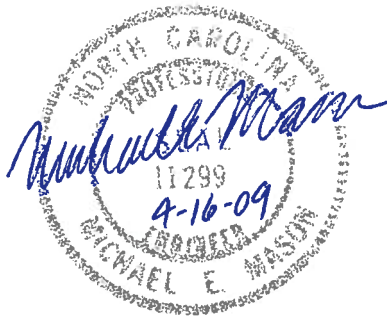


**UNDERGROUND STORAGE TANK
CLOSURE REPORT
TT-3145**

**TARAWA TERRACE
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA**

APRIL 15, 2009

CATLIN PROJECT NO. 209-022



PREPARED FOR:

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TABLE OF CONTENTS

	<u>PAGE</u>
A. GENERAL INFORMATION	1
B. CLOSURE PROCEDURES	3
C. SITE INVESTIGATION	5
D. CONCLUSIONS AND RECOMMENDATION	9
E. SIGNATURE AND SEAL	9
F. LIMITATIONS	9
G. REFERENCES	10

TABLES

TABLE 1	SUMMARY OF SOIL LABORATORY RESULTS FROM FEBRUARY 26, 2009
TABLE 2	SUMMARY OF SOIL LABORATORY RESULTS FROM MARCH 10 AND 19, 2009
TABLE 3	SUMMARY OF GROUNDWATER LABORATORY RESULTS FROM MARCH 31, 2009

FIGURES

FIGURE 1	USGS TOPOGRAPHIC SITE LOCATION MAP
FIGURE 2	SITE MAP WITH SOIL LABORATORY RESULTS
FIGURE 3	SITE MAP WITH GROUNDWATER LABORATORY RESULTS

APPENDICES

APPENDIX A	SITE INVESTIGATION REPORT FOR PERMANENT CLOSURE OR CHANGE-IN-SERVICE OF UST (UST-2)
APPENDIX B	24 HOUR RELEASE AND UST LEAK REPORTING FORM (UST-61)
APPENDIX C	CERTIFICATE OF UST DISPOSAL
APPENDIX D	DISPOSAL MANIFESTS
APPENDIX E	LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION
APPENDIX F	PHOTOGRAPHS
APPENDIX G	WELL CONSTRUCTION/ABANDONMENT RECORD

**UST-12
UNDERGROUND STORAGE TANK CLOSURE REPORT
SITE TT-3145
TARAWA TERRACE
MCB CAMP LEJEUNE, NORTH CAROLINA**

A. GENERAL INFORMATION

1. Facility Information

a. Facility Name:

Site TT-3145
Tarawa Terrace

b. Facility ID Number:

N/A

c. Facility address, telephone number, and county:

Commanding Officer
Director, Installations and Environment Department, Environmental
Management Division (EMD)
PSC Box 20004
Marine Corps Base (MCB) Camp Lejeune, North Carolina, 28542-0004
(910) 451-5068
Onslow County

2. Contacts

a. Name, address, telephone number, and job title of primary contact person:

Mr. Bruce Markwick
Installations & Environment Department, EMD
MCB Camp Lejeune, North Carolina 28542
(910) 451-5068

b. Name, address, and telephone number of closure contractor:

Osage of Virginia, Inc. (Osage)
2618A Colley Avenue
Norfolk, Virginia 23517-1132
(757) 440-0400

c. Name, address, and telephone number of primary consultant:

CATLIN Engineers and Scientists (CATLIN)
220 Old Dairy Road
Wilmington, NC 28405
(910) 452-5861

d. Name, address, telephone number, and State certification number of laboratory:

SGS Environmental Services (SGS)
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
NC Laboratory Certification # 481

3. UST Information

Tank Number	Installation Date	Capacity (Gallons)	Tank Dimensions	Last Contents of Tank
TT-3145	Unknown	550	4 ft x 6 ft	#2 Heating Oil

4. Site Characteristics

a. Describe any past releases at the site:

No previous releases have been reported in conjunction with this tank.

b. Indicate if the facility is active or inactive. If inactive, note the last date that the USTs were in operation:

The UST was an inactive home heating oil tank previously used to store #2 Heating Oil for on-site use.

c. Describe the use of surrounding properties:

The site is located within the Tarawa Terrace Housing Area aboard the MCB Camp Lejeune. The site area, where existing housing sites have been demolished, will be used to re-build military housing units. As a result, land use should be categorized as Residential.

d. Describe site geology and hydrogeology:

The site lies within the Tidewater Region of the Coastal Plain Physiographic Province of North Carolina, where large streams and many of their tributaries are affected by ocean tides. The predominant soil type at the site is silty sand to sand of Quarternary surficial deposits. The depth to the underlain Tertiary Castle Hayne limestone/sand is unknown, but is estimated to be more than 30 feet. The depth to water is estimated to be approximately 11 feet below land surface (BLS).

e. If a release has occurred, describe the results of the receptor survey performed within 1,500 feet of the facility:

As illustrated on Figure 1, the nearest surface water body is an unnamed tributary of the New River, which is approximately 400 feet northwest of the site. Groundwater flow direction in the surficial aquifer is estimated to flow toward the south. There are no water supply wells within a 1,500 ft radius of

the site, and all buildings in the area are supplied by the MCB water supply system, specifically water from the Holcomb Boulevard Water Treatment Plant.

The nearest place of public assembly is unknown at this time as the entire area is being redeveloped with new residential housing units. Community playgrounds may be planned in the area where the new housing units are to be constructed.

B. CLOSURE PROCEDURES

1. Describe preparations for closure including steps taken to notify authorities, permits obtained, and steps taken to clean and purge the tanks:

According to Osage, the UST was pre-located and surveyed prior to removal to prevent damage or UST releases by subcontractors of Actus Lend Lease (Actus). On February 23, 2009 an access hole was cut into the top of the tank in order to remove liquid contents from tank. A vacuum truck, provided by the EMD, Resource Conservation and Recovery Section (RCRS), was used to remove approximately 400 gallons of contaminated water from the tank.

As documented by Osage, on February 26, 2009 the tank was removed and transported to RCRS Building 977 for cleaning and disposal preparation. Osage personnel noted there were signs of deterioration and corrosion on the bottom of the UST. Photographs of the tank are included in Appendix F. The tank was transported to J&E Salvage for disposal on March 3, 2009. The Tank Disposal Manifest is included in Appendix C. Appendix A and B contain North Carolina Department of Environment and Natural Resources (NCDENR) Forms UST-2 and UST-61, respectively.

2. Note the amount of residual material pumped from the tank:

Osage reported that approximately 400 gallons of contaminated water was pumped from the tank.

3. Describe the storage, sampling and disposal of the residual material:

According to Osage, the 400 gallons of contaminated water pumped from the tank was containerized and properly disposed of by EMD, RCRS at Building 977.

4. Excavation

a. Describe excavation procedures noting the condition of the soil encountered and the dimensions of the excavation in relation to the tank, piping, and/or pumps:

Osage mobilized to the site to conduct a site survey and remove the UST on February 26, 2009. Once the UST was removed, visible staining was noted beneath the tank. Excavation activities began and a Photo Ionization Detector (PID) was used to identify contamination limits prior to obtaining soil samples. PID readings during the excavation ranged from 0 to 330 parts per

million (ppm).

The excavation limits were approximately 12 feet (length) x 10 feet (width) x 6.5 feet (depth). Four soil samples were collected at approximately three feet BLS along the sidewalls surrounding the tank (TT3145-S001 through TT3145-S004). One soil sample (TT3145-S005) was collected at 6.5 feet BLS, directly below the tank bottom. The soil samples were collected from the backhoe bucket. The excavated soil was properly stockpiled on site, awaiting disposal at the P&F Land Farming Facility, Permit# SR0500106, in Whitakers, NC. The excavation area was fenced off to ensure security.

On March 10 and 11, 2009 Osage personnel returned to the site to conduct over excavation of the eastern and northern sidewalls and the bottom of the tank basin since laboratory analysis indicated noncompliant Total Petroleum Hydrocarbons (TPH) concentrations at these locations. The resultant over excavation increased the dimensions to 21 feet (length) x 19 feet (width) x 11 feet (depth). The excavated soil from the initial excavation and the subsequent over excavation was loaded into trucks. Approximately 234.69 tons of soil was transported to the P&F Land Farming Facility, Permit# SR0500106, Whitakers NC for disposal. Confirmation soil samples were collected on March 10, 2009 and submitted for analysis via EPA Methods 8260, 8270, and MADEP VPH/EPH. Soil samples TT3145-S006 and TT3145-S007 were collected from the eastern and northern sidewalls at three feet BLS, respectively. Soil samples TT3145-S008 through TT3145-S011 were collected at each of the sidewalls from a depth of 10 feet BLS. Again, the area was fenced off to ensure security pending results of the confirmation soil samples.

On March 19 and 20, 2009, Osage personnel returned to the site to conduct a second over excavation of the eastern sidewall since laboratory analysis indicated the presence of MADEP VPH/EPH compounds at concentrations above the Soil-to-Groundwater (STGW) and Residential Maximum Soil Contaminant Concentrations (MSCCs). The second over excavation increased the final excavation dimensions to 29 feet (length) x 19 feet (width) x 11 feet (depth). The soil from the second over excavation was loaded into trucks and 148.65 tons of soil was transported to the P&F Land Farming Facility, Permit# SR0500106, Whitakers NC for disposal. After over excavation, one confirmation soil sample was collected, TT3145-S012, from the eastern sidewall at 10 feet BLS on March 19, 2009. The sample was analyzed using EPA Methods 8260, 8270, and MADEP VPH/EPH. Again, the area was fenced off to ensure security pending results of the confirmation soil sample.

b. Note the depth from the land surface to the top of the tank:
Approximately 2 feet.

c. Note the volume of soil excavated:

A total of 383.34 tons of soil was excavated from the tank basin – 234.69 tons of contaminated soil was removed on March 10 and 11, 2009 and 148.65 tons between March 19 and 20, 2009.

d. Describe the soil type(s) encountered:

Based on field observation of the tank excavation:

0.0 – 2.5' BLS – Dry light brown silty sand with dark silty sand

2.5 – 7.0' BLS – Slightly moist light brown silty clay with sand

7.0 – 9.5' BLS – Moist light brown to tan clayey sand

9.5 – 12.0' BLS – Moist tan to white fine sand

e. Describe the type and source of backfill used:

The excavation was backfilled on March 23 and 24, 2009. The excavation was filled with common fill sand from Morton Trucking in Jacksonville, NC.

f. Note if water, free product, or bedrock was encountered during the excavation process:

Groundwater was encountered at approximately 11 feet BLS. Therefore, EMD concluded a temporary monitoring well would need to be installed in the former tank basin. No free product or bedrock was encountered during the excavation process.

5. Contaminated soil

During UST removal activities and over excavation, a total of 383.34 tons of contaminated soil were excavated. The 383.34 tons of soil removed during the excavations were transported to the P&F Land Facility, Permit# SR0500106, in Whitakers, NC for disposal. Soil Disposal Manifests are included in Appendix D.

C. SITE INVESTIGATION

1. Provide information of field screening and physical observations, including methods used to calibrate field screening instruments:

Soil discoloration and petroleum odor were observed within the UST excavation. PID field screening indicated organic vapor readings in the sidewalls, as well as at the bottom. Readings ranged from 0 to 330 ppm. The PID instrument was calibrated using the standard procedure as recommended by the manufacturer.

2. Document soil sampling information including the sample locations, sample type, procedure, and analyses used:

Soil sample locations are illustrated on Figure 2.

Confirmation soil samples (Sample IDs TT3145-S001 through S005) were collected from the tank basin on February 26, 2009 immediately following excavation of the basin. Soil samples TT3145-S001 through S004 were collected from the sidewalls at a depth of three feet BLS. Soil sample TT3145-S005 was obtained from the

bottom of the tank basin at approximately 6.5 feet BLS. The samples were placed into laboratory provided glassware, properly labeled, and transported directly to SGS under proper chain of custody. Samples were analyzed for TPH Gasoline and Diesel Range Organics (GRO/DRO) via EPA Method 8015.

On March 10 and 11, 2009, Osage personnel returned to the site to over excavate the eastern and northern sidewalls and the bottom of the tank basin since laboratory analysis indicated the presence of TPH GRO and/or TPH DRO at concentrations above the 10 mg/kg North Carolina Department of Environment and Natural Resources (NCDENR) Action Level. Additional contaminated soil was excavated from the tank basin. After over excavation, six confirmation soil samples were collected (Soil Samples TT3145-S006 through TT3145-S011). Soil sample TT3145-S006 was collected from the eastern sidewall at three feet BLS. Soil sample TT3145-S007 was collected from the northern sidewall at three feet BLS. Soil samples TT3145-S008 through TT3145-S011 were collected at each of the sidewalls from a depth of 10 feet BLS. Samples were again placed into laboratory provided glassware, properly labeled, and transported directly to SGS under proper chain of custody. Samples were analyzed using EPA Methods 8260, 8270, and MADEP VPH/EPH.

On March 19 and 20, 2009, Osage personnel returned to the site to conduct a second over excavation of the eastern sidewall since laboratory analysis indicated the presence of MADEP VPH/EPH compounds at concentrations above the STGW and Residential MSCCs. Additional contaminated soil was excavated from the tank basin. After over excavation, one confirmation soil sample was collected, TT3145-S012, from the eastern sidewall at 10 feet BLS. Samples were again placed into laboratory provided glassware, properly labeled, and transported directly to SGS under proper chain of custody. Samples were analyzed using EPA Methods 8260, 8270, and MADEP VPH/EPH.

3. Document groundwater sampling information:

CATLIN installed temporary monitoring well TT3145-TW01 in the center of the former tank basin. The monitoring well was advanced to a depth of 14.5 feet BLS. The well was installed to monitor for the presence of free-phase product and to allow for the collection of a groundwater sample. As free-phase product was not encountered, a representative groundwater sample was collected on March 31, 2009 after proper purging of the well. The groundwater sample was analyzed per EPA Methods 602 and 625 and MADEP VPH/EPH. Groundwater analytical results are presented in Table 3 and illustrated on Figure 3. The temporary monitoring well was permanently abandoned on March 31, 2009. A well construction and abandonment record is included in Appendix G.

4. Document quality-control measures:

Laboratory provided glassware and containers and disposable gloves were used during sampling. Upon collection, soil samples were immediately packed into clean containers and refrigerated for shipment to the analytical laboratory. There was a laboratory trip blank included with each cooler of samples.

5. Describe investigation results:

Soil Investigation

Some soil discoloration and petroleum odor were observed during tank removal. Elevated PID readings indicated the presence of organic vapors in the sidewalls, as well as the excavation bottom.

Laboratory results of the soil samples collected during this tank removal action are summarized in Tables 1 and 2, illustrated on Figure 2 and the laboratory analytical reports are included in Appendix E.

Confirmation soil samples (Sample IDs TT3145-S001 through S005) were collected from the tank basin on February 26, 2009. Soil samples TT3145-S001, TT3145-S002 and TT3145-S005 exhibited noncompliant TPH DRO concentrations of 2,740 mg/kg, 38.8 mg/kg and 1,080 mg/kg, respectively. Soil samples TT3145-S001 and TT3145-S005 also contained noncompliant TPH GRO concentrations of 19.4 mg/kg and 13.3 mg/kg, respectively.

On March 10 and 11, 2009, Osage personnel returned to the site to conduct additional soil excavation. After over excavation, six confirmation soil samples were collected (Soil Samples TT3145-S006 through TT3145-S011). A second over excavation was conducted by Osage on March 19 and 20, 2009 and after this excavation, one additional confirmation sample was collected (TT3145-S012). All over excavation confirmation soil samples were sent to SGS for analysis via EPA Methods 8260, 8270, and MADEP VPH/EPH. Laboratory results are discussed as follows:

EPA Method 8260

Soil sample TT3145-S010 contained 1,2,4-Trimethylbenzene at a concentration of 0.00825 mg/kg which is below the lowest MSCC for this compound. In the TT3145-S011 soil sample, sec-Butylbenzene, 4-Isopropyltoluene, Naphthalene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene and Total Xylenes were detected at concentrations of 2.01 mg/kg, 1.33 mg/kg, 2.7 mg/kg, 17.1 mg/kg, 4.83 mg/kg and <4.767 mg/kg, respectively. The above-stated concentration of Total Xylenes proceeded by a "<" indicates the result is the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction. The concentrations of 4-Isopropyltoluene, Naphthalene, and 1,2,4-Trimethylbenzene were above the STGW MSCCs but below the Residential MSCCs. Please note, there are no established MSCCs for 4-Isopropyltoluene, therefore any detection is considered reportable. 4-Isopropyltoluene, with molecular formula $C_{10}H_{14}$, is an Aromatic compound whose structure is based on the Benzene ring. By definition, Aromatics are carbon compounds whose structures are based on rings of carbon. 4-Isopropyltoluene contains ten carbon atoms and has a ringed structure, so detections can be compared to the MSCCs for the C_9 - C_{22} Aromatics hydrocarbon fraction. A comparison of the detected concentrations of 4-Isopropyltoluene to the MSCCs for the C_9 - C_{22} Aromatics hydrocarbon fraction reveals that the concentrations were well below the MSCCs.

All other EPA Method 8260 compounds were reported as Below Method Detection Limits (BMDL).

EPA Method 8270

Soil sample TT3145-S011 contained 2-Methylnaphthalene, Naphthalene and Phenanthrene at concentrations of 32 mg/kg, 4.49 mg/kg and 4.49 mg/kg, respectively. The detected concentrations of 2-Methylnaphthalene and Naphthalene were above their respective STGW MSCCs of 1.7 mg/kg and 0.58 mg/kg, but below Residential MSCCs.

All other EPA Method 8270 compounds were reported as BMDL.

MADEP VPH/EPH

Soil sample TT3145-S009 contained the C₉-C₁₈ Aliphatics and C₁₉-C₃₆ Aliphatics hydrocarbon fractions at concentrations of <61.7 mg/kg and 12.5 mg/kg, respectively. The TT3145-S010 soil sample revealed the C₉-C₁₈ Aliphatics and C₁₉-C₃₆ Aliphatics hydrocarbon fractions at concentrations of <61.9 mg/kg and 12.8 mg/kg, respectively. The above-stated concentrations proceeded by a "<" indicates the result is the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction. The TT3145-S011 soil sample revealed the C₅-C₈ Aliphatics, C₉-C₁₈ Aliphatics, C₁₉-C₃₆ Aliphatics and C₉-C₂₂ Aromatics hydrocarbon fractions at concentrations of 21.0 mg/kg, 3,361.1 mg/kg, 815 mg/kg and 1,488 mg/kg, respectively. The concentrations of the C₉-C₁₈ Aliphatics and C₉-C₂₂ Aromatics hydrocarbon fractions in the TT3145-S011 sample were above their STGW MSCCs and the concentration of the C₉-C₂₂ Aromatics hydrocarbon fractions was above the Residential MSCC.

All other MADEP VPH/EPH compounds were reported as BMDL.

Groundwater Investigation

Laboratory results of the groundwater samples collected during this tank removal action are summarized in Table 3, illustrated on Figure 3 and the laboratory analytical reports are included in Appendix E.

A representative groundwater sample was collected on March 31, 2009 after proper purging of temporary monitoring well TT3145-TW01. The groundwater sample was analyzed per EPA Methods 602 and 625 and MADEP VPH/EPH. Laboratory results are discussed as follows:

EPA Method 602

All EPA Method 602 compounds were reported as BMDL.

EPA Method 625

All EPA Method 625 compounds were reported as BMDL.

MADEP VPH/EPH

All MADEP VPH/EPH compounds were reported as BMDL.

D. CONCLUSIONS AND RECOMMENDATION

A total of 383.34 tons of contaminated soil was removed from the TT-3145 site. The confirmation soil samples collected from the sidewalls of the final excavation limits (TT3145-S008 through TT3145-S010 and TT3145-S012) revealed that no soil contaminants were detected at concentrations above the lowest MSCCs.

The groundwater sample collected from temporary monitoring well TT3145-TW01 revealed no compounds above the MDLs.

As previously stated the site's Land Use Classification is Residential. Since final confirmation soil samples revealed no contaminants above the lowest MSCCs and no groundwater contaminants were detected above the 2L GWQSs the site should require No Further Action (NFA).

E. SIGNATURE AND SEAL

Signature and seal of certifying (Professional Engineer or Licensed Geologist:

Michael E. Mason



F. LIMITATIONS

The soil and groundwater samples analyzed as part of this investigation only provide isolated data points and may not represent conditions at every location in the project area. Analyses and conclusions of this report, being based on interpolation between data points at the project area, may not be completely representative of all site conditions. Conclusions and recommendations of this investigation and report are based on the best available data in an effort to comply with current regulatory requirements.

G. REFERENCES

CATLIN Engineers and Scientists. *Workplan/Health and Safety Plan, Sites TT-2018, TT-2084, TT-3103, TT-3114, TT-3127 and TT-3145 – Groundwater Assessment*. Marine Corps Base, Camp Lejeune, NC. March 23, 2009.

North Carolina Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section, *Underground Storage Tank Section Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement*, Effective March 1, 2007.

TABLES

TABLE 1
SUMMARY OF SOIL LABORATORY RESULTS FROM FEBRUARY 26, 2009

Incident Name and No.: TT-3145 - Pending

Sample ID	Contaminant of Concern →		Gasoline Range Organics	Diesel Range Organics
	Date Collected	Sample Depth (ft. BLS)		
NCDENR Action Level (mg/kg)			10	10
TT3145-S001	2/26/2009	3	19.4	2,740
TT3145-S002	2/26/2009	3	<5.30	38.8
TT3145-S003	2/26/2009	3	<5.23	<7.23
TT3145-S004	2/26/2009	3	<5.73	<7.19
TT3145-S005	2/26/2009	6.5	13.3	1,080

All results in milligrams per kilogram (mg/kg).

ft. BLS = Feet Below Land Surface

NCDENR = North Carolina Department of Environment and Natural Resources

< = Less than method detection limit

Bold results indicate concentration above the NCDENR Action Level.

TABLE 2
SUMMARY OF SOIL LABORATORY RESULTS FROM MARCH 10 AND 19, 2009

Incident Name and No.: TT-3145 - Pending

Sample ID	Contaminant of Concern →		EPA METHOD 8260B/5035							EPA METHOD 8270				MADEP VPH/EPH			
			sec-Butylbenzene	4-Isopropyltoluene	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	All Other EPA Method 8260B/5035 Compounds	2-Methylnaphthalene	Naphthalene	Phenanthrene	All Other EPA Method 8270 Compounds	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)															
Residential MSCC (mg/kg)			626	NE	313	782	782	3,129	Varies	63	313	469	Varies	939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			16,350	NE	8,176	20,440	20,440	81,760	Varies	1,635	8,176	12,264	Varies	24,528	245,280	#	12,264
STGW MSCC (mg/kg)			3.3	NE	0.58	7.5	7.3	5	Varies	1.7	0.58	60	Varies	72	3,300	##	34
TT3145-S006	3/10/2009	3	<0.00490	<0.00490	<0.00490	<0.00490	<0.00490	<0.01470	BMDL	<0.389	<0.389	<0.389	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S007	3/10/2009	3	<0.00534	<0.00534	<0.00534	<0.00534	<0.00534	<0.01604	BMDL	<0.364	<0.364	<0.364	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S008	3/10/2009	10	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.01800	BMDL	<0.371	<0.371	<0.371	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S009	3/10/2009	10	<0.00468	<0.00468	<0.00468	<0.00468	<0.00468	<0.01404	BMDL	<0.372	<0.372	<0.372	BMDL	<10.0	<61.7*	12.5	<20.0
TT3145-S010	3/10/2009	10	<0.00491	<0.00491	<0.00491	0.00825	<0.00491	<0.01472	BMDL	<0.400	<0.400	<0.400	BMDL	<10.0	<61.9*	12.8	<20.0
TT3145-S011	3/10/2009	10	2.01	1.33	2.7	17.1	4.83	<4.767*	BMDL	32	4.49	4.49	BMDL	21.0	3,361.1	815	1,488
TT3145-S012	3/19/2009	10	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.01455	BMDL	<0.361	<0.361	<0.361	BMDL	<10.0	<20.0	<10.0	<20.0

All results in milligrams per kilogram (mg/kg).
BMDL = Below Method Detection Limit
ft. BLS = Feet Below Land Surface
NE = None Established
< = Less than method detection limit
STGW = Soil-to-Groundwater
MSCC = Maximum Soil Contaminant Concentration
= Health-Based Level (>100%)
= Considered Immobile
Bold results indicate concentration above the lowest MSCC.
* = The value represents the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction.

TABLE 3
SUMMARY OF GROUNDWATER LABORATORY RESULTS FROM MARCH 31, 2009

Incident Name and No.: TT-3145 - Pending

Well ID	Contaminant of Concern →		EPA METHOD 602	EPA METHOD 625	MADEP VPH/EPH			
	Sample ID	Date Collected	All EPA Method 602 Compounds	All EPA Method 625 Compounds	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
GCL (µg/L) 2L GWQS (µg/L)			Varies Varies	Varies Varies	NE 420	NE 4,200	NE 42,000	NE 210
TT3145-TW01	TT3145-TW01	3/31/2009	BMDL	BMDL	<100	<200	<100	<200

All results in micrograms per liter (µg/L).

BMDL = Below Method Detection Limit

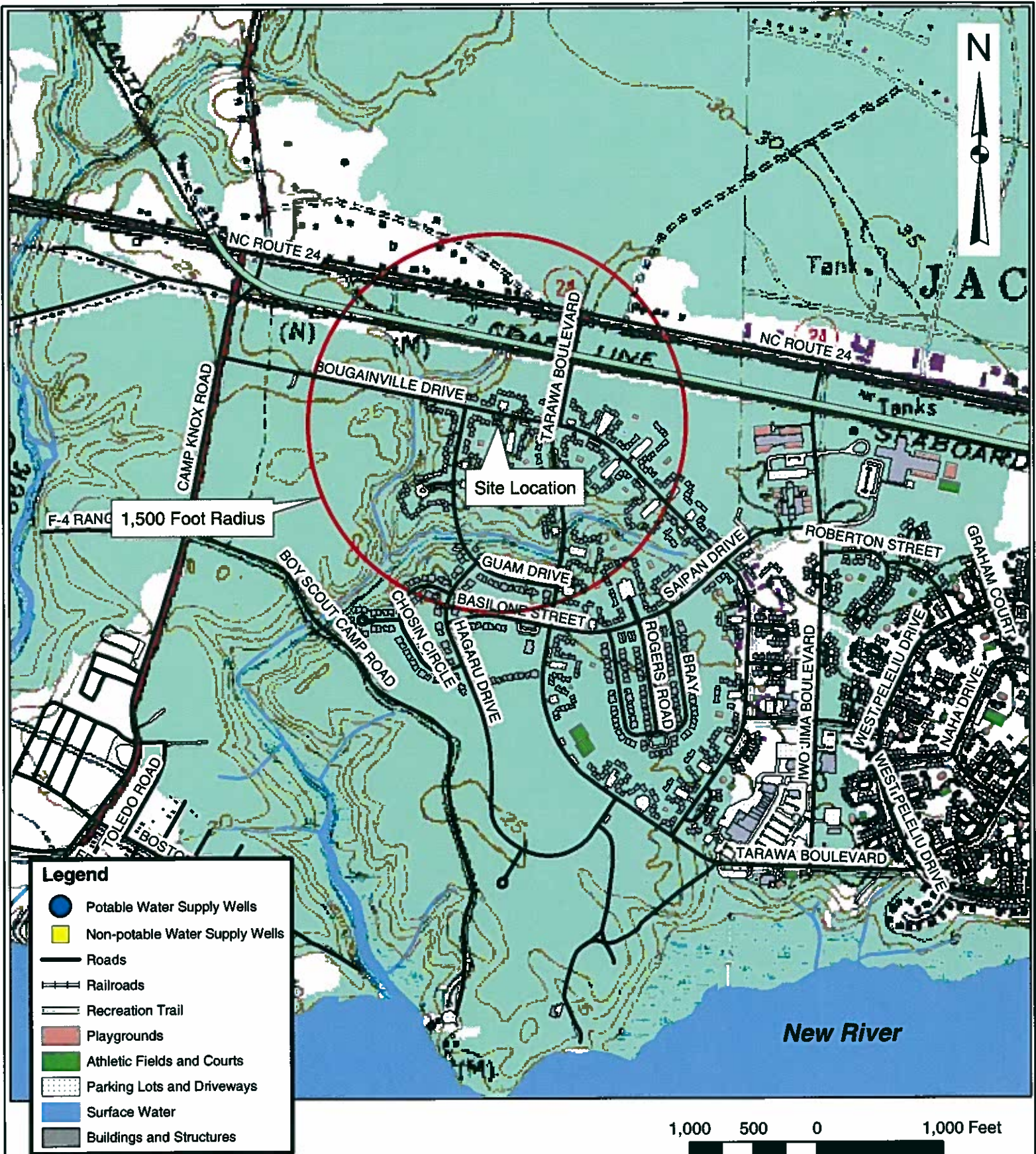
< = Less than method detection limit

GCL = Gross Contaminant Level

2L GWQS = NCAC T15A:02L Groundwater Quality Standards

NE = None Established

FIGURES



Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.



PROJECT
TANK CLOSURE REPORT
SITE TT-3145
MARINE CORPS BASE
CAMP LEJEUNE, NC

TITLE

**USGS TOPOGRAPHIC
SITE LOCATION MAP**

FIGURE

1

JOB NO. 209-022 DATE APR 2009

SCALE AS SHOWN

DRAWN BY SAC

CHECKED BY MEM

TABLE 1
SUMMARY OF SOIL LABORATORY RESULTS FROM FEBRUARY 26, 2009

Incident Name and No.: TT-3145 - Pending

Sample ID	Contaminant of Concern		Gasoline Range Organics	Diesel Range Organics
	Date Collected	Sample Depth (ft. BLS)		
NCDENR Action Level (mg/kg)			10	10
TT3145-S001	2/26/2009	3	19.4	2,740
TT3145-S002	2/26/2009	3	<5.30	38.8
TT3145-S003	2/26/2009	3	<5.23	<7.23
TT3145-S004	2/26/2009	3	<5.73	<7.19
TT3145-S005	2/26/2009	6.5	13.3	1,080

All results in milligrams per kilogram (mg/kg).
ft. BLS = Feet Below Land Surface
NCDENR = North Carolina Department of Environment and Natural Resources
< = Less than method detection limit
Bold results indicate concentration above the NCDENR Action Level.

TABLE 2
SUMMARY OF SOIL LABORATORY RESULTS FROM MARCH 10 AND 19, 2009

Incident Name and No.: TT-3145 - Pending

Sample ID	Contaminant of Concern →		EPA METHOD 8260B/5035								EPA METHOD 8270			MADEP VPH/EPH			
			sec-Butylbenzene	4-Isopropyltoluene	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	All Other EPA Method 8260B/5035 Compounds	2-Methylnaphthalene	Naphthalene	Phenanthrene	All Other EPA Method 8270 Compounds	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)															
Residential MSCC (mg/kg)			626	NE	313	782	782	3,129	Varies	63	313	469	Varies	939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			16,350	NE	8,176	20,440	20,440	81,760	Varies	1,635	8,176	12,264	Varies	24,528	245,280	2,452,800	12,264
STGW MSCC (mg/kg)			3.3	NE	0.58	7.5	7.3	5	Varies	1.7	0.58	60	Varies	72	3,300	33,000	34
TT3145-S006	3/10/2009	3	<0.00490	<0.00490	<0.00490	<0.00490	<0.00490	<0.01470	BMDL	<0.389	<0.389	<0.389	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S007	3/10/2009	3	<0.00534	<0.00534	<0.00534	<0.00534	<0.00534	<0.01604	BMDL	<0.364	<0.364	<0.364	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S008	3/10/2009	10	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.01800	BMDL	<0.371	<0.371	<0.371	BMDL	<10.0	<20.0	<10.0	<20.0
TT3145-S009	3/10/2009	10	<0.00468	<0.00468	<0.00468	<0.00468	<0.00468	<0.01404	BMDL	<0.372	<0.372	<0.372	BMDL	<10.0	<61.7*	12.5	<20.0
TT3145-S010	3/10/2009	10	<0.00491	<0.00491	<0.00491	0.00825	<0.00491	<0.01472	BMDL	<0.400	<0.400	<0.400	BMDL	<10.0	<61.9*	12.8	<20.0
TT3145-S011	3/10/2009	10	2.01	1.33	2.7	17.1	4.83	<4.767*	BMDL	32	4.49	4.49	BMDL	21.0	3,361.1	815	1,488
TT3145-S012	3/19/2009	10	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.01455	BMDL	<0.361	<0.361	<0.361	BMDL	<10.0	<20.0	<10.0	<20.0

All results in milligrams per kilogram (mg/kg).
BMDL = Below Method Detection Limit
ft. BLS = Feet Below Land Surface
NE = None Established
< = Less than method detection limit
STGW = Soil-to-Groundwater
MSCC = Maximum Soil Contaminant Concentration
= Health-Based Level (>100%)
= Considered Inmobile
Bold results indicate concentration above the lowest MSCC.
* = The value represents the sum of the reported practical quantitation limit of one fraction and the detected concentration of the other fraction.

TANK REMOVAL
SITE TT-3145
MARINE CORPS BASE
CAMP LEJEUNE, NC



LEGEND

- Tank Excavation Area
- Soil Sample Location
- Demolished Buildings and Structures
- Slabs
- Driveways
- Parking Lots
- Woods

NOTES

- Data layers provided by MCB Camp Lejeune GIS office.
- Soil sample location TT3145-S005 provided by Lanier Surveying.
- Initial excavation limits were approximately 10' by 12' by 6.5' deep. Over Excavation #1 increased the dimensions to 19' by 21' by 11' deep. Over Excavation #2 increased the final excavation limits to 19' by 29' by 11' deep.



SITE MAP WITH SOIL
LABORATORY RESULTS

FIGURE

2

Job No.: 209-022	Date: APR 2009	Scale: AS SHOWN	Drawn By: SAC	Checked By: MEM
------------------	----------------	-----------------	---------------	-----------------

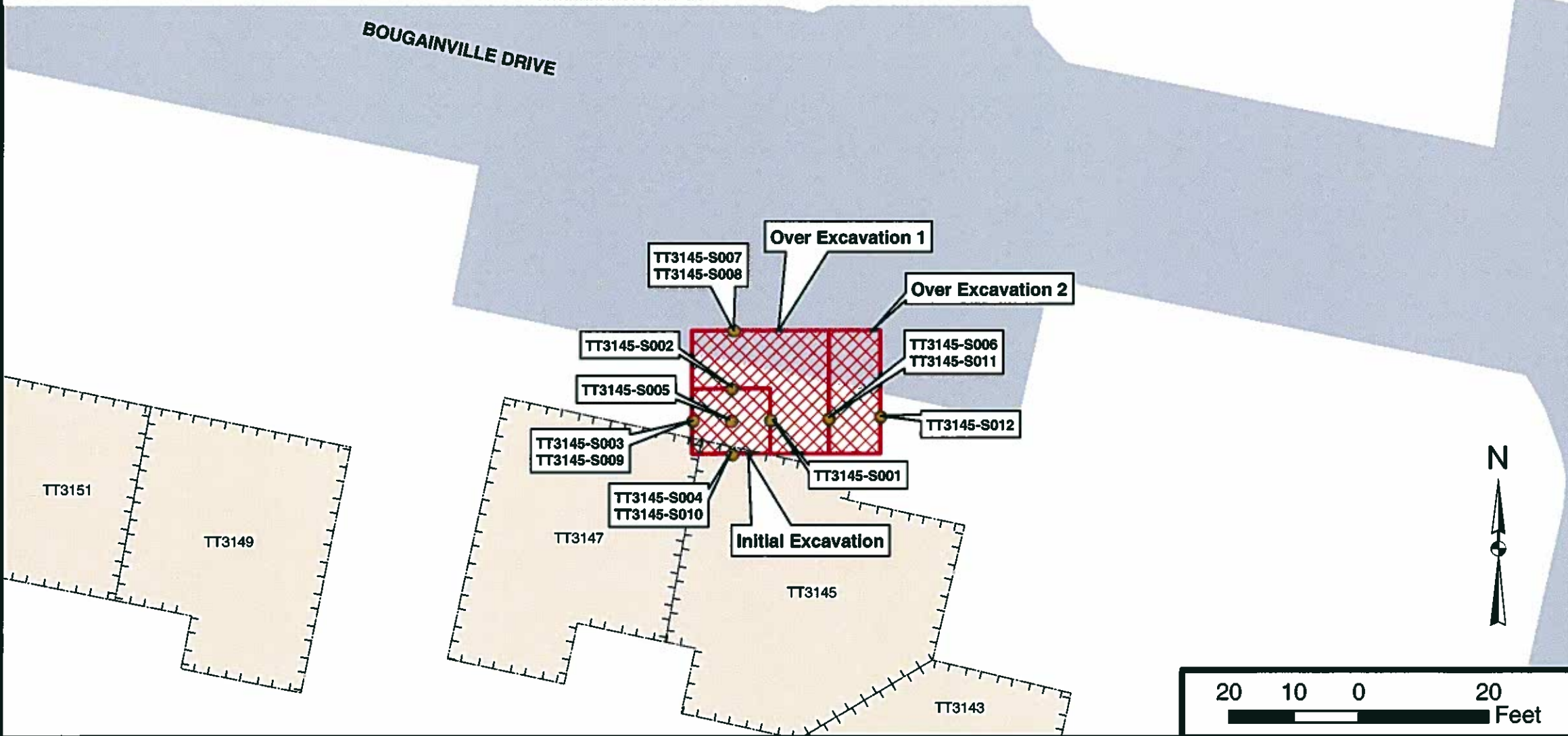


TABLE 3
SUMMARY OF GROUNDWATER LABORATORY RESULTS FROM MARCH 31, 2009

Incident Name and No.: TT-3145 - Pending

Well ID	Contaminant of Concern →		EPA METHOD 602	EPA METHOD 625	MADEP VPH/EPH			
	Sample ID	Date Collected	All EPA Method 602 Compounds	All EPA Method 625 Compounds	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
			Varies	Varies	NE	NE	NE	NE
			Varies	Varies	420	4,200	42,000	210
TT3145-TW01	TT3145-TW01	3/31/2009	BMDL	BMDL	<100	<200	<100	<200

All results in micrograms per liter (µg/L).
BMDL = Below Method Detection Limit
< = Less than method detection limit
GCL = Gross Contaminant Level
2L GWQS = NCAC T15A-02L Groundwater Quality Standards
NE = None Established



TANK REMOVAL
SITE TT-3145
MARINE CORPS BASE
CAMP LEJEUNE, NC



LEGEND

-  Tank Excavation Area
-  Groundwater Sample Location
-  Demolished Buildings and Structures
-  Slabs
-  Driveways
-  Parking Lots
-  Woods

NOTES

1. Data layers provided by MCB Camp Lejeune GIS office.
2. Groundwater sample collected from Temporary Monitoring Well TT3145-TW01.



SITE MAP WITH GROUNDWATER
LABORATORY RESULTS

FIGURE

3

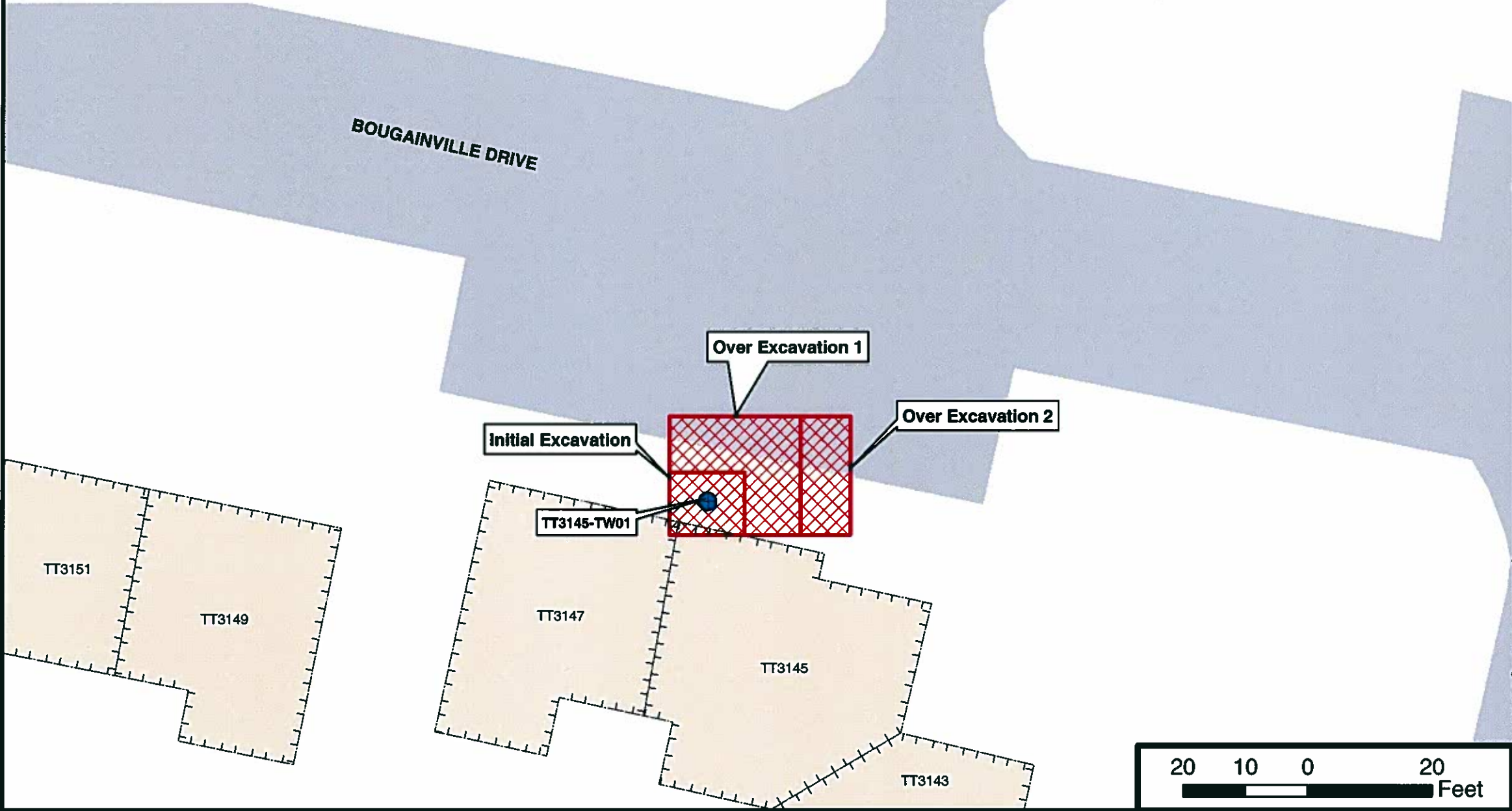
Job No.: 209-022

Date: APR 2009

Scale: AS SHOWN

Drawn By: SAC

Checked By: MEM



APPENDICES

APPENDIX A

SITE INVESTIGATION REPORT FOR PERMANENT CLOSURE OR CHANGE-IN-SERVICE OF UST (UST-2)

UST-2 Site Investigation Report for Permanent Closure or Change-in-Service of UST

Return completed form to:

The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out. SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY:

I.D. # _____

Date Received _____

INSTRUCTIONS (READ THIS FIRST)

For more than five UST systems you may attach additional forms as needed.

Permanent closure -- For permanent closure, complete all sections of this form.

Change-in-service -- For change-in-service where UST systems will be converted from containing a regulated substance to storing a non-regulated substance, complete sections I, II, III, IV, and VIII

Effective February 1, 1995, all UST closure/change-in-service reports must be submitted in the format provided in the UST-12 form. UST closure and change-in-services must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. A copy of the UST-12 form and the *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

I. OWNERSHIP OF TANKS

II. LOCATION OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
Commanding Officer, Marine Corps Base

Facility Name or Company
Tarawa Terrace Housing

Street Address
Bldg 1 Holcomb Blvd

Facility ID # (if known)
N/A

City
Camp Lejeune

County
Onslow

Street Address
TT3145 Bouganville Drive

State
NC

Zip Code
28542-0004

City
Camp Lejeune

County
Onslow

Zip Code
28542

Phone Number
(910) 451-9660

Phone Number

III. CONTACT PERSONNEL

Contact for Facility:
Bruce Markwick

Job Title:
Environmental Protection Specialist

Phone No:
(910) 451-9660

Closure Contractor Name:
OSAGE of Virginia

Closure Contractor Company:

Address:
2818A Colley Avenue

Phone No:
757 440-0400

Primary Consultant Name:
OSAGE of Virginia

Primary Consultant Company:

Address:
Norfolk, Virginia 23517-1132

Phone No:

IV. UST INFORMATION FOR REGISTERED UST SYSTEMS

V. EXCAVATION CONDITION

Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Change-in-Service Date	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

VI. UST INFORMATION FOR UNREGISTERED UST SYSTEMS

VII. EXCAVATION CONDITION

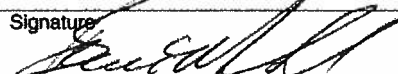
Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Tank Owner Name *	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
TT3145	500	4' X 6'	Heating Oil	Unknown		See Above	☒	☐	☐	☒	☒	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

* If the tank owner address is different from the one listed in Section I., then enter the street address, city, state, zip code and telephone no. below:

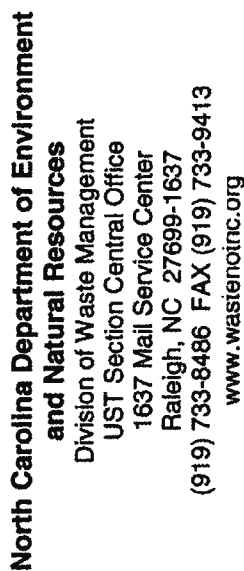
VIII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true accurate and complete.

Print name and official title of owner or owner's authorized representative
Bruce Markwick

Signature


Date Signed
4/15/2009



Washington Regional Office
943 Washington Square Mall
Washington, NC 27889
Phone: (252) 946-8481
Fax: (252) 975-3716

Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609
Phone: (919) 791-4200
Fax: (919) 571-4718

Winston-Salem Regional Office
585 Woughtown Street
Winston-Salem, NC 27107
Phone: (336) 771-5000
Fax: (336) 771-4632

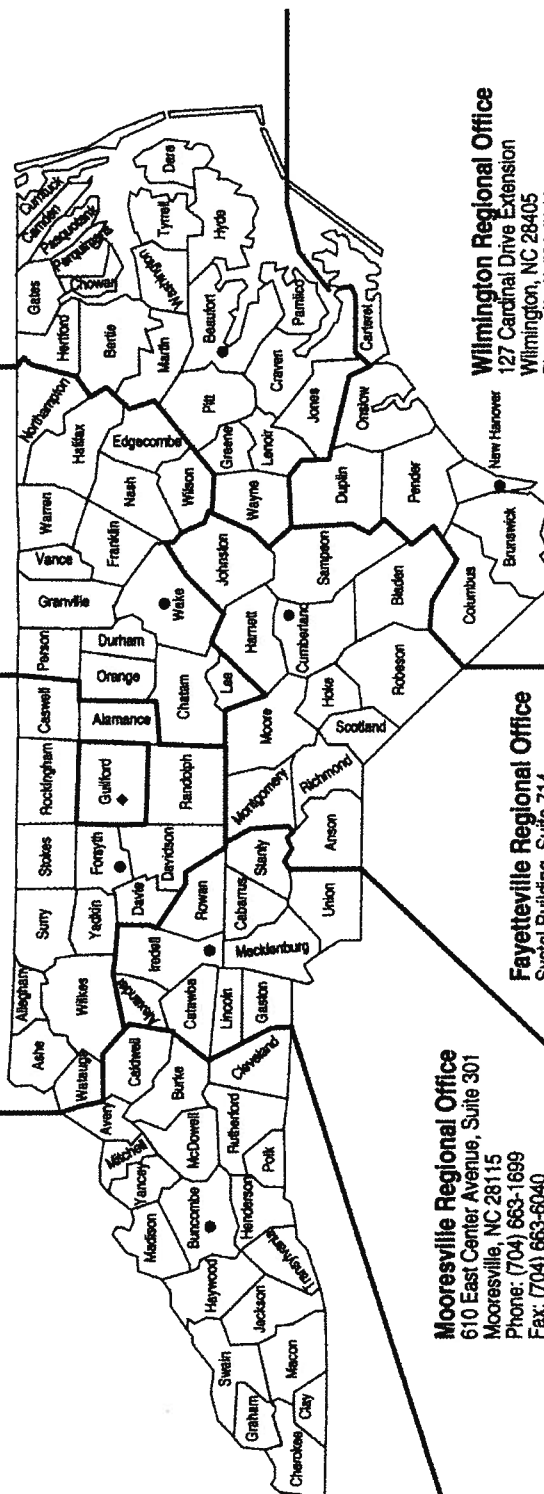
Gulford County Dept. of Public Health
1203 Maple Street
Greensboro, NC 27405
Phone: (336) 841-3771
Fax: (336) 841-4812

Asheville Regional Office
2090 U.S. Highway 70
Swannanoa, NC 28778
Phone: (828) 296-4500
Fax: (828) 299-7043

Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, NC 28405
Phone: (910) 796-7215
Fax: (910) 350-2004

Fayetteville Regional Office
Systel Building, Suite 714
2225 Green Street
Fayetteville, NC 28301
Phone: (910) 433-3300
Fax: (910) 486-0707

Mooreville Regional Office
610 East Center Avenue, Suite 301
Mooreville, NC 28115
Phone: (704) 663-1699
Fax: (704) 663-6040



APPENDIX B

24 HOUR RELEASE AND UST LEAK REPORTING FORM (UST-61)

UST-61**24-Hour Release and UST Leak Reporting Form.****For Releases
in NC**

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release

(DWM USE ONLY)
Incident # _____ Risk (H,I,L,U) _____
Received On _____ Received By _____
Reported by (circle one): Phone, Fax or Report
Region _____

Suspected Contamination? (Y/N) Y
Confirmed GW Contamination? (Y/N) N
Confirmed Soil Contamination? (Y/N) Y
Samples Taken? (Y/N) Y
Free Product? (Y/N) N If Yes, State Greatest
Thickness _____

Facility ID Number N/A
Date Leak Discovered 02/26/09
Commercial-Commercial _____
Reg Non-regulated

INCIDENT DESCRIPTION

Incident Name: TT3145 Heating Oil Tank

Address: TT3145 Bougainville Drive

County: Onslow

City/Town: Camp Lejeune

Zip Code: 28542

Regional Office (circle one): Asheville, Mooresville, Fayetteville,
Raleigh, Washington, Wilmington, Winston-Salem

Latitude (decimal degrees): 34 44' 25.665" N Longitude (decimal degrees): 77 22' 51.401" W

Briefly describe suspected or confirmed release: (including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)

On December 2008 at Tarawa Terrace housing area of Camp Lejeune, OSAGE of Virginia using magnetometer equipment discovered an abandoned heating oil tank. February 25, 2009 Environmental personnel removed all liquids from the tank (approximately 400 gallons of fuel and water mixture). OSAGE of Virginia removed the tank on 02/26/09 and there was evidence (visual) of a release from the tank. OSAGE took samples per the state requirements. All contaminated soil was removed and stored at the MCB Camp Lejeune soil storage pad at bldg TP464 awaiting removal on a separate contract. A UST-12 report will follow.

Obtained by:

- ☐ GPS
☐ Topographic map
☒ GIS Address matching
☐ Other
☐ Unknown

Describe location:

HOW RELEASE WAS DISCOVERED (Release Code)

(Check one)

- ☐ Release Detection Equipment or Methods
☒ During UST Closure/Removal
☐ Property Transfer

- ☒ Visual/Odor
☐ Water in Tank
☐ Water Supply Well Contamination

- ☐ Groundwater Contamination
☐ Surface Water Contamination
☐ Other (specify) _____

SOURCE OF CONTAMINATION**Source of Release**

(Check one to indicate primary source)

- ☒ Tank
☐ Piping
☐ Dispenser
☐ Submersible Turbine Pump
☐ Delivery Problem
☐ Other
☐ Unknown

Cause of Release

(Check one to indicate primary cause)

- ☐ Spill
☐ Overfill
☐ Corrosion
☐ Physical or Mechanical Damage
☐ Install Problem
☐ Other
☐ Unknown

Type of Release

(Check one)

- ☒ Petroleum
☐ Non-Petroleum
☐ Both

Location
(Check one)

- ☐ Facility
☒ Residence
☐ Other

Product Type Released

(Check one to indicate primary product type released)

- ☐ Gasoline/ Diesel/ Kerosene
☒ Heating Oil
☐ Other Petroleum Products
☐ Metals
☐ Other Inorganics
☐ Other Organics
☐ Diesel/Veg. Oil Blend
☐ Vegetable Oil 100%
☐ E10 - E20
☐ E21 - E84
☐ E85 - E99
☐ Ethanol 100%
☐ E01 - E09

Definitions presented on reverse

Definitions presented on reverse

Ownership

1. Municipal 2. Military 3. Unknown 4. Private 5. Federal 6. County 7. State

Operation Type

1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. 5. Industrial 6. Commercial 7. Mining

IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected? 1. Yes **2. No** 3. Unknown

Number of Water Supply Wells Affected _____

Water Supply Wells Contaminated: (Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary)

- 1.
- 2.
- 3.

UST SYSTEM OWNER

UST Owner/Company
Commanding Officer, Marine Corps Base,

Point of Contact Bruce Markwick		Address	
City Camp Lejeune	State NC	Zip Code 28542	Telephone Number 910 451-9660

UST SYSTEM OPERATOR

UST Operator/Company Same as above		Address	
City	State	Zip Code	Telephone Number

LANDOWNER AT LOCATION OF UST INCIDENT

Landowner Same as above		Address	
City	State	Zip Code	Telephone Number

Draw Sketch of Area (showing two major road intersections) or Attach Map

Person Reporting Incident Bruce Markwick	Company Military/USMC	Telephone Number 910 451-9660
Title Environmental Protection Specialist	Address Bldg 12 Post Lane, Camp Lejeune, NC 28542	Date 02/26/09

UST Form 61 (02/08)

Page 2 of 2

Definitions of Sources

- Tank:** means the tank that stores the product and is part of the underground storage tank system
- Piping:** means the piping and connectors running from the tank or submersible turbine pump to the dispenser or other end-use equipment (Vent, vapor recovery, or fill lines are excluded.)
- Dispenser:** includes the dispenser and the equipment used to connect the dispenser to the piping (e.g., a release from a suction pump or from components located above the shear valve)
- Submersible Turbine Pump (STP) Area** includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the tank
- Delivery Problem:** identifies releases that occurred during product delivery to the tank. (Typical causes associated with this source are spills and overfills.)
- Other:** serves as the option to use when the release source is known but does not fit into one of the preceding categories (e.g., for releases from vent lines, vapor recovery lines, and fill lines)
- Unknown:** identifies releases for which the source has not been determined

Definitions of Causes

- Spill:** use this cause when a spill occurs (e.g., when the delivery hose is disconnected from the tank fill pipe or when the nozzle is removed from the dispenser)
- Overfill:** use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)
- Physical or Mechanical Damage:** use for all types of physical or mechanical damage, except corrosion (e.g., puncture of tank or piping, loose fittings, broken components, and components that have changed dimension)
- Corrosion:** use when a metal tank, piping, or other component has a release due to corrosion (e.g., for steel, corrosion takes the form of rust)
- Installation Problem:** use when the problem is determined to have occurred specifically because the UST system was not installed properly
- Other:** use this option when the cause is known but does not fit into one of the preceding categories (e.g., putting regulated substances into monitoring wells)
- Unknown:** use when the cause has not been determined

APPENDIX C
CERTIFICATE OF UST DISPOSAL

Tank Disposal Manifest

Tank Owner: Commanding Officer, Marine Corps Base,
Camp Lejeune NC 28542

Tank/Owner Authorized Representative

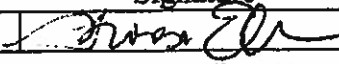
Contact: Bruce Markwick

Phone: (910) 451-9660

Description of Tank:

Tank ID	Capacity	Previous Contents	Comments/Dimensions
TT-3145	550 gal	Heating Oil	4 Ft X 6 Ft Dim

Transporter: Osage of Virginia
2618 Colley Ave Ste A
Norfolk, VA 23517
Phone: (757) 440-0400

Print Name	Signature	Month/Day/Year
Theresa Ellerman		3/3/09

The undersigned certifies that the above named storage tank(s) has been cut into scrap and accepted by the disposal facility.

Name of Receiving Facility: J&E Salvage
2012 Blue Creek Rd
Jacksonville NC 28540
Phone: (910) 347-5865

Print Name	Signature	Month/Day/Year
Crystal Darlington		3/3/09

APPENDIX D
DISPOSAL MANIFESTS

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804

Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07269

GENERATOR

CG, AC/S, I & E (CMO) MCB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 452 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: IT site 3145 @ Tarama Blvd

OSAGE OF VA 757 274 4949

Transporter: P & F Environmental

Truck #: 104

Truck Tag #/State: NC 2B 12252

Driver Name (Print): Bryant Bridger
GL # NC 1406087

Gross Weight (lbs.): 70580

Tare Weight (lbs.): 31700

Net Weight (lbs.): 38880

Net Weight (tons): 19.44

I hereby certify that the material stated herein was received at the waste origination site listed.

Bryant Bridger 3-10-09
(Driver Signature) Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Bryant Bridger 3-10-09
(Driver Signature) Date

Inspected and Accepted By: [Signature]

NOTICE TO TRANSPORTER

**TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET**

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804

Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07271

GENERATOR

CG, AC / S, I + E (EMO) MCB
PO Box 20004
CLMC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: TT site 3HS Tarama Blvd @ TT

USAGE OF VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 58880

Truck #: 101

Tare Weight (lbs.): 23560

Truck Tag #/State: ZB NC 12254

Net Weight (lbs.): 35320

Driver Name (Print): Tim Thorne
CDL # 216 7392

Net Weight (tons): 17.66

I hereby certify that the material stated herein
was received at the waste origination site listed.

Tim Thorne 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Tim Thorne 3-10-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3-10-09 [Signature]

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07272

GENERATOR

CG, AC/S, I+E (EMD) MCB
PO BOX 20004
CLNC 28542 - 0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: TI Site 345 Tarawa Blvd @ TI

USAGE OF VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 78420

Truck #: 103

Tare Weight (lbs.): 33060

Truck Tag #/State: NC 2B 16949

Net Weight (lbs.): 45360

Driver Name (Print): Walker Parker
CDL # NC 4538892

Net Weight (tons): 22.68

I hereby certify that the material stated herein was received at the waste origination site listed.

Walker Parker 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Walker Parker 3-10-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3-10-09

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07275

GENERATOR

(G, A, E, S, F, & E (EMO) MCB
PO Box 20004
UNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION:

II site 3145 on Bogamille Rd @ II
Osage of VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 81020

Truck #: P 103

Tare Weight (lbs.): 33060

Truck Tag #/State: NC 2B 16949

Net Weight (lbs.): 47960

Driver Name (Print): Walter Parker
CDL # NC 4538892

Net Weight (tons): 23.98

I hereby certify that the material stated herein was received at the waste origination site listed.

Walter Parker 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Walter Parker 3-10-09
Driver Signature Date

Inspected and Accepted By:

[Signature] 3/10/09 [Signature]
Date

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07276

GENERATOR

CG AC/S I+E (EMD) MCB
PO Box 20004
CNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION: IT site 3145 on Bogartville Rd @ IT
osage of VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 54260

Truck #: P 105

Tare Weight (lbs.): 21600

Truck Tag #/State: 2B NC 35517

Net Weight (lbs.): 32660

Driver Name (Print): Franklin Rhodes
CDL # NC 2806555

Net Weight (tons): 16.33

I hereby certify that the material stated herein
was received at the waste origination site listed.

Franklin Rhodes 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Franklin Rhodes 3-10-09
Driver Signature Date

Inspected and Accepted By:

E. M. Jones 3/10/09 Franklin Rhodes

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07217

GENERATOR

CG, AC/S, T & E (EMB) MCB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: TI site 3145 Bogannville Rd @ TI
0509 of VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 78920

Truck #: P 104

Tare Weight (lbs.): 31700

Truck Tag #/State: NC 2B 12252

Net Weight (lbs.): 47220

Driver Name (Print): Bryant Bridger
CDL # NC 1406087

Net Weight (tons): 23.61

I hereby certify that the material stated herein
was received at the waste origination site listed.

Bryant Bridger 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Bryant Bridger 3-10-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3/10/09 James Bridger

NOTICE TO TRANSPORTER

**TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET**

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07278

GENERATOR

CG AC/S, I & E (GMS) MCB
PO Box 20004
CNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: IT site 3145 E Bogamville Rd @ IT
OSAGE OF VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 59300

Truck #: P 101

Tare Weight (lbs.): 23560

Truck Tag #/State: NC 2B 12254

Net Weight (lbs.): 35740

Driver Name (Print): Tim Thorne
CDL # 2167392

Net Weight (tons): 17.87

I hereby certify that the material stated herein was received at the waste origination site listed.

Tim Thorne 3-10-09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Tim Thorne 3-10-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3/10/09 [Signature]

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07279

GENERATOR

CG, ACIS, I & E (EMD) MCB
P.O. Box 20004
CNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: IT site 3145 on Bogalusa Rd @ TT
usage of VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 52780

Truck #: P105

Tare Weight (lbs.): 21600

Truck Tag #/State: Z13 NC 35517

Net Weight (lbs.): 31180

Driver Name (Print): Franklin Rhodes
CDL # NC 2806555

Net Weight (tons): 15.59

I hereby certify that the material stated herein
was received at the waste origination site listed.

Franklin Rhodes 3-11-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Franklin Rhodes 3-11-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3-11-09 [Signature]

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07280

GENERATOR

CG, AC/S, I + F (EMD) MCB
Po Box 20004
CLNC 28542 - 0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION:

IT site 3145 @ Boggsville Rd @ TT

OSAGE OF VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 53860

Truck #: P101

Tare Weight (lbs.): 23560

Truck Tag #/State: NC 2B 12254

Net Weight (lbs.): 30300

Driver Name (Print): Tim Thorne

Net Weight (tons): 15.15

CDL #: 2167392

I hereby certify that the material stated herein
was received at the waste origination site listed.

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Tim Thorne 3-11-09
Driver Signature Date

Tim Thorne 3-11-09
Driver Signature Date

Inspected and Accepted By:

[Signature] 3/11/09

[Signature]

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804

Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD# 07281

GENERATOR

CG, AC/S, I+E (GMD) MCB
PO Box 20004
CWC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1452

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION: IT site 3145 Boyanville Rd @ TT

OSage of VA 757 274 4949

Transporter: P & F Environmental

Truck #: P 103

Truck Tag #/State: NC 2B 16949

Driver Name (Print): Walter Parker
CDL # NC 4538892

Gross Weight (lbs.): 77960

Tare Weight (lbs.): 33060

Net Weight (lbs.): 44900

Net Weight (tons): 22.45

I hereby certify that the material stated herein was received at the waste origination site listed.

Walter Parker 3-11-09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Walter Parker 3-11-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3/11/09 [Signature]

NOTICE TO TRANSPORTER

**TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET**

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07282

GENERATOR

(G. AC/S, I & F (CMA)) MCB
PO Box 20004
CENC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: IT site 3145 Bogardville Rd @ IT
usage of VA 757 274 4949

Transporter: P & F Environmental

Gross Weight (lbs.): 76580

Truck #: P104

Tare Weight (lbs.): 31700

Truck Tag #/State: NC 2B 12252

Net Weight (lbs.): 44880

Driver Name (Print): Bryant Pruden
CDL # NC 1406087

Net Weight (tons): 22.44

I hereby certify that the material stated herein was received at the waste origination site listed.

Bryant Pruden 3-11-09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Bryant Pruden 3-11-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3-11-09 [Signature]

NOTICE TO TRANSPORTER

**TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET**

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07286

GENERATOR

CG, AC/S, I+E (EMD) MCB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION: TT 345 off Bogamille Rd @ TT
OSAGE of VA 757-274-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 58540

Truck #: P 101

Tare Weight (lbs.): 23560

Truck Tag #/State: NC 28 12254

Net Weight (lbs.): 34980

Driver Name (Print): Tim Thorne
CDL # NC 2167392

Net Weight (tons): 17.49

I hereby certify that the material stated herein was received at the waste origination site listed.

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Tim Thorne 3-11-09
Driver Signature Date

Tim Thorne 3-11-09
Driver Signature Date

Inspected and Accepted By: [Signature] 3/11/09 [Signature]

NOTICE TO TRANSPORTER

**TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET**

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07328

GENERATOR

CG, AC/S, I & E (FIND) MMB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-4482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGINATION:

IT 3145 - BOLGAINVILLE Dr TARA
CLNC

OSAGE OF VIRGINIA (MS) 204-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 74340

Truck #: 208

Tare Weight (lbs.): 30000

Truck Tag #/State: NC LL 9754

Net Weight (lbs.): 44340

Driver Name (Print): SIDNEY BOYD
CDL# NC 2908217

Net Weight (tons): 22.17

I hereby certify that the material stated herein
was received at the waste origination site listed.

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Driver Signature

Date

Driver Signature

Date

Inspected and Accepted By:

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07329

GENERATOR

CG AC/5 I+E (EMD) MCB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION:

TT 3145 - BOUGAINVILLE D-TT AREA CLNC

OSAGE OF VIRGINIA (757) 274-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 77400

Truck #: P103

Tare Weight (lbs.): 33060

Truck Tag #/State: ZB16949

Net Weight (lbs.): 44340

Driver Name (Print): Walter Parker
CDL# NC 4538892

Net Weight (tons): 22.17

I hereby certify that the material stated herein
was received at the waste origination site listed.

Walter Parker 2/20/09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Walter Parker 3/20/09
Driver Signature Date

Inspected and Accepted By:

George L. Taylor 20090320
James Fredrick

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07330

GENERATOR

CG, AC/S, IFE (END) MCB
P.O. BOX 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION:

IT 3145 BOUGAINVILLE Dr IT AREA CLNC

OSAGE OF VA (757) 274-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 79640

Truck #: P104

Tare Weight (lbs.): 31700

Truck Tag #/State: ZB 12252

Net Weight (lbs.): 47940

Driver Name (Print): GREG PRIDGEN

Net Weight (tons): 23.97

CDL# NC 3890292

I hereby certify that the material stated herein was received at the waste origination site listed.

Greg Pridgen 2/20/09
Driver Signature Date

I hereby certify that the material stated herein was delivered without incident to the destination listed.

Greg Pridgen 2/20/09
Driver Signature Date

Inspected and Accepted By:

George L Taylor 20090320
James Pridgen

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07332

GENERATOR

CG, AC/S, IFE (EMD) MCB
PO Box 20004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-1482

PHONE: (252) 443-4083

WASTE DESCRIPTION: Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION: 113145 Bougainville Dr 11 CLNC

OSAGE of VIRGINIA (757) 274-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 73861

Truck #: P102

Tare Weight (lbs.): 33420

Truck Tag #/State: NC ZB25821

Net Weight (lbs.): 404410

Driver Name (Print): Bryant Pridgen
CDL # NC #9406087

Net Weight (tons): 20.22

I hereby certify that the material stated herein
was received at the waste origination site listed.

Bryant Pridgen 2/20/09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Bryant Pridgen 3-2009
Driver Signature Date

Inspected and Accepted By: George L. Taylor

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07333

GENERATOR

CG, AC/S, I+E (EMD) NCB
PO Box 20004
CLN 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION:

TT 3145 Bourgainville Dr TT Aiken
CLN

OSACK- OF VIRGINIA (1757) 274-4949

Transporter: P & F Environmental

Gross Weight (lbs.): 59360

Truck #: P101

Tare Weight (lbs.): 23560

Truck Tag #/State: NC ZB12254

Net Weight (lbs.): 35800

Driver Name (Print): TIM THORNE

Net Weight (tons): 17.90

I hereby certify that the material stated herein
was received at the waste origination site listed.

Tim Thorne 3/20/09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Tim Thorne 3-20-09
Driver Signature Date

Inspected and Accepted By: George L Taylor See P/F to 20090320
Janet Bridg

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL# _____

LOAD # 07335

GENERATOR

CG, AC/S I+E (EMD) MCB
PO Box 120004
CLNC 28542-0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: (910) 451-1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION:

113145 Boulgainville Dr 11 Area CLNC

OSAGE OF VIRGINIA (757) 274-4949

Transporter: P & F ENVIRONMENTAL

Gross Weight (lbs.): 78220

Truck #: 208

Tare Weight (lbs.): 30000

Truck Tag #/State: NC LL 9754

Net Weight (lbs.): 48220

Driver Name (Print): Sidney Boyd
CDL# NC 2908217

Net Weight (tons): 24.11

I hereby certify that the material stated herein
was received at the waste origination site listed.

Sidney Boyd 3-20-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Sidney Boyd 3-20-09
Driver Signature Date

Inspected and Accepted By:

Cecily L. Taylor

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

P & F Environmental

4352 N. Old Carriage Road • Rocky Mount, NC 27804
Phone: (252) 443-4083 • Fax: (252) 443-4104

NON-HAZARDOUS WASTE MANIFEST

APPROVAL # _____

LOAD # 07339

GENERATOR

CG AC/S, I-E (EMD) MCB
PO Box 20004
CNC 28546 - 0004

DESTINATION

Land Application Facility Permit No. SR0500106
Speights Chapel Road
Whitakers, NC 27891

PHONE: 910 451 1482

PHONE: (252) 443-4083

WASTE DESCRIPTION:

Non-Hazardous Petroleum Contaminated Soil

WASTE ORIGATION:

IT 3145 Bayannille Dr IT cnc
OSAGE of VA 757 274 - 4949

Transporter: P-F Environmental

Gross Weight (lbs.): 59780

Truck #: P101

Tare Weight (lbs.): 23560

Truck Tag #/State: NC 2B 12254

Net Weight (lbs.): 36220

Driver Name (Print): Tim Thorne
CDL # NC 2167392

Net Weight (tons): 18.11

I hereby certify that the material stated herein
was received at the waste origination site listed.

Tim Thorne 3-20-09
Driver Signature Date

I hereby certify that the material stated herein was
delivered without incident to the destination listed.

Tim Thorne 3-20-09
Driver Signature Date

Inspected and Accepted By: George L Taylor Ray Taylor 20090320

NOTICE TO TRANSPORTER

TRUCKS WILL NOT BE PERMITTED TO ENTER
THE FACILITY WITHOUT THIS ENTRANCE TICKET

WHITE - Invoice

YELLOW - Generator

PINK - Trucker

GOLD - P & F Environmental

APPENDIX E

**LABORATORY REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION**



Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-120

Client Project: CTO 005

Dear Shaun Whitworth,

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS Environmental Services at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.


Project Manager Date
Ashley Nifong

List of Reporting Abbreviations And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.**
- 2) Uncertainty for all reported data is less than or equal to 30 percent.**

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S001
Client Project ID: CTO 005
Lab Sample ID: G649-120-1D
Lab Project ID: G649-120

Date Collected: 2/26/2009 9:27
Date Received: 2/27/2009
Matrix: Soil
Solids 76.59
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	2740	149	mg/Kg	20	03/01/09 15:21

Surrogate Spike Results

	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	NA	NA

Comments:

Batch Information

Analytical Batch: EP030109
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13763
Prep Method: 3541
Prep Date: 02/27/09
Initial Prep Wt/Vol: 34.94 G
Prep Final Vol: 10 mL

Analyst: *lw*

NC Certification #481

Reviewed By: *MS*
DRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S002
Client Project ID: CTO 005
Lab Sample ID: G649-120-2D
Lab Project ID: G649-120

Date Collected: 2/26/2009 9:31
Date Received: 2/27/2009
Matrix: Soil
Solids 82.57
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	38.8	7.49	mg/Kg	1	02/28/09 18:54

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	31.3	78.2

Comments:

Batch Information

Analytical Batch: EP022809
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13763
Prep Method: 3541
Prep Date: 02/27/09
Initial Prep Wt/Vol: 32.35 G
Prep Final Vol: 10 mL

Analyst: lw

NC Certification #481

Reviewed By: [Signature]
DRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S003
Client Project ID: CTO 005
Lab Sample ID: G649-120-3D
Lab Project ID: G649-120

Date Collected: 2/26/2009 9:40
Date Received: 2/27/2009
Matrix: Soil
Solids 83.98
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.23	mg/Kg	1	02/28/09 19:23

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	31.5	78.8

Comments:

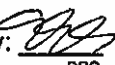
Batch Information

Analytical Batch: EP022809
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13763
Prep Method: 3541
Prep Date: 02/27/09
Initial Prep Wt/Vol: 32.96 G
Prep Final Vol: 10 mL

Analyst: 

NC Certification #481

Reviewed By: 
DRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S004
Client Project ID: CTO 005
Lab Sample ID: G649-120-4D
Lab Project ID: G649-120

Date Collected: 2/26/2009 9:45
Date Received: 2/27/2009
Matrix: Soil
Solids 81.08
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.19	mg/Kg	1	02/28/09 19:52
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	29.1	72.7

Comments:

Batch Information

Analytical Batch: EP022809
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13763
Prep Method: 3541
Prep Date: 02/27/09
Initial Prep Wt/Vol: 34.3 G
Prep Final Vol: 10 mL

Analyst: 

NC Certification #481

Reviewed By: 
DRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S005
Client Project ID: CTO 005
Lab Sample ID: G649-120-5D
Lab Project ID: G649-120

Date Collected: 2/26/2009 9:15
Date Received: 2/27/2009
Matrix: Soil
Solids 79.10
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	1080	74.6	mg/Kg	10	03/01/09 15:49

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	NA	NA

Comments:

Batch Information

Analytical Batch: EP030109
Analytical Method: 8015
Instrument: GC6
Analyst: EAW

Prep batch: 13763
Prep Method: 3541
Prep Date: 02/27/09
Initial Prep Wt/Vol: 33.9 G
Prep Final Vol: 10 mL

Analyst: h

NC Certification #481

Reviewed By: MS
ORO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S001
Client Project ID: CTO 005
Lab Sample ID: G649-120-1A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:27
Date Received: 2/27/2009
Matrix: Soil
Solids 76.59

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	19.4	5.84	mg/Kg	1	02/27/09 16:27

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	105	105		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 6.71 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: [Signature]
GRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S002
Client Project ID: CTO 005
Lab Sample ID: G649-120-2A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:31
Date Received: 2/27/2009
Matrix: Soil
Solids 82.57

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.30	mg/Kg	1	02/27/09 16:53

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	96	95.8		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 6.85 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: 
GRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S003
Client Project ID: CTO 005
Lab Sample ID: G649-120-3A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:40
Date Received: 2/27/2009
Matrix: Soil
Solids 83.98

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.23	mg/Kg	1	02/27/09 17:20

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	100	100		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 6.83 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: [Signature]
GRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S004
Client Project ID: CTO 005
Lab Sample ID: G649-120-4A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:45
Date Received: 2/27/2009
Matrix: Soil
Solids 81.08

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.73	mg/Kg	1	02/27/09 17:47

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	97	97.3		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 6.46 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: 
GRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: TT3145-S005
Client Project ID: CTO 005
Lab Sample ID: G649-120-5A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:15
Date Received: 2/27/2009
Matrix: Soil
Solids 79.10

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	13.3	5.82	mg/Kg	1	02/27/09 18:13

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	99	99.1		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 6.52 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: [Signature]
GRO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: Trip Blank
Client Project ID: CTO 005
Lab Sample ID: G649-120-6A
Lab Project ID: G649-120
Report Basis: Dry Weight

Analyzed By: DVG
Date Collected: 2/26/2009 9:00
Date Received: 2/27/2009
Matrix: Soil
Solids 100.00

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.00	mg/Kg	1	02/27/09 11:59

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95	95.1		70-130

Comments:

Batch Information

Analytical Batch: VP022709
Analytical Method: 8015
Instrument ID: GC4
Analyst: DVG

Prep Method: 5035
Initial Wt/Vol: 5 g
Final Volume: 5 mL

Analyst: DVG

NC Certification #481

Reviewed By: 
GRO



SGS Environmental Services Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide
• Alaska • Maryland
• New Jersey • New York
• North Carolina • Ohio
• West Virginia
www.us.sgs.com

1 CLIENT: <u>OSAGE of VIRGINIA</u>					SGS Reference #: <u>6649-120</u>					page <u>1</u> of <u>1</u>									
CONTACT: <u>Theresa E. Tellerman</u> PHONE NO: <u>(757) 274-4949</u>					# CONTAINERS SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples <u>TPH DRO</u> <u>TPH GEO</u>					Preservatives Used					Analysis Required				
PROJECT: <u>CTO 005</u> SITE/PWSID#: <u>TT 3145</u>										Now					Retained				
REPORTS TO: EMAIL: <u>Shaun Whitworth @ osageva.com</u>																			
INVOICE TO: QUOTE #: <u>Mike Cree</u> P.O. #: <u>CTO 005</u>																			
2																			
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/MATRIX CODE													REMARKS/LOC ID		
	<u>TT 3145-S001</u>	<u>2/26/09</u>	<u>0927</u>	<u>S</u>	<u>3</u>														
	<u>TT 3145-S002</u>	<u>2/26/09</u>	<u>0931</u>	<u>S</u>	<u>5</u>														
	<u>TT 3145-S003</u>	<u>2/26/09</u>	<u>0940</u>	<u>S</u>	<u>3</u>														
	<u>TT 3145-S004</u>	<u>2/26/09</u>	<u>0945</u>	<u>S</u>	<u>3</u>														
	<u>TT 3145-S005</u>	<u>2/26/09</u>	<u>0915</u>	<u>S</u>	<u>3</u>														
	<u>Trip Blank</u>	<u>2/26/09</u>	<u>0920</u>	<u>-</u>	<u>1</u>														
5					4														
Collected/Relinquished By: (1) <u>[Signature]</u>		Date <u>2/27/09</u>	Time <u>8:45</u>	Received By: <u>[Signature]</u>		DOD Project? <u>YES</u> NO					Special Deliverable Requirements: <u>EDD</u>								
Relinquished By: (2) <u>[Signature]</u>		Date <u>2/27/09</u>	Time <u>9:05</u>	Received By: <u>[Signature]</u>		Cooler ID _____					Requested Turnaround Time and-or Special Instructions: <u>24 HR TURN</u>								
Relinquished By: (3) <u>[Signature]</u>		Date _____	Time _____	Received By: _____		Email results: <u>shwhitworth@osageva.com</u> <u>tellerman@osageva.com</u>					Samples Received Cold? <u>YES</u> NO								
Relinquished By: (4) _____		Date _____	Time _____	Received For Laboratory By: _____		Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u>					Temperature °C: <u>2.9°C</u>								



Mr. Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk VA 23517

Report Number: G649-128

Client Project: CTO 005

Dear Mr. Whitworth:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.

Bailana Hager *March 16.09*
Project Manager Date

for:

Lori Lockamy

**List of Reporting Abbreviations
And Data Qualifiers**

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.**
- 2) Uncertainty for all reported data is less than or equal to 30 percent.**

MI34.021808.4

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

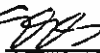
Sample Information	
Sample Identification	TT3145-S006
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 13:18
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 18:05 - 03/12/09 18:05
Dry Weight	79.9
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	94.2		70	130
Surrogate % Recovery - FID	96.4		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-1D	Lab Info: G649-128-1D
FID Info: VP031209/023F0101.D	PID Info: VP031209/023R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S007
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 14:28
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 18:32 - 03/12/09 18:32
Dry Weight	79.7
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C ₅ -C ₈ Aliphatics**	BQL	10.0	
C ₉ -C ₁₂ Aliphatics**	BQL	10.0	
C ₉ -C ₁₀ Aromatics**	BQL	10.0	
	Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID	93.3		70 130
Surrogate % Recovery - FID	95.8		70 130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-2D	Lab Info: G649-128-2D
FID Info: VP031209/024F0101.D	PID Info: VP031209/024R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

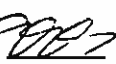
Sample Information	
Sample Identification	TT3145-S008
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 09:16
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 18:59 - 03/12/09 18:59
Dry Weight	82.9
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	99.6		70	130
Surrogate % Recovery - FID	103		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-3D	Lab Info: G649-128-3D
FID Info: VP031209/025F0101.D	PID Info: VP031209/025R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of Virginia

Project Name: CTO 005

Sample Information	
Sample Identification	TT3145-S009
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 09:10
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 19:26 - 03/12/09 19:26
Dry Weight	80.4
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	88.7		70	130
Surrogate % Recovery - FID	91.3		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-4D	Lab Info: G649-128-4D
FID Info: VP031209/026F0101.D	PID Info: VP031209/026R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S010
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 09:25
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 19:53 - 03/12/09 19:53
Dry Weight	77.5
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	92.8		70	130
Surrogate % Recovery - FID	96.9		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-5D	Lab Info: G649-128-5D
FID Info: VP031209/027F0101.D	PID Info: VP031209/027R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Osage of VirginiaProject Name: CTO 005

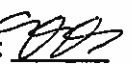
Sample Information	
Sample Identification	TT3145-S011
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/10/09 09:22
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 20:19 - 03/12/09 20:19
Dry Weight	81.1
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	21.0	10.0		
C ₉ -C ₁₂ Aliphatics**	81.1	10.0		
C ₉ -C ₁₀ Aromatics**	228	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	117		70	130
Surrogate % Recovery - FID	130		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-6D	Lab Info: G649-128-6D
FID Info: VP031209/028F0101.D	PID Info: VP031209/028R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	Trip Blanks
Sample Matrix	Soil
Collection Option (for Soil)*	NA
Date Collected	03/10/09 00:00
Date Received	03/11/09
Date Extracted	03/11/09
Date Analyzed	03/12/09 17:11 - 03/12/09 17:11
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits	
			Lower	Upper
Surrogate % Recovery - PID	102		70	130
Surrogate % Recovery - FID	103		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-7B	Lab Info: G649-128-7B
FID Info: VP031209/021F0101.D	PID Info: VP031209/021R0101.D

Reviewed By: 

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 03/09/09PID Initial Calibration Date: 03/09/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	6.98	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	6.63	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 03/12/09Filename: VP031209/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	2.2	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-17.6	±25%
C ₉ -C ₁₀ Aromatics	200	16	-8.6	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 03/09/09PID Initial Calibration Date: 03/09/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	6.98	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	6.63	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 03/12/09Filename: VP031209/032F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	-14.8	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-12.9	±25%
C ₉ -C ₁₀ Aromatics	200	16	-5.1	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S006
Sample Matrix	Soil
Date Collected	03/10/09 13:18
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/12/09 19:54 - 03/12/09 20:22
Dry Weight	79.9
Dilution Factor	1 - 1
Initial weight (g)	12.68
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	108		40	140
Aromatic (ortho-terphenyl)	104		40	140
Fractionation 1 (2-bromonaphthalene)	95.8		40	140
Fractionation 2 (2-fluorobiphenyl)	98.2		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-1G	Lab Info: G649-128-1G
Aliphatic: EP031209/018F1501.D	Aromatic: EP031209/019F1601.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

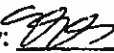
Sample Information	
Sample Identification	TT3145-S007
Sample Matrix	Soil
Date Collected	03/10/09 14:28
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/12/09 20:51 - 03/12/09 21:19
Dry Weight	79.7
Dilution Factor	1 - 1
Initial weight (g)	13.38
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	96.0		40	140
Aromatic (ortho-terphenyl)	91.1		40	140
Fractionation 1 (2-bromonaphthalene)	96.4		40	140
Fractionation 2 (2-fluorobiphenyl)	98.8		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-2G	Lab Info: G649-128-2G
Aliphatic: EP031209/020F1701.D	Aromatic: EP031209/021F1801.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S008
Sample Matrix	Soil
Date Collected	03/10/09 09:16
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/12/09 21:48 - 03/12/09 22:16
Dry Weight	82.9
Dilution Factor	1 - 1
Initial weight (g)	12.84
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	95.2		40	140
Aromatic (ortho-terphenyl)	89.9		40	140
Fractionation 1 (2-bromonaphthalene)	97.4		40	140
Fractionation 2 (2-fluorobiphenyl)	99.8		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-3G	Lab Info: G649-128-3G
Aliphatic: EP031209/022F1901.D	Aromatic: EP031209/023F2001.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

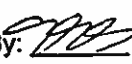
Sample Information	
Sample Identification	TT3145-S009
Sample Matrix	Soil
Date Collected	03/10/09 09:10
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/13/09 00:37 - 03/13/09 01:06
Dry Weight	80.4
Dilution Factor	1 - 1
Initial weight (g)	13.63
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	51.7	10.0	
C19-C36 Aliphatics	12.5	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	93.1		40	140
Aromatic (ortho-terphenyl)	76.1		40	140
Fractionation 1 (2-bromonaphthalene)	76.8		40	140
Fractionation 2 (2-fluorobiphenyl)	77.8		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-4G	Lab Info: G649-128-4G
Aliphatic: EP031209/026F2301.D	Aromatic: EP031209/027F2401.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S010
Sample Matrix	Soil
Date Collected	03/10/09 09:25
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/13/09 01:34 - 03/13/09 02:02
Dry Weight	77.5
Dilution Factor	1 - 1
Initial weight (g)	12.90
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	51.9	10.0	
C19-C36 Aliphatics	12.8	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	93.8		40	140
Aromatic (ortho-terphenyl)	82.7		40	140
Fractionation 1 (2-bromonaphthalene)	90.4		40	140
Fractionation 2 (2-fluorobiphenyl)	93.1		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-5G	Lab Info: G649-128-5G
Aliphatic: EP031209/028F2501.D	Aromatic: EP031209/029F2601.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

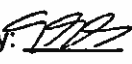
Sample Information	
Sample Identification	TT3145-S011
Sample Matrix	Soil
Date Collected	03/10/09 09:22
Date Received	03/11/09
Date Extracted	03/12/09
Date Analyzed	03/13/09 12:43 - 03/13/09 13:11
Dry Weight	81.1
Dilution Factor	10 - 2
Initial weight (g)	13.55
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	3280	10.0	
C19-C36 Aliphatics	815	10.0	
C11-C22 Aromatics	1260	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	137		40	140
Aromatic (ortho-terphenyl)	91.1		40	140
Fractionation 1 (2-bromonaphthalene)	84.0		40	140
Fractionation 2 (2-fluorobiphenyl)	86.7		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-128-6G	Lab Info: G649-128-6G
Aliphatic: EP031309/008F0401.D	Aromatic: EP031309/009F0501.D

Reviewed By: 

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/12/09Filename: ep031209/001f0101.d03/12/09ep031209/003f0101.d

Calibration Check

Range	Levels (µg/L) (mg/Kg)		%Difference if CF %Drift if LR ✓	Limits
C9-C18 Aliphatics	100	16.7	6.9	±25%
C19-C36 Aliphatics	100	16.7	12.7	±25%
C11-C22 Aromatics	100	16.7	-8.4	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/12/09
03/12/09Filename: ep031209/024f2101.d
ep031209/025f2201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	18.6	±25%
C19-C36 Aliphatics	100	16.7	20.4	±25%
C11-C22 Aromatics	100	16.7	11.4	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/13/09
03/13/09Filenames: ep031309/001f0101.d
ep031309/002f0201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C9-C18 Aliphatics	100	16.7	20.9	≤±25%
C19-C36 Aliphatics	100	16.7	23.2	≤±25%
C11-C22 Aromatics	100	16.7	12.7	≤±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/13/09Filenames: ep031309/001f0601.d03/13/09ep031309/002f0701.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR ✓	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	9.9	≤±25%
C19-C36 Aliphatics	100	16.7	14.6	≤±25%
C11-C22 Aromatics	100	16.7	9.3	≤±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S006
Client Project ID: CTO 005
Lab Sample ID G649-128-1A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 13:18
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.38 g
%Solids: 79.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	49.0	1	3/12/2009
Benzene	BQL	4.90	1	3/12/2009
Bromobenzene	BQL	4.90	1	3/12/2009
Bromochloromethane	BQL	4.90	1	3/12/2009
Bromodichloromethane	BQL	4.90	1	3/12/2009
Bromoform	BQL	4.90	1	3/12/2009
Bromomethane	BQL	4.90	1	3/12/2009
2-Butanone	BQL	24.5	1	3/12/2009
n-Butylbenzene	BQL	4.90	1	3/12/2009
sec-Butylbenzene	BQL	4.90	1	3/12/2009
tert-Butylbenzene	BQL	4.90	1	3/12/2009
Carbon disulfide	BQL	4.90	1	3/12/2009
Carbon tetrachloride	BQL	4.90	1	3/12/2009
Chlorobenzene	BQL	4.90	1	3/12/2009
Chloroethane	BQL	4.90	1	3/12/2009
Chloroform	BQL	4.90	1	3/12/2009
Chloromethane	BQL	4.90	1	3/12/2009
2-Chlorotoluene	BQL	4.90	1	3/12/2009
4-Chlorotoluene	BQL	4.90	1	3/12/2009
Dibromochloromethane	BQL	4.90	1	3/12/2009
1,2-Dibromo-3-chloropropane	BQL	24.5	1	3/12/2009
Dibromomethane	BQL	4.90	1	3/12/2009
1,2-Dibromoethane (EDB)	BQL	4.90	1	3/12/2009
1,2-Dichlorobenzene	BQL	4.90	1	3/12/2009
1,3-Dichlorobenzene	BQL	4.90	1	3/12/2009
1,4-Dichlorobenzene	BQL	4.90	1	3/12/2009
trans-1,4-Dichloro-2-butene	BQL	24.5	1	3/12/2009
1,1-Dichloroethane	BQL	4.90	1	3/12/2009
1,1-Dichloroethene	BQL	4.90	1	3/12/2009
1,2-Dichloroethane	BQL	4.90	1	3/12/2009
cis-1,2-Dichloroethene	BQL	4.90	1	3/12/2009
trans-1,2-dichloroethene	BQL	4.90	1	3/12/2009
1,2-Dichloropropane	BQL	4.90	1	3/12/2009
1,3-Dichloropropane	BQL	4.90	1	3/12/2009
2,2-Dichloropropane	BQL	4.90	1	3/12/2009
1,1-Dichloropropene	BQL	4.90	1	3/12/2009
cis-1,3-Dichloropropene	BQL	4.90	1	3/12/2009
trans-1,3-Dichloropropene	BQL	4.90	1	3/12/2009
Dichlorodifluoromethane	BQL	4.90	1	3/12/2009
Diisopropyl ether (DIPE)	BQL	4.90	1	3/12/2009
Ethylbenzene	BQL	4.90	1	3/12/2009
Hexachlorobutadiene	BQL	4.90	1	3/12/2009
2-Hexanone	BQL	12.3	1	3/12/2009
Iodomethane	BQL	4.90	1	3/12/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S006
Client Project ID: CTO 005
Lab Sample ID G649-128-1A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 13:18
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.38 g
%Solids: 79.9

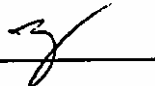
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	4.90	1	3/12/2009
4-Isopropyltoluene	BQL	4.90	1	3/12/2009
Methylene chloride	BQL	19.6	1	3/12/2009
4-Methyl-2-pentanone	BQL	12.3	1	3/12/2009
Methyl-tert-butyl ether (MTBE)	BQL	4.90	1	3/12/2009
Naphthalene	BQL	4.90	1	3/12/2009
n-Propyl benzene	BQL	4.90	1	3/12/2009
Styrene	BQL	4.90	1	3/12/2009
1,1,1,2-Tetrachloroethane	BQL	4.90	1	3/12/2009
1,1,2,2-Tetrachloroethane	BQL	4.90	1	3/12/2009
Tetrachloroethene	BQL	4.90	1	3/12/2009
Toluene	BQL	4.90	1	3/12/2009
1,2,3-Trichlorobenzene	BQL	4.90	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	4.90	1	3/12/2009
Trichloroethene	BQL	4.90	1	3/12/2009
1,1,1-Trichloroethane	BQL	4.90	1	3/12/2009
1,1,2-Trichloroethane	BQL	4.90	1	3/12/2009
Trichlorofluoromethane	BQL	4.90	1	3/12/2009
1,2,3-Trichloropropane	BQL	4.90	1	3/12/2009
1,2,4-Trimethylbenzene	BQL	4.90	1	3/12/2009
1,3,5-Trimethylbenzene	BQL	4.90	1	3/12/2009
Vinyl chloride	BQL	4.90	1	3/12/2009
m-,p-Xylene	BQL	9.80	1	3/12/2009
o-Xylene	BQL	4.90	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	54.5	109
Toluene-d8	50	50.7	101
4-Bromofluorobenzene	50	50.7	101

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S007
Client Project ID: CTO 005
Lab Sample ID G649-128-2A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 14:28
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 5.86 g
%Solids: 79.7

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	53.4	1	3/12/2009
Benzene	BQL	5.34	1	3/12/2009
Bromobenzene	BQL	5.34	1	3/12/2009
Bromochloromethane	BQL	5.34	1	3/12/2009
Bromodichloromethane	BQL	5.34	1	3/12/2009
Bromoform	BQL	5.34	1	3/12/2009
Bromomethane	BQL	5.34	1	3/12/2009
2-Butanone	BQL	26.7	1	3/12/2009
n-Butylbenzene	BQL	5.34	1	3/12/2009
sec-Butylbenzene	BQL	5.34	1	3/12/2009
tert-Butylbenzene	BQL	5.34	1	3/12/2009
Carbon disulfide	BQL	5.34	1	3/12/2009
Carbon tetrachloride	BQL	5.34	1	3/12/2009
Chlorobenzene	BQL	5.34	1	3/12/2009
Chloroethane	BQL	5.34	1	3/12/2009
Chloroform	BQL	5.34	1	3/12/2009
Chloromethane	BQL	5.34	1	3/12/2009
2-Chlorotoluene	BQL	5.34	1	3/12/2009
4-Chlorotoluene	BQL	5.34	1	3/12/2009
Dibromochloromethane	BQL	5.34	1	3/12/2009
1,2-Dibromo-3-chloropropane	BQL	26.7	1	3/12/2009
Dibromomethane	BQL	5.34	1	3/12/2009
1,2-Dibromoethane (EDB)	BQL	5.34	1	3/12/2009
1,2-Dichlorobenzene	BQL	5.34	1	3/12/2009
1,3-Dichlorobenzene	BQL	5.34	1	3/12/2009
1,4-Dichlorobenzene	BQL	5.34	1	3/12/2009
trans-1,4-Dichloro-2-butene	BQL	26.7	1	3/12/2009
1,1-Dichloroethane	BQL	5.34	1	3/12/2009
1,1-Dichloroethene	BQL	5.34	1	3/12/2009
1,2-Dichloroethane	BQL	5.34	1	3/12/2009
cis-1,2-Dichloroethene	BQL	5.34	1	3/12/2009
trans-1,2-dichloroethene	BQL	5.34	1	3/12/2009
1,2-Dichloropropane	BQL	5.34	1	3/12/2009
1,3-Dichloropropane	BQL	5.34	1	3/12/2009
2,2-Dichloropropane	BQL	5.34	1	3/12/2009
1,1-Dichloropropene	BQL	5.34	1	3/12/2009
cis-1,3-Dichloropropene	BQL	5.34	1	3/12/2009
trans-1,3-Dichloropropene	BQL	5.34	1	3/12/2009
Dichlorodifluoromethane	BQL	5.34	1	3/12/2009
Diisopropyl ether (DIPE)	BQL	5.34	1	3/12/2009
Ethylbenzene	BQL	5.34	1	3/12/2009
Hexachlorobutadiene	BQL	5.34	1	3/12/2009
2-Hexanone	BQL	13.4	1	3/12/2009
Iodomethane	BQL	5.34	1	3/12/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S007
 Client Project ID: CTO 005
 Lab Sample ID G649-128-2A
 Lab Project ID: G649-128
 Report Basis: Dry Weight

Analyzed By: MJC
 Date Collected: 03-10-2009 14:28
 Date Received: 3/11/2009
 Matrix: Soil
 Sample Amount: 5.86 g
 %Solids: 79.7

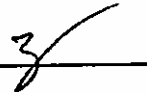
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	5.34	1	3/12/2009
4-Isopropyltoluene	BQL	5.34	1	3/12/2009
Methylene chloride	BQL	21.4	1	3/12/2009
4-Methyl-2-pentanone	BQL	13.4	1	3/12/2009
Methyl-tert-butyl ether (MTBE)	BQL	5.34	1	3/12/2009
Naphthalene	BQL	5.34	1	3/12/2009
n-Propyl benzene	BQL	5.34	1	3/12/2009
Styrene	BQL	5.34	1	3/12/2009
1,1,1,2-Tetrachloroethane	BQL	5.34	1	3/12/2009
1,1,2,2-Tetrachloroethane	BQL	5.34	1	3/12/2009
Tetrachloroethene	BQL	5.34	1	3/12/2009
Toluene	BQL	5.34	1	3/12/2009
1,2,3-Trichlorobenzene	BQL	5.34	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	5.34	1	3/12/2009
Trichloroethene	BQL	5.34	1	3/12/2009
1,1,1-Trichloroethane	BQL	5.34	1	3/12/2009
1,1,2-Trichloroethane	BQL	5.34	1	3/12/2009
Trichlorofluoromethane	BQL	5.34	1	3/12/2009
1,2,3-Trichloropropane	BQL	5.34	1	3/12/2009
1,2,4-Trimethylbenzene	BQL	5.34	1	3/12/2009
1,3,5-Trimethylbenzene	BQL	5.34	1	3/12/2009
Vinyl chloride	BQL	5.34	1	3/12/2009
m-,p-Xylene	BQL	10.7	1	3/12/2009
o-Xylene	BQL	5.34	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	54.5	109
Toluene-d8	50	50.6	101
4-Bromofluorobenzene	50	50.5	101

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S008
Client Project ID: CTO 005
Lab Sample ID G649-128-3A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 09:16
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 5.03 g
%Solids: 82.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	60.0	1	3/12/2009
Benzene	BQL	6.00	1	3/12/2009
Bromobenzene	BQL	6.00	1	3/12/2009
Bromochloromethane	BQL	6.00	1	3/12/2009
Bromodichloromethane	BQL	6.00	1	3/12/2009
Bromoform	BQL	6.00	1	3/12/2009
Bromomethane	BQL	6.00	1	3/12/2009
2-Butanone	BQL	30.0	1	3/12/2009
n-Butylbenzene	BQL	6.00	1	3/12/2009
sec-Butylbenzene	BQL	6.00	1	3/12/2009
tert-Butylbenzene	BQL	6.00	1	3/12/2009
Carbon disulfide	BQL	6.00	1	3/12/2009
Carbon tetrachloride	BQL	6.00	1	3/12/2009
Chlorobenzene	BQL	6.00	1	3/12/2009
Chloroethane	BQL	6.00	1	3/12/2009
Chloroform	BQL	6.00	1	3/12/2009
Chloromethane	BQL	6.00	1	3/12/2009
2-Chlorotoluene	BQL	6.00	1	3/12/2009
4-Chlorotoluene	BQL	6.00	1	3/12/2009
Dibromochloromethane	BQL	6.00	1	3/12/2009
1,2-Dibromo-3-chloropropane	BQL	30.0	1	3/12/2009
Dibromomethane	BQL	6.00	1	3/12/2009
1,2-Dibromoethane (EDB)	BQL	6.00	1	3/12/2009
1,2-Dichlorobenzene	BQL	6.00	1	3/12/2009
1,3-Dichlorobenzene	BQL	6.00	1	3/12/2009
1,4-Dichlorobenzene	BQL	6.00	1	3/12/2009
trans-1,4-Dichloro-2-butene	BQL	30.0	1	3/12/2009
1,1-Dichloroethane	BQL	6.00	1	3/12/2009
1,1-Dichloroethene	BQL	6.00	1	3/12/2009
1,2-Dichloroethane	BQL	6.00	1	3/12/2009
cis-1,2-Dichloroethene	BQL	6.00	1	3/12/2009
trans-1,2-dichloroethene	BQL	6.00	1	3/12/2009
1,2-Dichloropropane	BQL	6.00	1	3/12/2009
1,3-Dichloropropane	BQL	6.00	1	3/12/2009
2,2-Dichloropropane	BQL	6.00	1	3/12/2009
1,1-Dichloropropene	BQL	6.00	1	3/12/2009
cis-1,3-Dichloropropene	BQL	6.00	1	3/12/2009
trans-1,3-Dichloropropene	BQL	6.00	1	3/12/2009
Dichlorodifluoromethane	BQL	6.00	1	3/12/2009
Diisopropyl ether (DIPE)	BQL	6.00	1	3/12/2009
Ethylbenzene	BQL	6.00	1	3/12/2009
Hexachlorobutadiene	BQL	6.00	1	3/12/2009
2-Hexanone	BQL	15.0	1	3/12/2009
Iodomethane	BQL	6.00	1	3/12/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S008
Client Project ID: CTO 005
Lab Sample ID G649-128-3A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 09:16
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 5.03 g
%Solids: 82.9

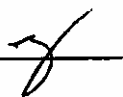
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	6.00	1	3/12/2009
4-Isopropyltoluene	BQL	6.00	1	3/12/2009
Methylene chloride	BQL	24.0	1	3/12/2009
4-Methyl-2-pentanone	BQL	15.0	1	3/12/2009
Methyl-tert-butyl ether (MTBE)	BQL	6.00	1	3/12/2009
Naphthalene	BQL	6.00	1	3/12/2009
n-Propyl benzene	BQL	6.00	1	3/12/2009
Styrene	BQL	6.00	1	3/12/2009
1,1,1,2-Tetrachloroethane	BQL	6.00	1	3/12/2009
1,1,2,2-Tetrachloroethane	BQL	6.00	1	3/12/2009
Tetrachloroethene	BQL	6.00	1	3/12/2009
Toluene	BQL	6.00	1	3/12/2009
1,2,3-Trichlorobenzene	BQL	6.00	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	6.00	1	3/12/2009
Trichloroethene	BQL	6.00	1	3/12/2009
1,1,1-Trichloroethane	BQL	6.00	1	3/12/2009
1,1,2-Trichloroethane	BQL	6.00	1	3/12/2009
Trichlorofluoromethane	BQL	6.00	1	3/12/2009
1,2,3-Trichloropropane	BQL	6.00	1	3/12/2009
1,2,4-Trimethylbenzene	BQL	6.00	1	3/12/2009
1,3,5-Trimethylbenzene	BQL	6.00	1	3/12/2009
Vinyl chloride	BQL	6.00	1	3/12/2009
m-,p-Xylene	BQL	12.0	1	3/12/2009
o-Xylene	BQL	6.00	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	55.2	110
Toluene-d8	50	50.4	101
4-Bromofluorobenzene	50	49.3	99

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: TT3145-S009
Client Project ID: CTO 005
Lab Sample ID G649-128-4A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 09:10
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.65 g
%Solids: 80.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	46.8	1	3/12/2009
Benzene	BQL	4.68	1	3/12/2009
Bromobenzene	BQL	4.68	1	3/12/2009
Bromochloromethane	BQL	4.68	1	3/12/2009
Bromodichloromethane	BQL	4.68	1	3/12/2009
Bromoform	BQL	4.68	1	3/12/2009
Bromomethane	BQL	4.68	1	3/12/2009
2-Butanone	BQL	23.4	1	3/12/2009
n-Butylbenzene	BQL	4.68	1	3/12/2009
sec-Butylbenzene	BQL	4.68	1	3/12/2009
tert-Butylbenzene	BQL	4.68	1	3/12/2009
Carbon disulfide	BQL	4.68	1	3/12/2009
Carbon tetrachloride	BQL	4.68	1	3/12/2009
Chlorobenzene	BQL	4.68	1	3/12/2009
Chloroethane	BQL	4.68	1	3/12/2009
Chloroform	BQL	4.68	1	3/12/2009
Chloromethane	BQL	4.68	1	3/12/2009
2-Chlorotoluene	BQL	4.68	1	3/12/2009
4-Chlorotoluene	BQL	4.68	1	3/12/2009
Dibromochloromethane	BQL	4.68	1	3/12/2009
1,2-Dibromo-3-chloropropane	BQL	23.4	1	3/12/2009
Dibromomethane	BQL	4.68	1	3/12/2009
1,2-Dibromoethane (EDB)	BQL	4.68	1	3/12/2009
1,2-Dichlorobenzene	BQL	4.68	1	3/12/2009
1,3-Dichlorobenzene	BQL	4.68	1	3/12/2009
1,4-Dichlorobenzene	BQL	4.68	1	3/12/2009
trans-1,4-Dichloro-2-butene	BQL	23.4	1	3/12/2009
1,1-Dichloroethane	BQL	4.68	1	3/12/2009
1,1-Dichloroethene	BQL	4.68	1	3/12/2009
1,2-Dichloroethane	BQL	4.68	1	3/12/2009
cis-1,2-Dichloroethene	BQL	4.68	1	3/12/2009
trans-1,2-dichloroethene	BQL	4.68	1	3/12/2009
1,2-Dichloropropane	BQL	4.68	1	3/12/2009
1,3-Dichloropropane	BQL	4.68	1	3/12/2009
2,2-Dichloropropane	BQL	4.68	1	3/12/2009
1,1-Dichloropropene	BQL	4.68	1	3/12/2009
cis-1,3-Dichloropropene	BQL	4.68	1	3/12/2009
trans-1,3-Dichloropropene	BQL	4.68	1	3/12/2009
Dichlorodifluoromethane	BQL	4.68	1	3/12/2009
Diisopropyl ether (DIPE)	BQL	4.68	1	3/12/2009
Ethylbenzene	BQL	4.68	1	3/12/2009
Hexachlorobutadiene	BQL	4.68	1	3/12/2009
2-Hexanone	BQL	11.7	1	3/12/2009
Iodomethane	BQL	4.68	1	3/12/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S009
Client Project ID: CTO 005
Lab Sample ID G649-128-4A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-10-2009 09:10
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.65 g
%Solids: 80.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	4.68	1	3/12/2009
4-Isopropyltoluene	BQL	4.68	1	3/12/2009
Methylene chloride	BQL	18.7	1	3/12/2009
4-Methyl-2-pentanone	BQL	11.7	1	3/12/2009
Methyl-tert-butyl ether (MTBE)	BQL	4.68	1	3/12/2009
Naphthalene	BQL	4.68	1	3/12/2009
n-Propyl benzene	BQL	4.68	1	3/12/2009
Styrene	BQL	4.68	1	3/12/2009
1,1,1,2-Tetrachloroethane	BQL	4.68	1	3/12/2009
1,1,2,2-Tetrachloroethane	BQL	4.68	1	3/12/2009
Tetrachloroethene	BQL	4.68	1	3/12/2009
Toluene	BQL	4.68	1	3/12/2009
1,2,3-Trichlorobenzene	BQL	4.68	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	4.68	1	3/12/2009
Trichloroethene	BQL	4.68	1	3/12/2009
1,1,1-Trichloroethane	BQL	4.68	1	3/12/2009
1,1,2-Trichloroethane	BQL	4.68	1	3/12/2009
Trichlorofluoromethane	BQL	4.68	1	3/12/2009
1,2,3-Trichloropropane	BQL	4.68	1	3/12/2009
1,2,4-Trimethylbenzene	BQL	4.68	1	3/12/2009
1,3,5-Trimethylbenzene	BQL	4.68	1	3/12/2009
Vinyl chloride	BQL	4.68	1	3/12/2009
m-,p-Xylene	BQL	9.36	1	3/12/2009
o-Xylene	BQL	4.68	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	54.1	108
Toluene-d8	50	51	102
4-Bromofluorobenzene	50	50	100

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S010
Client Project ID: CTO 005
Lab Sample ID G649-128-5A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 03-10-2009 09:25
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.57 g
%Solids: 77.5

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	49.1	1	3/14/2009
Benzene	BQL	4.91	1	3/14/2009
Bromobenzene	BQL	4.91	1	3/14/2009
Bromochloromethane	BQL	4.91	1	3/14/2009
Bromodichloromethane	BQL	4.91	1	3/14/2009
Bromoform	BQL	4.91	1	3/14/2009
Bromomethane	BQL	4.91	1	3/14/2009
2-Butanone	BQL	24.5	1	3/14/2009
n-Butylbenzene	BQL	4.91	1	3/14/2009
sec-Butylbenzene	BQL	4.91	1	3/14/2009
tert-Butylbenzene	BQL	4.91	1	3/14/2009
Carbon disulfide	BQL	4.91	1	3/14/2009
Carbon tetrachloride	BQL	4.91	1	3/14/2009
Chlorobenzene	BQL	4.91	1	3/14/2009
Chloroethane	BQL	4.91	1	3/14/2009
Chloroform	BQL	4.91	1	3/14/2009
Chloromethane	BQL	4.91	1	3/14/2009
2-Chlorotoluene	BQL	4.91	1	3/14/2009
4-Chlorotoluene	BQL	4.91	1	3/14/2009
Dibromochloromethane	BQL	4.91	1	3/14/2009
1,2-Dibromo-3-chloropropane	BQL	24.5	1	3/14/2009
Dibromomethane	BQL	4.91	1	3/14/2009
1,2-Dibromoethane (EDB)	BQL	4.91	1	3/14/2009
1,2-Dichlorobenzene	BQL	4.91	1	3/14/2009
1,3-Dichlorobenzene	BQL	4.91	1	3/14/2009
1,4-Dichlorobenzene	BQL	4.91	1	3/14/2009
trans-1,4-Dichloro-2-butene	BQL	24.5	1	3/14/2009
1,1-Dichloroethane	BQL	4.91	1	3/14/2009
1,1-Dichloroethene	BQL	4.91	1	3/14/2009
1,2-Dichloroethane	BQL	4.91	1	3/14/2009
cis-1,2-Dichloroethene	BQL	4.91	1	3/14/2009
trans-1,2-dichloroethene	BQL	4.91	1	3/14/2009
1,2-Dichloropropane	BQL	4.91	1	3/14/2009
1,3-Dichloropropane	BQL	4.91	1	3/14/2009
2,2-Dichloropropane	BQL	4.91	1	3/14/2009
1,1-Dichloropropene	BQL	4.91	1	3/14/2009
cis-1,3-Dichloropropene	BQL	4.91	1	3/14/2009
trans-1,3-Dichloropropene	BQL	4.91	1	3/14/2009
Dichlorodifluoromethane	BQL	4.91	1	3/14/2009
Diisopropyl ether (DIPE)	BQL	4.91	1	3/14/2009
Ethylbenzene	BQL	4.91	1	3/14/2009
Hexachlorobutadiene	BQL	4.91	1	3/14/2009
2-Hexanone	BQL	12.3	1	3/14/2009
Iodomethane	BQL	4.91	1	3/14/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S010
Client Project ID: CTO 005
Lab Sample ID G649-128-5A
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 03-10-2009 09:25
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.57 g
%Solids: 77.5

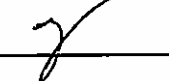
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	4.91	1	3/14/2009
4-Isopropyltoluene	BQL	4.91	1	3/14/2009
Methylene chloride	BQL	19.6	1	3/14/2009
4-Methyl-2-pentanone	BQL	12.3	1	3/14/2009
Methyl-tert-butyl ether (MTBE)	BQL	4.91	1	3/14/2009
Naphthalene	BQL	4.91	1	3/14/2009
n-Propyl benzene	BQL	4.91	1	3/14/2009
Styrene	BQL	4.91	1	3/14/2009
1,1,1,2-Tetrachloroethane	BQL	4.91	1	3/14/2009
1,1,2,2-Tetrachloroethane	BQL	4.91	1	3/14/2009
Tetrachloroethene	BQL	4.91	1	3/14/2009
Toluene	BQL	4.91	1	3/14/2009
1,2,3-Trichlorobenzene	BQL	4.91	1	3/14/2009
1,2,4-Trichlorobenzene	BQL	4.91	1	3/14/2009
Trichloroethene	BQL	4.91	1	3/14/2009
1,1,1-Trichloroethane	BQL	4.91	1	3/14/2009
1,1,2-Trichloroethane	BQL	4.91	1	3/14/2009
Trichlorofluoromethane	BQL	4.91	1	3/14/2009
1,2,3-Trichloropropane	BQL	4.91	1	3/14/2009
1,2,4-Trimethylbenzene	8.25	4.91	1	3/14/2009
1,3,5-Trimethylbenzene	BQL	4.91	1	3/14/2009
Vinyl chloride	BQL	4.91	1	3/14/2009
m-,p-Xylene	BQL	9.81	1	3/14/2009
o-Xylene	BQL	4.91	1	3/14/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	65.3	131
Toluene-d8	50	51.1	102
4-Bromofluorobenzene	50	49.9	100

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260B/5035

Client Sample ID: TT3145-S011
Client Project ID: CTO 005
Lab Sample ID: G649-128-6D
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 3/10/2009 9:22
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.31 g
%Solids: 81.1

Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	24400	1000	3/12/2009
Benzene	BQL	977	1000	3/12/2009
Bromobenzene	BQL	977	1000	3/12/2009
Bromochloromethane	BQL	977	1000	3/12/2009
Bromodichloromethane	BQL	977	1000	3/12/2009
Bromoform	BQL	977	1000	3/12/2009
Bromomethane	BQL	977	1000	3/12/2009
2-Butanone	BQL	24400	1000	3/12/2009
n-Butylbenzene	BQL	977	1000	3/12/2009
sec-Butylbenzene	2010	977	1000	3/12/2009
tert-Butylbenzene	BQL	977	1000	3/12/2009
Carbon disulfide	BQL	977	1000	3/12/2009
Carbon tetrachloride	BQL	977	1000	3/12/2009
Chlorobenzene	BQL	977	1000	3/12/2009
Chloroethane	BQL	977	1000	3/12/2009
Chloroform	BQL	977	1000	3/12/2009
Chloromethane	BQL	977	1000	3/12/2009
2-Chlorotoluene	BQL	977	1000	3/12/2009
4-Chlorotoluene	BQL	977	1000	3/12/2009
Dibromochloromethane	BQL	977	1000	3/12/2009
1,2-Dibromo-3-chloropropane	BQL	4890	1000	3/12/2009
Dibromomethane	BQL	977	1000	3/12/2009
1,2-Dibromoethane (EDB)	BQL	977	1000	3/12/2009
1,2-Dichlorobenzene	BQL	977	1000	3/12/2009
1,3-Dichlorobenzene	BQL	977	1000	3/12/2009
1,4-Dichlorobenzene	BQL	977	1000	3/12/2009
trans-1,4-Dichloro-2-butene	BQL	4890	1000	3/12/2009
1,1-Dichloroethane	BQL	977	1000	3/12/2009
1,1-Dichloroethene	BQL	977	1000	3/12/2009
1,2-Dichloroethane	BQL	977	1000	3/12/2009
cis-1,2-Dichloroethene	BQL	977	1000	3/12/2009
trans-1,2-dichloroethene	BQL	977	1000	3/12/2009
1,2-Dichloropropane	BQL	977	1000	3/12/2009
1,3-Dichloropropane	BQL	977	1000	3/12/2009
2,2-Dichloropropane	BQL	977	1000	3/12/2009
1,1-Dichloropropene	BQL	977	1000	3/12/2009
cis-1,3-Dichloropropene	BQL	977	1000	3/12/2009
trans-1,3-Dichloropropene	BQL	977	1000	3/12/2009
Dichlorodifluoromethane	BQL	4890	1000	3/12/2009
Diisopropyl ether (DIPE)	BQL	977	1000	3/12/2009
Ethylbenzene	BQL	977	1000	3/12/2009
Hexachlorobutadiene	BQL	977	1000	3/12/2009
2-Hexanone	BQL	4890	1000	3/12/2009
Iodomethane	BQL	977	1000	3/12/2009
Isopropylbenzene	BQL	977	1000	3/12/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260B/5035

Client Sample ID: TT3145-S011
Client Project ID: CTO 005
Lab Sample ID: G649-128-6D
Lab Project ID: G649-128
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 3/10/2009 9:22
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 6.31 g
%Solids: 81.1

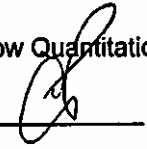
Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
4-Isopropyltoluene	1330	977	1000	3/12/2009
Methylene chloride	BQL	4890	1000	3/12/2009
4-Methyl-2-pentanone	BQL	4890	1000	3/12/2009
Methyl-tert-butyl ether (MTBE)	BQL	977	1000	3/12/2009
Naphthalene	2700	977	1000	3/12/2009
n-Propyl benzene	BQL	977	1000	3/12/2009
Styrene	BQL	977	1000	3/12/2009
1,1,1,2-Tetrachloroethane	BQL	977	1000	3/12/2009
1,1,2,2-Tetrachloroethane	BQL	977	1000	3/12/2009
Tetrachloroethene	BQL	977	1000	3/12/2009
Toluene	BQL	977	1000	3/12/2009
1,2,3-Trichlorobenzene	BQL	977	1000	3/12/2009
1,2,4-Trichlorobenzene	BQL	977	1000	3/12/2009
Trichloroethene	BQL	977	1000	3/12/2009
1,1,1-Trichloroethane	BQL	977	1000	3/12/2009
1,1,2-Trichloroethane	BQL	977	1000	3/12/2009
Trichlorofluoromethane	BQL	977	1000	3/12/2009
1,2,3-Trichloropropane	BQL	977	1000	3/12/2009
1,2,4-Trimethylbenzene	17100	977	1000	3/12/2009
1,3,5-Trimethylbenzene	4830	977	1000	3/12/2009
Vinyl chloride	BQL	977	1000	3/12/2009
m,p-Xylene	3790	1950	1000	3/12/2009
o-Xylene	BQL	977	1000	3/12/2009

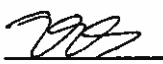
	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	10	9.62	96
Toluene-d8	10	9.95	99
4-Bromofluorobenzene	10	9.77	98

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: Trip Blanks
Client Project ID: CTO 005
Lab Sample ID G649-128-7A
Lab Project ID: G649-128
Report Basis: 0.0

Analyzed By: CLP
Date Collected: 03-10-2009 00:00
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	50.0	1	3/14/2009
Benzene	BQL	5.00	1	3/14/2009
Bromobenzene	BQL	5.00	1	3/14/2009
Bromochloromethane	BQL	5.00	1	3/14/2009
Bromodichloromethane	BQL	5.00	1	3/14/2009
Bromoform	BQL	5.00	1	3/14/2009
Bromomethane	BQL	5.00	1	3/14/2009
2-Butanone	BQL	25.0	1	3/14/2009
n-Butylbenzene	BQL	5.00	1	3/14/2009
sec-Butylbenzene	BQL	5.00	1	3/14/2009
tert-Butylbenzene	BQL	5.00	1	3/14/2009
Carbon disulfide	BQL	5.00	1	3/14/2009
Carbon tetrachloride	BQL	5.00	1	3/14/2009
Chlorobenzene	BQL	5.00	1	3/14/2009
Chloroethane	BQL	5.00	1	3/14/2009
Chloroform	BQL	5.00	1	3/14/2009
Chloromethane	BQL	5.00	1	3/14/2009
2-Chlorotoluene	BQL	5.00	1	3/14/2009
4-Chlorotoluene	BQL	5.00	1	3/14/2009
Dibromochloromethane	BQL	5.00	1	3/14/2009
1,2-Dibromo-3-chloropropane	BQL	25.0	1	3/14/2009
Dibromomethane	BQL	5.00	1	3/14/2009
1,2-Dibromoethane (EDB)	BQL	5.00	1	3/14/2009
1,2-Dichlorobenzene	BQL	5.00	1	3/14/2009
1,3-Dichlorobenzene	BQL	5.00	1	3/14/2009
1,4-Dichlorobenzene	BQL	5.00	1	3/14/2009
trans-1,4-Dichloro-2-butene	BQL	25.0	1	3/14/2009
1,1-Dichloroethane	BQL	5.00	1	3/14/2009
1,1-Dichloroethene	BQL	5.00	1	3/14/2009
1,2-Dichloroethane	BQL	5.00	1	3/14/2009
cis-1,2-Dichloroethene	BQL	5.00	1	3/14/2009
trans-1,2-dichloroethene	BQL	5.00	1	3/14/2009
1,2-Dichloropropane	BQL	5.00	1	3/14/2009
1,3-Dichloropropane	BQL	5.00	1	3/14/2009
2,2-Dichloropropane	BQL	5.00	1	3/14/2009
1,1-Dichloropropene	BQL	5.00	1	3/14/2009
cis-1,3-Dichloropropene	BQL	5.00	1	3/14/2009
trans-1,3-Dichloropropene	BQL	5.00	1	3/14/2009
Dichlorodifluoromethane	BQL	5.00	1	3/14/2009
Diisopropyl ether (DIPE)	BQL	5.00	1	3/14/2009
Ethylbenzene	BQL	5.00	1	3/14/2009
Hexachlorobutadiene	BQL	5.00	1	3/14/2009
2-Hexanone	BQL	12.5	1	3/14/2009
Iodomethane	BQL	5.00	1	3/14/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Trip Blanks
Client Project ID: CTO 005
Lab Sample ID G649-128-7A
Lab Project ID: G649-128
Report Basis: 0.0

Analyzed By: CLP
Date Collected: 03-10-2009 00:00
Date Received: 3/11/2009
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

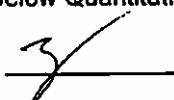
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	5.00	1	3/14/2009
4-Isopropyltoluene	BQL	5.00	1	3/14/2009
Methylene chloride	BQL	20.0	1	3/14/2009
4-Methyl-2-pentanone	BQL	12.5	1	3/14/2009
Methyl-tert-butyl ether (MTBE)	BQL	5.00	1	3/14/2009
Naphthalene	BQL	5.00	1	3/14/2009
n-Propyl benzene	BQL	5.00	1	3/14/2009
Styrene	BQL	5.00	1	3/14/2009
1,1,1,2-Tetrachloroethane	BQL	5.00	1	3/14/2009
1,1,2,2-Tetrachloroethane	BQL	5.00	1	3/14/2009
Tetrachloroethene	BQL	5.00	1	3/14/2009
Toluene	BQL	5.00	1	3/14/2009
1,2,3-Trichlorobenzene	BQL	5.00	1	3/14/2009
1,2,4-Trichlorobenzene	BQL	5.00	1	3/14/2009
Trichloroethene	BQL	5.00	1	3/14/2009
1,1,1-Trichloroethane	BQL	5.00	1	3/14/2009
1,1,2-Trichloroethane	BQL	5.00	1	3/14/2009
Trichlorofluoromethane	BQL	5.00	1	3/14/2009
1,2,3-Trichloropropane	BQL	5.00	1	3/14/2009
1,2,4-Trimethylbenzene	BQL	5.00	1	3/14/2009
1,3,5-Trimethylbenzene	BQL	5.00	1	3/14/2009
Vinyl chloride	BQL	5.00	1	3/14/2009
m-,p-Xylene	BQL	10.0	1	3/14/2009
o-Xylene	BQL	5.00	1	3/14/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	68.6	137
Toluene-d8	50	50.3	101
4-Bromofluorobenzene	50	46.7	93

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S006
Client Project ID: CTO 005
Lab Sample ID: G649-128-1H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 32.14 g

Analyzed By: DCS
Date Collected: 3/10/2009 13:18
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 79.94

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	389	1	3/12/2009
Acenaphthylene	BQL	389	1	3/12/2009
Anthracene	BQL	389	1	3/12/2009
Benzo[a]anthracene	BQL	389	1	3/12/2009
Benzo[a]pyrene	BQL	389	1	3/12/2009
Benzo[b]fluoranthene	BQL	389	1	3/12/2009
Benzo[g,h,i]perylene	BQL	389	1	3/12/2009
Benzo[k]fluoranthene	BQL	389	1	3/12/2009
Benzoic Acid	BQL	778	1	3/12/2009
Bis(2-chloroethoxy)methane	BQL	389	1	3/12/2009
Bis(2-chloroethyl)ether	BQL	389	1	3/12/2009
Bis(2-chloroisopropyl)ether	BQL	389	1	3/12/2009
Bis(2-ethylhexyl)phthalate	BQL	389	1	3/12/2009
4-bromophenyl phenyl ether	BQL	389	1	3/12/2009
Butylbenzylphthalate	BQL	389	1	3/12/2009
2-Chloronaphthalene	BQL	389	1	3/12/2009
2-Chlorophenol	BQL	389	1	3/12/2009
4-Chloro-3-methylphenol	BQL	389	1	3/12/2009
4-Chloroaniline	BQL	1950	1	3/12/2009
4-Chlorophenyl phenyl ether	BQL	389	1	3/12/2009
Chrysene	BQL	389	1	3/12/2009
Dibenzo[a,h]anthracene	BQL	389	1	3/12/2009
Dibenzofuran	BQL	389	1	3/12/2009
Di-n-Butylphthalate	BQL	389	1	3/12/2009
1,2-Dichlorobenzene	BQL	389	1	3/12/2009
1,3-Dichlorobenzene	BQL	389	1	3/12/2009
1,4-Dichlorobenzene	BQL	389	1	3/12/2009
3,3'-Dichlorobenzidine	BQL	778	1	3/12/2009
2,4-Dichlorophenol	BQL	389	1	3/12/2009
Diethylphthalate	BQL	389	1	3/12/2009
Dimethylphthalate	BQL	389	1	3/12/2009
2,4-Dimethylphenol	BQL	389	1	3/12/2009
Di-n-octylphthalate	BQL	389	1	3/12/2009
4,6-Dinitro-2-methylphenol	BQL	1950	1	3/12/2009
2,4-Dinitrophenol	BQL	1950	1	3/12/2009
2,4-Dinitrotoluene	BQL	389	1	3/12/2009
2,6-Dinitrotoluene	BQL	389	1	3/12/2009
Fluoranthene	BQL	389	1	3/12/2009
Fluorene	BQL	389	1	3/12/2009
Hexachlorobenzene	BQL	389	1	3/12/2009
Hexachlorobutadiene	BQL	389	1	3/12/2009
Hexachlorocyclopentadiene	BQL	778	1	3/12/2009
Hexachloroethane	BQL	389	1	3/12/2009
Indeno(1,2,3-c,d)pyrene	BQL	389	1	3/12/2009
Isophorone	BQL	389	1	3/12/2009
2-Methylnaphthalene	BQL	389	1	3/12/2009
2-Methylphenol	BQL	389	1	3/12/2009

SGS Environmental Services, Inc.

Results for Semivolatiles by GCMS 8270

Client Sample ID: TT3145-S006
Client Project ID: CTO 005
Lab Sample ID: G649-128-1H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 32.14 g

Analyzed By: DCS
Date Collected: 3/10/2009 13:18
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 79.94

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	389	1	3/12/2009
Naphthalene	BQL	389	1	3/12/2009
2-Nitroaniline	BQL	389	1	3/12/2009
3-Nitroaniline	BQL	1950	1	3/12/2009
4-Nitroaniline	BQL	1950	1	3/12/2009
Nitrobenzene	BQL	389	1	3/12/2009
2-Nitrophenol	BQL	389	1	3/12/2009
4-Nitrophenol	BQL	1950	1	3/12/2009
Diphenylamine *	BQL	389	1	3/12/2009
Pentachlorophenol	BQL	1950	1	3/12/2009
Phenanthrene	BQL	389	1	3/12/2009
Phenol	BQL	389	1	3/12/2009
Pyrene	BQL	389	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	389	1	3/12/2009
2,4,5-Trichlorophenol	BQL	389	1	3/12/2009
2,4,6-Trichlorophenol	BQL	389	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.5	85
2-Fluorophenol	10	9	90
Nitrobenzene-d5	10	9.2	92
Phenol-d6	10	9.4	94
2,4,6-Tribromophenol	10	7.8	78
4-Terphenyl-d14	10	8	80

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S007
Client Project ID: CTO 005
Lab Sample ID: G649-128-2H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 34.51 g

Analyzed By: DCS
Date Collected: 3/10/2009 14:28
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 79.69

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	364	1	3/12/2009
Acenaphthylene	BQL	364	1	3/12/2009
Anthracene	BQL	364	1	3/12/2009
Benzo[a]anthracene	BQL	364	1	3/12/2009
Benzo[a]pyrene	BQL	364	1	3/12/2009
Benzo[b]fluoranthene	BQL	364	1	3/12/2009
Benzo[g,h,i]perylene	BQL	364	1	3/12/2009
Benzo[k]fluoranthene	BQL	364	1	3/12/2009
Benzoic Acid	BQL	727	1	3/12/2009
Bis(2-chloroethoxy)methane	BQL	364	1	3/12/2009
Bis(2-chloroethyl)ether	BQL	364	1	3/12/2009
Bis(2-chloroisopropyl)ether	BQL	364	1	3/12/2009
Bis(2-ethylhexyl)phthalate	BQL	364	1	3/12/2009
4-bromophenyl phenyl ether	BQL	364	1	3/12/2009
Butylbenzylphthalate	BQL	364	1	3/12/2009
2-Chloronaphthalene	BQL	364	1	3/12/2009
2-Chlorophenol	BQL	364	1	3/12/2009
4-Chloro-3-methylphenol	BQL	364	1	3/12/2009
4-Chloroaniline	BQL	1820	1	3/12/2009
4-Chlorophenyl phenyl ether	BQL	364	1	3/12/2009
Chrysene	BQL	364	1	3/12/2009
Dibenzo[a,h]anthracene	BQL	364	1	3/12/2009
Dibenzofuran	BQL	364	1	3/12/2009
Di-n-Butylphthalate	BQL	364	1	3/12/2009
1,2-Dichlorobenzene	BQL	364	1	3/12/2009
1,3-Dichlorobenzene	BQL	364	1	3/12/2009
1,4-Dichlorobenzene	BQL	364	1	3/12/2009
3,3'-Dichlorobenzidine	BQL	727	1	3/12/2009
2,4-Dichlorophenol	BQL	364	1	3/12/2009
Diethylphthalate	BQL	364	1	3/12/2009
Dimethylphthalate	BQL	364	1	3/12/2009
2,4-Dimethylphenol	BQL	364	1	3/12/2009
Di-n-octylphthalate	BQL	364	1	3/12/2009
4,6-Dinitro-2-methylphenol	BQL	1820	1	3/12/2009
2,4-Dinitrophenol	BQL	1820	1	3/12/2009
2,4-Dinitrotoluene	BQL	364	1	3/12/2009
2,6-Dinitrotoluene	BQL	364	1	3/12/2009
Fluoranthene	BQL	364	1	3/12/2009
Fluorene	BQL	364	1	3/12/2009
Hexachlorobenzene	BQL	364	1	3/12/2009
Hexachlorobutadiene	BQL	364	1	3/12/2009
Hexachlorocyclopentadiene	BQL	727	1	3/12/2009
Hexachloroethane	BQL	364	1	3/12/2009
Indeno(1,2,3-c,d)pyrene	BQL	364	1	3/12/2009
Isophorone	BQL	364	1	3/12/2009
2-Methylnaphthalene	BQL	364	1	3/12/2009
2-Methylphenol	BQL	364	1	3/12/2009

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S007
Client Project ID: CTO 005
Lab Sample ID: G649-128-2H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 34.51 g

Analyzed By: DCS
Date Collected: 3/10/2009 14:28
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 79.69

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	364	1	3/12/2009
Naphthalene	BQL	364	1	3/12/2009
2-Nitroaniline	BQL	364	1	3/12/2009
3-Nitroaniline	BQL	1820	1	3/12/2009
4-Nitroaniline	BQL	1820	1	3/12/2009
Nitrobenzene	BQL	364	1	3/12/2009
2-Nitrophenol	BQL	364	1	3/12/2009
4-Nitrophenol	BQL	1820	1	3/12/2009
Diphenylamine *	BQL	364	1	3/12/2009
Pentachlorophenol	BQL	1820	1	3/12/2009
Phenanthrene	BQL	364	1	3/12/2009
Phenol	BQL	364	1	3/12/2009
Pyrene	BQL	364	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	364	1	3/12/2009
2,4,5-Trichlorophenol	BQL	364	1	3/12/2009
2,4,6-Trichlorophenol	BQL	364	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9	90
2-Fluorophenol	10	9.2	92
Nitrobenzene-d5	10	9.6	96
Phenol-d6	10	9.6	96
2,4,6-Tribromophenol	10	8.2	82
4-Terphenyl-d14	10	8.5	85

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: TT3145-S008
 Client Project ID: CTO 005
 Lab Sample ID: G649-128-3H
 Lab Project ID: G649-128
 Report Basis: Dry weight
 Initial Weight: 32.49 g

Analyzed By: DCS
 Date Collected: 3/10/2009 9:16
 Date Received: 3/11/2009
 Date Extracted: 3/12/2009
 Matrix: Soil
 % Solids: 82.88

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	371	1	3/12/2009
Acenaphthylene	BQL	371	1	3/12/2009
Anthracene	BQL	371	1	3/12/2009
Benzo[a]anthracene	BQL	371	1	3/12/2009
Benzo[a]pyrene	BQL	371	1	3/12/2009
Benzo[b]fluoranthene	BQL	371	1	3/12/2009
Benzo[g,h,i]perylene	BQL	371	1	3/12/2009
Benzo[k]fluoranthene	BQL	371	1	3/12/2009
Benzoic Acid	BQL	743	1	3/12/2009
Bis(2-chloroethoxy)methane	BQL	371	1	3/12/2009
Bis(2-chloroethyl)ether	BQL	371	1	3/12/2009
Bis(2-chloroisopropyl)ether	BQL	371	1	3/12/2009
Bis(2-ethylhexyl)phthalate	BQL	371	1	3/12/2009
4-bromophenyl phenyl ether	BQL	371	1	3/12/2009
Butylbenzylphthalate	BQL	371	1	3/12/2009
2-Chloronaphthalene	BQL	371	1	3/12/2009
2-Chlorophenol	BQL	371	1	3/12/2009
4-Chloro-3-methylphenol	BQL	371	1	3/12/2009
4-Chloroaniline	BQL	1860	1	3/12/2009
4-Chlorophenyl phenyl ether	BQL	371	1	3/12/2009
Chrysene	BQL	371	1	3/12/2009
Dibenzo[a,h]anthracene	BQL	371	1	3/12/2009
Dibenzofuran	BQL	371	1	3/12/2009
Di-n-Butylphthalate	BQL	371	1	3/12/2009
1,2-Dichlorobenzene	BQL	371	1	3/12/2009
1,3-Dichlorobenzene	BQL	371	1	3/12/2009
1,4-Dichlorobenzene	BQL	371	1	3/12/2009
3,3'-Dichlorobenzidine	BQL	743	1	3/12/2009
2,4-Dichlorophenol	BQL	371	1	3/12/2009
Diethylphthalate	BQL	371	1	3/12/2009
Dimethylphthalate	BQL	371	1	3/12/2009
2,4-Dimethylphenol	BQL	371	1	3/12/2009
Di-n-octylphthalate	BQL	371	1	3/12/2009
4,6-Dinitro-2-methylphenol	BQL	1860	1	3/12/2009
2,4-Dinitrophenol	BQL	1860	1	3/12/2009
2,4-Dinitrotoluene	BQL	371	1	3/12/2009
2,6-Dinitrotoluene	BQL	371	1	3/12/2009
Fluoranthene	BQL	371	1	3/12/2009
Fluorene	BQL	371	1	3/12/2009
Hexachlorobenzene	BQL	371	1	3/12/2009
Hexachlorobutadiene	BQL	371	1	3/12/2009
Hexachlorocyclopentadiene	BQL	743	1	3/12/2009
Hexachloroethane	BQL	371	1	3/12/2009
Indeno(1,2,3-c,d)pyrene	BQL	371	1	3/12/2009
Isophorone	BQL	371	1	3/12/2009
2-Methylnaphthalene	BQL	371	1	3/12/2009
2-Methylphenol	BQL	371	1	3/12/2009

**Results for Semivolatiles
by GCMS 8270**

Client Sample ID: TT3145-S008
 Client Project ID: CTO 005
 Lab Sample ID: G649-128-3H
 Lab Project ID: G649-128
 Report Basis: Dry weight
 Initial Weight: 32.49 g

Analized By: DCS
 Date Collected: 3/10/2009 9:16
 Date Received: 3/11/2009
 Date Extracted: 3/12/2009
 Matrix: Soil
 % Solids: 82.88

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	371	1	3/12/2009
Naphthalene	BQL	371	1	3/12/2009
2-Nitroaniline	BQL	371	1	3/12/2009
3-Nitroaniline	BQL	1860	1	3/12/2009
4-Nitroaniline	BQL	1860	1	3/12/2009
Nitrobenzene	BQL	371	1	3/12/2009
2-Nitrophenol	BQL	371	1	3/12/2009
4-Nitrophenol	BQL	1860	1	3/12/2009
Diphenylamine *	BQL	371	1	3/12/2009
Pentachlorophenol	BQL	1860	1	3/12/2009
Phenanthrene	BQL	371	1	3/12/2009
Phenol	BQL	371	1	3/12/2009
Pyrene	BQL	371	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	371	1	3/12/2009
2,4,5-Trichlorophenol	BQL	371	1	3/12/2009
2,4,6-Trichlorophenol	BQL	371	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9	90
2-Fluorophenol	10	9.3	93
Nitrobenzene-d5	10	9.4	94
Phenol-d6	10	9.5	95
2,4,6-Tribromophenol	10	8.2	82
4-Terphenyl-d14	10	8.2	82

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S009
Client Project ID: CTO 005
Lab Sample ID: G649-128-4H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 33.46 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:10
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 80.37

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	372	1	3/12/2009
Acenaphthylene	BQL	372	1	3/12/2009
Anthracene	BQL	372	1	3/12/2009
Benzo[a]anthracene	BQL	372	1	3/12/2009
Benzo[a]pyrene	BQL	372	1	3/12/2009
Benzo[b]fluoranthene	BQL	372	1	3/12/2009
Benzo[g,h,i]perylene	BQL	372	1	3/12/2009
Benzo[k]fluoranthene	BQL	372	1	3/12/2009
Benzoic Acid	BQL	744	1	3/12/2009
Bis(2-chloroethoxy)methane	BQL	372	1	3/12/2009
Bis(2-chloroethyl)ether	BQL	372	1	3/12/2009
Bis(2-chloroisopropyl)ether	BQL	372	1	3/12/2009
Bis(2-ethylhexyl)phthalate	BQL	372	1	3/12/2009
4-bromophenyl phenyl ether	BQL	372	1	3/12/2009
Butylbenzylphthalate	BQL	372	1	3/12/2009
2-Chloronaphthalene	BQL	372	1	3/12/2009
2-Chlorophenol	BQL	372	1	3/12/2009
4-Chloro-3-methylphenol	BQL	372	1	3/12/2009
4-Chloroaniline	BQL	1860	1	3/12/2009
4-Chlorophenyl phenyl ether	BQL	372	1	3/12/2009
Chrysene	BQL	372	1	3/12/2009
Dibenzo[a,h]anthracene	BQL	372	1	3/12/2009
Dibenzofuran	BQL	372	1	3/12/2009
Di-n-Butylphthalate	BQL	372	1	3/12/2009
1,2-Dichlorobenzene	BQL	372	1	3/12/2009
1,3-Dichlorobenzene	BQL	372	1	3/12/2009
1,4-Dichlorobenzene	BQL	372	1	3/12/2009
3,3'-Dichlorobenzidine	BQL	744	1	3/12/2009
2,4-Dichlorophenol	BQL	372	1	3/12/2009
Diethylphthalate	BQL	372	1	3/12/2009
Dimethylphthalate	BQL	372	1	3/12/2009
2,4-Dimethylphenol	BQL	372	1	3/12/2009
Di-n-octylphthalate	BQL	372	1	3/12/2009
4,6-Dinitro-2-methylphenol	BQL	1860	1	3/12/2009
2,4-Dinitrophenol	BQL	1860	1	3/12/2009
2,4-Dinitrotoluene	BQL	372	1	3/12/2009
2,6-Dinitrotoluene	BQL	372	1	3/12/2009
Fluoranthene	BQL	372	1	3/12/2009
Fluorene	BQL	372	1	3/12/2009
Hexachlorobenzene	BQL	372	1	3/12/2009
Hexachlorobutadiene	BQL	372	1	3/12/2009
Hexachlorocyclopentadiene	BQL	744	1	3/12/2009
Hexachloroethane	BQL	372	1	3/12/2009
Indeno(1,2,3-c,d)pyrene	BQL	372	1	3/12/2009
Isophorone	BQL	372	1	3/12/2009
2-Methylnaphthalene	BQL	372	1	3/12/2009
2-Methylphenol	BQL	372	1	3/12/2009

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S009
Client Project ID: CTO 005
Lab Sample ID: G649-128-4H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 33.46 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:10
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 80.37

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	372	1	3/12/2009
Naphthalene	BQL	372	1	3/12/2009
2-Nitroaniline	BQL	372	1	3/12/2009
3-Nitroaniline	BQL	1860	1	3/12/2009
4-Nitroaniline	BQL	1860	1	3/12/2009
Nitrobenzene	BQL	372	1	3/12/2009
2-Nitrophenol	BQL	372	1	3/12/2009
4-Nitrophenol	BQL	1860	1	3/12/2009
Diphenylamine *	BQL	372	1	3/12/2009
Pentachlorophenol	BQL	1860	1	3/12/2009
Phenanthrene	BQL	372	1	3/12/2009
Phenol	BQL	372	1	3/12/2009
Pyrene	BQL	372	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	372	1	3/12/2009
2,4,5-Trichlorophenol	BQL	372	1	3/12/2009
2,4,6-Trichlorophenol	BQL	372	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.3	73
2-Fluorophenol	10	7.5	75
Nitrobenzene-d5	10	7.9	79
Phenol-d6	10	7.7	77
2,4,6-Tribromophenol	10	6.6	66
4-Terphenyl-d14	10	6.6	66

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S010
Client Project ID: CTO 005
Lab Sample ID: G649-128-5H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 32.24 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:25
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 77.45

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	400	1	3/12/2009
Acenaphthylene	BQL	400	1	3/12/2009
Anthracene	BQL	400	1	3/12/2009
Benzo[a]anthracene	BQL	400	1	3/12/2009
Benzo[a]pyrene	BQL	400	1	3/12/2009
Benzo[b]fluoranthene	BQL	400	1	3/12/2009
Benzo[g,h,i]perylene	BQL	400	1	3/12/2009
Benzo[k]fluoranthene	BQL	400	1	3/12/2009
Benzoic Acid	BQL	801	1	3/12/2009
Bis(2-chloroethoxy)methane	BQL	400	1	3/12/2009
Bis(2-chloroethyl)ether	BQL	400	1	3/12/2009
Bis(2-chloroisopropyl)ether	BQL	400	1	3/12/2009
Bis(2-ethylhexyl)phthalate	BQL	400	1	3/12/2009
4-bromophenyl phenyl ether	BQL	400	1	3/12/2009
Butylbenzylphthalate	BQL	400	1	3/12/2009
2-Chloronaphthalene	BQL	400	1	3/12/2009
2-Chlorophenol	BQL	400	1	3/12/2009
4-Chloro-3-methylphenol	BQL	400	1	3/12/2009
4-Chloroaniline	BQL	2000	1	3/12/2009
4-Chlorophenyl phenyl ether	BQL	400	1	3/12/2009
Chrysene	BQL	400	1	3/12/2009
Dibenzo[a,h]anthracene	BQL	400	1	3/12/2009
Dibenzofuran	BQL	400	1	3/12/2009
Di-n-Butylphthalate	BQL	400	1	3/12/2009
1,2-Dichlorobenzene	BQL	400	1	3/12/2009
1,3-Dichlorobenzene	BQL	400	1	3/12/2009
1,4-Dichlorobenzene	BQL	400	1	3/12/2009
3,3'-Dichlorobenzidine	BQL	801	1	3/12/2009
2,4-Dichlorophenol	BQL	400	1	3/12/2009
Diethylphthalate	BQL	400	1	3/12/2009
Dimethylphthalate	BQL	400	1	3/12/2009
2,4-Dimethylphenol	BQL	400	1	3/12/2009
Di-n-octylphthalate	BQL	400	1	3/12/2009
4,6-Dinitro-2-methylphenol	BQL	2000	1	3/12/2009
2,4-Dinitrophenol	BQL	2000	1	3/12/2009
2,4-Dinitrotoluene	BQL	400	1	3/12/2009
2,6-Dinitrotoluene	BQL	400	1	3/12/2009
Fluoranthene	BQL	400	1	3/12/2009
Fluorene	BQL	400	1	3/12/2009
Hexachlorobenzene	BQL	400	1	3/12/2009
Hexachlorobutadiene	BQL	400	1	3/12/2009
Hexachlorocyclopentadiene	BQL	801	1	3/12/2009
Hexachloroethane	BQL	400	1	3/12/2009
Indeno(1,2,3-c,d)pyrene	BQL	400	1	3/12/2009
Isophorone	BQL	400	1	3/12/2009
2-Methylnaphthalene	BQL	400	1	3/12/2009
2-Methylphenol	BQL	400	1	3/12/2009

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S010
Client Project ID: CTO 005
Lab Sample ID: G649-128-5H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 32.24 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:25
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 77.45

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	400	1	3/12/2009
Naphthalene	BQL	400	1	3/12/2009
2-Nitroaniline	BQL	400	1	3/12/2009
3-Nitroaniline	BQL	2000	1	3/12/2009
4-Nitroaniline	BQL	2000	1	3/12/2009
Nitrobenzene	BQL	400	1	3/12/2009
2-Nitrophenol	BQL	400	1	3/12/2009
4-Nitrophenol	BQL	2000	1	3/12/2009
Diphenylamine *	BQL	400	1	3/12/2009
Pentachlorophenol	BQL	2000	1	3/12/2009
Phenanthrene	BQL	400	1	3/12/2009
Phenol	BQL	400	1	3/12/2009
Pyrene	BQL	400	1	3/12/2009
1,2,4-Trichlorobenzene	BQL	400	1	3/12/2009
2,4,5-Trichlorophenol	BQL	400	1	3/12/2009
2,4,6-Trichlorophenol	BQL	400	1	3/12/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	8.3	83
2-Fluorophenol	10	8.7	87
Nitrobenzene-d5	10	9.2	92
Phenol-d6	10	9.1	91
2,4,6-Tribromophenol	10	7.8	78
4-Terphenyl-d14	10	7.9	79

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S011
Client Project ID: CTO 005
Lab Sample ID: G649-128-6H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 36.52 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:22
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 81.08

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	3380	10	3/13/2009
Acenaphthylene	BQL	3380	10	3/13/2009
Anthracene	BQL	3380	10	3/13/2009
Benzo[a]anthracene	BQL	3380	10	3/13/2009
Benzo[a]pyrene	BQL	3380	10	3/13/2009
Benzo[b]fluoranthene	BQL	3380	10	3/13/2009
Benzo[g,h,i]perylene	BQL	3380	10	3/13/2009
Benzo[k]fluoranthene	BQL	3380	10	3/13/2009
Benzoic Acid	BQL	6750	10	3/13/2009
Bis(2-chloroethoxy)methane	BQL	3380	10	3/13/2009
Bis(2-chloroethyl)ether	BQL	3380	10	3/13/2009
Bis(2-chloroisopropyl)ether	BQL	3380	10	3/13/2009
Bis(2-ethylhexyl)phthalate	BQL	3380	10	3/13/2009
4-bromophenyl phenyl ether	BQL	3380	10	3/13/2009
Butylbenzylphthalate	BQL	3380	10	3/13/2009
2-Chloronaphthalene	BQL	3380	10	3/13/2009
2-Chlorophenol	BQL	3380	10	3/13/2009
4-Chloro-3-methylphenol	BQL	3380	10	3/13/2009
4-Chloroaniline	BQL	16900	10	3/13/2009
4-Chlorophenyl phenyl ether	BQL	3380	10	3/13/2009
Chrysene	BQL	3380	10	3/13/2009
Dibenzo[a,h]anthracene	BQL	3380	10	3/13/2009
Dibenzofuran	BQL	3380	10	3/13/2009
Di-n-Butylphthalate	BQL	3380	10	3/13/2009
1,2-Dichlorobenzene	BQL	3380	10	3/13/2009
1,3-Dichlorobenzene	BQL	3380	10	3/13/2009
1,4-Dichlorobenzene	BQL	3380	10	3/13/2009
3,3'-Dichlorobenzidine	BQL	6750	10	3/13/2009
2,4-Dichlorophenol	BQL	3380	10	3/13/2009
Diethylphthalate	BQL	3380	10	3/13/2009
Dimethylphthalate	BQL	3380	10	3/13/2009
2,4-Dimethylphenol	BQL	3380	10	3/13/2009
Di-n-octylphthalate	BQL	3380	10	3/13/2009
4,6-Dinitro-2-methylphenol	BQL	16900	10	3/13/2009
2,4-Dinitrophenol	BQL	16900	10	3/13/2009
2,4-Dinitrotoluene	BQL	3380	10	3/13/2009
2,6-Dinitrotoluene	BQL	3380	10	3/13/2009
Fluoranthene	BQL	3380	10	3/13/2009
Fluorene	BQL	3380	10	3/13/2009
Hexachlorobenzene	BQL	3380	10	3/13/2009
Hexachlorobutadiene	BQL	3380	10	3/13/2009
Hexachlorocyclopentadiene	BQL	6750	10	3/13/2009
Hexachloroethane	BQL	3380	10	3/13/2009
Indeno(1,2,3-c,d)pyrene	BQL	3380	10	3/13/2009
Isophorone	BQL	3380	10	3/13/2009
2-Methylnaphthalene	32000	3380	10	3/13/2009
2-Methylphenol	BQL	3380	10	3/13/2009

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S011
Client Project ID: CTO 005
Lab Sample ID: G649-128-6H
Lab Project ID: G649-128
Report Basis: Dry weight
Initial Weight: 36.52 g

Analyzed By: DCS
Date Collected: 3/10/2009 9:22
Date Received: 3/11/2009
Date Extracted: 3/12/2009
Matrix: Soil
% Solids: 81.08

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	3380	10	3/13/2009
Naphthalene	4490	3380	10	3/13/2009
2-Nitroaniline	BQL	3380	10	3/13/2009
3-Nitroaniline	BQL	16900	10	3/13/2009
4-Nitroaniline	BQL	16900	10	3/13/2009
Nitrobenzene	BQL	3380	10	3/13/2009
2-Nitrophenol	BQL	3380	10	3/13/2009
4-Nitrophenol	BQL	16900	10	3/13/2009
Diphenylamine *	BQL	3380	10	3/13/2009
Pentachlorophenol	BQL	16900	10	3/13/2009
Phenanthrene	4490	3380	10	3/13/2009
Phenol	BQL	3380	10	3/13/2009
Pyrene	BQL	3380	10	3/13/2009
1,2,4-Trichlorobenzene	BQL	3380	10	3/13/2009
2,4,5-Trichlorophenol	BQL	3380	10	3/13/2009
2,4,6-Trichlorophenol	BQL	3380	10	3/13/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	1	NA	NA
2-Fluorophenol	1	NA	NA
Nitrobenzene-d5	1	NA	NA
Phenol-d6	1	NA	NA
2,4,6-Tribromophenol	1	NA	NA
4-Terphenyl-d14	1	NA	NA

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 



SGS Environmental Services Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide
• Alaska • Maryland
• New Jersey • New York
• North Carolina • Ohio
• West Virginia
www.us.sgs.com

1 CLIENT: <u>OSAGE OF VIRGINIA</u>					SGS Reference #: <u>4641-128</u>					page <u>1</u> of <u>1</u>				
CONTACT: <u>THORSEN EIKEMAN</u> PHONE NO: <u>(757) 274-4949</u>														
PROJECT: <u>CTO 005</u> SITE/PWSID#: <u>TT 3145</u>														
REPORTS TO: EMAIL: <u>shaunwhitworth@osageva.com</u>														
INVOICE TO: <u>Mike Cree</u> QUOTE #: <u>CT 005</u>														
2														
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required	MADEP VPH	MADEP EPH	8260	8270		REMARKS/ LOC ID
	TT 3145-5006	3/10/09	1318	S	4		X	X	X	X				3'ft
	TT 3145-5007	3/10/09	1428	S	6		X	X	X	X				3'ft
	TT 3145-5008	3/10/09	0916	S	6		X	X	X	X				9.5'ft
	TT 3145-5009	3/10/09	0910	S	4		X	X	X	X				10'ft
	TT 3145-5010	3/10/09	0925	S	6		X	X	X	X				10'ft
	TT 3145-5011	3/10/09	0922	S	4		X	X	X	X				10'ft
	TRIP BLANKS	3/10/09	0900	-	2		X		X					
5														
Collected/Relinquished By: (1)		Date	Time	Received By:		4		DOD Project? <u>YES</u> NO		Special Deliverable Requirements: <u>EDD</u>				
<u>[Signature]</u>		<u>3/11/09</u>	<u>1600</u>	<u>[Signature]</u>				Cooler ID _____						
Relinquished By: (2)		Date	Time	Received By:		Requested Turnaround Time and-or Special Instructions: <u>24 HR TURN</u> <u>Email results to swhitworth@osageva.com</u> <u>tellerman@osageva.com</u>								
Relinquished By: (3)		Date	Time	Received By:		Samples Received Cold? <u>YES</u> NO								
Relinquished By: (4)		Date	Time	Received For Laboratory By:		Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u>								
									Temperature °C: <u>5.9°C</u>		Cooler <u>TB</u>			



Shaun Whitworth
Osage of Virginia
2618 A Colley Ave
Norfolk, VA 23517

Report Number: G649-134

Client Project: CTO 005

Dear Shaun Whitworth,

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS Environmental Services at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
SGS Environmental Services, Inc.

 3/23/09
Project Manager Date
Ashley Nifong

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S012
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	03/19/09 12:15
Date Received	03/20/09
Date Extracted	03/20/09
Date Analyzed	03/21/09 01:19 - 03/21/09 01:19
Dry Weight	80.3
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	86.8		70	130
Surrogate % Recovery - FID	99.5		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g649-134-1d	Lab Info: g649-134-1d
FID Info: VP032009/029F0101.D	PID Info: VP032009/029R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	Trip Blanks
Sample Matrix	Soil
Collection Option (for Soil)*	NA
Date Collected	03/19/09 00:00
Date Received	03/20/09
Date Extracted	03/20/09
Date Analyzed	03/20/09 22:10 - 03/20/09 22:10
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits	
			Lower	Upper
Surrogate % Recovery - PID	85.4		70	130
Surrogate % Recovery - FID	98.1		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g649-134-2a	Lab Info: g649-134-2a
FID Info: VP032009/022F0101.D	PID Info: VP032009/022R0101.D

Reviewed By: 

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 03/15/09PID Initial Calibration Date: 03/15/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	24.28	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	7.07	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 03/20/09Filename: VP032009/007F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	-9.4	±25%
C ₉ -C ₁₂ Aliphatics	200	16	2.3	±25%
C ₉ -C ₁₀ Aromatics	200	16	-5.0	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 03/15/09PID Initial Calibration Date: 03/15/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	($\mu\text{g/L}$)	(mg/Kg)	($\mu\text{g/L}$)	(mg/Kg)	($\mu\text{g/L}$)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels ($\mu\text{g/L}$)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.21	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	24.28	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	7.07	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 03/20/09Filename: VP032009/031F0101.d

Calibration Check

Range	Levels ($\mu\text{g/L}$)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	-23.6	±25%
C ₉ -C ₁₂ Aliphatics	200	16	3.0	±25%
C ₉ -C ₁₀ Aromatics	200	16	-11.4	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Osage of VirginiaProject Name: CTO 005

Sample Information	
Sample Identification	TT3145-S012
Sample Matrix	Soil
Date Collected	03/19/09 12:15
Date Received	03/20/09
Date Extracted	03/20/09
Date Analyzed	03/23/09 10:13 - 03/23/09 10:13
Dry Weight	80.3
Dilution Factor	1 - 1
Initial weight (g)	13.58
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	97.7		40	140
Aromatic (ortho-terphenyl)	96.8		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G649-134-1H	Lab Info: G649-134-1H
Aliphatic: EP032309/004F0201.D	Aromatic: EP032309/004F0201.D

Reviewed By: 

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/23/09
03/23/09Filenames: ep032309/001f0101.d
ep032309/002f0201.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR ✓	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	-3.5	±25%
C19-C36 Aliphatics	100	16.7	-9.9	±25%
C11-C22 Aromatics	100	16.7	0.4	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 03/23/09
03/23/09Filename: ep032309/001f1301.d
ep032309/002f1401.d

Calibration Check

Range	Levels		%Difference if CF %Drift if LR ✓	Limits
	(µg/L)	(mg/Kg)		
C9-C18 Aliphatics	100	16.7	6.1	±25%
C19-C36 Aliphatics	100	16.7	6.3	±25%
C11-C22 Aromatics	100	16.7	-4.7	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: TT3145-S012
Client Project ID: CTO 005
Lab Sample ID G649-134-1C
Lab Project ID: G649-134
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-19-2009 12:15
Date Received: 3/20/2009
Matrix: Soil
Sample Amount: 6.42 g
%Solids: 80.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	48.5	1	3/23/2009
Benzene	BQL	4.85	1	3/23/2009
Bromobenzene	BQL	4.85	1	3/23/2009
Bromochloromethane	BQL	4.85	1	3/23/2009
Bromodichloromethane	BQL	4.85	1	3/23/2009
Bromoform	BQL	4.85	1	3/23/2009
Bromomethane	BQL	4.85	1	3/23/2009
2-Butanone	BQL	24.3	1	3/23/2009
n-Butylbenzene	BQL	4.85	1	3/23/2009
sec-Butylbenzene	BQL	4.85	1	3/23/2009
tert-Butylbenzene	BQL	4.85	1	3/23/2009
Carbon disulfide	BQL	4.85	1	3/23/2009
Carbon tetrachloride	BQL	4.85	1	3/23/2009
Chlorobenzene	BQL	4.85	1	3/23/2009
Chloroethane	BQL	4.85	1	3/23/2009
Chloroform	BQL	4.85	1	3/23/2009
Chloromethane	BQL	4.85	1	3/23/2009
2-Chlorotoluene	BQL	4.85	1	3/23/2009
4-Chlorotoluene	BQL	4.85	1	3/23/2009
Dibromochloromethane	BQL	4.85	1	3/23/2009
1,2-Dibromo-3-chloropropane	BQL	24.3	1	3/23/2009
Dibromomethane	BQL	4.85	1	3/23/2009
1,2-Dibromoethane (EDB)	BQL	4.85	1	3/23/2009
1,2-Dichlorobenzene	BQL	4.85	1	3/23/2009
1,3-Dichlorobenzene	BQL	4.85	1	3/23/2009
1,4-Dichlorobenzene	BQL	4.85	1	3/23/2009
trans-1,4-Dichloro-2-butene	BQL	24.3	1	3/23/2009
1,1-Dichloroethane	BQL	4.85	1	3/23/2009
1,1-Dichloroethene	BQL	4.85	1	3/23/2009
1,2-Dichloroethane	BQL	4.85	1	3/23/2009
cis-1,2-Dichloroethene	BQL	4.85	1	3/23/2009
trans-1,2-dichloroethene	BQL	4.85	1	3/23/2009
1,2-Dichloropropane	BQL	4.85	1	3/23/2009
1,3-Dichloropropane	BQL	4.85	1	3/23/2009
2,2-Dichloropropane	BQL	4.85	1	3/23/2009
1,1-Dichloropropene	BQL	4.85	1	3/23/2009
cis-1,3-Dichloropropene	BQL	4.85	1	3/23/2009
trans-1,3-Dichloropropene	BQL	4.85	1	3/23/2009
Dichlorodifluoromethane	BQL	4.85	1	3/23/2009
Diisopropyl ether (DIPE)	BQL	4.85	1	3/23/2009
Ethylbenzene	BQL	4.85	1	3/23/2009
Hexachlorobutadiene	BQL	4.85	1	3/23/2009
2-Hexanone	BQL	12.1	1	3/23/2009
Iodomethane	BQL	4.85	1	3/23/2009

SGS Environmental Services, Inc.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: TT3145-S012
Client Project ID: CTO 005
Lab Sample ID G649-134-1C
Lab Project ID: G649-134
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 03-19-2009 12:15
Date Received: 3/20/2009
Matrix: Soil
Sample Amount: 6.42 g
%Solids: 80.3

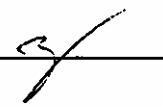
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	4.85	1	3/23/2009
4-Isopropyltoluene	BQL	4.85	1	3/23/2009
Methylene chloride	BQL	19.4	1	3/23/2009
4-Methyl-2-pentanone	BQL	12.1	1	3/23/2009
Methyl-tert-butyl ether (MTBE)	BQL	4.85	1	3/23/2009
Naphthalene	BQL	4.85	1	3/23/2009
n-Propyl benzene	BQL	4.85	1	3/23/2009
Styrene	BQL	4.85	1	3/23/2009
1,1,1,2-Tetrachloroethane	BQL	4.85	1	3/23/2009
1,1,2,2-Tetrachloroethane	BQL	4.85	1	3/23/2009
Tetrachloroethene	BQL	4.85	1	3/23/2009
Toluene	BQL	4.85	1	3/23/2009
1,2,3-Trichlorobenzene	BQL	4.85	1	3/23/2009
1,2,4-Trichlorobenzene	BQL	4.85	1	3/23/2009
Trichloroethene	BQL	4.85	1	3/23/2009
1,1,1-Trichloroethane	BQL	4.85	1	3/23/2009
1,1,2-Trichloroethane	BQL	4.85	1	3/23/2009
Trichlorofluoromethane	BQL	4.85	1	3/23/2009
1,2,3-Trichloropropane	BQL	4.85	1	3/23/2009
1,2,4-Trimethylbenzene	BQL	4.85	1	3/23/2009
1,3,5-Trimethylbenzene	BQL	4.85	1	3/23/2009
Vinyl chloride	BQL	4.85	1	3/23/2009
m-,p-Xylene	BQL	9.70	1	3/23/2009
o-Xylene	BQL	4.85	1	3/23/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	64.4	129
Toluene-d8	50	50.7	101
4-Bromofluorobenzene	50	46.4	93

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Trip Blanks
Client Project ID: CTO 005
Lab Sample ID G649-134-2A
Lab Project ID: G649-134
Report Basis: 0.0

Analyzed By: MJC
Date Collected: 03-19-2009 00:00
Date Received: 3/20/2009
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	50.0	1	3/21/2009
Benzene	BQL	5.00	1	3/21/2009
Bromobenzene	BQL	5.00	1	3/21/2009
Bromochloromethane	BQL	5.00	1	3/21/2009
Bromodichloromethane	BQL	5.00	1	3/21/2009
Bromoform	BQL	5.00	1	3/21/2009
Bromomethane	BQL	5.00	1	3/21/2009
2-Butanone	BQL	25.0	1	3/21/2009
n-Butylbenzene	BQL	5.00	1	3/21/2009
sec-Butylbenzene	BQL	5.00	1	3/21/2009
tert-Butylbenzene	BQL	5.00	1	3/21/2009
Carbon disulfide	BQL	5.00	1	3/21/2009
Carbon tetrachloride	BQL	5.00	1	3/21/2009
Chlorobenzene	BQL	5.00	1	3/21/2009
Chloroethane	BQL	5.00	1	3/21/2009
Chloroform	BQL	5.00	1	3/21/2009
Chloromethane	BQL	5.00	1	3/21/2009
2-Chlorotoluene	BQL	5.00	1	3/21/2009
4-Chlorotoluene	BQL	5.00	1	3/21/2009
Dibromochloromethane	BQL	5.00	1	3/21/2009
1,2-Dibromo-3-chloropropane	BQL	25.0	1	3/21/2009
Dibromomethane	BQL	5.00	1	3/21/2009
1,2-Dibromoethane (EDB)	BQL	5.00	1	3/21/2009
1,2-Dichlorobenzene	BQL	5.00	1	3/21/2009
1,3-Dichlorobenzene	BQL	5.00	1	3/21/2009
1,4-Dichlorobenzene	BQL	5.00	1	3/21/2009
trans-1,4-Dichloro-2-butene	BQL	25.0	1	3/21/2009
1,1-Dichloroethane	BQL	5.00	1	3/21/2009
1,1-Dichloroethene	BQL	5.00	1	3/21/2009
1,2-Dichloroethane	BQL	5.00	1	3/21/2009
cis-1,2-Dichloroethene	BQL	5.00	1	3/21/2009
trans-1,2-dichloroethene	BQL	5.00	1	3/21/2009
1,2-Dichloropropane	BQL	5.00	1	3/21/2009
1,3-Dichloropropane	BQL	5.00	1	3/21/2009
2,2-Dichloropropane	BQL	5.00	1	3/21/2009
1,1-Dichloropropene	BQL	5.00	1	3/21/2009
cis-1,3-Dichloropropene	BQL	5.00	1	3/21/2009
trans-1,3-Dichloropropene	BQL	5.00	1	3/21/2009
Dichlorodifluoromethane	BQL	5.00	1	3/21/2009
Diisopropyl ether (DIPE)	BQL	5.00	1	3/21/2009
Ethylbenzene	BQL	5.00	1	3/21/2009
Hexachlorobutadiene	BQL	5.00	1	3/21/2009
2-Hexanone	BQL	12.5	1	3/21/2009
Iodomethane	BQL	5.00	1	3/21/2009

SGS Environmental Services, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Trip Blanks
Client Project ID: CTO 005
Lab Sample ID G649-134-2A
Lab Project ID: G649-134
Report Basis: 0.0

Analyzed By: MJC
Date Collected: 03-19-2009 00:00
Date Received: 3/20/2009
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

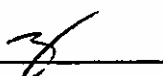
Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Isopropylbenzene	BQL	5.00	1	3/21/2009
4-Isopropyltoluene	BQL	5.00	1	3/21/2009
Methylene chloride	BQL	20.0	1	3/21/2009
4-Methyl-2-pentanone	BQL	12.5	1	3/21/2009
Methyl-tert-butyl ether (MTBE)	BQL	5.00	1	3/21/2009
Naphthalene	BQL	5.00	1	3/21/2009
n-Propyl benzene	BQL	5.00	1	3/21/2009
Styrene	BQL	5.00	1	3/21/2009
1,1,1,2-Tetrachloroethane	BQL	5.00	1	3/21/2009
1,1,2,2-Tetrachloroethane	BQL	5.00	1	3/21/2009
Tetrachloroethene	BQL	5.00	1	3/21/2009
Toluene	BQL	5.00	1	3/21/2009
1,2,3-Trichlorobenzene	BQL	5.00	1	3/21/2009
1,2,4-Trichlorobenzene	BQL	5.00	1	3/21/2009
Trichloroethene	BQL	5.00	1	3/21/2009
1,1,1-Trichloroethane	BQL	5.00	1	3/21/2009
1,1,2-Trichloroethane	BQL	5.00	1	3/21/2009
Trichlorofluoromethane	BQL	5.00	1	3/21/2009
1,2,3-Trichloropropane	BQL	5.00	1	3/21/2009
1,2,4-Trimethylbenzene	BQL	5.00	1	3/21/2009
1,3,5-Trimethylbenzene	BQL	5.00	1	3/21/2009
Vinyl chloride	BQL	5.00	1	3/21/2009
m-,p-Xylene	BQL	10.0	1	3/21/2009
o-Xylene	BQL	5.00	1	3/21/2009

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	68.8	138
Toluene-d8	50	50.2	100
4-Bromofluorobenzene	50	45.2	90

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S012
Client Project ID: CTO 005
Lab Sample ID: G649-134-1G
Lab Project ID: G649-134
Report Basis: Dry weight
Initial Weight: 34.48 g

Analyzed By: DCS
Date Collected: 3/19/2009 12:15
Date Received: 3/20/2009
Date Extracted: 3/20/2009
Matrix: Soil
% Solids: 80.25

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	361	1	3/23/2009
Acenaphthylene	BQL	361	1	3/23/2009
Anthracene	BQL	361	1	3/23/2009
Benzo[a]anthracene	BQL	361	1	3/23/2009
Benzo[a]pyrene	BQL	361	1	3/23/2009
Benzo[b]fluoranthene	BQL	361	1	3/23/2009
Benzo[g,h,i]perylene	BQL	361	1	3/23/2009
Benzo[k]fluoranthene	BQL	361	1	3/23/2009
Benzoic Acid	BQL	723	1	3/23/2009
Bis(2-chloroethoxy)methane	BQL	361	1	3/23/2009
Bis(2-chloroethyl)ether	BQL	361	1	3/23/2009
Bis(2-chloroisopropyl)ether	BQL	361	1	3/23/2009
Bis(2-ethylhexyl)phthalate	BQL	361	1	3/23/2009
4-bromophenyl phenyl ether	BQL	361	1	3/23/2009
Butylbenzylphthalate	BQL	361	1	3/23/2009
2-Chloronaphthalene	BQL	361	1	3/23/2009
2-Chlorophenol	BQL	361	1	3/23/2009
4-Chloro-3-methylphenol	BQL	361	1	3/23/2009
4-Chloroaniline	BQL	1810	1	3/23/2009
4-Chlorophenyl phenyl ether	BQL	361	1	3/23/2009
Chrysene	BQL	361	1	3/23/2009
Dibenzo[a,h]anthracene	BQL	361	1	3/23/2009
Dibenzofuran	BQL	361	1	3/23/2009
Di-n-Butylphthalate	BQL	361	1	3/23/2009
1,2-Dichlorobenzene	BQL	361	1	3/23/2009
1,3-Dichlorobenzene	BQL	361	1	3/23/2009
1,4-Dichlorobenzene	BQL	361	1	3/23/2009
3,3'-Dichlorobenzidine	BQL	723	1	3/23/2009
2,4-Dichlorophenol	BQL	361	1	3/23/2009
Diethylphthalate	BQL	361	1	3/23/2009
Dimethylphthalate	BQL	361	1	3/23/2009
2,4-Dimethylphenol	BQL	361	1	3/23/2009
Di-n-octylphthalate	BQL	361	1	3/23/2009
4,6-Dinitro-2-methylphenol	BQL	1810	1	3/23/2009
2,4-Dinitrophenol	BQL	1810	1	3/23/2009
2,4-Dinitrotoluene	BQL	361	1	3/23/2009
2,6-Dinitrotoluene	BQL	361	1	3/23/2009
Fluoranthene	BQL	361	1	3/23/2009
Fluorene	BQL	361	1	3/23/2009
Hexachlorobenzene	BQL	361	1	3/23/2009
Hexachlorobutadiene	BQL	361	1	3/23/2009
Hexachlorocyclopentadiene	BQL	723	1	3/23/2009
Hexachloroethane	BQL	361	1	3/23/2009
Indeno(1,2,3-c,d)pyrene	BQL	361	1	3/23/2009
Isophorone	BQL	361	1	3/23/2009
2-Methylnaphthalene	BQL	361	1	3/23/2009
2-Methylphenol	BQL	361	1	3/23/2009

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: TT3145-S012
Client Project ID: CTO 005
Lab Sample ID: G649-134-1G
Lab Project ID: G649-134
Report Basis: Dry weight
Initial Weight: 34.48 g

Analyzed By: DCS
Date Collected: 3/19/2009 12:15
Date Received: 3/20/2009
Date Extracted: 3/20/2009
Matrix: Soil
% Solids: 80.25

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
3- & 4-Methylphenol	BQL	361	1	3/23/2009
Naphthalene	BQL	361	1	3/23/2009
2-Nitroaniline	BQL	361	1	3/23/2009
3-Nitroaniline	BQL	1810	1	3/23/2009
4-Nitroaniline	BQL	1810	1	3/23/2009
Nitrobenzene	BQL	361	1	3/23/2009
2-Nitrophenol	BQL	361	1	3/23/2009
4-Nitrophenol	BQL	1810	1	3/23/2009
Diphenylamine *	BQL	361	1	3/23/2009
Pentachlorophenol	BQL	1810	1	3/23/2009
Phenanthrene	BQL	361	1	3/23/2009
Phenol	BQL	361	1	3/23/2009
Pyrene	BQL	361	1	3/23/2009
1,2,4-Trichlorobenzene	BQL	361	1	3/23/2009
2,4,5-Trichlorophenol	BQL	361	1	3/23/2009
2,4,6-Trichlorophenol	BQL	361	1	3/23/2009

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	5.4	54
2-Fluorophenol	10	5.6	56
Nitrobenzene-d5	10	5.9	59
Phenol-d6	10	5.9	59
2,4,6-Tribromophenol	10	5.4	54
4-Terphenyl-d14	10	4.9	49

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

Reviewed By: 

SGS Environmental Services Inc. CHAIN OF CUSTODY RECORD

Locations Nationwide

- Alaska
- New Jersey
- North Carolina
- West Virginia
- Maryland
- New York
- Ohio

www.us.sgs.com

[illegible]

SGS Environmental Services, Inc.

Shane Chasteen
Richard Catlin & Associates
P.O. Box 10279
Wilmington, NC 28404-0279

Report Number: G128-2346

Client Project: TT-3145

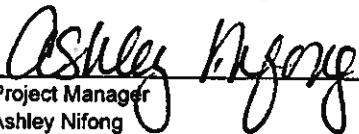
Dear Shane Chasteen,

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Ashley Nifong at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS Environmental Services for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS Environmental Services, Inc.

 4/2/09
Project Manager Date
Ashley Nifong

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

SGS Environmental Services, Inc.

Results for Volatiles
by GC 602

Client Sample ID: TT3145-TW01
Client Project ID: TT-3145
Lab Sample ID: G128-2346-1D
Lab Project ID: G128-2346

Analyzed By: RSB
Date Collected: 3/31/2009 13:30
Date Received: 3/31/2009
Matrix: Water

Analyte	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flags
Benzene	BQL	1.00	0.177	1	4/2/2009	
Diisopropyl ether (DIPE)	BQL	1.00	0.253	1	4/2/2009	
Ethylbenzene	BQL	1.00	0.19	1	4/2/2009	
Methyl-tert butyl ether (MTBE)	BQL	2.00	0.306	1	4/2/2009	
Toluene	BQL	1.00	0.313	1	4/2/2009	
m/p-Xylene	BQL	2.00	0.481	1	4/2/2009	
o-Xylene	BQL	2.00	0.405	1	4/2/2009	

Surrogate Spike Recoveries

	Spike Added	Spike Result	Percent Recovery
Trifluorotoluene	40	40.0	100

Comments:

All values corrected for dilution.
BQL = Below quantitation limit.

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT3145-TW01
 Client Project ID: TT-3145
 Lab Sample ID: G128-2346-1J
 Lab Project ID: G128-2346

Analyzed By: DCS
 Date Collected: 3/31/2009 13:30
 Date Received: 3/31/2009
 Date Extracted: 4/1/2009
 Matrix: Water

Initial/Final Amt: 963 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	5.19	0.774	1	4/2/2009	
Acenaphthylene	BQL	5.19	0.774	1	4/2/2009	
Anthracene	BQL	5.19	0.909	1	4/2/2009	
Benzo[a]anthracene	BQL	5.19	0.706	1	4/2/2009	
Benzo[a]pyrene	BQL	5.19	0.659	1	4/2/2009	
Benzo[b]fluoranthene	BQL	5.19	0.742	1	4/2/2009	
Benzo[g,h,i]perylene	BQL	5.19	0.639	1	4/2/2009	
Benzo[k]fluoranthene	BQL	5.19	0.571	1	4/2/2009	
Bis(2-chloroethoxy)methane	BQL	5.19	1.07	1	4/2/2009	
Bis(2-chloroethyl)ether	BQL	5.19	1.08	1	4/2/2009	
Bis(2-chloroisopropyl)ether	BQL	5.19	1.01	1	4/2/2009	
Bis(2-ethylhexyl)phthalate	BQL	5.19	0.426	1	4/2/2009	
4-bromophenyl phenyl ether	BQL	5.19	0.810	1	4/2/2009	
Butylbenzylphthalate	BQL	5.19	0.462	1	4/2/2009	
2-Chloronaphthalene	BQL	5.19	0.898	1	4/2/2009	
2-Chlorophenol	BQL	5.19	1.21	1	4/2/2009	
4-Chloro-3-methylphenol	BQL	5.19	0.826	1	4/2/2009	
4-Chlorophenyl phenyl ether	BQL	5.19	3.38	1	4/2/2009	
Chrysene	BQL	5.19	0.576	1	4/2/2009	
Dibenzo[a,h]anthracene	BQL	5.19	0.457	1	4/2/2009	
Di-n-Butylphthalate	BQL	5.19	0.857	1	4/2/2009	
3,3'-Dichlorobenzidine	BQL	10.4	1.27	1	4/2/2009	
2,4-Dichlorophenol	BQL	5.19	1.16	1	4/2/2009	
Diethylphthalate	BQL	5.19	0.768	1	4/2/2009	
Dimethylphthalate	BQL	5.19	0.576	1	4/2/2009	
2,4-Dimethylphenol	BQL	5.19	1.68	1	4/2/2009	
Di-n-octylphthalate	BQL	5.19	0.602	1	4/2/2009	
4,6-Dinitro-2-methylphenol	BQL	26.0	0.571	1	4/2/2009	
2,4-Dinitrophenol	BQL	26.0	0.665	1	4/2/2009	
2,4-Dinitrotoluene	BQL	5.19	0.556	1	4/2/2009	
2,6-Dinitrotoluene	BQL	5.19	0.675	1	4/2/2009	
Diphenylamine *	BQL	5.19	0.592	1	4/2/2009	
Fluoranthene	BQL	5.19	0.732	1	4/2/2009	
Fluorene	BQL	5.19	0.753	1	4/2/2009	
Hexachlorobenzene	BQL	5.19	0.524	1	4/2/2009	
Hexachlorobutadiene	BQL	5.19	0.789	1	4/2/2009	
Hexachlorocyclopentadiene	BQL	10.4	10.4	1	4/2/2009	
Hexachloroethane	BQL	5.19	0.774	1	4/2/2009	
Indeno(1,2,3-c,d)pyrene	BQL	5.19	2.37	1	4/2/2009	
Isophorone	BQL	5.19	0.919	1	4/2/2009	
Naphthalene	BQL	5.19	0.945	1	4/2/2009	
Nitrobenzene	BQL	5.19	1.09	1	4/2/2009	
2-Nitrophenol	BQL	5.19	1.28	1	4/2/2009	
4-Nitrophenol	BQL	26.0	1.12	1	4/2/2009	
N-Nitrosodi-n-propylamine	BQL	5.19	1.56	1	4/2/2009	
Pentachlorophenol	BQL	26.0	1.47	1	4/2/2009	
Phenanthrene	BQL	5.19	0.462	1	4/2/2009	

SGS Environmental Services, Inc.

Results for Semivolatiles
by GCMS 625

Client Sample ID: TT3145-TW01
Client Project ID: TT-3145
Lab Sample ID: G128-2346-1J
Lab Project ID: G128-2346

Analyzed By: DCS
Date Collected: 3/31/2009 13:30
Date Received: 3/31/2009
Date Extracted: 4/1/2009
Matrix: Water

Initial/Final Amt: 963 mL / 5.0 mL

Compound	Result ug/L	RL ug/L	MDL ug/L	Dilution Factor	Date Analyzed	Flag
Phenol	BQL	5.19	1.10	1	4/2/2009	
Pyrene	BQL	5.19	2.14	1	4/2/2009	
1,2,4-Trichlorobenzene	BQL	5.19	0.748	1	4/2/2009	
2,4,6-Trichlorophenol	BQL	5.19	0.961	1	4/2/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.4	84		
2-Fluorophenol		10	8	80		
Nitrobenzene-d5		10	8.6	86		
Phenol-d6		10	8.4	84		
2,4,6-Tribromophenol		10	7.8	78		
4-Terphenyl-d14		10	9.3	93		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: TT3145-TW01
Client Project ID: TT-3145
Lab Sample ID: G128-2346-1J
Lab Project ID: G128-2346
Sample Wt/Vol: 963 ML
Dilution: 1

Analyzed By: DES
Date Collected: 3/31/2009 13:30
Date Received: 3/31/2009
Date Extracted: 4/1/2009
Date Analyzed: 4/2/2009
Matrix: Water

No.	Compound	Retention Time	CAS#	Match Probability	Result ug/L
1	Unknown	5.82			13.6

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: TT-3145

Sample Information	
Sample Identification	TT3145-TW01
Sample Matrix	Water
Collection Option (for Soil)*	NA
Date Collected	03/31/09 13:30
Date Received	03/31/09
Date Extracted	04/01/09 17:41 - 04/01/09 17:41
Date Analyzed	04/01/09 17:41 - 04/01/09 17:41
Dry Weight	NA
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result µg/L	Report Limit µg/L	Flags	
C ₅ -C ₈ Aliphatics**	BQL	100		
C ₉ -C ₁₂ Aliphatics**	BQL	100		
C ₉ -C ₁₀ Aromatics**	BQL	100		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	92.9		70	130
Surrogate % Recovery - FID	93.9		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2346-1b	Lab Info: g128-2346-1b
FID Info: VP040109/022F0101.D	PID Info: VP040109/022R0101.D

Reviewed By: 

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date:

03/28/09

PID Initial Calibration Date:

03/28/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	7.11	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	0.99	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.28	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date:

04/01/09

Filename:

VP040109/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	-21.0	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-15.2	±25%
C ₉ -C ₁₀ Aromatics	200	16	-0.7	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 03/28/09PID Initial Calibration Date: 03/28/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	7.11	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	0.99	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	11.28	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 04/01/09Filename: VP040109/031F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C ₅ -C ₈ Aliphatics	200	16	-21.9	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-6.7	±25%
C ₉ -C ₁₀ Aromatics	200	16	8.0	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: TT-3145

Sample Information	
Sample Identification	TT3145-TW01
Sample Matrix	Water
Date Collected	03/31/09 13:30
Date Received	03/31/09
Date Extracted	04/01/09
Date Analyzed	04/02/09 13:53 - 04/02/09 15:18
Dry Weight	NA
Dilution Factor	1 - 1
Initial Volume (mL)	979
Final Volume (mL)	5.0

Analytical Results			
Analytes**	Result µg/L	Report Limit µg/L	Flags
C9-C18 Aliphatics	BQL	100	
C19-C36 Aliphatics	BQL	100	
C11-C22 Aromatics	BQL	100	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	103		40	140
Aromatic (ortho-terphenyl)	98.1		40	140
Fractionation 1 (2-bromonaphthalene)	93.1		40	140
Fractionation 2 (2-fluorobiphenyl)	95.5		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2346-1L	Lab Info: G128-2346-1L
Aliphatic: EP040209/009F0501.D	Aromatic: EP040209/012F0301.D

Reviewed By: 

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 04/02/09Filenames: ep040209/001f0101.d04/02/09ep040209/002f0201.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C9-C18 Aliphatics	100	16.7	2.5	±25%
C19-C36 Aliphatics	100	16.7	0.6	±25%
C11-C22 Aromatics	100	16.7	5.0	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 02/24/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR ✓	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	6.70	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	4.67	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	2.55	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 04/02/09
04/02/09Filenames: ep040209/001f0401.d
ep040209/002f0501.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR ✓	Limits
C9-C18 Aliphatics	100	16.7	4.5	≤±25%
C19-C36 Aliphatics	100	16.7	3.6	≤±25%
C11-C22 Aromatics	100	16.7	8.3	≤±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

APPENDIX F

PHOTOGRAPHS



UST TT-3145 prior to removal with access hole



UST TT-3145 during removal activities

APPENDIX G

WELL CONSTRUCTION/ABANDONMENT RECORD



Non RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

1. WELL CONTRACTOR:

William J. Miller

Well Contractor (Individual) Name

CATLIN Engineers and Scientists

Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington

North Carolina

28405

City or Town

State

Zip Code

(910) - 452-5861

Area code - Phone number

2. WELL INFORMATION

SITE WELL ID #if applicable: TT3145-TW01

STATE WELL PERMIT #if applicable: N/A

DWQ or OTHER PERMIT # (if applicable): N/A

WELL USE (Check Applicable Box): Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☒ (list use): TEMPORARY WELL

DATE DRILLED: 03/30/2009

TIME COMPLETED:

AM ☐ PM ☐

3. WELL LOCATION:

CITY: Jacksonville

COUNTY: Onslow

Tarawa Terrace, MCB Camp Lejeune, North Carolina

(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING

Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

NORTHING: 3,846,850.7

EASTING: 282,024.1

UTM NAD83 (m)

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☒ GPS ☐ Topo. map

(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4. FACILITY - is the name of the business where the well is located.

FACILITY ID #if applicable: N/A

NAME OF FACILITY: N/A

STREET ADDRESS: TT-3145, Tarawa Terrace
MCB Camp Lejeune

Jacksonville

NC

City or Town

State

Zip Code

CONTACT PERSON: Dr. Johanna Arnold

STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune

NC

28542-0004

City or Town

State

Zip Code

(910)- 451-9017

Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 14.5

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒

c. WATER LEVEL Below Top of Casing: 9.78 FT.

(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0.5 FT. Above Land Surface*

* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

e. YIELD (gpm): N/A METHOD OF TEST: N/A

f. DISINFECTION: Type N/A Amount: N/A

g. WATER ZONES(depth):

From _____ To _____ From _____ To _____

From _____ To _____ From _____ To _____

From _____ To _____ From _____ To _____

6. CASING:

Depth	Diameter	Thickness/Weight	Material
From 0 To 4.5 ft.	1"	Sch. 40	PVC
From _____ To _____ ft.	"		
From _____ To _____ ft.	"		

7. GROUT:

Depth	Material	Method
From _____ To _____ Ft.		
From 0 To 1 Ft.	Bent. Pellets	Surface Pour
From _____ To _____ Ft.		

8. SCREEN:

Depth	Diameter	Slot Size	Material
From 4.5 To 14.3 Ft.	1 in.	Slot .010in.	PVC
From _____ To _____ Ft.	in.	in.	
From _____ To _____ Ft.	in.	in.	

9. SAND/GRAVEL PACK:

Depth	Size	Material
From 1 To 14.5 Ft.	#2 Medium	Torpedo Sand
From _____ To _____ Ft.		
From _____ To _____ Ft.		

10. DRILLING LOG

From _____ To _____ Formation Description

SEE ATTACHED

11. REMARKS:

Set 1" TEMPORARY monitoring well. Abandoned well subsequent to sampling.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR

DATE

William J. Miller

PRINTED NAME OF PERSON CONSTRUCTING THE WELL



WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

CATLIN PROJECT NO.: 209-022

1. WELL CONTRACTOR:

William J. Miller

Well Contractor (Individual) Name

CATLIN Engineers and Scientists

Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington North Carolina 28405

City or Town State Zip Code

(910) - 452-5861

Area code - Phone number

2. WELL INFORMATION

SITE WELL ID # (if applicable): TT3145-TW01

STATE WELL PERMIT # (if applicable): N.A.

COUNTY WELL PERMIT # (if applicable): N.A.

DWQ or OTHER PERMIT # (if applicable):

WELL USE (Check Applicable Box): Monitoring ☒ Residential ☐

Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐

Recovery ☐ Injection ☐ Irrigation ☐

Other (list use): TEMPORARY WELL

3. WELL LOCATION:

COUNTY: Onslow QUADRANGLE:

NEAREST TOWN: Jacksonville

TT-3145, Tarawa Terrace, MCB Camp Lejeune

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING

Slope ☐ Valley ☐ Flat ☒ Ridge ☐ Other: _____

NORTHING: 3,846,850.7

EASTING: 282,024.1

UTM NAD83 (m)

May be in degrees, minutes
seconds, or in a decimal

Latitude/longitude source: ☒ GPS ☐ Topo. map

(Location of well must be shown on a USGS topo map and
attached to this form if not using a GPS.)

4a. FACILITY - The name of the business where the well is located. Complete 4a and 4b.
(If a residential well, skip 4a; complete 4b, well owner information only)

FACILITY ID # (if applicable)

NAME OF FACILITY:

STREET ADDRESS: Tarawa Terrace, MCB Camp Lejeune

Jacksonville North Carolina

City or Town State Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME: Dr. Johanna Arnold

STREET ADDRESS: Attn: I&E/ EMD/ EQB/ PSC Box 20004

Camp Lejeune NC 28542-0004

City or Town State Zip Code

(910) 451-9017

Area code - Phone number

5. WELL DETAILS:

a. Total Depth: 14.5 ft. Diameter: 1 in.

b. Water Level (Below Measuring Point): 9.78 ft.

Measuring point is 0.5 ft. above land surface

6. CASING:

Length Diameter

a. Casing Depth (if known): 4.5 ft. 1 in.

b. Casing Removed: 5 ft. 1 in.

7. DISINFECTION: N/A

(Amount of 70% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement

Cement _____ lb.

Water _____ gal.

Sand Cement

Cement _____ lb.

Water _____ gal.

Bentonite

Bentonite 5 lb.

Type: Slurry _____ Pellets ☒

Water _____ gal.

Other

Type material _____

Amount _____

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

Screen and casing removed. Hole backfilled with Benseal.

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 3/31/2009

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

William J. Miller
SIGNATURE OF CERTIFIED WELL CONTRACTOR

3-7-09
DATE

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL DATE
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113)

William J. Miller

PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.

Attn: Information Management, 1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from
Form GW-30
Rev. 5/06