SUMMARY REPORT 90 DOLPHIN STREET (FORMERLY 857 DOLPHIN STREET) LAUREL BAY MILITARY HOUSING AREA MARINE CORPS AIR STATION BEAUFORT BEAUFORT, SC

> Revision: 0 Prepared for:

Department of the Navy Naval Facilities Engineering Command, Mid-Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095

and



Naval Facilities Engineering Command Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095

JUNE 2021

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Prepared by:



CDM - AECOM Multimedia Joint Venture 10560 Arrowhead Drive, Suite 500 Fairfax, Virginia 22030

Contract Number: N62470-14-D-9016 CTO WE52 JUNE 2021



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List of Acronyms

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
СТО	Contract Task Order
COPC	constituents of potential concern
IDIQ	Indefinite Delivery, Indefinite Quantity
IGWA	Initial Groundwater Assessment
JV	Joint Venture
LBMH	Laurel Bay Military Housing
MCAS	Marine Corps Air Station
NAVFAC Mid-Lant	Naval Facilities Engineering Command Mid-Atlantic
NFA	No Further Action
PAH	polynuclear aromatic hydrocarbon
QAPP	Quality Assurance Program Plan
RBSL	risk-based screening level
SCDHEC	South Carolina Department of Health and Environmental Control
Site	LBMH area at MCAS Beaufort, South Carolina
UST	underground storage tank
VISL	vapor intrusion screening level



1.0 INTRODUCTION

The CDM - AECOM Multimedia Joint Venture (JV) was contracted by the Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC Mid-Lant) to provide reporting services for the heating oil underground storage tanks (USTs) located in Laurel Bay Military Housing (LBMH) area at the Marine Corps Air Station (MCAS) Beaufort, South Carolina (Site). This work has been awarded under Contract Task Order (CTO) WE52 of the Indefinite Delivery, Indefinite Quantity (IDIQ) Multimedia Environmental Compliance Contract (Contract No. N62470-14-D-9016).

As of January 2014, the LBMH addresses were re-numbered to comply with the E-911 emergency response addressing system; however, in order to remain consistent with historical sampling and reporting for LBMH area, the residences will continue to be referenced with their original address numbers in sample nomenclature and reporting documents.

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 90 Dolphin Street (Formerly 857 Dolphin Street). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

- Background information;
- Sampling activities and results; and
- A determination of the property status.
- 1.1 Background Information

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.



Capehart style homes within the LBMH area were formerly heated using heating oil stored in USTs at each residence. There were 1,100 Capehart style housing units in the LBMH area. The newer duplex homes within the LBMH area never utilized heating oil tanks. Heating oil has not been used at Laurel Bay since the mid-1980s. As was the accepted practice at the time, USTs were drained, filled with dirt, capped, and left in place when they were removed from service. Residential USTs are not regulated in the State of South Carolina (i.e., there are no federal or state laws governing installation, management, or removal).

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

1.2 UST Removal and Assessment Process

During the UST removal process, a soil sample was collected from beneath the UST excavations (approximately 4 to 6 feet [ft] below ground surface [bgs]) and analyzed for a predetermined list of constituents of potential concern (COPCs) associated with the petroleum compounds found in home heating oil. These COPCs, derived from the *Quality Assurance Program Plan (QAPP) for the Underground Storage Tank Management Division, Revision 3.1* (SCDHEC, 2016) and the *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service,* (SCDHEC, 2018), are as follows:

- benzene, toluene, ethylbenzene, and xylenes (BTEX),
- naphthalene, and
- five select polynuclear aromatic hydrocarbon (PAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

Soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form. In accordance with SCDHEC's *QAPP for the UST Management Division* (SCDHEC, 2016), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs). It should be noted that the RBSLs for select PAHs were revised in Revision 2.0 of the QAPP (SCDHEC, 2013) and were revised again in Revision 3.0 (SCDHEC, 2015). The screening levels



used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The results of the IGWA sampling (if necessary) are used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations will require additional delineation of COPCs in groundwater. In order to delineate the extent of impact to groundwater, permanent wells are installed and a sampling program is established for those former UST locations where IGWA sampling has indicated the presence of COPCs in excess of the SCDHEC RBSLs for groundwater. Groundwater analytical results are also compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 90 Dolphin Street (Formerly 857 Dolphin Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 857 Dolphin Street* (MCAS Beaufort, 2012). The UST Assessment Report is provided in Appendix B.

2.1 UST Removal and Soil Sampling

On May 9, 2012, a single 280 gallon heating oil UST was removed from the back yard adjacent to the patio area at 90 Dolphin Street (Formerly 857 Dolphin Street). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 6'5" bgs and a single soil sample was collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of the excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in



accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

2.2 Soil Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 1. A copy of the laboratory analytical data report is included in the UST Assessment Report presented in Appendix B. The laboratory analytical data report includes the soil results for the additional PAHs that were analyzed, but do not have associated RBSLs.

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 90 Dolphin Street (Formerly 857 Dolphin Street) were less than the SCDHEC RBSLs, which indicated the subsurface was not impacted by COPCs associated with the former UST at concentrations that presented a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for soil, SCDHEC made the determination that NFA was required for 90 Dolphin Street (Formerly 857 Dolphin Street). This NFA determination was obtained in a letter dated July 1, 2015. SCDHEC's NFA letter is provided in Appendix C.

4.0 REFERENCES

- Marine Corps Air Station Beaufort, 2012. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 857 Dolphin Street, Laurel Bay Military Housing Area, August 2012.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.



- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service, March 2018.

Table



Table 1Laboratory Analytical Results - Soil90 Dolphin Street (Formerly 857 Dolphin Street)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs ⁽¹⁾	Results Sample Collected 05/09/12					
olatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)							
Benzene	0.003	ND					
Ethylbenzene	1.15	ND					
Naphthalene	0.036	ND					
Toluene	0.627	ND					
Xylenes, Total	13.01 ND						
Semivolatile Organic Compounds Anal	yzed by EPA Method 8270D (mg/kg)						
Benzo(a)anthracene	0.66	ND					
Benzo(b)fluoranthene	0.66	ND					
Benzo(k)fluoranthene	0.66	ND					
Chrysene	0.66	ND					
Dibenz(a,h)anthracene	0.66	ND					

Notes:

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0 and 3.1 (SCDHEC, May 2015 and SCDHEC, February 2016) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL.

EPA - United States Environmental Protection Agency

mg/kg - milligram per kilogram

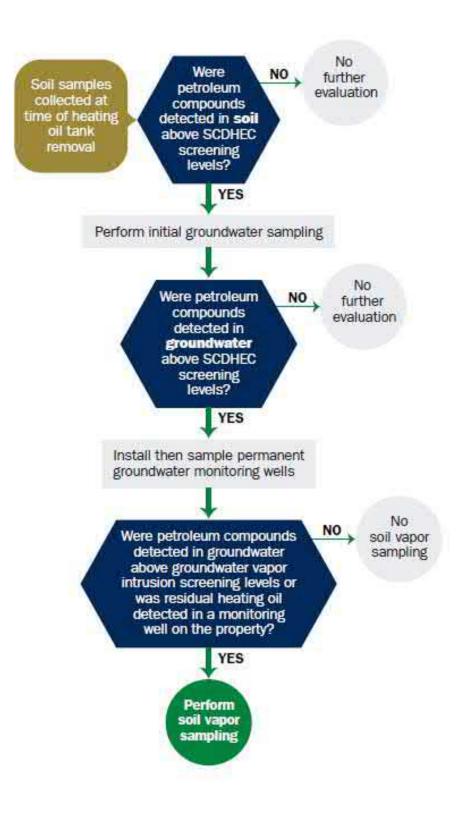
ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The laboratory report is provided in Appendix B.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

Appendix A Multi-Media Selection Process for LBMH





Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



Attachment 1

South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank (UST) Assessment Report

Date Received
State Use Only

Submit Completed Form To: UST Program SCDHEC 2600 Bull Street Columbia, South Carolina 29201 Telephone (803) 896-7957

I. OWNERSHIP OF UST (S)

	commanding Officer Attn: NRE	EAO (Craig Ehde)					
Owner Name (Corporation, Individual, Public Agency, Other)							
P.O. Box 55001 Mailing Address							
Beaufort,	South Carolina	29904-5001					
City	State	Zip Code					
843 228-7317 Craig Ehde							
Area Code	Telephone Number	Contact Person					

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #	
Laurel Bay Milit	ary Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Compar	iy Site Identifier
	eet, Laurel Bay Military Housing Area
Street Address or State R	oad (as applicable)
Beaufort,	Beaufort
City	County

Attachment 2

Insurance Statement

The petroleum release reported to DHEC on ______ at Permit ID Number _____ may qualify to receive state monies to pay for appropriate site rehabilitation activities. Before participation is allowed in the State Clean-up fund, written confirmation of the existence or non-existence of an environmental insurance policy is required. This section must be completed.

Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? YES____ NO____ (check one)

If you answered **YES** to the above question, please complete the following information:

My policy provider is: ______ The policy deductible is: ______ The policy limit is:

If you have this type of insurance, please include a copy of the policy with this report.

IV. REQUEST FOR SUPERB FUNDING

I DO / DO NOT wish to participate in the SUPERB Program. (Circle one.)

V. CERTIFICATION (To be signed by the UST owner)

I certify 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 responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name (Type or print.)

Signature

To be completed by Notary Public:

Sworn before me this _____ day of _____, 20____

(Name)

Notary Public for the state of ______. Please affix State seal if you are commissioned outside South Carolina

VI. UST INFORMATION

		857Dolphin
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
Е·	Month/Year of Last Use	Mid 1980s
F.	Depth (ft.) To Base of Tank	6'5"
G.	Spill Prevention Equipment Y/N	No
H·	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J _.	Date Tanks Removed/Filled	5/9/2012
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

M. Method of disposal for any USTs removed from the ground (attach disposal manifests) <u>UST 857Dolphin was removed from the ground and disposed at a</u> Subtitle "D" landfill. See Attachment "A".

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)
 UST 857Dolphin had been previously filled with sand by others.

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST <u>Corrosion</u>, pitting and holes were found throughout the tank.

VII. PIPING INFORMATION

		857Dolphin
		Steel
A.	Construction Material(ex. Steel, FRP)	& Copper
B.	Distance from UST to Dispenser	N/A
C.	Number of Dispensers	N/A
D.	Type of System Pressure or Suction	Suction
E.	Was Piping Removed from the Ground? Y/N	No
F.	Visible Corrosion or Pitting Y/N	Yes
G.	Visible Holes Y/N	No
H.	Age	Late 1950s
I.	If any corrosion, pitting, or holes were observed, des	scribe the location and extent for each piping run.

Corrosion and pitting were found on the surface of the steel vent pipe. Copper supply and return lines were sound.

VIII. BRIEF SITE DESCRIPTION AND HISTORY

The USTs at the residences are constructed of single wall steel and formerly contained fuel oil for heating. These USTs were installed in the late 1950s and last used in the mid 1980s.

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?		х	
If yes, indicate depth and location on the site map.			
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?		х	
If yes, indicate location on site map and describe the odor (strong, mild, etc.)			
C. Was water present in the UST excavation, soil borings, or trenches?		Х	
If yes, how far below land surface (indicate location and depth)?			
D. Did contaminated soils remain stockpiled on site after closure?		х	
If yes, indicate the stockpile location on the site map.			
Name of DHEC representative authorizing soil removal:			
E. Was a petroleum sheen or free product detected on any excavation or boring waters?		x	
If yes, indicate location and thickness.			

IX. SITE CONDITIONS

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

В.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
857 Dolphin	Excav at fill end	Soil	Sandy	6'5"	5/9/12 1445 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

XI. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect <u>and</u> store the samples. Also include the preservative used for each sample. Please use the space provided below.

Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC Assessment Guidelines. Sample containers were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted from area below tank. The samples were marked, logged, and immediately placed in a sample cooler packed with ice to maintain an approximate temperature of 4 degrees Centigrade. Tools were thoroughly cleaned and decontaminated with the seven step decon process after each use. The samples remained in custody of SBG-EEG, Inc. until they were transferred to Test America Incorporated for analysis as documented in the Chain of Custody Record.

XII. RECEPTORS

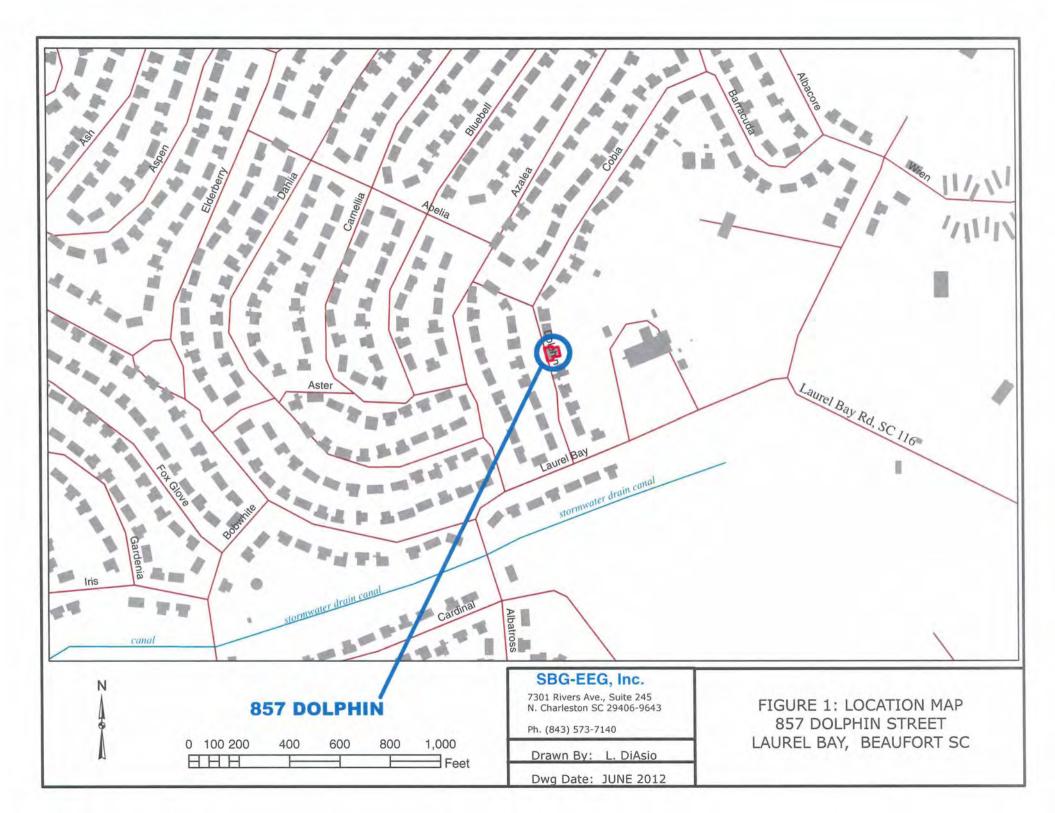
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?	*X	
	*Stormwater drainage	canal	
	If yes, indicate type of receptor, distance, and direction on site map.		
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		Х
	If yes, indicate type of structure, distance, and direction on site map.		
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the	*X	
	contamination? *Sewer, water, electr	icity	
	cable & fiber optic		
	If yes, indicate the type of utility, distance, and direction on the site map.		
E.	Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?		Х
	If yes, indicate the area of contaminated soil on the site map.		

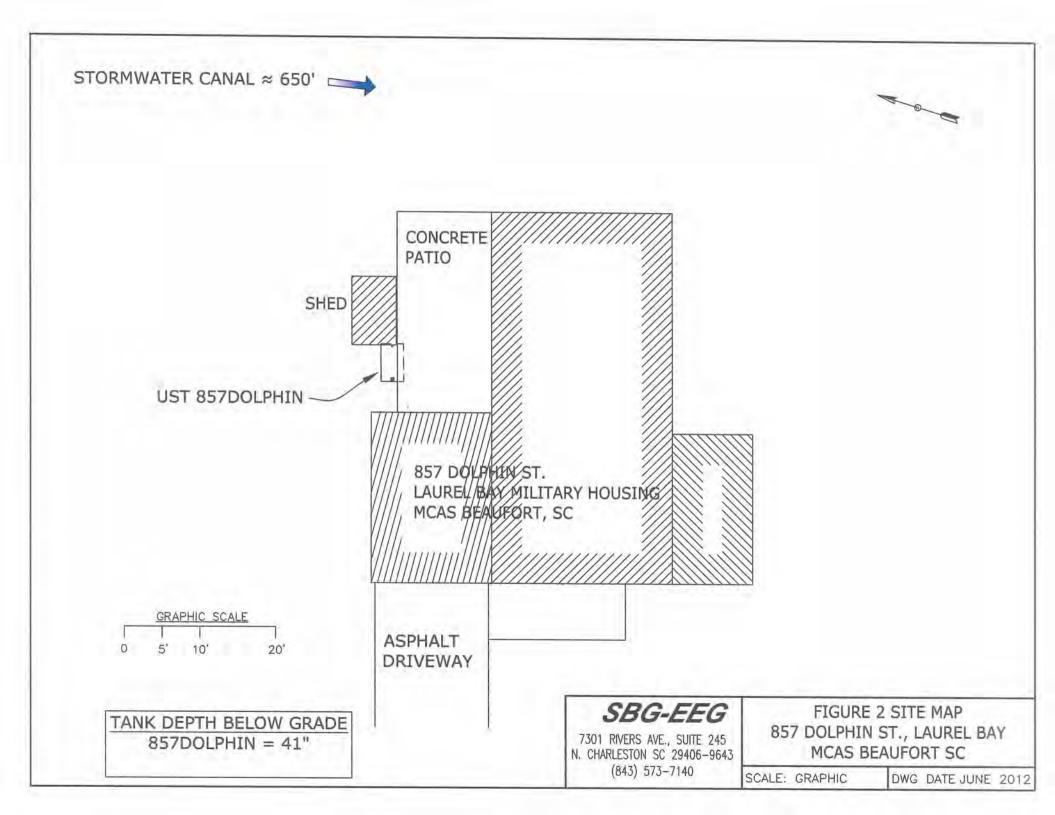
XIII. SITE MAP

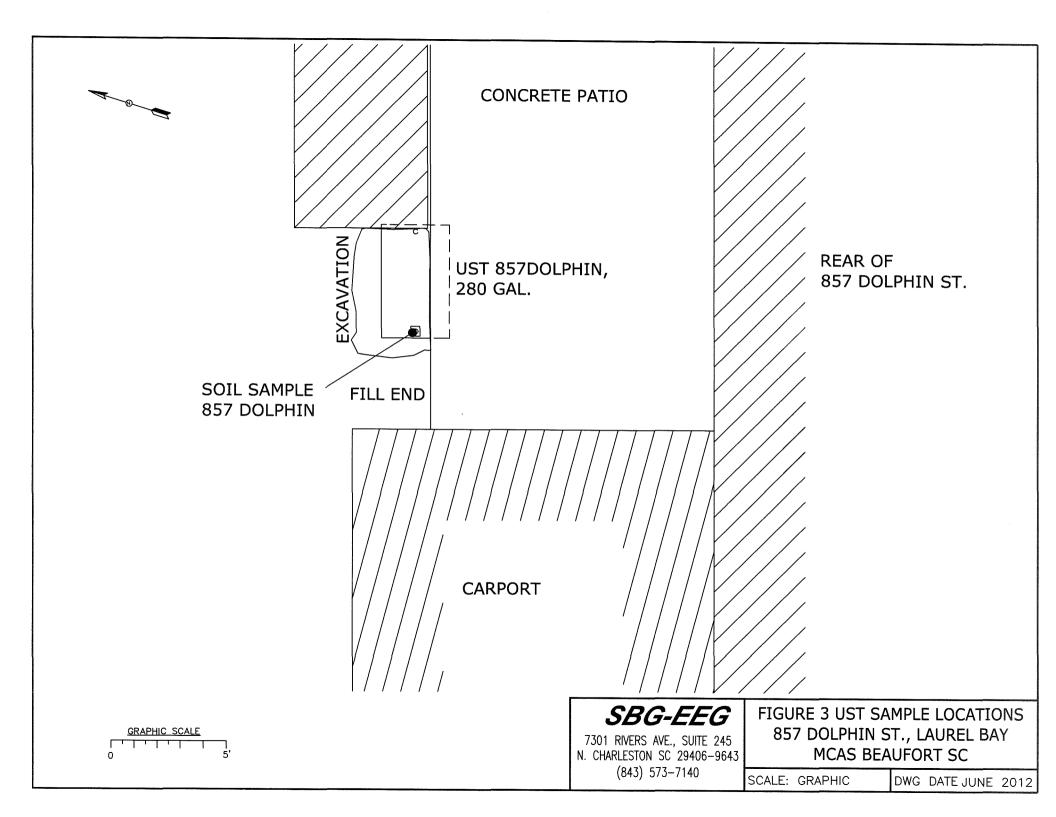
You must supply a <u>scaled</u> site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.

(Attach Site Map Here)

æ









Picture 1: Location of UST 857Dolphin.



Picture 2: UST 857Dolphin excavation.

XIV. SUMMARY OF ANALYSIS RESULTS

Enter the soil analytical data for each soil boring for all COC in the table below and on the following page.

	1	 T	T		Т	
CoC UST	857Dolphin					
Benzene	ND					
Toluene	ND					
Ethylbenzene	ND					
Xylenes	ND					
Naphthalene	ND					
Benzo (a) anthracene	ND					
Benzo (b) fluoranthene	ND					
Benzo (k) fluoranthene	ND					
Chrysene	ND					
Dibenz (a, h) anthracene	ND					
ТРН (ЕРА 3550)						
		 		T		
CoC		 				
Benzene						
Toluene						
Ethylbenzene						
Xylenes						
Naphthalene						
Benzo (a) anthracene			:			
Benzo (b) fluoranthene						
Benzo (k) fluoranthene						
Chrysene						
Dibenz (a, h) anthracene						
ТРН (ЕРА 3550)						

SUMMARY OF ANALYSIS RESULTS (cont'd) Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

CoC	RBSL (µg/l)	W-1	W-2	W -3	W -4
Free Product Thickness	None				
Benzene	5				
Toluene	1,000				
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A				
МТВЕ	40				
Naphthalene	25				
Benzo (a) anthracene	10				
Benzo (b) flouranthene	10				
Benzo (k) flouranthene	10				
Chrysene	10				
Dibenz (a, h) anthracene	10				
EDB	.05				
1,2-DCA	5				
Lead	Site specific				

XV. ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

(Attach Certified Analytical Results and Chain-of-Custody Here) (Please see Form #4)



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Road Nashville, TN 37204 Tel: 800-765-0980

TestAmerica Job ID: NWE1590

Client Project/Site: [none] Client Project Description: Laurel Bay Housing Project

For:

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Expert

EEG - Small Business Group, Inc. (2449) 10179 Highway 78 Ladson, SC 29456

Attn: Tom McElwee

Vin Sa Hay

Authorized for release by: 5/29/2012 9:29:40 AM

Ken A. Hayes Senior Project Manager ken.hayes@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary	19
Chain of Custody	20

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	ß
NWE1590-01	1192 Bobwhite	Soil	05/07/12 15:30	05/12/12 08:10	
NWE1590-02	857 Dolphin	Soil	05/09/12 14:45	05/12/12 08:10	
NWE1590-03	411 Elderberney	Soil	05/10/12 11:15	05/12/12 08:10	

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Qualifiers

GCMS Volatiles

Qualifier	Qualifier Description
Z2	Surrogate recovery was above the acceptance limits. Data not impacted.
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
RL1	Reporting limit raised due to sample matrix effects.
GCMS Sem	ivolatiles

Qualifier	Qualifier Description
MNR	No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this,
	the spike compounds were diluted below the detection limit.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
Ø	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Client Sample ID: 1192 Bobwhite

Date Collected: 05/07/12 15:30

Date Received: 05/12/12 08:10

Indeno (1,2,3-cd) pyrene

1-Methylnaphthalene

2-Methylnaphthalene

Naphthalene

Pyrene

Phenanthrene

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Lab Sample ID: NWE1590-01	

Matrix: Soil Baraant Solida: 84.1

Percent Solids: 84.1

Method, 54040 02000 - 40	iame organic comp	Journas by i	-i A method of	.000 -112					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00244	0.00134	mg/kg dry	4	05/07/12 15:30	05/17/12 14:25	1.00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	144	ZX	70 - 130				05/07/12 15:30	05/17/12 14:25	1.00
Dibromofluoromethane	135	ZX	70 - 130				05/07/12 15:30	05/17/12 14:25	1.00
Toluene-d8	179	ZX	70 - 130				05/07/12 15:30	05/17/12 14:25	1.00
4-Bromofluorobenzene	430	ZX	70 - 130				05/07/12 15:30	05/17/12 14:25	1.00
Method: SW846 8260B - Vo	latile Organic Comp	ounds by E	EPA Method 82	60B - RE	2				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	1.08		0.122	0.0668	mg/kg dry	0	05/07/12 15:30	05/17/12 14:56	50.0
Toluene	ND	RL1	0.122	0.0668	mg/kg dry	0	05/07/12 15:30	05/17/12 14:56	50.0
Xylenes, total	4.30		0.304	0.152	mg/kg dry	³	05/07/12 15:30	05/17/12 14:56	50.0
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	79		70 - 130				05/07/12 15:30	05/17/12 14:56	50.0
Dibromofluoromethane	85		70 - 130				05/07/12 15:30	05/17/12 14:56	50.0
Toluene-d8	132	ZX	70 - 130				05/07/12 15:30	05/17/12 14:56	50.0
4-Bromofluorobenzene	123		70 - 130				05/07/12 15:30	05/17/12 14:56	50.0
Method: SW846 8260B - Vol	atile Organic Comp	ounds by E	PA Method 82	60B - RE3	3				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	25.3		3.04	1.52	mg/kg dry	0	05/07/12 15:30	05/18/12 15:11	500
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	105		70 - 130				05/07/12 15:30	05/18/12 15:11	500
Dibromofluoromethane	100		70 - 130				05/07/12 15:30	05/18/12 15:11	500
Toluene-d8	111		70 - 130				05/07/12 15:30	05/18/12 15:11	500
4-Bromofluorobenzene	93		70 - 130				05/07/12 15:30	05/18/12 15:11	500
Method: SW846 8270D - Pol	yaromatic Hydroca	rbons by El	PA 8270D - RE	1					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	4.93		3.15	1.60	mg/kg dry	Ø	05/17/12 11:09	05/18/12 15:08	20.0
Acenaphthylene	2.46	J	3.15	1.60	mg/kg dry	\$	05/17/12 11:09	05/18/12 15:08	20.0
Anthracene	1.85	J	3.15	1.60	mg/kg dry	0	05/17/12 11:09	05/18/12 15:08	20.0
Benzo (a) anthracene	1.74	J	3.15	1.60	mg/kg dry	0	05/17/12 11:09	05/18/12 15:08	20.0
Benzo (a) pyrene	ND		3.15	1.60	mg/kg dry	9	05/17/12 11:09	05/18/12 15:08	20.0
Benzo (b) fluoranthene	ND		3.15	1.60	mg/kg dry	0	05/17/12 11:09	05/18/12 15:08	20.0
Benzo (g,h,i) perylene	ND		3.15	1.60	mg/kg dry	Ø.	05/17/12 11:09	05/18/12 15:08	20.0
Benzo (k) fluoranthene	ND		3.15	1,60	mg/kg dry	0	05/17/12 11:09	05/18/12 15:08	20.0
Chrysene	ND		3.15	1.60	mg/kg dry	6	05/17/12 11:09	05/18/12 15:08	20.0
Dibenz (a,h) anthracene	ND		3.15	1.60	mg/kg dry	-0	05/17/12 11:09	05/18/12 15:08	20.0
luoranthene	5.18		3.15	1.60	mg/kg dry	-0	05/17/12 11:09	05/18/12 15:08	20.0
Fluorene	13.3		3.15	1.60	mg/kg dry	0	05/17/12 11:09	05/18/12 15:08	20.0
			1000		and the same			interest a state of the	1.0.0

05/18/12 15:08

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45

12

05/17/12 11:09

05/17/12 11:09

05/17/12 11:09

05/17/12 11:09

05/17/12 11:09

05/17/12 11:09

ND

24.0

22.1

5.12

52.5

97.4

.....

Client Sample Results

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Client Sample ID: 1192 Bobwhite Date Collected: 05/07/12 15:30

Date Received: 05/12/12 08:10

Surrogate	%Recovery	and the second second	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	121	ZX	18 - 120				05/17/12 11:09	05/18/12 15:08	20.0
2-Fluorobiphenyl	97		14 - 120				05/17/12 11:09	05/18/12 15:08	20.0
Nitrobenzene-d5	134	ZX	17 - 120				05/17/12 11:09	05/18/12 15:08	20.0
Method: SW-846 - Genera	Chemistry Paramete	rs							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	84.1		0.500	0.500	%		05/14/12 15:39	05/15/12 07:13	1.00

TestAmerica Job ID: NWE1590

Lab Sample ID: NWE1590-01 Matrix: Soil

Percent Solids: 84.1

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Client Sample ID: 857 Dolphin

Date Collected: 05/09/12 14:45

Date Received: 05/12/12 08:10

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Lab Sample ID: NWE1590-02

Matrix: Soil Percent Solids: 76.6

Method: 50040 02000 - Volat	ne organic comp	ounus uy i		Abim lite			Contract Trees	and the second se	-
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00624	0.00343	mg/kg dry	¢	05/09/12 14:45	05/17/12 13:24	1.00
Ethylbenzene	ND		0.00624	0.00343	mg/kg dry	- B.	05/09/12 14:45	05/17/12 13:24	1.00
Naphthalene	ND		0.0156	0.00781	mg/kg dry	9	05/09/12 14:45	05/17/12 13:24	1.00
Toluene	ND		0.00624	0.00343	mg/kg dry	2	05/09/12 14:45	05/17/12 13:24	1.00
Xylenes, total	ND		0.0156	0.00781	mg/kg dry	2	05/09/12 14:45	05/17/12 13:24	1.00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	105		70 - 130				05/09/12 14:45	05/17/12 13:24	1,00
Dibromofluoromethane	100		70 - 130				05/09/12 14:45	05/17/12 13:24	1.00
Toluene-d8	115		70 - 130				05/09/12 14:45	05/17/12 13:24	1.00
4-Bromofluorobenzene	118		70 - 130				05/09/12 14:45	05/17/12 13:24	1.00
Method: SW846 8270D - Polya	aromatic Hydroca	rbons by E	PA 8270D					1.5.5	
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Acenaphthylene	ND		0.0871	0.0442	mg/kg dry	10	05/17/12 11:09	05/18/12 00:34	1.00
Anthracene	ND		0.0871	0.0442	mg/kg dry	D.	05/17/12 11:09	05/18/12 00:34	1.00
Benzo (a) anthracene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Benzo (a) pyrene	ND		0.0871	0.0442	mg/kg dry	10	05/17/12 11:09	05/18/12 00:34	1,00
Benzo (b) fluoranthene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Benzo (g,h,i) perylene	ND		0.0871	0.0442	mg/kg dry	a	05/17/12 11:09	05/18/12 00:34	1.00
Benzo (k) fluoranthene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Chrysene	ND		0.0871	0.0442	mg/kg dry	9	05/17/12 11:09	05/18/12 00:34	1.00
Dibenz (a,h) anthracene	ND		0.0871	0.0442	mg/kg dry	¢.	05/17/12 11:09	05/18/12 00:34	1.00
Fluoranthene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Fluorene	ND		0.0871	0.0442	mg/kg dry	9	05/17/12 11:09	05/18/12 00:34	1.00
Indeno (1,2,3-cd) pyrene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
Naphthalene	ND		0.0871	0.0442	mg/kg dry	10	05/17/12 11:09	05/18/12 00:34	1.00
Phenanlhrene	ND		0.0871	0.0442	mg/kg dry	C	05/17/12 11:09	05/18/12 00:34	1.00
Pyrene	ND		0.0871	0.0442	mg/kg dry	O	05/17/12 11:09	05/18/12 00:34	1.00
1-Methylnaphthalene	ND		0.0871	0.0442	mg/kg dry	0	05/17/12 11:09	05/18/12 00:34	1.00
2-Methylnaphthalene	ND		0.0871	0.0442	mg/kg dry	-0	05/17/12 11:09	05/18/12 00:34	1.00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	86		18 - 120				05/17/12 11:09	05/18/12 00:34	1.00
2-Fluorobiphenyl	65		14 - 120				05/17/12 11:09	05/18/12 00:34	1.00
Nitrobenzene-d5	60		17 - 120				05/17/12 11:09	05/18/12 00:34	1.00
Method: SW-846 - General Ch	emistry Paramete	rs							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	76.6		0.500	0.500	%		05/14/12 15:39	05/15/12 07:13	1.00

Client Sample Results

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Client Sample ID: 411 Elderberney

Date Collected: 05/10/12 11:15

Date Received: 05/12/12 08:10

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B - RE1

Lab Sample ID: NWE1590-03 Matrix: Soil

Percent Solids: 93

Method: SW846 82608 - Vola	tile Organic Comp	ounds by b	EPA Method 82	OUB - RE					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00241	0.00133	mg/kg dry	-¢-	05/10/12 11:15	05/17/12 13:55	1.00
Ethylbenzene	ND		0.00241	0.00133	mg/kg dry	0	05/10/12 11:15	05/17/12 13:55	1.00
Naphthalene	ND		0.00603	0.00301	mg/kg dry	8	05/10/12 11:15	05/17/12 13:55	1.00
Toluene	ND		0.00241	0.00133	mg/kg dry	\$	05/10/12 11:15	05/17/12 13:55	1.00
Xylenes, total	ND		0.00603	0.00301	mg/kg dry	*	05/10/12 11:15	05/17/12 13:55	1.00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	106		70 - 130				05/10/12 11:15	05/17/12 13:55	1.00
Dibromofluoromethane	102		70 - 130				05/10/12 11:15	05/17/12 13:55	1.00
Toluene-d8	120		70 - 130				05/10/12 11:15	05/17/12 13:55	1.00
4-Bromofluorobenzene	117		70 - 130				05/10/12 11:15	05/17/12 13:55	1.00
Method: SW846 8270D - Poly	aromatic Hydroca	rbons by E	PA 8270D						
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0712	0.0361	mg/kg dry	9	05/17/12 11:09	05/18/12 00:56	1.00
Acenaphthylene	ND		0.0712	0.0361	mg/kg dry	0	05/17/12 11:09	05/18/12 00:56	1.00
Anthracene	ND		0.0712	0.0361	mg/kg dry	-Ó	05/17/12 11:09	05/18/12 00:56	1.00
Benzo (a) anthracene	ND		0.0712	0.0361	mg/kg dry	9	05/17/12 11:09	05/18/12 00:56	1.00
Benzo (a) pyrene	ND		0.0712	0.0361	mg/kg dry	^o	05/17/12 11:09	05/18/12 00:56	1.00
Benzo (b) fluoranthene	ND		0.0712	0.0361	mg/kg dry	0	05/17/12 11:09	05/18/12 00:56	1.00
Benzo (g,h,i) perylene	ND		0.0712	0.0361	mg/kg dry	-0	05/17/12 11:09	05/18/12 00:56	1.00
Benzo (k) fluoranthene	ND		0.0712	0.0361	mg/kg dry	0	05/17/12 11:09	05/18/12 00:56	1.00
Chrysene	ND		0.0712	0.0361	mg/kg dry	-0	05/17/12 11:09	05/18/12 00:56	1.00
Dibenz (a,h) anthracene	ND		0.0712	0.0361	mg/kg dry	- ()\$	05/17/12 11:09	05/18/12 00:56	1.00
Fluoranthene	ND		0.0712	0.0361	mg/kg dry	9	05/17/12 11:09	05/18/12 00:56	1.00
Fluorene	ND		0.0712	0.0361	mg/kg dry	. Ø.	05/17/12 11:09	05/18/12 00:56	1.00
Indeno (1,2,3-cd) pyrene	ND		0.0712	0.0361	mg/kg dry	-0	05/17/12 11:09	05/18/12 00:56	1.00
Naphthalene	ND		0.0712	0.0361	mg/kg dry	50	05/17/12 11:09	05/18/12 00:56	1.00
Phenanthrene	ND		0.0712	0.0361	mg/kg dry	-12	05/17/12 11:09	05/18/12 00:56	1.00
Pyrene	ND		0.0712	0.0361	mg/kg dry	107	05/17/12 11:09	05/18/12 00:56	1.00
1-Methylnaphthalene	ND		0.0712	0.0361	mg/kg dry	9	05/17/12 11:09	05/18/12 00:56	1.00
2-Methylnaphthalene	ND		0.0712	0.0361	mg/kg dry	-0	05/17/12 11:09	05/18/12 00:56	1,00
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	87		18 - 120				05/17/12 11:09	05/18/12 00:56	1.00
2-Fluorobiphenyl	65		14 - 120				05/17/12 11:09	05/18/12 00:56	1.00
Nitrobenzene-d5	63		17 - 120				05/17/12 11:09	05/18/12 00:56	1.00
Method: SW-846 - General C	hemistry Paramete	ers							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	93.0		0.500	0.500	%		05/14/12 15:39	05/15/12 07:13	1.00

4-Bromofluorobenzene

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

Lab Sample ID: 12E3877-BLK1											Client S	ample ID: Metho	
Matrix: Soil													pe: Total
Analysis Batch: V008288		Inch	Blank									Prep Batch: 12	E3877_P
Analyte			Qualifier	RL		MDI	Unit		D		repared	Analyzed	Dil Fac
Benzene	i de	ND		0.00200			mg/kg	tewn	U		17/12 00:28	05/17/12 12:23	1.00
Ethylbenzene		ND		0.00200			mg/kg				17/12 00:28	05/17/12 12:23	1.00
Naphthalene		ND		0.00500			mg/k				17/12 00:28	05/17/12 12:23	1.00
Toluene		ND		0.00200			mg/kg				17/12 00:28	05/17/12 12:23	1.00
Xylenes, total		ND		0.00500			mg/kg				17/12 00:28	05/17/12 12:23	1.00
	В	lank	Blank										
Surrogate	%Reco	very	Qualifier	Limits						F	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4		111		70 - 130						05/	17/12 00:28	05/17/12 12:23	1.00
Dibromofluoromethane		103		70 - 130						05/	17/12 00:28	05/17/12 12:23	1.00
Toluene-d8		106		70 - 130						05/	17/12 00:28	05/17/12 12:23	1.00
4-Bromofluorobenzene		114		70 - 130						05/	17/12 00:28	05/17/12 12:23	1.00
Lab Sample ID: 12E3877-BLK2											Client Sa	ample ID: Metho	d Blank
Matrix: Soil												Prep Typ	e: Total
Analysis Batch: V008288												Prep Batch: 12	
and the providence	B	lank	Blank										-
Analyte	Re	sult	Qualifier	RL		MDL	Unit		D	P	repared	Analyzed	Dil Fac
Benzene		ND		0.100	0	.0550	mg/kg	y wet		05/1	7/12 00:28	05/17/12 12:54	50,0
Ethylbenzene		ND		0.100	0.	.0550	mg/kg	wet		05/1	7/12 00:28	05/17/12 12:54	50.0
Naphthalene		ND		0.250		0.125	mg/kg	wet		05/1	7/12 00:28	05/17/12 12:54	50.0
Toluene		ND		0.100	0.	.0550	mg/kg	wet		05/1	7/12 00:28	05/17/12 12:54	50.0
Xylenes, total		ND		0.250		0.125	mg/kg	wet		05/1	7/12 00:28	05/17/12 12:54	50.0
	BI	ank	Blank										
Surrogate	%Recov	ry	Qualifier	Limits						P	repared	Analyzed	Dil Fac
1,2-Dichloroethane-d4		110		70 - 130						05/1	7/12 00:28	05/17/12 12:54	50.0
Dibromofluoromethane		102		70 - 130						05/1	7/12 00:28	05/17/12 12:54	50.0
Toluene-d8		114		70 - 130						05/1	7/12 00:28	05/17/12 12:54	50.0
4-Bromofluorobenzene		113		70 - 130						05/1	7/12 00:28	05/17/12 12:54	.50.0
Lab Sample ID: 12E3877-BS1									C	lient	Sample	ID: Lab Control	Sample
Matrix: Soil												Prep Typ	e: Total
Analysis Batch: V008288				Spike	LCS	LCS						Prep Batch: 12E %Rec.	3877_P
Analyte				Added	Result		ifier	Unit		D	%Rec	Limits	
Benzene				50.0	49.6			ug/kg			99	75 - 127	
Ethylbenzene				50.0	49.9			ug/kg			100	80 - 134	
Naphthalene				50.0	40.7			ug/kg			81	69 - 150	
Toluene				50.0	53.2			ug/kg			106	80 - 132	
Xylenes, total				150	140			ug/kg			93	80 - 137	
	LCS I	LCS											
Surrogate	%Recovery	Quali	ifier	Limits									
1,2-Dichloroethane-d4	108			70 - 130									
Dibromofluoromethane	104			70 - 130									
Toluene-d8	113			70 - 130									

70 - 130

100

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 12E3877-BSD1	1					Clie	nt San	nple ID:	Lab Contro	Sampl	e Dup
Matrix: Soil									Pre	ep Type:	Total
Analysis Batch: V008288									Prep Bato	h: 12E3	877_P
			Spike	LCS Dup	LCS Dup				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			50.0	48.3		ug/kg		97	75 - 127	3	50
Ethylbenzene			50.0	47.7		ug/kg		95	80 - 134	4	50
Naphthalene			50.0	43.6		ug/kg		87	69 - 150	7	50
Toluene			50.0	57.9		ug/kg		116	80 - 132	8	50
Xylenes, total			150	134		ug/kg		89	80 - 137	4	50
	LCS Dup	LCS Dup									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4	108		70 - 130								
Dibromofluoromethane	103		70 - 130								
Toluene-d8	131	Z2	70 - 130								
4-Bromofluorobenzene	101		70 - 130								
Lab Sample ID: 12E3877-MS1								Client	Sample ID	Matrix	Spike
Matrix: Soil										p Type:	
Analysis Batch: V008288									Prep Batc		
	Sample	Sample	Spike	Matrix Spike	Matrix Spik	e			%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	ND		0.0504	0.0502		mg/kg dry	ō	100	31 - 143		
Ethylbenzene	ND		0.0504	0.0485		mg/kg dry	Ó	96	23 - 161		
Naphthalene	ND		0.0504	0.0201		mg/kg dry	ġ.	40	10 - 176		
Toluene	ND		0.0504	0.0514		mg/kg dry	0	102	30 - 155		
Xylenes, lotal	ND		0.151	0.130		mg/kg dry	0-	86	25 - 162		
	Matrix Spike	Matrix Spike									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4	111		70 - 130								
Dibromofluoromethane	103		70 - 130								
Toluene-d8	110		70 - 130								
4-Bromofluorobenzene	98		70 - 130								
Lab Sample ID: 12E3877-MSD1						CI	ient Sa	mole ID	: Matrix Sp	ike Dun	licate
and campic ter recourt moor						011	unit Se	inpic in	manna op	ine wah	oute

Lab Sample ID: 12E3877-MSD1 Matrix: Soil

A

Analysis Batch: V008288									Prep Batc	h: 12E3	877_P
	Sample	Sample	Spike	itrix Spike Dup	Matrix Spi	ke Duj			%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		0.0536	0.0536		mg/kg dry	13	100	31 - 143	6	50
Ethylbenzene	ND		0.0536	0.0522		mg/kg dry	0	97	23 - 161	7	50
Naphthalene	ND		0.0536	0.0222		mg/kg dry	¢	41	10 - 176	10	50
Toluene	ND		0.0536	0.0539		mg/kg dry	¢.	101	30 - 155	5	50
Xylenes, total	ND		0.161	0.136		mg/kg dry	ġ.	85	25 - 162	5	50

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	Matrix Spike Dup	Matrix Spike	Dup
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	108		70 - 130
Dibromofluoromethane	102		70 - 130
Toluene-d8	95		70 - 130
4-Bromofluorobenzene	100		70 - 130

Prep Type: Total

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 12E4742-BLK1	0								Client	Sample ID: Meth	
Matrix: Soil											pe: Total
Analysis Batch: V008450										Prep Batch: 12	E4742_P
		k Blank						-	-		
Analyte		t Qualifier	RL			Unit		D	Prepared	Analyzed	Dil Fac
Benzene	N		0.00200			mg/kg w			05/18/12 10:0		1.00
Ethylbenzene	N		0.00200			mg/kg w			05/18/12 10:0		1.00
Naphthalene	N		0.00500			mg/kg w			05/18/12 10:0		1.00
Toluene	N		0.00200			mg/kg w			05/18/12 10:0		1.00
Xylenes, total	N	,	0.00500	0.00	0250	mg/kg we			05/18/12 10:0	04 05/18/12 13:39	1.00
	Blan	k Blank									
Surrogate	%Recover	Qualifier	Limits						Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	10)	70 - 130						05/18/12 10:0	04 05/18/12 13:39	1.00
Dibromofluoromethane	10	1	70 - 130						05/18/12 10:0	04 05/18/12 13:39	1.00
Toluene-d8	12	2	70 - 130						05/18/12 10:0	04 05/18/12 13:39	1.00
4-Bromofluorobenzene	11:	2	70 - 130					(05/18/12 10:0	04 05/18/12 13:39	1.00
Lab Sample ID: 12E4742-BLK2									Client	Sample ID: Metho	d Blank
Matrix: Soil										Prep Ty	e: Total
Analysis Batch: V008450										Prep Batch: 12	
Curran Contract Contracts	Blanl	Blank								aller and alle	
Analyte	Resul	Qualifier	RL		MDL	Unit		D	Prepared	Analyzed	Dil Fac
Benzene	NE	-	0.100	0.0	0550	mg/kg we	t	0	05/18/12 10:0	4 05/18/12 14:10	50.0
Ethylbenzene	NE	6	0.100	0.0	0550	mg/kg we	t	(05/18/12 10:0	4 05/18/12 14:10	50.0
Naphthalene	NE		0.250	0.	.125	mg/kg we	t	C	05/18/12 10:0	4 05/18/12 14:10	50.0
Toluene	NE		0.100	0.0	0550	mg/kg we	t	C	05/18/12 10:0	4 05/18/12 14:10	50.0
Xylenes, total	NE		0.250	0.	.125	mg/kg we	t	0	05/18/12 10:0	4 05/18/12 14:10	50.0
	Blank	Blank									
Surrogate	%Recovery	Qualifier	Limits						Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	97		70 - 130					C	05/18/12 10:0	4 05/18/12 14:10	50.0
Dibromofluoromethane	99		70 - 130					0	05/18/12 10:0	4 05/18/12 14:10	50.0
Toluene-d8	113		70 - 130					C	05/18/12 10:0	4 05/18/12 14:10	50.0
4-Bromofluorobenzene	111		70 - 130					C	05/18/12 10:0	4 05/18/12 14:10	50.0
Lab Sample ID: 12E4742-BS1								Clie	ent Sample	e ID: Lab Control	Sample
Matrix: Soil										Prep Typ	e: Total
Analysis Batch: V008450										Prep Batch: 128	4742_P
			Spike	LCS	LCS					%Rec.	
Analyte			Added	Result	Quali	ifier U	nit		D %Rec	Limits	
Benzene			50.0	46.9		Ug	/kg		94	75 - 127	
Ethylbenzene			50.0	44.8		ug	/kg		90	80 - 134	
Naphthalene			50.0	38.6		ug	/kg		77	69 - 150	
Toluene			50.0	47.5		ug	/kg		95	80 - 132	
Xylenes, total			150	127		ug	/kg		84	80 - 137	
	LCS LCS										
Surrogate	%Recovery Qua	lifier	Limits								
1,2-Dichloroethane-d4	106		70 - 130								
Dibromofluoromethane	103		70 - 130								
Toluene-d8	107		70 - 130								
	19-1										

70 - 130

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4-Bromofluorobenzene

K

Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 12E4742-BSD1						Clie	nt San	nple ID;	Lab Contro		
Matrix: Soil										ep Type:	
Analysis Batch: V008450									Prep Bato	:h: 12E4	
			Spike	LCS Dup	LCS Dup				%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			50.0	46.8		ug/kg		94	75 - 127	0.1	50
Ethylbenzene			50.0	44.6		ug/kg		89	80 - 134	0.5	50
Naphthalene			50.0	38.2		ug/kg		76	69 - 150	1	50
Toluene			50.0	45.6		ug/kg		91	80 - 132	4	50
Xylenes, total			150	126		ug/kg		84	80 - 137	0.4	50
	LCS Dup	LCS Dup									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4	107		70 - 130								
Dibromofluoromethane	105		70 - 130								
Toluene-d8	105		70 - 130								
4-Bromofluorobenzene	98		70 - 130								
Lab Sample ID: 12E4742-MS1								Client	Sample ID	: Matrix	Spike
Matrix: Soil										p Type:	
Analysis Batch: V008450									Prep Batc		
	Sample	Sample	Spike	Matrix Spike	Matrix Spil	ke			%Rec.		0.00
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	ND		0.0661	0.0736		mg/kg dry	0	111	31 - 143		
Ethylbenzene	ND		0.0661	0.0678		mg/kg dry	ŵ	102	23 - 161		
Naphthalene	0.00613		0.0661	0.0234		mg/kg dry	۵	26	10 - 176		
Toluene	ND		0.0661	0.0873		mg/kg dry	0	132	30 - 155		
Xylenes, total	0.00250		0.198	0.176		mg/kg dry	\$	88	25 - 162		
	Matrix Spike	Matrix Spike									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4	103		70 - 130								
Dibromofluoromethane	101		70 - 130								
Toluene-d8	125		70 - 130								
4-Bromofluorobenzene	160	ZX	70 - 130								
Lab Sample ID: 12E4742-MSD1						CI	ient Sa	imple ID	: Matrix Sp	ike Dup	licate
Matrix: Soil										p Type:	
Analysis Batch: V008450									Prep Batch		
	Sample	Sample	Spike	Itrix Spike Dup	Matrix Spik	e Dui			%Rec.		RPD

	Sample	Sample	Spike	Itrix Spike Dup	Matrix Spi	ke Duj			%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		0.0544	0.0587		mg/kg dry	Ø	108	31 - 143	22	50
Ethylbenzene	ND		0.0544	0.0503		mg/kg dry	0	93	23 - 161	30	50
Naphthalene	0.00613		0.0544	0.0177		mg/kg dry	9	21	10 - 176	28	50
Toluene	ND		0.0544	0.0739		mg/kg dry	ō.	136	30 - 155	17	50
Xylenes, total	0.00250		0.163	0.129		mg/kg dry	-01	77	25 - 162	31	50

	Matrix Spike Dup	Matrix Spike	Dup
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	104		70 - 130
Dibromofluoromethane	104		70 - 130
Toluene-d8	136	ZX	70 - 130
4-Bromofluorobenzene	155	ZX	70 - 130

Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D

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Lab Sample ID: 12E3033-BLK1 Matrix: Soil Analysis Batch: 12E3033

Client Sample	D: Me	ethod E	Blank
	Prep	Type:	Total
Prep	Batch:	12E30	33 P

A NEW CONTRACTOR OF CONTRACTOR	Blank	Blank						and a second second	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Acenaphthylene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Anthracene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Benzo (a) anthracene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Benzo (a) pyrene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Benzo (b) fluoranthene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Benzo (g.h.i) perylene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Benzo (k) fluoranthene	ND		0.0670	0,0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Chrysene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Dibenz (a,h) anthracene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Fluoranthene	ND		0,0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Fluorene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Indeno (1,2,3-cd) pyrene	ND		0,0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Naphthalene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Phenanthrene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
Pyrene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
1-Methylnaphthalene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
2-Methylnaphthalene	ND		0.0670	0.0340	mg/kg wet		05/17/12 11:09	05/17/12 23:49	1.00
	Blank	Blank							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	95		18 - 120				05/17/12 11:09	05/17/12 23:49	1.00
2-Fluorobiphenyl	72		14 - 120				05/17/12 11:09	05/17/12 23:49	1.00

17 - 120

Lab Sample ID: 12E3033-BS1 Matrix: Soil Analysis Batch: 12E3033

Nitrobenzene-d5

Client Sample ID: Lab Control Sample

05/17/12 11:09

05/17/12 23:49

Prep Type: Total Prep Batch: 12E3033_P

1.00

						the second second second	
Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
1.67	1.54	MNR	mg/kg wet		93	36 - 120	
1.67	1.49	MNR	mg/kg wet		89	38 - 120	
1.67	1.60	MNR	mg/kg wet		96	46 - 124	
1.67	1.62	MNR	mg/kg wet		97	45 - 120	
1,67	1.75	MNR	mg/kg wet		105	45 - 120	
1.67	1.69	MNR	mg/kg wet		101	42 - 120	
1.67	1.63	MNR	mg/kg wet		98	38 - 120	
1.67	1.54	MNR	mg/kg wet		92	42 - 120	
1.67	1.59	MNR	mg/kg wet		96	43 - 120	
1.67	1.58	MNR	mg/kg wet		95	32 - 128	
1.67	1.67	MNR	mg/kg wet		100	46 - 120	
1.67	1.58	MNR	mg/kg wet		95	42 - 120	
1.67	1.69	MNR	mg/kg wet		101	41 - 121	
1.67	1.40	MNR	mg/kg wet		84	32 - 120	
1.67	1.57	MNR	mg/kg wet		94	45 - 120	
1.67	1.59	MNR	mg/kg wet		96	43 - 120	
1.67	1.03	MNR	mg/kg wet		62	32 - 120	
1.67	1.37	MNR	mg/kg wet		82	28 - 120	
	Added 1.67	AddedResult1.671.541.671.671.671.601.671.621.671.671.671.631.671.631.671.541.671.591.671.581.671.581.671.581.671.581.671.581.671.581.671.591.671.591.671.571.671.591.671.591.671.03	AddedResultQualifier1.671.54MNR1.671.49MNR1.671.60MNR1.671.62MNR1.671.62MNR1.671.63MNR1.671.63MNR1.671.63MNR1.671.54MNR1.671.54MNR1.671.58MNR1.671.58MNR1.671.58MNR1.671.58MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.59MNR1.671.03MNR	Added Result Qualifier Unit 1.67 1.54 MNR mg/kg wet 1.67 1.49 MNR mg/kg wet 1.67 1.60 MNR mg/kg wet 1.67 1.60 MNR mg/kg wet 1.67 1.62 MNR mg/kg wet 1.67 1.62 MNR mg/kg wet 1.67 1.63 MNR mg/kg wet 1.67 1.54 MNR mg/kg wet 1.67 1.58 MNR mg/kg wet 1.67 1.67 MNR mg/kg wet 1.67 1.69 MNR mg/kg wet 1.67 1.69 MNR mg/kg wet 1.67 1.69 MNR mg/kg wet 1.67 1.40 MNR mg/kg wet 1.67 <td< td=""><td>AddedResultQualifierUnitD1.671.54MNRmg/kg wet1.671.49MNRmg/kg wet1.671.60MNRmg/kg wet1.671.62MNRmg/kg wet1.671.62MNRmg/kg wet1.671.62MNRmg/kg wet1.671.63MNRmg/kg wet1.671.69MNRmg/kg wet1.671.69MNRmg/kg wet1.671.54MNRmg/kg wet1.671.55MNRmg/kg wet1.671.58MNRmg/kg wet1.671.67MNRmg/kg wet1.671.69MNRmg/kg wet1.671.58MNRmg/kg wet1.671.59MNRmg/kg wet1</td><td>AddedResultQualifierUnitD%Rec1.671.54MNRmg/kg wet931.671.49MNRmg/kg wet891.671.60MNRmg/kg wet961.671.62MNRmg/kg wet971.671.62MNRmg/kg wet1051.671.62MNRmg/kg wet1011.671.63MNRmg/kg wet981.671.63MNRmg/kg wet981.671.54MNRmg/kg wet921.671.58MNRmg/kg wet961.671.58MNRmg/kg wet951.671.67MNRmg/kg wet951.671.58MNRmg/kg wet951.671.69MNRmg/kg wet961.671.58MNRmg/kg wet951.671.69MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNR<t< td=""><td>AddedResultQualifierUnitD%RecLimits1.671.54MNRmg/kg wet9336 - 1201.671.49MNRmg/kg wet8938 - 1201.671.60MNRmg/kg wet9646 - 1241.671.62MNRmg/kg wet9745 - 1201.671.62MNRmg/kg wet10545 - 1201.671.671.69MNRmg/kg wet10142 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.68MNRmg/kg wet9643 - 1201.671.58MNRmg/kg wet9643 - 1201.671.67MNRmg/kg wet9532 - 1281.671.67MNRmg/kg wet9542 - 1201.671.68MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9445 - 1201.671.69MNRmg/kg wet9445 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet<</td></t<></td></td<>	AddedResultQualifierUnitD1.671.54MNRmg/kg wet1.671.49MNRmg/kg wet1.671.60MNRmg/kg wet1.671.62MNRmg/kg wet1.671.62MNRmg/kg wet1.671.62MNRmg/kg wet1.671.63MNRmg/kg wet1.671.69MNRmg/kg wet1.671.69MNRmg/kg wet1.671.54MNRmg/kg wet1.671.55MNRmg/kg wet1.671.58MNRmg/kg wet1.671.67MNRmg/kg wet1.671.69MNRmg/kg wet1.671.58MNRmg/kg wet1.671.59MNRmg/kg wet1	AddedResultQualifierUnitD%Rec1.671.54MNRmg/kg wet931.671.49MNRmg/kg wet891.671.60MNRmg/kg wet961.671.62MNRmg/kg wet971.671.62MNRmg/kg wet1051.671.62MNRmg/kg wet1011.671.63MNRmg/kg wet981.671.63MNRmg/kg wet981.671.54MNRmg/kg wet921.671.58MNRmg/kg wet961.671.58MNRmg/kg wet951.671.67MNRmg/kg wet951.671.58MNRmg/kg wet951.671.69MNRmg/kg wet961.671.58MNRmg/kg wet951.671.69MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNRmg/kg wet961.671.59MNR <t< td=""><td>AddedResultQualifierUnitD%RecLimits1.671.54MNRmg/kg wet9336 - 1201.671.49MNRmg/kg wet8938 - 1201.671.60MNRmg/kg wet9646 - 1241.671.62MNRmg/kg wet9745 - 1201.671.62MNRmg/kg wet10545 - 1201.671.671.69MNRmg/kg wet10142 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.68MNRmg/kg wet9643 - 1201.671.58MNRmg/kg wet9643 - 1201.671.67MNRmg/kg wet9532 - 1281.671.67MNRmg/kg wet9542 - 1201.671.68MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9445 - 1201.671.69MNRmg/kg wet9445 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet<</td></t<>	AddedResultQualifierUnitD%RecLimits1.671.54MNRmg/kg wet9336 - 1201.671.49MNRmg/kg wet8938 - 1201.671.60MNRmg/kg wet9646 - 1241.671.62MNRmg/kg wet9745 - 1201.671.62MNRmg/kg wet10545 - 1201.671.671.69MNRmg/kg wet10142 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.69MNRmg/kg wet9838 - 1201.671.68MNRmg/kg wet9643 - 1201.671.58MNRmg/kg wet9643 - 1201.671.67MNRmg/kg wet9532 - 1281.671.67MNRmg/kg wet9542 - 1201.671.68MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9542 - 1201.671.69MNRmg/kg wet9445 - 1201.671.69MNRmg/kg wet9445 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet9643 - 1201.671.59MNRmg/kg wet<

Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D (Continued)

Lab Sample ID: 12E3033-BS1	
Matrix: Soil	
Analysis Batch: 12E3033	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Terphenyl-d14	93		18 - 120
2-Fluorobiphenyl	69		14 - 120
Nitrobenzene-d5	59		17 - 120

Client Sample ID: Lab Control Sample Prep Type: Total Prep Batch: 12E3033_P

Method: SW-846 - General Chemistry Parameters

Lab Sample ID: 12E3045-DU	P1						Client Sample ID: Dup	olicate
Matrix: Soil							Prep Type:	: Total
Analysis Batch: 12E3045							Prep Batch: 12E3	045_P
	Sample	Sample	Duplicate	Duplicate				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
% Dry Solids	86.7		86.8		%		0.07	20

QC Association Summary

GCMS Volatiles

Analysis Batch: V008288

This yers Batom Terr					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3877-BLK1	Method Blank	Total	Soil	SW846 8260B	12E3877_P
12E3877-BLK2	Method Blank	Total	Soil	SW846 8260B	12E3877_P
12E3877-BS1	Lab Control Sample	Total	Soil	SW846 8260B	12E3877_P
12E3877-BSD1	Lab Control Sample Dup	Total	Soil	SW846 8260B	12E3877_P
12E3877-MS1	Matrix Spike	Total	Soil	SW846 8260B	12E3877_P
12E3877-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8260B	12E3877_P
NWE1590-01 - RE1	1192 Bobwhite	Total	Soil	SW846 8260B	12E3877_P
NWE1590-01 - RE2	1192 Bobwhite	Total	Soil	SW846 8260B	12E3877_P
NWE1590-02 - RE1	857 Dolphin	Total	Soil	SW846 8260B	12E3877_P
NWE1590-03 - RE1	411 Elderberney	Total	Soil	SW846 8260B	12E3877_P
Analysis Batch: V008	450				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E4742-BLK1	Method Blank	Total	Soil	SW846 8260B	12E4742_P
12E4742-BLK2	Method Blank	Total	Soll	SW846 8260B	12E4742_P
12E4742-BS1	Lab Control Sample	Total	Soil	SW846 8260B	12E4742_P
12E4742-BSD1	Lab Control Sample Dup	Total	Soil	SW846 8260B	12E4742_P
12E4742-MS1	Matrix Spike	Total	Soil	SW846 8260B	12E4742_P
12E4742-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8260B	12E4742_P
NWE1590-01 - RE3	1192 Bobwhite	Total	Soil	SW846 8260B	12E4742_P
Prep Batch: 12E3877	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3877-BLK1	Method Blank	Total	Soil	EPA 5035	
12E3877-BLK2	Method Blank	Total	Soil	EPA 5035	
12E3877-BS1	Lab Control Sample	Total	Soil	EPA 5035	
12E3877-BSD1	Lab Control Sample Dup	Total	Soil	EPA 5035	
12E3877-MS1	Matrix Spike	Total	Soil	EPA 5035	
12E3877-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 5035	
NWE1590-01 - RE1	1192 Bobwhite	Total	Soil	EPA 5035	
NWE1590-01 - RE2	1192 Bobwhite	Total	Soil	EPA 5035	
NWE1590-02 - RE1	857 Dolphin	Total	Soil	EPA 5035	
NWE1590-03 - RE1	411 Elderberney	Total	Soil	EPA 5035	
Prep Batch: 12E4742_	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E4742-BLK1	Method Blank	Total	Soil	EPA 5035	
12E4742-BLK2	Method Blank	Total	Soil	EPA 5035	
12E4742-BS1	Lab Control Sample	Total	Soil	EPA 5035	
12E4742-BSD1	Lab Control Sample Dup	Total	Soil	EPA 5035	
12E4742-MS1	Matrix Spike	Total	Soil	EPA 5035	
12E4742-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 5035	
NWE1590-01 - RE3	1192 Bobwhite	Total	Soil	EPA 5035	
GCMS Semivolatil	es				
Analysis Batch: 12E30	033				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3033-BLK1	Method Blank	Total	Soil	SW846 8270D	12E3033_P

Eas outline is	onem oumple to	Lich ithe	Matrix	metriou	Fieb paren
12E3033-BLK1	Method Blank	Total	Soil	SW846 8270D	12E3033_P
12E3033-BS1	Lab Control Sample	Total	Soil	SW846 8270D	12E3033_P
NWE1590-01 - RE1	1192 Bobwhite	Total	Soil	SW846 8270D	12E3033_P
NWE1590-02	857 Dolphin	Total	Soil	SW846 8270D	12E3033_P
NWE1590-02	857 Dolphin	Total	Soil	SW846 8270D	12E3033_

QC Association Summary

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GCMS Semivolatiles (Continued)

Analysis Batch: 12E3033 (Continued)

NWE1590-02

NWE1590-03

. analysis satura tase	(activities of)				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
NWE1590-03	411 Elderberney	Total	Soil	SW846 8270D	12E3033_P
Prep Batch: 12E3033	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3033-BLK1	Method Blank	Total	Soil	EPA 3550B	
12E3033-BS1	Lab Control Sample	Total	Soil	EPA 3550B	
NWE1590-01 - RE1	1192 Bobwhite	Total	Soil	EPA 3550B	
NWE1590-02	857 Dolphin	Total	Soil	EPA 3550B	
NWE1590-03	411 Elderberney	Total	Soil	EPA 3550B	
Extractions					
Analysis Batch: 12E3	045				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3045-DUP1	Duplicate	Total	Soil	SW-846	12E3045_P
NWE1590-01	1192 Bobwhite	Total	Soil	SW-846	12E3045_P
NWE1590-02	857 Dolphin	Total	Soil	SW-846	12E3045_P
NWE1590-03	411 Elderberney	Total	Soil	SW-846	12E3045_P
Prep Batch: 12E3045	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E3045-DUP1	Duplicate	Total	Soil	% Solids	
NWE1590-01	1192 Bobwhite	Total	Soil	% Solids	

D	Client Sample ID	Prep Type	Matrix	Method
P1	Duplicate	Total	Soil	% Solids
	1192 Bobwhite	Total	Soil	% Solids
	857 Dolphin	Total	Soil	% Solids
	411 Elderberney	Total	Soil	% Solids

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

Client Sample ID: 1192 Bobwhite Date Collected: 05/07/12 15:30 Date Received: 05/12/12 08:10

Lab Sample ID: NWE1590-01 Matrix: Soil

Percent Solids: 84.1

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total	Prep	EPA 5035	RE1	1.03	12E3877_P	05/07/12 15:30	TSP	TAL NSH
Total	Analysis	SW846 8260B	RE1	1.00	V008288	05/17/12 14:25	KKK	TAL NSF
Total	Prep	EPA 5035	RE2	1.02	12E3877_P	05/07/12 15:30	TSP	TAL NSH
Total	Analysis	SW846 8260B	RE2	50.0	V008288	05/17/12 14:56	KKK	TAL NSH
Total	Prep	EPA 5035	RE3	1.02	12E4742_P	05/07/12 15:30	TSP	TAL NSH
Total	Analysis	SW846 8260B	RE3	500	V008450	05/18/12 15:11	ККК	TAL NSH
Total	Prep	EPA 3550B	RE1	1.98	12E3033_P	05/17/12 11:09	JJR	TAL NSH
Total	Analysis	SW846 8270D	RE1	20.0	12E3033	05/18/12 15:08	WLL	TAL NSH
Total	Prep	% Solids		1.00	12E3045_P	05/14/12 15:39	RRS	TAL NSH
Total	Analysis	SW-846		1.00	12E3045	05/15/12 07:13	KDJ	TAL NSH

Client Sample ID: 857 Dolphin

Date Collected: 05/09/12 14:45 Date Received: 05/12/12 08:10 Lab Sample ID: NWE1590-02 Matrix: Soil

Lab Sample ID: NWE1590-03

Percent Solids: 76.6

Matrix: Soil

Percent Solids: 93

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total	Prep	EPA 5035	RE1	2.39	12E3877_P	05/09/12 14:45	TSP	TAL NSH
Total	Analysis	SW846 8260B	RE1	1.00	V008288	05/17/12 13:24	KKK	TAL NSH
Total	Prep	EPA 3550B		0.996	12E3033_P	05/17/12 11:09	JJR	TAL NSH
Total	Analysis	SW846 8270D		1.00	12E3033	05/18/12 00:34	WLL	TAL NSH
Total	Prep	% Solids		1.00	12E3045_P	05/14/12 15:39	RRS	TAL NSH
Total	Analysis	SW-846		1.00	12E3045	05/15/12 07:13	KDJ	TAL NSH

Client Sample ID: 411 Elderberney Date Collected: 05/10/12 11:15 Date Received: 05/12/12 08:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total	Prep	EPA 5035	RE1	1.12	12E3877_P	05/10/12 11:15	TSP	TAL NSH
Total	Analysis	SW846 8260B	RE1	1.00	V008288	05/17/12 13:55	ККК	TAL NSH
Total	Prep	EPA 3550B		0.987	12E3033_P	05/17/12 11:09	JJR	TAL NSH
Total	Analysis	SW846 8270D		1.00	12E3033	05/18/12 00:56	WLL	TAL NSH
Total	Prep	% Solids		1.00	12E3045_P	05/14/12 15:39	RRS	TAL NSH
Total	Analysis	SW-846		1.00	12E3045	05/15/12 07:13	KDJ	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Road, Nashville, TN 37204, TEL 800-765-0980

Method	Method Description	Protocol	Laboratory
SW-846	General Chemistry Parameters		TAL NSH
SW846 8260B	Volatile Organic Compounds by EPA Method 8260B		TAL NSH
SW846 8270D	Polyaromatic Hydrocarbons by EPA 8270D		TAL NSH

Protocol References:

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Road, Nashville, TN 37204, TEL 800-765-0980

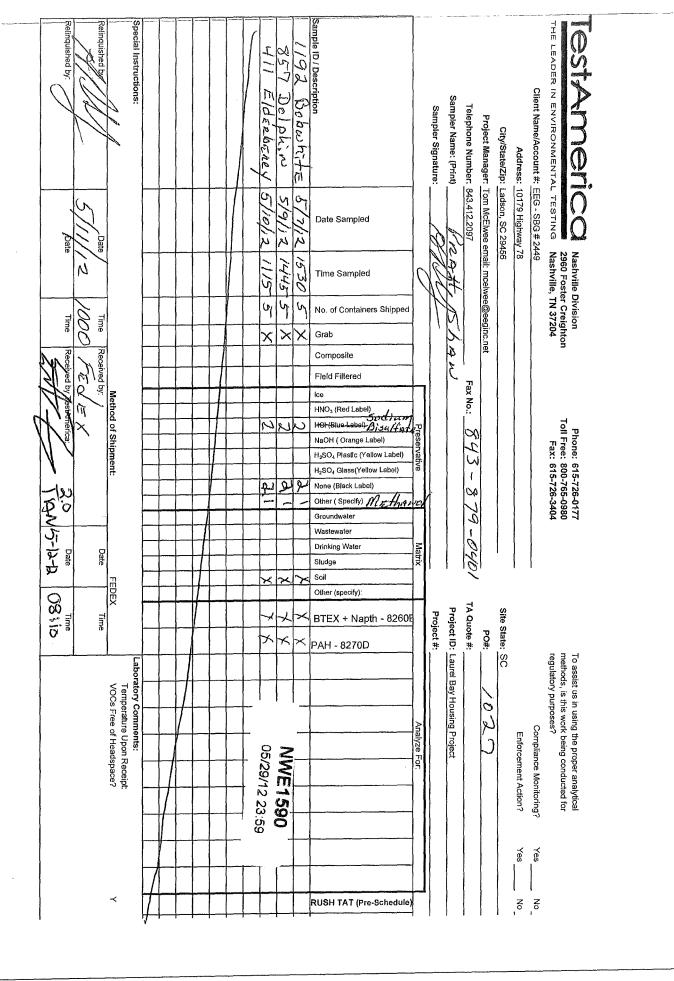
Certification Summary

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Nashville		ACIL		393
TestAmerica Nashville	A2LA	ISO/IEC 17025		0453.07
TestAmerica Nashville	Alabama	State Program	4	41150
TestAmerica Nashville	Alaska (UST)	State Program	10	UST-087
TestAmerica Nashville	Arizona	State Program	9	AZ0473
TestAmerica Nashville	Arkansas DEQ	State Program	6	88-0737
TestAmerica Nashville	California	NELAC	9	1168CA
TestAmerica Nashville	Canadian Assoc Lab Accred (CALA)	Canada		3744
TestAmerica Nashville	Colorado	State Program	8	N/A
TestAmerica Nashville	Connecticut	State Program	1	PH-0220
TestAmerica Nashville	Florida	NELAC	4	E87358
TestAmerica Nashville	Illinois	NELAC	5	200010
TestAmerica Nashville	Iowa	State Program	7	131
TestAmerica Nashville	Kansas	NELAC	7	E-10229
TestAmerica Nashville	Kentucky	State Program	4	90038
TestAmerica Nashville	Kentucky (UST)	State Program	4	19
TestAmerica Nashville	Louisiana	NELAC	6	30613
TestAmerica Nashville	Louisiana	NELAC	6	LA110014
TestAmerica Nashville	Maryland	State Program	3	316
TestAmerica Nashville	Massachusetts	State Program	1	M-TN032
TestAmerica Nashville	Minnesota	NELAC	5	047-999-345
TestAmerica Nashville	Mississippi	State Program	4	N/A
TestAmerica Nashville	Montana (UST)	State Program	8	NA
TestAmerica Nashville	New Hampshire	NELAC	1	2963
TestAmerica Nashville	New Jersey	NELAC	2	TN965
TestAmerica Nashville	New York	NELAC	2	11342
TestAmerica Nashville	North Carolina DENR	State Program	4	387
TestAmerica Nashville	North Dakota	State Program	8	R-146
TestAmerica Nashville	Ohio VAP	State Program	5	CL0033
TestAmerica Nashville	Oklahoma	State Program	6	9412
TestAmerica Nashville	Oregon	NELAC	10	TN200001
TestAmerica Nashville	Pennsylvania	NELAC	3	68-00585
TestAmerica Nashville	Rhode Island	State Program	1	LAO00268
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	Tennessee	State Program	4	2008
TestAmerica Nashville	Texas	NELAC	6	T104704077-09-TX
TestAmerica Nashville	USDA	Federal		S-48469
TestAmerica Nashville	Utah	NELAC	8	TAN
TestAmerica Nashville	Virginia	NELAC	3	460152
TestAmerica Nashville	Virginia	State Program	3	00323
TestAmerica Nashville	Washington	State Program	10	C789
TestAmerica Nashville	West Virginia DEP	State Program	3	219
TestAmerica Nashville	Wisconsin	State Program	5	998020430
TestAmerica Nashville	Wyoming (UST)	A2LA	8	453.07

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



ATTACHMENT A

NON-HAZARDOUS MANIFEST	's US EPA ID	No. N	lanifest Doc	No.	2. Page 1	of 1 🖉	
3. Generator's Mailing Address: MCAS, BEAUFORT LAUREL BAY HOUSING	S, BEAUFORT		f different than mailing):			est Number /MNA	00316836
BEAUFORT, SC 29907 4. Generator's Phone 843-228-6461						B. State	Generator's ID
5. Transporter 1 Company Name	6	US EPA	D Number			1	
EEG, INC.					C. State Transporter's ID		
7. Transporter 2 Company Name	8	8. US EPA ID Number		D. Transporter's Phone 843-879-0411			
			E. State Transporter's ID F. Transporter's Phone				
9. Designated Facility Name and Site Address HICKORY HILL LANDFILL		10. US EPA ID Number		G. State Facility ID			
2621 LOW COUNTRY ROAD				H. State Facility Phone 843-987-4643			
RIDGELAND, SC 29936				A CONTRACTOR CONTRACTOR			
			12 Cor	ntainers	13. Total	14. Unit	
1. Description of Waste Materials			No.	Туре	Quantity	Wt /Vol.	I. Misc. Comments
HEATING OIL TANKS FILLED WITH SAND							
WM Profile # 102655	550		-		1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
				1767			1.00
WM Profile #			1		1757.55		
WM Profile #							
Additional Descriptions for Materials Listed Abov	/e		K. Disposi	al Location			
			6-0		_		(1996)
			Cell Grid				Level
5. Special Handling Instructions and Additional Infor 1359 Grand Additional Theorem 20 urchase Order # 5. GENERATOR'S CERTIFICATE:	(mation 2)857	Bobohin Dolphin EMERGENCY CO	te 4	1470	Elder <u>7 Car</u>	berey dival-	(G) 1202; CREdin
nereby certify that the above-described materials an							ve been fully and
curately described, classified and packaged and are inted Name		ndition for transpo Signature "On beha	and the second se	ding to app	nicable regul	ations.	Month Day
ported 2a	2	1.1	U.	AS	6		1111
7. Transporter 1 Acknowledgement of Receipt of Ma		100000000000000000000000000000000000000	11	/	-		
Printed Name PRAA Shaw Signature		NY				Month Day Y	
3. Transporter 2 Acknowledgement of Receipt of Ma	aterials		1				
Printed Name	3	Signature					Month Day y
James BALdus.N D. Certificate of Final Treatment/Disposal		James	Bald	he	-	-	7 46 1
ertify, on behalf of the above listed treatment facilit pplicable laws, regulations, permits and licenses on t	he dates liste	ed above.				is managed in	compliance with all
 Facility Owner or Operator: Certification of receip Printed Name 			overed by this	s manifest.	-		Marth Day 1
Printed Name		Signature					Month Day Y

Appendix C Regulatory Correspondence





Catherine E. Heigel, Director Promoting and protecting the health of the public and the environment

July 1, 2015

Commanding Officer Attention: NREAO Mr. William A. Drawdy United State Marine Corps Air Station Post Office Box 55001 Beaufort, SC 29904-5001

RE: No Further Action Laurel Bay Underground Storage Tank Assessment Reports for: See attached sheet

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received the referenced Underground Storage Tanks (USTs) Assessment Reports for the addresses listed above. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 <u>et seq</u>., as amended).

The Department has reviewed the referenced assessment reports and agrees there is no indication of soil or groundwater contamination on these properties, and therefore no further investigation is required at this time.

Please note that the Department's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, the Department retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at kriegkm@dhec.sc.gov or 803-898-0255.

Sincerely,

Kent Krieg Department of Defense Corrective Action Section Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control

Cc: Russell Berry (via email) Craig Ehde (via email) Bryan Beck (via email)



Catherine E. Heigel, Director Promoting and protecting the health of the public and the environment

Attachment to:	Krieg to Drawdy
	Subject: NFA
	Dated 7/1/2015

Laurel Bay Underground Storage Tank Assessment Reports for: (153 addresses/161 tanks)

111 Birch	363 Aspen
123 Banyan	364 Aspen
131 Banyan	366 Aspen
134 Banyan	369 Aspen
145 Laurel Bay	373 Aspen
150 Laurel Bay	381 Aspen
153 Laurel Bay	401 Elderberry
154 Laurel Bay	402 Elderberry
155 Laurel Bay	404 Elderberry
200 Balsam	410 Elderberry
202 Balsam	420 Elderberry
203 Balsam	424 Elderberry
208 Balsam	435 Elderberry Tank 3
210 Balsam	452 Elderberry
211 Balsam	460 Elderberry
220 Cypress	465 Dogwood
222 Cypress	477 Laurel Bay
223 Cypress	487Laurel Bay
252 Beech Tank 2	513 Laurel Bay
271 Beech Tank 1	519 Laurel Bay
271 Beech Tank 2	524 Laurel Bay
284 Birch Tank 1	535 Laurel Bay
284 Birch Tank 2	553 Dahlia
308 Ash	590 Aster
311 Ash	591 Aster
312 Ash	610 Dahlia
317 Ash	612 Dahlia
318 Ash	628 Dahlia
337 Ash	636 Dahlia
351 Ash Tank 1	637 Dahlia Tank 1
351 Ash Tank 2	637 Dahlia Tank 2
355 Ash Tank 1	641 Dahlia
355 Ash Tank 2	642 Dahlia Tank 1
360 Aspen	642 Dahlia Tank 2

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL 2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.gov Laurel Bay Underground Storage Tank Assessment Reports for: (153 addresses/161 tanks) cont.

655 Camellia	920 Albacore
662 Camellia	922 Barracuda Tank 1
683 Camellia	922 Barracuda Tank 2
684 Camellia	924 Albacore
689 Abelia	925 Albacore
694 Abelia	926 Albacore
695 Abelia	930 Albacore
741 Blue Bell	931 Albacore
742 Blue Bell	933 Albacore
755 Althea	936 Albacore
757 Althea	938 Albacore
776 Laurel Bay	939 Albacore
777 Azalea	940 Albacore
779 Laurel Bay	1010 Foxglove
781 Laurel Bay	1066 Gardenia
802 Azalea	1068 Gardenia
816 Azalea	1071 Heather Tank 2
822 Azalea	1100 Iris Tank 2
823 Azalea	1128 Iris
825 Azalea	1178 Bobwhite
828 Azalea	1204 Cardinal
837 Azalea	1208 Cardinal
851 Dolphin	1209 Cardinal
856 Dolphin	1210 Cardinal
857 Dolphin	1215 Cardinal
861 Dolphin	1216 Cardinal
864 Dolphin	1217 Cardinal Tank 1
868 Dolphin	1217 Cardinal Tank 2
872 Dolphin	1233 Dove
879 Cobia	1244 Dove
886 Cobia	1250 Dove
888 Cobia	1252 Dove
889 Cobia	1254 Dove
901 Barracuda	1256 Dove
902 Barracuda	1258 Dove
903 Barracuda	1263 Dove
904 Barracuda	1269 Dove
909 Barracuda	1276 Dove
910 Barracuda	1283 Dove
914 Barracuda	1285 Dove
915 Barracuda	1288 Eagle

Laurel Bay Underground Storage Tank Assessment Reports for: (153 addresses/161 tanks) cont.

1296 Eagle	1330 Albatross
1307 Eagle	1331 Albatross
1321 Albatross	1333 Albatross
1322 Albatross	1334 Albatross
1327 Albatross	1335 Albatross
1328 Albatross	