
Lab Code: ELABN Case No.: 0311075-01 SAS No.: NA SDG No.: STE.D11075-01
Matrix: (soil/water) SOIL Lab Sample ID: 0311075-01
Sample wt/vol: 25.3 (g/mL) G Lab File ID: 075F0301
% Moisture: 19 decanted: (Y/N) N Date Sampled: 11/10/03
Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/11/03
Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/12/03
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	Q	<i>Rw Qual</i>
	-----Extractable Petroleum Hyd. __	7.2		

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000054
 CLIENT SAMPLE NO.

015MT24BDUP

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311075-01 SAS No.: NA SDG No.: STE.D11075-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311075-02
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 078F0301
 % Moisture: 18 decanted: (Y/N) N Date Sampled: 11/10/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/11/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/12/03
 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	Q
-----	Extractable Petroleum Hyd. ___	7.3	

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000061
 CLIENT SAMPLE NO.

015MT26W

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311020-01 SAS No.: NA SDG No.: STE.D11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-04
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 009F0101
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/06/03
 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		Q	Rev Qual
	-----Extractable Petroleum Hyd.____	5.0	U		u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000062
 CLIENT SAMPLE NO.

015MT27W

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311020-01 SAS No.: NA SDG No.: STE.D11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-05
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: 010F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/06/03
 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		Q
	-----Extractable Petroleum Hyd. ___	4.9	U	Q Rev Q uel u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000064
 CLIENT SAMPLE NO.

015MT28B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-02
 Sample wt/vol: 25.6 (g/mL) G Lab File ID: 025F0201
 % Moisture: 22 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/14/03
 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	Q	ReQual
	-----Extractable Petroleum Hyd.____	5.0	U	u

FORM 1
EPH ORGANICS ANALYSIS DATA SHEET

000056
CLIENT SAMPLE NO.

015MT29B

Lab Name: ELAB Contract: STEP, INC.
Lab Code: ELABN Case No.: 0311075-01 SAS No.: NA SDG No.: STE.D11075-01
Matrix: (soil/water) SOIL Lab Sample ID: 0311075-04
Sample wt/vol: 25.7 (g/mL) G Lab File ID: 080F0301
% Moisture: 20 decanted: (Y/N) N Date Sampled: 11/10/03
Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/11/03
Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/12/03
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	Q
	-----Extractable Petroleum Hyd.____	8.0	Reqd

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 EPH ORGANICS ANALYSIS DATA SHEET

000065
 CLIENT SAMPLE NO.

015MT31B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-03
 Sample wt/vol: 25.6 (g/mL) G Lab File ID: 026F0201
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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	Q
	-----Extractable Petroleum Hyd.____	5.6	2 Rev Jmal

000066

FORM 1
EPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015MT32B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311094-01 SAS No.: NA SDG No.: STE.D11094-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311094-01
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 033F0201
 % Moisture: 23 decanted: (Y/N) N Date Sampled: 11/12/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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		Q
	-----Extractable Petroleum Hyd.____	5.2	U	<i>u</i>

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000066
 CLIENT SAMPLE NO.

015MT33B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-04
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: 027F0201
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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		Q
	-----Extractable Petroleum Hyd.____	5.0	U	u

Req'd

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000067
 CLIENT SAMPLE NO.

015MT34B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-05
 Sample wt/vol: 25.4 (g/mL) G Lab File ID: 028F0201
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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	Q
	-----Extractable Petroleum Hyd.____	5.0	U

Revised
u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000068
 CLIENT SAMPLE NO.

015MT35B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-06
 Sample wt/vol: 25.3 (g/mL) G Lab File ID: 029F0201
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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	Q	ReQual
	-----Extractable Petroleum Hyd.____	5.0	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000069
 CLIENT SAMPLE NO.

015MT36B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-07
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: 030F0201
 % Moisture: 20 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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	Q	Remarks
	-----Extractable Petroleum Hyd. ___	5.0	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000071
 CLIENT SAMPLE NO.

015MT37BDUP

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-09
 Sample wt/vol: 25.8 (g/mL) G Lab File ID: 032F0201
 % Moisture: 20 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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		
	-----Extractable Petroleum Hyd.____	4.8	U	^Q <i>Raw Quel</i> u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000063
 CLIENT SAMPLE NO.

015MT38B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311093-01 SAS No.: NA SDG No.: STE.D11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-01
 Sample wt/vol: 25.5 (g/mL) G Lab File ID: 024F0201
 % Moisture: 24 decanted: (Y/N) N Date Sampled: 11/11/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/14/03
 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	Q	Rev/Qual
	-----Extractable Petroleum Hyd. ___	5.1	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000067
 CLIENT SAMPLE NO.

015MT39B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311094-01 SAS No.: NA SDG No.: STE.D11094-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311094-02
 Sample wt/vol: 25.1 (g/mL) G Lab File ID: 035F0201
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/12/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/14/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/15/03
 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	Q	Rev Qnd
-----	Extractable Petroleum Hyd. ___	5.0	U	u

Appendix H-2

Analyses for Gasoline Range Organics in Confirmatory Soil Samples

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000037
CLIENT SAMPLE NO.

015MT02N

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10118-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310118-02
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 006F0101
 Level: (low/med) HIGH Date Sampled: 10/14/03
 % Moisture: not dec. 19 Date Analyzed: 10/16/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics	13	Revised

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000058
CLIENT SAMPLE NO.

015MT04W

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310172-01 SAS No.: NA SDG No.: STE.G10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-01
 Sample wt/vol: 5.4 (g/mL) G Lab File ID: 012F0101
 Level: (low/med) HIGH Date Sampled: 10/20/03
 % Moisture: not dec. 20 Date Analyzed: 10/21/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Raw Data
-----	Gasoline Range Organics	12	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000059
CLIENT SAMPLE NO.

015MT05B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310172-01 SAS No.: NA SDG No.: STE.G10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-02
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 004F0101
 Level: (low/med) HIGH Date Sampled: 10/20/03
 % Moisture: not dec. 20 Date Analyzed: 10/23/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 2.5
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	
	-----Gasoline Range Organics_____	780	D

Q *Res 2nd*

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000054
CLIENT SAMPLE NO.

015MT05B2

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10222-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-01
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 017F0101
 Level: (low/med) HIGH Date Sampled: 10/24/03
 % Moisture: not dec. 19 Date Analyzed: 10/27/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics_____	32	Rev 2 ul

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000060
CLIENT SAMPLE NO.

015MT06B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310172-01 SAS No.: NA SDG No.: STE.G10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-03
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 014F0101
 Level: (low/med) HIGH Date Sampled: 10/20/03
 % Moisture: not dec. 20 Date Analyzed: 10/21/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Res Qual
	-----Gasoline Range Organics		91	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000061
CLIENT SAMPLE NO.

015MT07B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310172-01 SAS No.: NA SDG No.: STE.G10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-04
 Sample wt/vol: 5.3 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 10/20/03
 % Moisture: not dec. 19 Date Analyzed: 10/23/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 10.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics	1900	D <i>Revised</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000062
CLIENT SAMPLE NO.

015MT08E

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310172-01 SAS No.: NA SDG No.: STE.G10172-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-05
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 017F0101
 Level: (low/med) HIGH Date Sampled: 10/20/03
 % Moisture: not dec. 21 Date Analyzed: 10/21/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Residual
-----	Gasoline Range Organics	5.6	J		J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000056
CLIENT SAMPLE NO.

015MT09W

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.G10222-01

Matrix: (soil/water) SOIL

Lab Sample ID: 0310222-03

Sample wt/vol: 5.4 (g/mL) G

Lab File ID: 019F0101

Level: (low/med) HIGH

Date Sampled: 10/24/03

% Moisture: not dec. 18

Date Analyzed: 10/27/03

GC Column: RTX 502.2 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (ul)

Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	<i>Revised</i>
-----	Gasoline Range Organics	11	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000055
CLIENT SAMPLE NO.

015MT10B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10222-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-02
 Sample wt/vol: 5.5 (g/mL) G Lab File ID: 018F0101
 Level: (low/med) HIGH Date Sampled: 10/24/03
 % Moisture: not dec. 19 Date Analyzed: 10/27/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
-----	Gasoline Range Organics	82	Req'd

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000047
CLIENT SAMPLE NO.

015MT13E

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10193-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310193-04
 Sample wt/vol: 5.3 (g/mL) G Lab File ID: 012F0101
 Level: (low/med) HIGH Date Sampled: 10/22/03
 % Moisture: not dec. 22 Date Analyzed: 10/23/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Rev Qual
	-----Gasoline Range Organics_____	12	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000066
CLIENT SAMPLE NO.

015MT14W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-01
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 009F0101
 Level: (low/med) HIGH Date Sampled: 11/02/03
 % Moisture: not dec. 18 Date Analyzed: 11/04/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		<i>Q</i> <i>Rev Qnd</i>
-----	Gasoline Range Organics	12	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000067
CLIENT SAMPLE NO.

015MT14WDUP

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-02
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 011F0101
 Level: (low/med) HIGH Date Sampled: 11/02/03
 % Moisture: not dec. 16 Date Analyzed: 11/04/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Rev
-----	Gasoline Range Organics	11	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000068**

015MT15B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-04
 Sample wt/vol: 5.4 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 11/02/03
 % Moisture: not dec. 17 Date Analyzed: 11/05/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Rev	Qual
	-----Gasoline Range Organics		10	J		J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000033**

015MT16B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10231-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310231-02
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 025F0101
 Level: (low/med) HIGH Date Sampled: 10/25/03
 % Moisture: not dec. 20 Date Analyzed: 10/27/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Rev Qual
-----	Gasoline Range Organics	12	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000041
CLIENT SAMPLE NO.

015MT18W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11020-01 SAS No.: NA SDG No.: STE.G11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-01
 Sample wt/vol: 5.7 (g/mL) G Lab File ID: 012F0101
 % Moisture: 22 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 5000 (ul) Date Analyzed: 11/05/03
 Injection Volume: _____ (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		Q	Residual
-----	Gasoline Range Organics	11	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000069
CLIENT SAMPLE NO.

015MT19W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G11007-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-05
 Sample wt/vol: 5.4 (g/mL) G Lab File ID: 012F0101
 Level: (low/med) HIGH Date Sampled: 11/02/03
 % Moisture: not dec. 21 Date Analyzed: 11/04/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	
-----	Gasoline Range Organics	12	U		<i>Req'd</i> u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000042**

015MT22B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11020-01 SAS No.: NA SDG No.: STE.G11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-02
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 013F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 5000 (ul) Date Analyzed: 11/05/03
 Injection Volume: _____ (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	
	-----Gasoline Range Organics_____	12	U

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000043**

015MT23B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11020-01 SAS No.: NA SDG No.: STE.G11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-03
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 014F0101
 % Moisture: 16 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 5000 (ul) Date Analyzed: 11/05/03
 Injection Volume: _____ (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	Q
-----	Gasoline Range Organics	12	U

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000035**

015MT24B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0311075-01 SAS No.: NA SDG No.: STE.G11075-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311075-01
 Sample wt/vol: 5.5 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 11/10/03
 % Moisture: not dec. 19 Date Analyzed: 11/11/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Rev	Qual
	-----Gasoline Range Organics_____	55			

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000036
CLIENT SAMPLE NO.

015MT24BDUP

Lab Name: ELAB

Contract: STEP, INC.

Lab Code: ELABN

Case No.: 0311075-01 SAS No.: NA

SDG No.: STE.G11075-01

Matrix: (soil/water) SOIL

Lab Sample ID: 0311075-02

Sample wt/vol: 5.2 (g/mL) G

Lab File ID: 009F0101

Level: (low/med) HIGH

Date Sampled: 11/10/03

% Moisture: not dec. 18

Date Analyzed: 11/11/03

GC Column: RTX 502.2 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (ul)

Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Rw Qual
	-----Gasoline Range Organics	46		

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000044**

015MT26W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11020-01 SAS No.: NA SDG No.: STE.G11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-04
 Sample wt/vol: 5.8 (g/mL) G Lab File ID: 015F0101
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 5000 (ul) Date Analyzed: 11/05/03
 Injection Volume: _____ (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		Q
-----	Gasoline Range Organics	11	U	

Revised
u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000045**

015MT27W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11020-01 SAS No.: NA SDG No.: STE.G11020-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-05
 Sample wt/vol: 5.5 (g/mL) G Lab File ID: 017F0101
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 11/04/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 11/05/03
 Concentrated Extract Volume: 5000 (ul) Date Analyzed: 11/05/03
 Injection Volume: _____ (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	Q
-----	Gasoline Range Organics	11	U

Reqd
u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000041
CLIENT SAMPLE NO.

015MT28B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-02
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 012F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 22 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Residual
-----	Gasoline Range Organics	12	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000042**

015MT31B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-03
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 013F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Revised
-----	Gasoline Range Organics	13	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000045**

015MT32B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11094-01 SAS No.: NA SDG No.: STE.G11094-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311094-01
 Sample wt/vol: 5.4 (g/mL) G Lab File ID: 021F0101
 Level: (low/med) HIGH Date Sampled: 11/12/03
 % Moisture: not dec. 23 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics	15	Req'd

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000043
CLIENT SAMPLE NO.

015MT33B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-04
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 014F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics	15	<i>Rev 2nd</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000044
CLIENT SAMPLE NO.

015MT34B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-05
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 015F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics_____	45	Req'd

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000045
CLIENT SAMPLE NO.

015MT35B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-06
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 017F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Rev Qual
	-----Gasoline Range Organics_____	9.6	J		J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000047
CLIENT SAMPLE NO.

015MT37B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-08
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 019F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	-----Gasoline Range Organics	38	Req'd



FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000048
CLIENT SAMPLE NO.

015MT37BDUP

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-09
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 020F0101
 Level: (low/med) HIGH Date Sampled: 11/11/03
 % Moisture: not dec. 20 Date Analyzed: 11/14/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
-----	Gasoline Range Organics	49	Rev Incl

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000040**

015MT38B

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: 11093-01 SAS No.: NA SDG No.: STE.G11093-01

Matrix: (soil/water) SOIL Lab Sample ID: 0311093-01

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 011F0101

Level: (low/med) HIGH Date Sampled: 11/11/03

% Moisture: not dec. 24 Date Analyzed: 11/14/03

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
-----	Gasoline Range Organics	29	

Rev Q ucl

000040

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

015MT39B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: 11094-01 SAS No.: NA

SDG No.: STE.G11094-01

Matrix: (soil/water) SOIL

Lab Sample ID: 0311094-02

Sample wt/vol: 5.2 (g/mL) G

Lab File ID: 022F0101

Level: (low/med) HIGH

Date Sampled: 11/12/03

% Moisture: not dec. 21

Date Analyzed: 11/14/03

GC Column: RTX 502.2 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (ul)

Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	MG/KG
	-----Gasoline Range Organics_____	52	Q

Rev 2/01

Appendix H-3
Analyses for Benzene in Confirmatory Soil Samples

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000015
CLIENT SAMPLE NO.

015MT01N

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10118
 Matrix: (soil/water) SOIL Lab Sample ID: 0310118-01
 Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1011801D
 Level: (low/med) MED Date Sampled: 10/14/03
 % Moisture: not dec. 23 Date Analyzed: 10/16/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 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	66	U	u

Rev Qual

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000016
CLIENT SAMPLE NO.

015MT02N

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10118
 Matrix: (soil/water) SOIL Lab Sample ID: 0310118-02
 Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1011802D
 Level: (low/med) MED Date Sampled: 10/14/03
 % Moisture: not dec. 19 Date Analyzed: 10/16/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qual
71-43-2-----	Benzene	63	U	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000017
CLIENT SAMPLE NO.

015MT03N

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10118
 Matrix: (soil/water) SOIL Lab Sample ID: 0310118-03
 Sample wt/vol: 5.9 (g/mL) G Lab File ID: 1011803D
 Level: (low/med) MED Date Sampled: 10/14/03
 % Moisture: not dec. 22 Date Analyzed: 10/16/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 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	54	U	u

Rev Qual

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000024
CLIENT SAMPLE NO.

015MT04W

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10172

Matrix: (soil/water) SOIL Lab Sample ID: 0310172-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1017201

Level: (low/med) LOW Date Sampled: 10/20/03

% Moisture: not dec. 20 Date Analyzed: 10/21/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Req Qual
71-43-2-----	Benzene	6.2	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000021
CLIENT SAMPLE NO.

015MT05B2

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10222
 Matrix: (soil/water) SOIL Lab Sample ID: 0310222-01
 Sample wt/vol: 5.3 (g/mL) G Lab File ID: 1022201A
 Level: (low/med) LOW Date Sampled: 10/24/03
 % Moisture: not dec. 19 Date Analyzed: 10/28/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG
71-43-2-----	Benzene	3.4 J

Q Rev 2nd
J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000026
CLIENT SAMPLE NO.

015MT06B

Lab Name: ELAB Contract: STEP
Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10172

Matrix: (soil/water) SOIL Lab Sample ID: 0310172-03
Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1017203M
Level: (low/med) MED Date Sampled: 10/20/03
% Moisture: not dec. 20 Date Analyzed: 10/21/03
GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Q/w
71-43-2-----	Benzene	310	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000027
CLIENT SAMPLE NO.

015MT07B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10172
 Matrix: (soil/water) SOIL Lab Sample ID: 0310172-04
 Sample wt/vol: 5.3 (g/mL) G Lab File ID: 1017204M
 Level: (low/med) MED Date Sampled: 10/20/03
 % Moisture: not dec. 19 Date Analyzed: 10/21/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 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	540	Q <i>Rev 2nd</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000013
CLIENT SAMPLE NO.

015MT07B2

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10231

Matrix: (soil/water) SOIL

Lab Sample ID: 0310231-01

Sample wt/vol: 5.2 (g/mL) G

Lab File ID: 1023101A

Level: (low/med) LOW

Date Sampled: 10/25/03

% Moisture: not dec. 21

Date Analyzed: 10/28/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Res Qnd
71-43-2-----	Benzene	6.1	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000028
CLIENT SAMPLE NO.

015MT08E

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10172

Matrix: (soil/water) SOIL

Lab Sample ID: 0310172-05

Sample wt/vol: 4.9 (g/mL) G

Lab File ID: 1017205

Level: (low/med) LOW

Date Sampled: 10/20/03

% Moisture: not dec. 21

Date Analyzed: 10/21/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	
71-43-2-----	Benzene	6.5	U		Rev 2nd u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000023
CLIENT SAMPLE NO.

015MT09W

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10222

Matrix: (soil/water) SOIL

Lab Sample ID: 0310222-03

Sample wt/vol: 5.2 (g/mL) G

Lab File ID: 1022203A

Level: (low/med) LOW

Date Sampled: 10/24/03

% Moisture: not dec. 18

Date Analyzed: 10/28/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
		ug/L	ug/Kg	
71-43-2-----	Benzene	5.9	U	<i>Rev Juel</i> <i>u</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000022**

015MT10B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10222

Matrix: (soil/water) SOIL

Lab Sample ID: 0310222-02

Sample wt/vol: 5.3 (g/mL) G

Lab File ID: 1022202A

Level: (low/med) LOW

Date Sampled: 10/24/03

% Moisture: not dec. 19

Date Analyzed: 10/28/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
71-43-2-----	Benzene	5.8	U	<i>u</i>

Rev Q uel

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000021**

015MT11B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10193

Matrix: (soil/water) SOIL

Lab Sample ID: 0310193-01

Sample wt/vol: 4.8 (g/mL) G

Lab File ID: 1019301A

Level: (low/med) LOW

Date Sampled: 10/22/03

% Moisture: not dec. 19

Date Analyzed: 10/23/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev	Qual
71-43-2-----	Benzene	6.4	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000022
CLIENT SAMPLE NO.

015MT11BDUP

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10193

Matrix: (soil/water) SOIL

Lab Sample ID: 0310193-02

Sample wt/vol: 5.5 (g/mL) G

Lab File ID: 1019302A

Level: (low/med) LOW

Date Sampled: 10/22/03

% Moisture: not dec. 17

Date Analyzed: 10/23/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
71-43-2-----	Benzene	5.5	U	u <i>Req'd</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000023**

015MT12B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10193

Matrix: (soil/water) SOIL

Lab Sample ID: 0310193-03

Sample wt/vol: 5.1 (g/mL) G

Lab File ID: 1019303A

Level: (low/med) LOW

Date Sampled: 10/22/03

% Moisture: not dec. 18

Date Analyzed: 10/23/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

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

Q Rev Qnd

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qnd
71-43-2-----	Benzene	6.0	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000024
CLIENT SAMPLE NO.

015MT13E

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10193
 Matrix: (soil/water) SOIL Lab Sample ID: 0310193-04
 Sample wt/vol: 5.2 (g/mL) G Lab File ID: 1019304A
 Level: (low/med) LOW Date Sampled: 10/22/03
 % Moisture: not dec. 22 Date Analyzed: 10/23/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qnd
71-43-2-----	Benzene	6.2 U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000028
CLIENT SAMPLE NO.

015MT14W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11007
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-01
 Sample wt/vol: 4.8 (g/mL) G Lab File ID: 1100701A
 Level: (low/med) LOW Date Sampled: 11/02/03
 % Moisture: not dec. 18 Date Analyzed: 11/05/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	Benzene	6.4	U

Rev Q ucl
u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000029
CLIENT SAMPLE NO.

015MT14WDUP

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11007

Matrix: (soil/water) SOIL

Lab Sample ID: 0311007-02

Sample wt/vol: 4.7 (g/mL) G

Lab File ID: 1100702A

Level: (low/med) LOW

Date Sampled: 11/02/03

% Moisture: not dec. 16

Date Analyzed: 11/05/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	ReQual
71-43-2-----	Benzene	6.3	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000014
CLIENT SAMPLE NO.

015MT16B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10231

Matrix: (soil/water) SOIL

Lab Sample ID: 0310231-02

Sample wt/vol: 5.2 (g/mL) G

Lab File ID: 1023102A

Level: (low/med) LOW

Date Sampled: 10/25/03

% Moisture: not dec. 20

Date Analyzed: 10/28/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	Benzene	6.0 U	

Rw Quaf
u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000015
CLIENT SAMPLE NO.

015MT17B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10231
 Matrix: (soil/water) SOIL Lab Sample ID: 0310231-03
 Sample wt/vol: 5.3 (g/mL) G Lab File ID: 1023103A
 Level: (low/med) LOW Date Sampled: 10/25/03
 % Moisture: not dec. 21 Date Analyzed: 10/28/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Res Q uel
71-43-2-----	Benzene	5.9	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000019
CLIENT SAMPLE NO.

015MT18W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.11020
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-01
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1102001A
 Level: (low/med) LOW Date Sampled: 11/04/03
 % Moisture: not dec. 22 Date Analyzed: 11/06/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		
71-43-2-----	Benzene	6.4	U	Q Rw Qual u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000031
CLIENT SAMPLE NO.

015MT19W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11007
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-05
 Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1100705A
 Level: (low/med) LOW Date Sampled: 11/02/03
 % Moisture: not dec. 21 Date Analyzed: 11/05/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Qual
		UG/L	UG/KG		
71-43-2-----	Benzene	6.4	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000033
CLIENT SAMPLE NO.

015MT21B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11007
 Matrix: (soil/water) SOIL Lab Sample ID: 0311007-07
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1100707A
 Level: (low/med) LOW Date Sampled: 11/02/03
 % Moisture: not dec. 21 Date Analyzed: 11/04/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev	Qual
71-43-2-----	Benzene	6.2	U		

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000020
CLIENT SAMPLE NO.

015MT22B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.11020
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-02
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1102002A
 Level: (low/med) LOW Date Sampled: 11/04/03
 % Moisture: not dec. 19 Date Analyzed: 11/06/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2-----	Benzene	6.2	U	<i>Raw Qucl</i> u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000021
CLIENT SAMPLE NO.

015MT23B

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.11020

Matrix: (soil/water) SOIL Lab Sample ID: 0311020-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1102003A

Level: (low/med) LOW Date Sampled: 11/04/03

% Moisture: not dec. 16 Date Analyzed: 11/06/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Revised
71-43-2-----	Benzene	6.0	U		u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000013
CLIENT SAMPLE NO.

015MT24B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11075
 Matrix: (soil/water) SOIL Lab Sample ID: 0311075-01
 Sample wt/vol: 4.7 (g/mL) G Lab File ID: 1107501A
 Level: (low/med) LOW Date Sampled: 11/10/03
 % Moisture: not dec. 19 Date Analyzed: 11/12/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qual
71-43-2-----	Benzene	6.6	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000014
CLIENT SAMPLE NO.

015MT24BDUP

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11075

Matrix: (soil/water) SOIL Lab Sample ID: 0311075-02

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1107502A

Level: (low/med) LOW Date Sampled: 11/10/03

% Moisture: not dec. 18 Date Analyzed: 11/12/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		
71-43-2-----	Benzene	6.1	U	u

Revised

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000023
CLIENT SAMPLE NO.

015MT27W

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.11020
 Matrix: (soil/water) SOIL Lab Sample ID: 0311020-05
 Sample wt/vol: 5.6 (g/mL) G Lab File ID: 1102005A
 Level: (low/med) LOW Date Sampled: 11/04/03
 % Moisture: not dec. 19 Date Analyzed: 11/07/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qual
71-43-2-----	Benzene	5.5	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000016**

015MT28B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11093

Matrix: (soil/water) SOIL

Lab Sample ID: 0311093-02

Sample wt/vol: 4.9 (g/mL) G

Lab File ID: 1109302A

Level: (low/med) LOW

Date Sampled: 11/11/03

% Moisture: not dec. 22

Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2-----	Benzene	5.8	J	<i>RwQnel</i> J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000016
CLIENT SAMPLE NO.

015MT29B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11075

Matrix: (soil/water) SOIL

Lab Sample ID: 0311075-04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1107504A

Level: (low/med) LOW

Date Sampled: 11/10/03

% Moisture: not dec. 20

Date Analyzed: 11/12/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		
71-43-2-----	Benzene	6.2	U	<i>Q Rev Incl u</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000017
CLIENT SAMPLE NO.

015MT30B

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11075

Matrix: (soil/water) SOIL Lab Sample ID: 0311075-05

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1107505A

Level: (low/med) LOW Date Sampled: 11/10/03

% Moisture: not dec. 18 Date Analyzed: 11/12/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Rev Qual
71-43-2-----	Benzene	6.0	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000017
CLIENT SAMPLE NO.

015MT31B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-03
 Sample wt/vol: 4.8 (g/mL) G Lab File ID: 1109303A
 Level: (low/med) LOW Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/13/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Qual
71-43-2-----	Benzene	2.1	J	J	J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000021**

015MT32B

Lab Name: ELAB Contract: STEP
Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11094

Matrix: (soil/water) SOIL Lab Sample ID: 0311094-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1109401A

Level: (low/med) LOW Date Sampled: 11/12/03

% Moisture: not dec. 23 Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Qual
		UG/L	UG/KG		
71-43-2-----	Benzene	6.5	U		U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000018
CLIENT SAMPLE NO.

015MT33B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-04
 Sample wt/vol: 4.4 (g/mL) G Lab File ID: 1109304A
 Level: (low/med) LOW Date Sampled: 11/11/03
 % Moisture: not dec. 21 Date Analyzed: 11/13/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Residual
71-43-2-----	Benzene	20		

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000019
CLIENT SAMPLE NO.

015MT34B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11093

Matrix: (soil/water) SOIL

Lab Sample ID: 0311093-05

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: 1109305A

Level: (low/med) LOW

Date Sampled: 11/11/03

% Moisture: not dec. 21

Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

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

Q Rev Qued

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	Benzene	7.0 U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000020
CLIENT SAMPLE NO.

015MT35B

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093

Matrix: (soil/water) SOIL Lab Sample ID: 0311093-06

Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1109306A

Level: (low/med) LOW Date Sampled: 11/11/03

% Moisture: not dec. 21 Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	Req Qual
71-43-2-----	Benzene	6.5	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000021
CLIENT SAMPLE NO.

015MT36B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093
 Matrix: (soil/water) SOIL Lab Sample ID: 0311093-07
 Sample wt/vol: 4.4 (g/mL) G Lab File ID: 1109307A
 Level: (low/med) LOW Date Sampled: 11/11/03
 % Moisture: not dec. 20 Date Analyzed: 11/13/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2-----	Benzene	7.1	U	<i>Revised</i> u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000022
CLIENT SAMPLE NO.

015MT37B

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093

Matrix: (soil/water) SOIL Lab Sample ID: 0311093-08

Sample wt/vol: 4.6 (g/mL) G Lab File ID: 1109308A

Level: (low/med) LOW Date Sampled: 11/11/03

% Moisture: not dec. 21 Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
71-43-2-----	Benzene	2.7	J

Q
Rev Juel
J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000023**

015MT37BDUP

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11093

Matrix: (soil/water) SOIL Lab Sample ID: 0311093-09

Sample wt/vol: 4.4 (g/mL) G Lab File ID: 1109309A

Level: (low/med) LOW Date Sampled: 11/11/03

% Moisture: not dec. 20 Date Analyzed: 11/13/03

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev Qual
71-43-2-----	Benzene	4.8	J		J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000022

CLIENT SAMPLE NO.

015MT39B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V11094

Matrix: (soil/water) SOIL

Lab Sample ID: 0311094-02

Sample wt/vol: 4.5 (g/mL) G

Lab File ID: 1109402B

Level: (low/med) LOW

Date Sampled: 11/12/03

% Moisture: not dec. 21

Date Analyzed: 11/14/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

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

2 *Req'd*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG
71-43-2-----	Benzene	45

Appendix I
Analytical Results for Unknown Substance Spill

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

015MTUNK01

Lab Name: ELAB of Tennessee, LLC

Contract: STEP Inc.

Lab Code: _____

Case No.: _____

SAS No.: _____

SDG No.: 0310142

Matrix (soil/water): LIQUID

Lab Sample ID: 0310142-01

Level (low/med): LOW

Date Received: 10/16/03

% Solids: _____

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	2260			P

Rev Qual

Color Before: _____ Clarity Before: _____ Texture: _____

or After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000015
CLIENT SAMPLE NO.

015MTUNK01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10142
 Matrix: (soil/water) OIL Lab Sample ID: 0310142-01
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 1014201D
 Level: (low/med) LOW Date Sampled: 10/16/03
 % Moisture: not dec. _____ Date Analyzed: 10/17/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 50000.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	Q	Rev Qual
67-64-1	Acetone	500	UD	u
71-43-2	Benzene	180	D	
75-27-4	Bromodichloromethane	50	UD	u
75-25-2	Bromoform	50	UD	
74-83-9	Bromomethane	100	UD	
78-93-3	2-Butanone	1100	D	
75-15-0	Carbon disulfide	50	UD	u
56-23-5	Carbon tetrachloride	50	UD	
108-90-7	Chlorobenzene	50	UD	
75-00-3	Chloroethane	100	UD	
67-66-3	Chloroform	50	UD	
74-87-3	Chloromethane	100	UD	
124-48-1	Dibromochloromethane	50	UD	
96-12-8	1,2-Dibromo-3-chloropropane	100	UD	
106-93-4	1,2-Dibromoethane	50	UD	
74-95-3	Dibromomethane	50	UD	
95-50-1	1,2-Dichlorobenzene	50	UD	
541-73-1	1,3-Dichlorobenzene	50	UD	
106-46-7	1,4-Dichlorobenzene	50	UD	
75-71-8	Dichlorodifluoromethane	100	UD	
75-34-3	1,1-Dichloroethane	50	UD	
107-06-2	1,2-Dichloroethane	50	UD	
75-35-4	1,1-Dichloroethene	50	UD	
156-59-2	cis-1,2-Dichloroethene	50	UD	
156-60-5	trans-1,2-Dichloroethene	50	UD	
540-59-0	1,2-Dichloroethene (total)	50	UD	
78-87-5	1,2-Dichloropropane	50	UD	
10061-01-5	cis-1,3-Dichloropropene	50	UD	
10061-02-6	trans-1,3-Dichloropropene	50	UD	
100-41-4	Ethylbenzene	3300	D	
591-78-6	2-Hexanone	250	UD	u
98-82-8	Isopropylbenzene	50	UD	
75-09-2	Methylene chloride	100	UD	
108-10-1	4-Methyl-2-pentanone	250	UD	
1634-04-4	MTBE	50	UD	
100-42-5	Styrene	59	D	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000016
CLIENT SAMPLE NO.

015MTUNK01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10142
 Matrix: (soil/water) OIL Lab Sample ID: 0310142-01
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 1014201D
 Level: (low/med) LOW Date Sampled: 10/16/03
 % Moisture: not dec. _____ Date Analyzed: 10/17/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 50000.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L		Q	Revised
79-34-5	1,1,2,2-Tetrachloroethane	50	UD		
127-18-4	Tetrachloroethene	50	UD		
108-88-3	Toluene	52000	DE		16
120-82-1	1,2,4-Trichlorobenzene	50	UD		
71-55-6	1,1,1-Trichloroethane	50	UD		
79-00-5	1,1,2-Trichloroethane	50	UD		
79-01-6	Trichloroethene	50	UD		
75-69-4	Trichlorofluoromethane	100	UD		
75-01-4	Vinyl chloride	100	UD*		
1330-20-7	Xylene (total)	18000	DE		16

* = THE CONTINUING CALIBRATION VERIFICATION FOR THIS ANALYTE EXCEEDED THE 20% DIFFERENCE LIMIT ON THE LOW SIDE AT -23.2%.

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000036**

015MTUNK01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10142-01
 Matrix: (soil/water) WATER Lab Sample ID: 0310142-01
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 007F0101
 Level: (low/med) LOW Date Sampled: 10/16/03
 % Moisture: not dec. _____ Date Analyzed: 10/17/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 20000.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L		Q
-----	Gasoline Range Organics	450000	DE	Rew Qual R 16

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000037
CLIENT SAMPLE NO.

015MTUNK01

Lab Name: ELAB Contract: STEP

Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10142-01

Matrix: (soil/water) WATER Lab Sample ID: 0310142-01

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 006F0101

Level: (low/med) LOW Date Sampled: 10/16/03

% Moisture: not dec. _____ Date Analyzed: 10/18/03

GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 200000.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	
	-----Gasoline Range Organics_____	700000	D

Q Rev Qual

Appendix J
Analytical Results for Impacted Soil Samples from Spill

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000069
 CLIENT SAMPLE NO.

015MTSP02A

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310241-01 SAS No.: NA SDG No.: STE.D10241-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-01
 Sample wt/vol: 25.0 (g/mL) G Lab File ID: D1029314
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 10/28/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/29/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/30/03
 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	Q	Rev Qual
	-----Extractable Petroleum Hyd. ___	5.0	U	u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000070
 CLIENT SAMPLE NO.

015MTSP02B

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310241-01 SAS No.: NA SDG No.: STE.D10241-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-02
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: D1029315
 % Moisture: 19 decanted: (Y/N) N Date Sampled: 10/28/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/29/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/30/03
 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	Q
	-----Extractable Petroleum Hyd.____	4.9	U

Rwdnd
u

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000071
 CLIENT SAMPLE NO.

015MTSP02C

Lab Name: ELAB Contract: STEP, INC.
 Lab Code: ELABN Case No.: 0310241-01 SAS No.: NA SDG No.: STE.D10241-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-03
 Sample wt/vol: 25.2 (g/mL) G Lab File ID: D1029316
 % Moisture: 21 decanted: (Y/N) N Date Sampled: 10/28/03
 Extraction: (SepF/Cont/Sonc/Soxh) SONC Date Extracted: 10/29/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 10/30/03
 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	Q	Rev Qml
	-----Extractable Petroleum Hyd. ___	5.0	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000053**

015MTSP02A

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10241-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-01
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 005F0101
 Level: (low/med) HIGH Date Sampled: 10/28/03
 % Moisture: not dec. 21 Date Analyzed: 10/30/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG		Q	Rev Qnd
-----	Gasoline Range Organics	12	J	J	J

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000054**

015MTSP02B

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G10241-01
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-02
 Sample wt/vol: 5.1 (g/mL) G Lab File ID: 006F0101
 Level: (low/med) HIGH Date Sampled: 10/28/03
 % Moisture: not dec. 19 Date Analyzed: 10/30/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (ul) Soil Aliquot Volume: _____ (ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q	Rev Qual
-----	Gasoline Range Organics	82		

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000022
CLIENT SAMPLE NO.

015MTSP02A

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10241

Matrix: (soil/water) SOIL

Lab Sample ID: 0310241-01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: 1024101A

Level: (low/med) LOW

Date Sampled: 10/28/03

% Moisture: not dec. 21

Date Analyzed: 10/30/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

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

Q *Rw Q u*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2-----	Benzene	6.3 U	<i>u</i>

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. **000023**

015MTSP02B

Lab Name: ELAB

Contract: STEP

Lab Code: ELABN

Case No.: NA

SAS No.: NA

SDG No.: STE.V10241

Matrix: (soil/water) SOIL

Lab Sample ID: 0310241-02

Sample wt/vol: 5.4 (g/mL) G

Lab File ID: 1024102A

Level: (low/med) LOW

Date Sampled: 10/28/03

% Moisture: not dec. 19

Date Analyzed: 10/30/03

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

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

Q *Req'd*

71-43-2-----Benzene	14	
---------------------	----	--

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000024
CLIENT SAMPLE NO.

015MTSP02C

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V10241
 Matrix: (soil/water) SOIL Lab Sample ID: 0310241-03
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: 1024103A
 Level: (low/med) LOW Date Sampled: 10/28/03
 % Moisture: not dec. 21 Date Analyzed: 10/30/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	Rev	Qual
71-43-2-----	Benzene	2.3	J			J

Appendix K
Analytical Results for Wastewater Sample

FORM 1
 EPH ORGANICS ANALYSIS DATA SHEET

000044
 CLIENT SAMPLE NO.

015MTWW01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: 0311008-01 SAS No.: NA SDG No.: STE.D11008-01
 Matrix: (soil/water) WATER Lab Sample ID: 0311008-01
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: 050F0101
 % Moisture: _____ decanted: (Y/N) _____ Date Sampled: 11/03/03
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 11/03/03
 Concentrated Extract Volume: 1 (mL) Date Analyzed: 11/04/03
 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/L	Q
-----	Extractable Petroleum Hyd. ___	0.26	

Rev Qual

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000032
CLIENT SAMPLE NO.

015MTWW01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.G11008-01
 Matrix: (soil/water) WATER Lab Sample ID: 0311008-01
 Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 007F0101
 Level: (low/med) LOW Date Sampled: 11/03/03
 % Moisture: not dec. _____ Date Analyzed: 11/05/03
 GC Column: RTX 502.2 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L	Q	Req'd
	-----Gasoline Range Organics_____	0.10	U	u

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

000013
CLIENT SAMPLE NO.

015MTWW01

Lab Name: ELAB Contract: STEP
 Lab Code: ELABN Case No.: NA SAS No.: NA SDG No.: STE.V11008
 Matrix: (soil/water) WATER Lab Sample ID: 0311008-01
 Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 1100801
 Level: (low/med) LOW Date Sampled: 11/03/03
 % Moisture: not dec. _____ Date Analyzed: 11/04/03
 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

Appendix L
Post-Construction Survey

Millington Municipal Airport

HORIZONTAL CONTROL

Horizontal Control: Horizontal coordinates used for this topographic survey are based on Tennessee State Plane Coordinates (NAD83).

Note: North as shown hereon is based upon Tennessee State Plane Coordinates (NAD83).

VERTICAL BENCHMARK

Vertical Benchmark: Elevations shown hereon are based upon Allen & Hoshall GPS Point 604.

GPS 604 is a P.K. Nail located at the southwest corner of the intersection of the east-west concrete drive and 1st Avenue. The elevation of GPS 604 is 283.75 feet referenced to the NSA-Millington vertical benchmark system.

GENERAL NOTES

This survey was requested by and performed for: STEP, INC.

The field information shown for this topographic survey was derived from random shots.

Date of field survey: December 5, 2003.

The contour interval for this survey is: 1 foot.

Prior to the excavation of the site, Tennessee one call should be contacted at 1-800-351-1111.

UTILITY DISCLAIMER

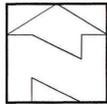
There may be non-visible underground utilities across this property or within streets that are not shown or noted hereon. Underground utilities shown hereon were copied from records obtained from others. The proper utility authorities should be contacted for more specific locations and information of underground utilities.

NAS Memphis Facilities
Bob Sipowich
(901)874-5909

CERTIFICATE OF SURVEY

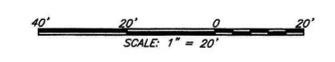
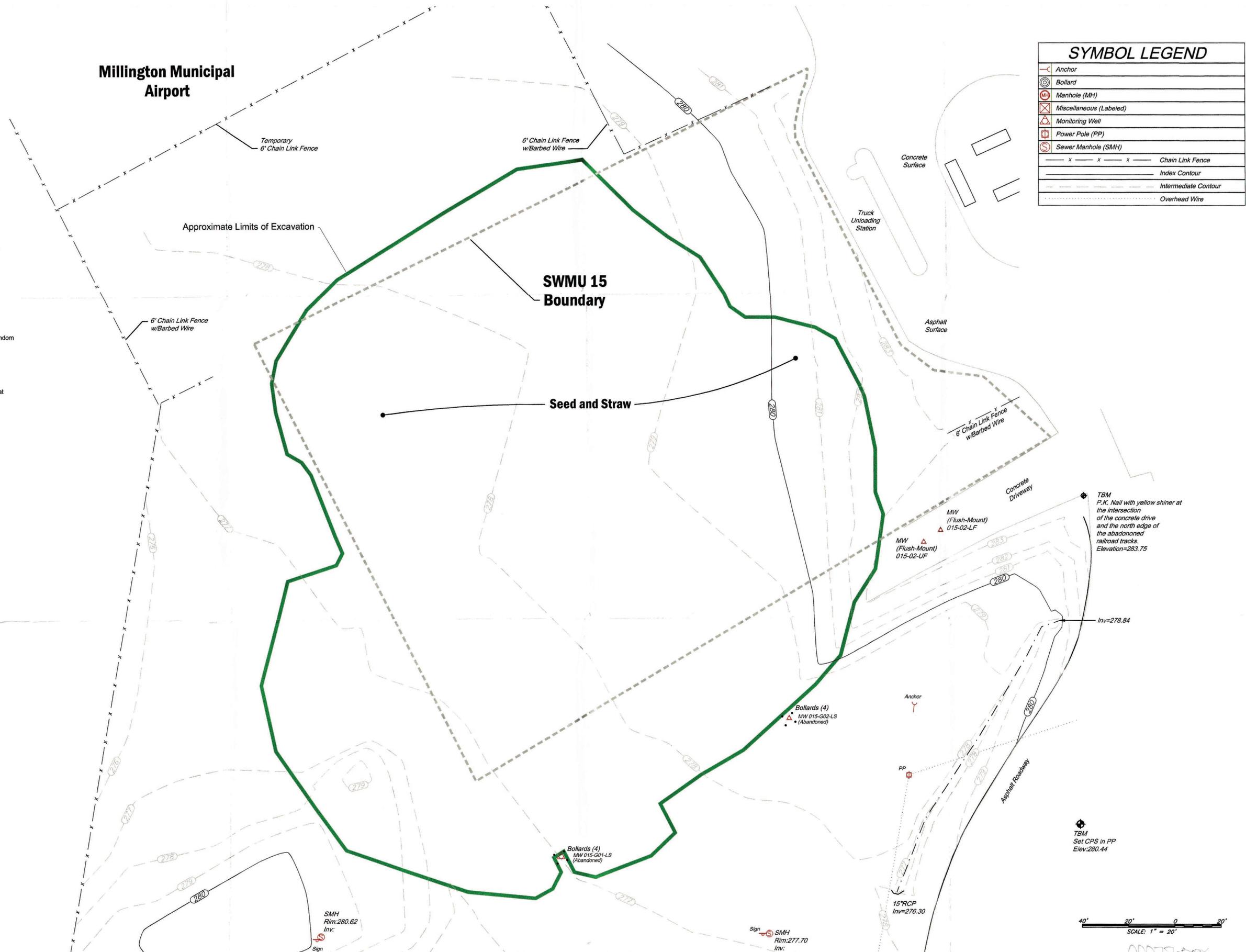
"I hereby certify that this is a category 1 survey and the ratio of precision of the unadjusted survey is at least 1:10,000 as shown hereon."

The word 'certify' or 'certificate' as shown and used hereon means an expression of professional opinion regarding the facts of the survey and does not constitute a warranty or guarantee, expressed or implied.



By: James B. Coughman, III, RLS License No. 1818, State of Tennessee
AllenHoshall, Inc.
1661 International Drive #100
Memphis, TN 38120
(901) 820-0820

SYMBOL LEGEND	
	Anchor
	Bollard
	Manhole (MH)
	Miscellaneous (Labeled)
	Monitoring Well
	Power Pole (PP)
	Sewer Manhole (SMH)
	Chain Link Fence
	Index Contour
	Intermediate Contour
	Overhead Wire



00075102087

RA\114\114-113-001\Craphics\millington_restoration.dwg (1:1) (01/23/04)

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

STEP Inc.
Solutions To Environmental Problems
1006 Floyd Culler Court
Oak Ridge, Tennessee 37830
(865)481-7837

CHECKED	DATE	CLIENT APPROVAL	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED		ISSUED FOR	DATE

Post-Construction Survey

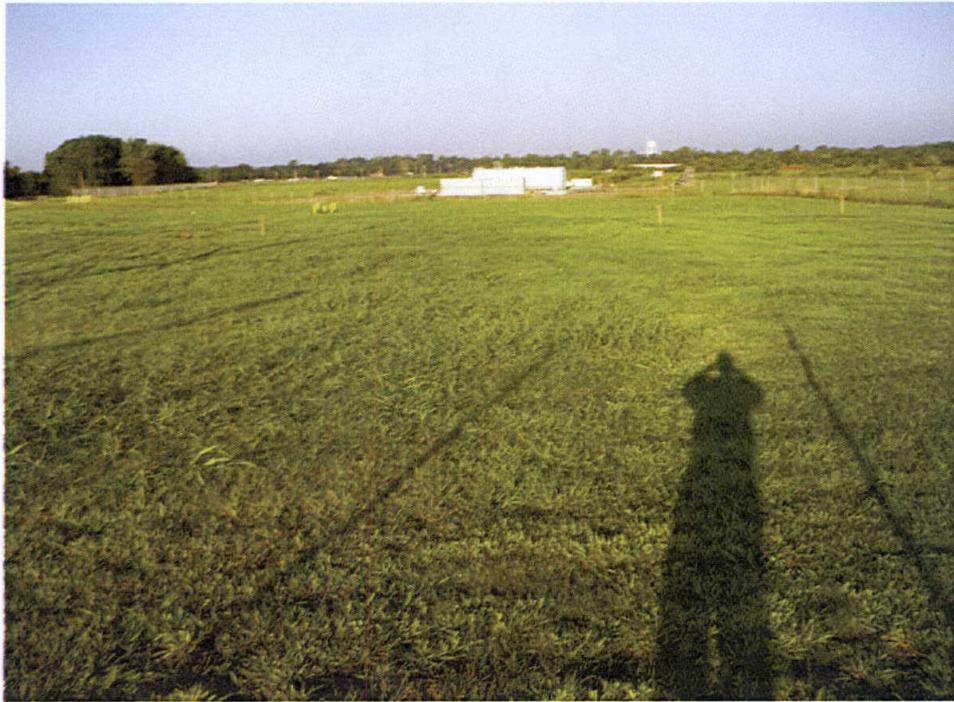
Soil Remediation at SWMU 15 Naval Support Activity Midsouth
Millington, Tennessee

DRAWN Allen and Hoshall, Inc., Memphis, Tennessee	DATE August 5, 2004	DWG. NO.	REV. NO.
SCALE As Shown	W.D. NO. 114-115 114-001	Appendix L	

Appendix M
Project Photographs



North view of SWMU 15 before construction activities. Waste characterization sample locations shown in photograph.



West view of SWMU 15 before construction activities.



Concrete roadway located south of SWMU 15 before construction activities.



Utility line (water) marked within the excavation area.



Temporary access road for trucks entering/exiting the construction area.



Silt fence installed for storm water control measures.



Temporary soil berm to prevent run-on of storm water into the excavation.



Removing grass layer from the excavation area.



UST pipe removed from the excavation area.



Excavating contaminated soil.



UST anchor strap removed from the excavation.



Contaminated soil in the excavation.



Excavating contaminated soil from the north wall.



View of soil contamination on the south wall of the excavation.



Excavating contaminated soil.



Excavating contaminated soil.



Liquid spilling into the excavation from a UST pipe.



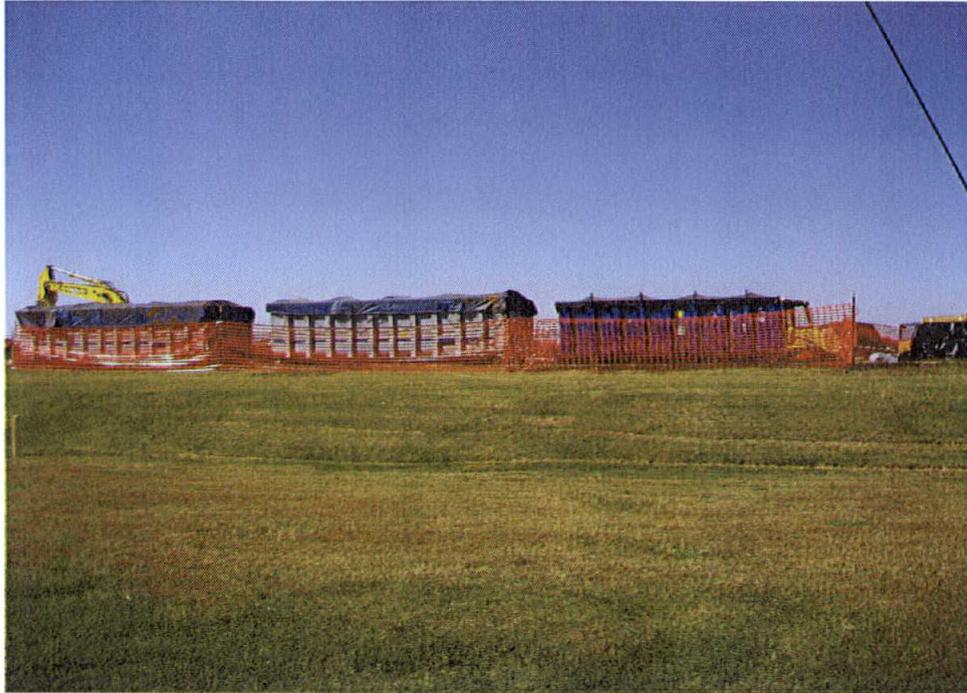
Spill area from the UST pipe.



Absorbent put on the liquid from the UST pipe spill.



UST pipe and concrete encountered in the excavation.



Waste roll-offs containing the impacted soil from the UST pipe spill.



Water line that was exposed outside the excavation area. Water line was connected to a fire hydrant located west of SWMU 15.



West end of water line capped and isolated.



East end of water line capped and isolated.



West view of excavation area.



East view of excavation area.



Exposed UST pipes located on the east wall of the excavation.



UST piping encountered within the excavation.



Removing UST pipe from the excavation.



Removing water line from the excavation.



Excavating contaminated soil.



UST piping and debris encountered in the excavation area.



UST piping encountered in the excavation.



North view of excavation activities.



UST piping encountered in the excavation.



West view of excavation activities.



Contaminated soil in the southeast corner of the excavation area.



Contaminated soil in the southeast corner of the excavation area.



Contaminated soil and debris encountered in the southeast corner of the excavation area.



UST saddle encountered at the southeast corner of the excavation area.



Removing the UST saddle from the excavation.



Excavating contaminated soil.



Debris removed from the excavation.



Excavating contaminated soil from the south wall.



Excavating contaminated soil from the southwest wall.



Removing the sewer manhole from the excavation.



Contaminated soil encountered during the excavation of the south wall.



Sewer line plugged to prevent water from entering the excavation.



Excavating contaminated soil.



Concrete roadway south of the excavation prior to removal.



Excavating contaminated soil.



Debris from the excavation and concrete roadway.



Excavating contaminated soil.



Excavating contaminated soil.



Loading construction debris for disposal at the landfill.



Excavation after removal of contaminated soil.



Backfilling the excavation with coarse sand.



Southern section of excavation before being backfilled.



Excavation showing concrete roadway removed.



Pumping rainwater from the excavation.



Geotextile fabric placed on sand layer.



Geotextile fabric placed on sand layer.



Backfilling the excavation with borrow soil.



Backfilling the excavation with borrow soil.



Backfilling the excavation with borrow soil.



Backfilling excavation with coarse sand and borrow soil.



Loading soil at the borrow pit to haul to the excavation.



Backfilling the excavation with coarse sand and borrow soil. Geotextile fabric placed between the sand and soil layer.



Backfilling the excavation with coarse sand and borrow soil. Geotextile fabric placed between the sand and soil layer.



Backfilling the excavation with borrow soil.



Backfilling the excavation with coarse sand and borrow soil. Geotextile fabric placed between the sand and soil layer.



Plastic sheeting placed on the south wall where contamination remains.



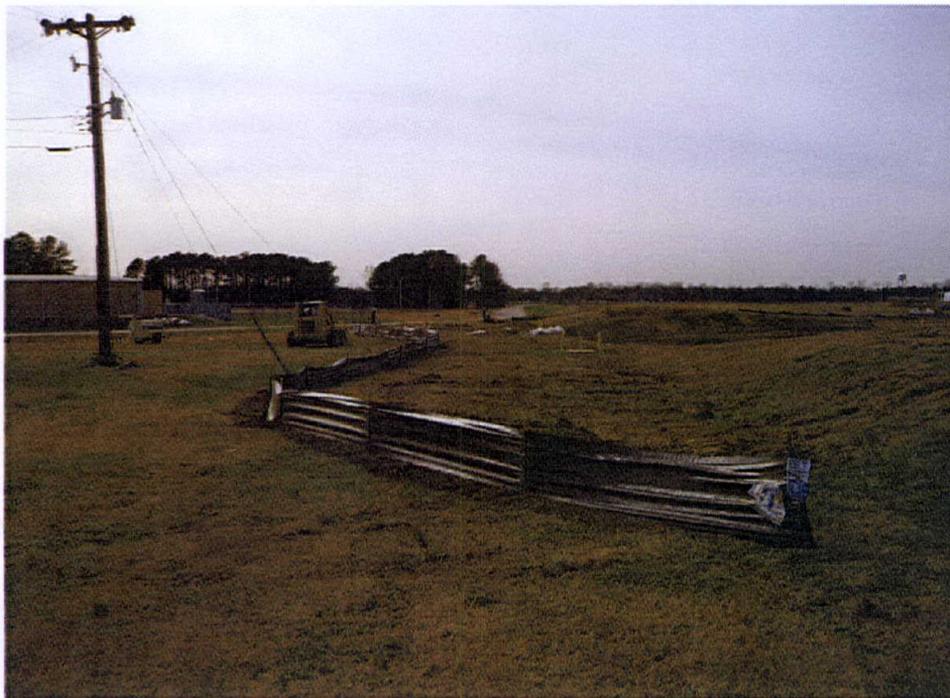
Plastic sheeting placed on the southeast wall where contamination remains.



Plastic sheeting placed on the west and southwest walls where contamination remains.



Backfilling excavation with borrow soil.



Silt fence installed for storm water control measures.



Backfilling the excavation with borrow soil.



Replacing sewer line.



Replacing sewer line.



Backfilling the excavation.



Compacting the excavation.



Site after backfilling is completed.



Site after backfilling is completed.