SUMMARY REPORT
355 IRIS LANE (FORMERLY 1134 IRIS LANE)
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

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
CTO	Contract Task Order
COPC	constituents of potential concern
ft	feet
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 355 Iris Lane (Formerly 1134 Iris Lane). 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 and the necessity for an investigation associated with this media. A multi-media investigation 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 355 Iris Lane (Formerly 1134 Iris Lane). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1134 Iris Lane* (MCAS Beaufort, 2013). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

2.1 UST Removal and Soil Sampling

On November 8, 2012, a single 280 gallon heating oil UST was removed from the rear patio area at 355 Iris Lane (Formerly 1134 Iris Lane). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. 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 5'6" 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 355 Iris Lane (Formerly 1134 Iris Lane) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated August 24, 2016, SCDHEC requested an IGWA for 355 Iris Lane (Formerly 1134 Iris Lane) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

2.3 Groundwater Sampling

On March 7, 2017, a temporary monitoring well was installed at 355 Iris Lane (Formerly 1134 Iris Lane), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil UST. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring well. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

2.4 Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 2. A copy of the laboratory analytical data report is included in Appendix C.

The groundwater results collected from 355 Iris Lane (Formerly 1134 Iris Lane) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 355 Iris Lane (Formerly 1134 Iris Lane). This NFA determination was obtained in a letter dated July 27, 2017. SCDHEC's NFA letter is provided in Appendix D.

4.0 REFERENCES

Marine Corps Air Station Beaufort, 2013. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1134 Iris Lane, Laurel Bay Military Housing Area*, February 2013.

Resolution Consultants, 2017. *Initial Groundwater Investigation Report – February and March 2017 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, June 2017.

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.

South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

Tables

Table 1
Laboratory Analytical Results - Soil
355 Iris Lane (Formerly 1134 Iris Lane)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs [(1)]	Results Sample Collected 11/08/12
Volatile 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 Analyzed 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 - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

Table 2
Laboratory Analytical Results - Groundwater
355 Iris Lane (Formerly 1134 Iris Lane)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs [1]	Site-Specific Groundwater VISLs (µg/L)[2]	Results Sample Collected 03/07/17
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)			
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	**0.95**
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

[1] South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.1 (SCDHEC, February 2016).

[2] Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of $1x10^{-6}$, a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL and/or the Site-Specific Groundwater VISL.

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

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

RBSL - Risk-Based Screening Level

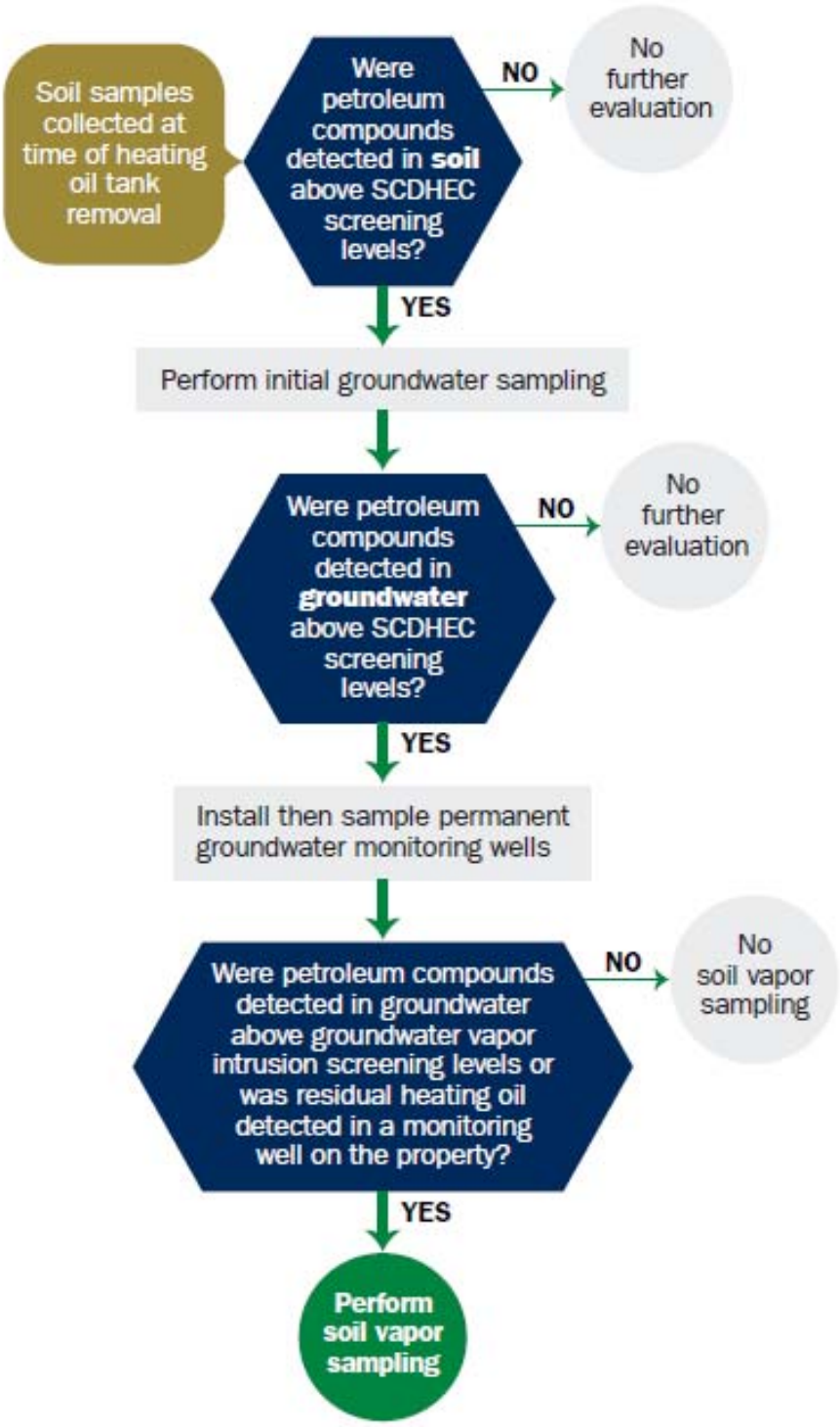
SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A
Multi-Media Selection Process for LBMH

CDM - AECOM
Multimedia Joint Venture



Appendix A - Multi-Media Selection Process for LBMH

Appendix B
UST Assessment Report

CDM - AECOM
Multimedia Joint Venture

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)

MCAS Beaufort, Commanding Officer Attn: NREAO (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 Military Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Company Site Identifier

1134 Iris Lane, Laurel Bay Military Housing Area
Street Address or State Road (as applicable)

Beaufort,	Beaufort
City	County

Attachment 2

III. INSURANCE INFORMATION

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

	1134Iris				
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				
E. Month/Year of Last Use.....	Mid 1980s				
F. Depth (ft.) To Base of Tank.....	5'6"				
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.....	11/8/2012				
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)
UST 1134Iris was removed from the ground and disposed at a 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 1134Iris 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
Corrosion, pitting and holes were found throughout the tank.

VII. PIPING INFORMATION

A.	Construction Material..(ex. Steel, FRP).....	1134Iris				
B.	Distance from UST to Dispenser.....	Steel & Copper				
C.	Number of Dispensers.....	N/A				
D.	Type of System Pressure or Suction…….	N/A				
E.	Was Piping Removed from the Ground? Y/N	Suction				
F.	Visible Corrosion or Pitting Y/N.....	No				
G.	Visible Holes Y/N.....	Yes				
H.	Age.....	No				
		Late 1950s				

I. If any corrosion, pitting, or holes were observed, describe 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.

IX. SITE CONDITIONS

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

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1134Iris	Excav at fill end	Soil	Sandy	5'6"	11/8/12 1415 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 and 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.

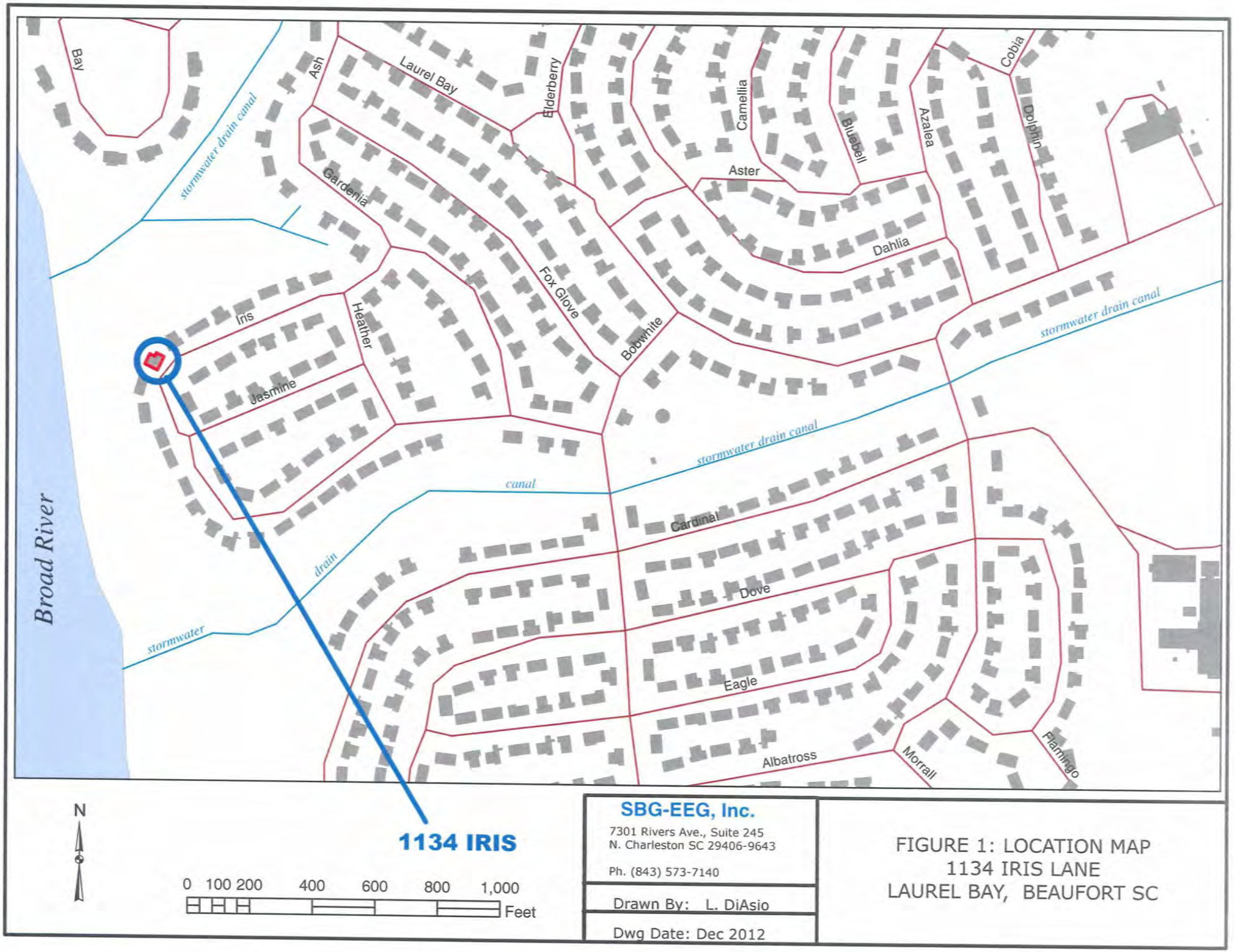
XII. RECEPTORS

	Yes	No
A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? *River & stormwater drainage canal If yes, indicate type of receptor, distance, and direction on site map.	*X	
B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map.		X
C. Are there any underground structures (e.g., basements) Located within 100 feet of the UST system? If yes, indicate type of structure, distance, and direction on site map.		X
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 contamination? *Sewer, water, electricity cable & fiber optic If yes, indicate the type of utility, distance, and direction on the site map.	*X	
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? If yes, indicate the area of contaminated soil on the site map.		X

XIII. SITE MAP

You must supply a scaled 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)

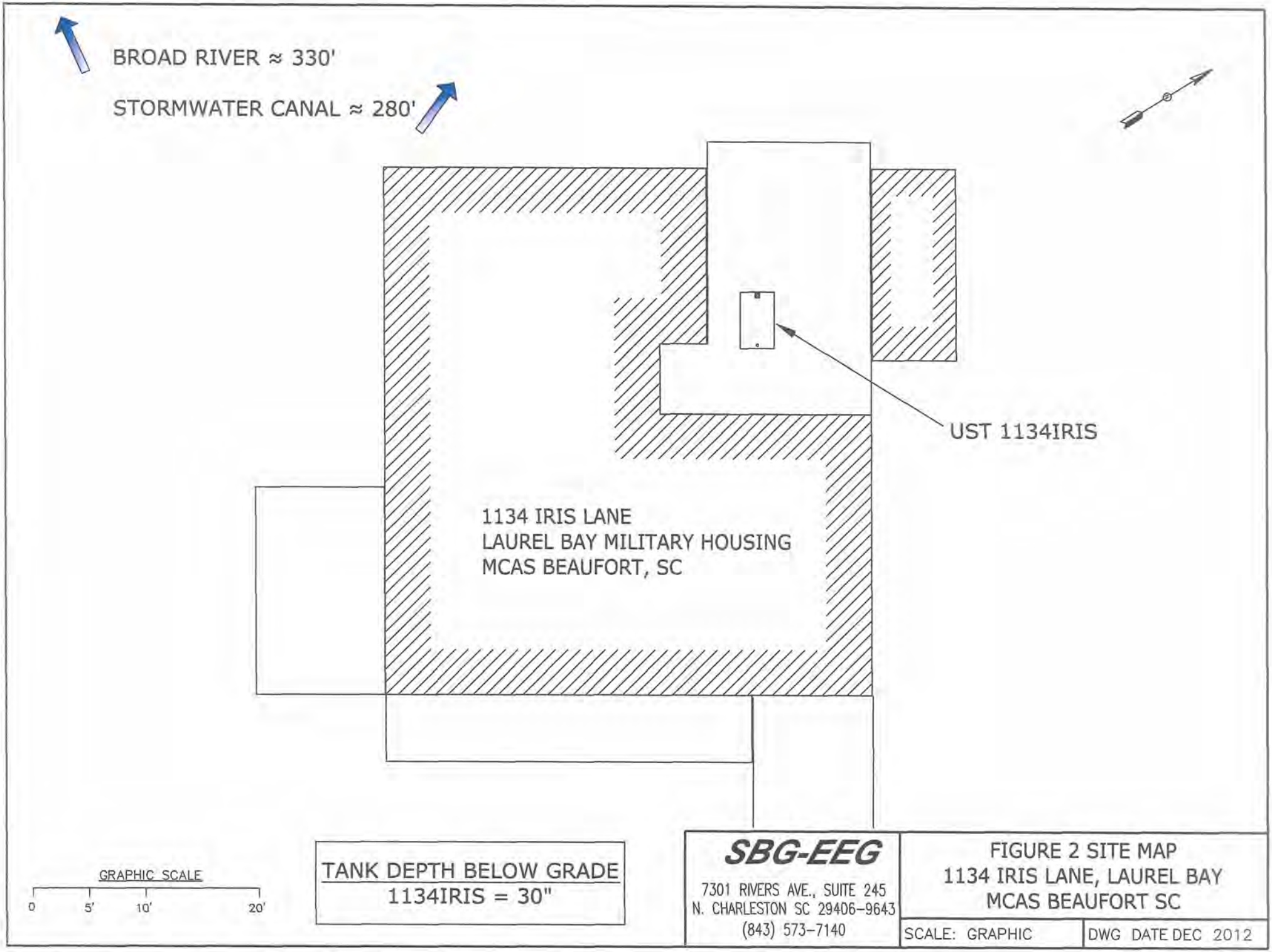


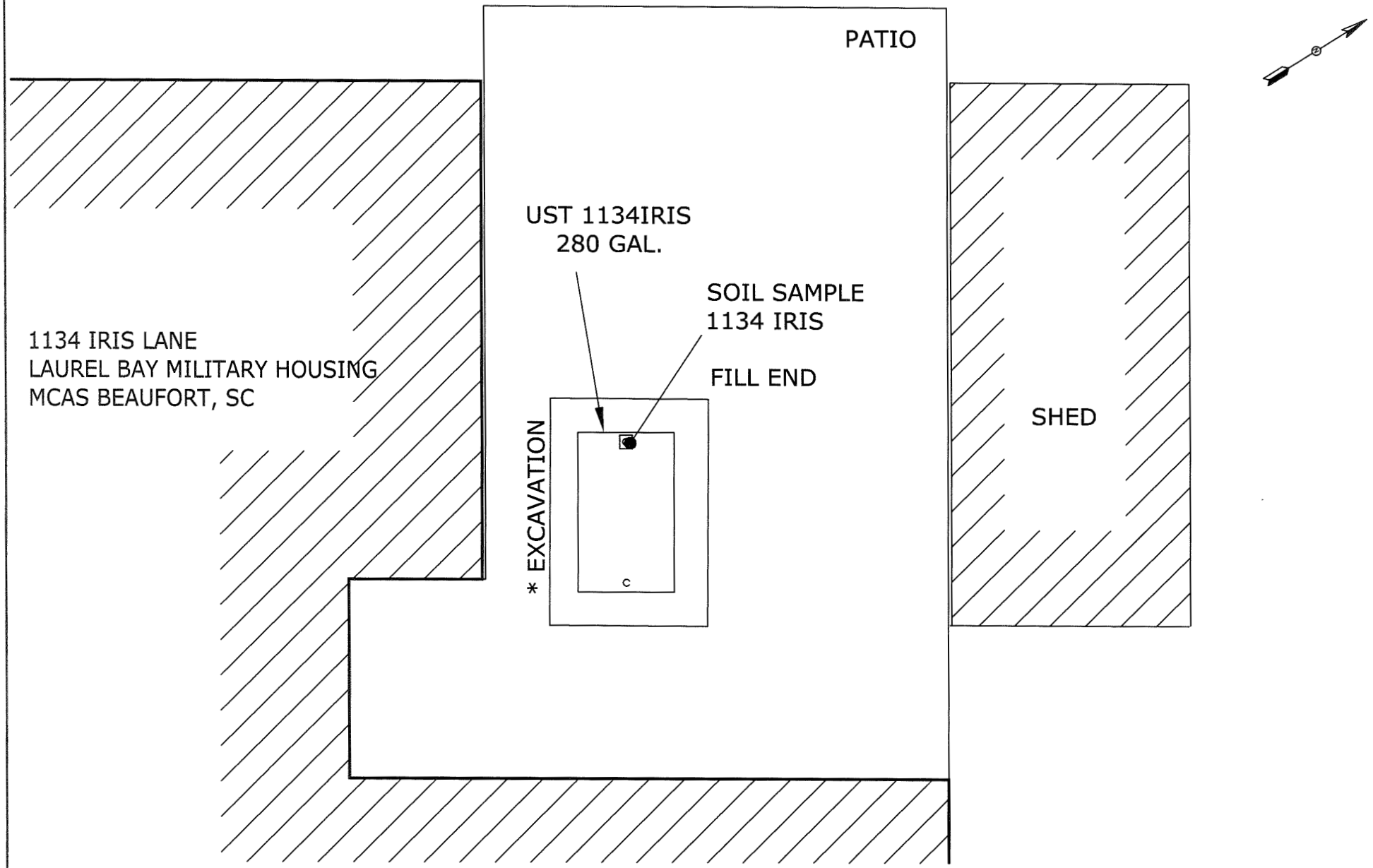
SBG-EEG, Inc.
7301 Rivers Ave., Suite 245
N. Charleston SC 29406-9643
Ph. (843) 573-7140

Drawn By: L. DiAsio

Dwg Date: Dec 2012

FIGURE 1: LOCATION MAP
1134 IRIS LANE
LAUREL BAY, BEAUFORT SC


BROAD RIVER ≈ 330'
STORMWATER CANAL ≈ 280'
UST 1134IRIS
1134 IRIS LANE
LAUREL BAY MILITARY HOUSING
MCAS BEAUFORT, SC
GRAPHIC SCALE
0
5'
10'
20'
TANK DEPTH BELOW GRADE
1134IRIS = 30"
SBG-EEG
7301 RIVERS AVE., SUITE 245
N. CHARLESTON SC 29406-9643
(843) 573-7140
FIGURE 2 SITE MAP
1134 IRIS LANE, LAUREL BAY
MCAS BEAUFORT SC
SCALE: GRAPHIC
DWG DATE DEC 2012



GRAPHIC SCALE

0 5'

* A PORTION OF THE PATIO WAS REMOVED TO FACILITATE TANK EXTRACTION.

SBG-EEG
7301 RIVERS AVE., SUITE 245
N. CHARLESTON SC 29406-9643
(843) 573-7140

FIGURE 3 UST SAMPLE LOCATIONS
1134 IRIS LANE, LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE DEC 2012

Picture 1: Location of UST 1134Iris.

Picture 2: Excavation of UST 1134Iris.

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.

CoC UST	1134Iris						
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						
TPH (EPA 3550)							

CoC							
Benzene							
Toluene							
Ethylbenzene							
Xylenes							
Naphthalene							
Benzo (a) anthracene							
Benzo (b) fluoranthene							
Benzo (k) fluoranthene							
Chrysene							
Dibenz (a, h) anthracene							
TPH (EPA 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				
MTBE	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)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-11468-1
Client Project/Site: Laurel Bay Housing Project

For:
Environmental Enterprise Group
10179 Highway 78
Ladson, South Carolina 29456

Attn: Mr. Tom McElwee

Authorized for release by:
11/24/2012 11:30:05 AM

Ken Hayes
Project Manager I
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-11468-1	516 Laurel Bay	Soil	11/05/12 15:00	11/13/12 17:41
490-11468-2	873 Cobia	Soil	11/05/12 14:45	11/13/12 17:41
490-11468-3	1037 Iris	Soil	11/07/12 14:45	11/13/12 17:41
490-11468-4	723 Bluebell	Soil	11/07/12 14:30	11/13/12 17:41
490-11468-5	1134 Iris	Soil	11/08/12 14:15	11/13/12 17:41
490-11468-6	1143 Iris	Soil	11/08/12 14:45	11/13/12 17:41

Job ID: 490-11468-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-11468-1

Comments
No additional comments.

Receipt
The samples were received on 11/13/2012 5:41 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6° C.

GC/MS VOA
Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 36345.

Method(s) 8260B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): 1143 Iris (490-11468-6).

Method(s) 8260B: The following sample(s) was diluted due to the nature of the sample matrix: 1143 Iris (490-11468-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1143 Iris (490-11468-6). Evidence of matrix interference is present.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 36624.

No other analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	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
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
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
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 516 Laurel Bay
Date Collected: 11/05/12 15:00
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-1
Matrix: Soil
Percent Solids: 97.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.107	0.0358	mg/Kg		11/14/12 14:09	11/15/12 23:30	1
Ethylbenzene	ND		0.107	0.0358	mg/Kg		11/14/12 14:09	11/15/12 23:30	1
Naphthalene	0.144	J	0.267	0.0909	mg/Kg		11/14/12 14:09	11/15/12 23:30	1
Toluene	ND		0.107	0.0396	mg/Kg		11/14/12 14:09	11/15/12 23:30	1
Xylenes, Total	ND		0.267	0.0358	mg/Kg		11/14/12 14:09	11/15/12 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/15/12 23:30*	*1*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*11/14/12 14:09*	*11/15/12 23:30*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/15/12 23:30*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*	*11/14/12 14:09*	*11/15/12 23:30*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0664	0.00991	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Acenaphthylene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Anthracene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Benzo[a]anthracene	ND		0.0664	0.0149	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Benzo[a]pyrene	0.0362	J	0.0664	0.0119	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Benzo[b]fluoranthene	ND		0.0664	0.0119	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Benzo[g,h,i]perylene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Benzo[k]fluoranthene	ND		0.0664	0.0139	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
1-Methylnaphthalene	ND		0.0664	0.0139	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Pyrene	ND		0.0664	0.0119	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Phenanthrene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Chrysene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Dibenz(a,h)anthracene	ND		0.0664	0.00694	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Fluoranthene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Fluorene	ND		0.0664	0.0119	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Indeno[1,2,3-cd]pyrene	ND		0.0664	0.00991	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
Naphthalene	ND		0.0664	0.00892	mg/Kg		11/17/12 10:46	11/21/12 17:42	1
2-Methylnaphthalene	ND		0.0664	0.0159	mg/Kg		11/17/12 10:46	11/21/12 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*53*		*29 - 120*	*11/17/12 10:46*	*11/21/12 17:42*	*1*
Terphenyl-d14 (Surr)	*70*		*13 - 120*	*11/17/12 10:46*	*11/21/12 17:42*	*1*
Nitrobenzene-d5 (Surr)	*53*		*27 - 120*	*11/17/12 10:46*	*11/21/12 17:42*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97		0.10	0.10	%			11/14/12 09:08	1

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 873 Cobia
Date Collected: 11/05/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-2
Matrix: Soil
Percent Solids: 94.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.105	0.0352	mg/Kg		11/14/12 14:09	11/16/12 00:01	1
Ethylbenzene	ND		0.105	0.0352	mg/Kg		11/14/12 14:09	11/16/12 00:01	1
Naphthalene	ND		0.263	0.0894	mg/Kg		11/14/12 14:09	11/16/12 00:01	1
Toluene	ND		0.105	0.0389	mg/Kg		11/14/12 14:09	11/16/12 00:01	1
Xylenes, Total	ND		0.263	0.0352	mg/Kg		11/14/12 14:09	11/16/12 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:01*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:01*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:01*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:01*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0661	0.00987	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Acenaphthylene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Anthracene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Benzo[a]anthracene	ND		0.0661	0.0148	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Benzo[a]pyrene	ND		0.0661	0.0118	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Benzo[b]fluoranthene	ND		0.0661	0.0118	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Benzo[g,h,i]perylene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Benzo[k]fluoranthene	ND		0.0661	0.0138	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
1-Methylnaphthalene	ND		0.0661	0.0138	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Pyrene	ND		0.0661	0.0118	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Phenanthrene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Chrysene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Dibenz(a,h)anthracene	ND		0.0661	0.00691	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Fluoranthene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Fluorene	ND		0.0661	0.0118	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Indeno[1,2,3-cd]pyrene	ND		0.0661	0.00987	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
Naphthalene	ND		0.0661	0.00888	mg/Kg		11/17/12 10:46	11/21/12 18:51	1
2-Methylnaphthalene	ND		0.0661	0.0158	mg/Kg		11/17/12 10:46	11/21/12 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*48*		*29 - 120*	*11/17/12 10:46*	*11/21/12 18:51*	*1*
Terphenyl-d14 (Surr)	*67*		*13 - 120*	*11/17/12 10:46*	*11/21/12 18:51*	*1*
Nitrobenzene-d5 (Surr)	*50*		*27 - 120*	*11/17/12 10:46*	*11/21/12 18:51*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94		0.10	0.10	%			11/14/12 09:08	1

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 1037 Iris
Date Collected: 11/07/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-3
Matrix: Soil
Percent Solids: 93.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.112	0.0375	mg/Kg		11/14/12 14:09	11/16/12 00:33	1
Ethylbenzene	ND		0.112	0.0375	mg/Kg		11/14/12 14:09	11/16/12 00:33	1
Naphthalene	ND		0.280	0.0951	mg/Kg		11/14/12 14:09	11/16/12 00:33	1
Toluene	ND		0.112	0.0414	mg/Kg		11/14/12 14:09	11/16/12 00:33	1
Xylenes, Total	ND		0.280	0.0375	mg/Kg		11/14/12 14:09	11/16/12 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:33*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:33*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:33*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*	*11/14/12 14:09*	*11/16/12 00:33*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0663	0.00989	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Acenaphthylene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Anthracene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Benzo[a]anthracene	ND		0.0663	0.0148	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Benzo[a]pyrene	ND		0.0663	0.0119	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Benzo[b]fluoranthene	ND		0.0663	0.0119	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Benzo[g,h,i]perylene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Benzo[k]fluoranthene	ND		0.0663	0.0138	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
1-Methylnaphthalene	ND		0.0663	0.0138	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Pyrene	ND		0.0663	0.0119	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Phenanthrene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Chrysene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Dibenz(a,h)anthracene	ND		0.0663	0.00692	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Fluoranthene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Fluorene	ND		0.0663	0.0119	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Indeno[1,2,3-cd]pyrene	ND		0.0663	0.00989	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
Naphthalene	ND		0.0663	0.00890	mg/Kg		11/17/12 10:46	11/21/12 19:14	1
2-Methylnaphthalene	ND		0.0663	0.0158	mg/Kg		11/17/12 10:46	11/21/12 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*43*		*29 - 120*	*11/17/12 10:46*	*11/21/12 19:14*	*1*
Terphenyl-d14 (Surr)	*67*		*13 - 120*	*11/17/12 10:46*	*11/21/12 19:14*	*1*
Nitrobenzene-d5 (Surr)	*42*		*27 - 120*	*11/17/12 10:46*	*11/21/12 19:14*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94		0.10	0.10	%			11/14/12 09:08	1

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 723 Bluebell
Date Collected: 11/07/12 14:30
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-4
Matrix: Soil
Percent Solids: 96.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.116	0.0387	mg/Kg		11/14/12 14:09	11/16/12 01:04	1
Ethylbenzene	ND		0.116	0.0387	mg/Kg		11/14/12 14:09	11/16/12 01:04	1
Naphthalene	ND		0.289	0.0983	mg/Kg		11/14/12 14:09	11/16/12 01:04	1
Toluene	ND		0.116	0.0428	mg/Kg		11/14/12 14:09	11/16/12 01:04	1
Xylenes, Total	ND		0.289	0.0387	mg/Kg		11/14/12 14:09	11/16/12 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:04*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:04*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:04*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0660	0.00985	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Acenaphthylene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Anthracene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Benzo[a]anthracene	ND		0.0660	0.0148	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Benzo[a]pyrene	ND		0.0660	0.0118	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Benzo[b]fluoranthene	ND		0.0660	0.0118	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Benzo[g,h,i]perylene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Benzo[k]fluoranthene	ND		0.0660	0.0138	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
1-Methylnaphthalene	ND		0.0660	0.0138	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Pyrene	ND		0.0660	0.0118	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Phenanthrene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Chrysene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Dibenz(a,h)anthracene	ND		0.0660	0.00689	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Fluoranthene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Fluorene	ND		0.0660	0.0118	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Indeno[1,2,3-cd]pyrene	ND		0.0660	0.00985	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
Naphthalene	ND		0.0660	0.00886	mg/Kg		11/17/12 10:46	11/21/12 19:37	1
2-Methylnaphthalene	ND		0.0660	0.0158	mg/Kg		11/17/12 10:46	11/21/12 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*50*		*29 - 120*	*11/17/12 10:46*	*11/21/12 19:37*	*1*
Terphenyl-d14 (Surr)	*68*		*13 - 120*	*11/17/12 10:46*	*11/21/12 19:37*	*1*
Nitrobenzene-d5 (Surr)	*48*		*27 - 120*	*11/17/12 10:46*	*11/21/12 19:37*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10	0.10	%			11/14/12 09:08	1

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 1134 Iris
Date Collected: 11/08/12 14:15
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-5
Matrix: Soil
Percent Solids: 91.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0977	0.0327	mg/Kg		11/14/12 14:09	11/16/12 01:36	1
Ethylbenzene	ND		0.0977	0.0327	mg/Kg		11/14/12 14:09	11/16/12 01:36	1
Naphthalene	ND		0.244	0.0831	mg/Kg		11/14/12 14:09	11/16/12 01:36	1
Toluene	ND		0.0977	0.0362	mg/Kg		11/14/12 14:09	11/16/12 01:36	1
Xylenes, Total	ND		0.244	0.0327	mg/Kg		11/14/12 14:09	11/16/12 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:36*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:36*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:36*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*	*11/14/12 14:09*	*11/16/12 01:36*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0666	0.00994	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Acenaphthylene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Anthracene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Benzo[a]anthracene	ND		0.0666	0.0149	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Benzo[a]pyrene	ND		0.0666	0.0119	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Benzo[b]fluoranthene	ND		0.0666	0.0119	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Benzo[g,h,i]perylene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Benzo[k]fluoranthene	ND		0.0666	0.0139	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
1-Methylnaphthalene	ND		0.0666	0.0139	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Pyrene	ND		0.0666	0.0119	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Phenanthrene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Chrysene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Dibenz(a,h)anthracene	ND		0.0666	0.00696	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Fluoranthene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Fluorene	ND		0.0666	0.0119	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Indeno[1,2,3-cd]pyrene	ND		0.0666	0.00994	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
Naphthalene	ND		0.0666	0.00895	mg/Kg		11/17/12 10:46	11/21/12 20:00	1
2-Methylnaphthalene	ND		0.0666	0.0159	mg/Kg		11/17/12 10:46	11/21/12 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*52*		*29 - 120*	*11/17/12 10:46*	*11/21/12 20:00*	*1*
Terphenyl-d14 (Surr)	*64*		*13 - 120*	*11/17/12 10:46*	*11/21/12 20:00*	*1*
Nitrobenzene-d5 (Surr)	*49*		*27 - 120*	*11/17/12 10:46*	*11/21/12 20:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92		0.10	0.10	%			11/14/12 09:08	1

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Client Sample ID: 1143 Iris
Date Collected: 11/08/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-6
Matrix: Soil
Percent Solids: 71.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00267	0.000893	mg/Kg	☼	11/14/12 14:09	11/16/12 08:24	1
Ethylbenzene	ND		0.00267	0.000893	mg/Kg	☼	11/14/12 14:09	11/16/12 08:24	1
Naphthalene	ND		0.430	0.146	mg/Kg	☼	11/14/12 14:07	11/16/12 08:56	1
Toluene	ND		0.00267	0.000986	mg/Kg	☼	11/14/12 14:09	11/16/12 08:24	1
Xylenes, Total	0.00586	J	0.00666	0.000893	mg/Kg	☼	11/14/12 14:09	11/16/12 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*11/14/12 14:09*	*11/16/12 08:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*	*11/14/12 14:07*	*11/16/12 08:56*	*1*
4-Bromofluorobenzene (Surr)	*144*	*X*	*70 - 130*	*11/14/12 14:09*	*11/16/12 08:24*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*11/14/12 14:07*	*11/16/12 08:56*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*	*11/14/12 14:09*	*11/16/12 08:24*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*	*11/14/12 14:07*	*11/16/12 08:56*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*	*11/14/12 14:09*	*11/16/12 08:24*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*	*11/14/12 14:07*	*11/16/12 08:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0652	0.00973	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Acenaphthylene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Anthracene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Benzo[a]anthracene	ND		0.0652	0.0146	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Benzo[a]pyrene	ND		0.0652	0.0117	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Benzo[b]fluoranthene	ND		0.0652	0.0117	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Benzo[g,h,i]perylene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Benzo[k]fluoranthene	ND		0.0652	0.0136	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
1-Methylnaphthalene	ND		0.0652	0.0136	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Pyrene	ND		0.0652	0.0117	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Phenanthrene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Chrysene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Dibenz(a,h)anthracene	ND		0.0652	0.00681	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Fluoranthene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Fluorene	ND		0.0652	0.0117	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Indeno[1,2,3-cd]pyrene	ND		0.0652	0.00973	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
Naphthalene	ND		0.0652	0.00875	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1
2-Methylnaphthalene	ND		0.0652	0.0156	mg/Kg	☼	11/17/12 10:46	11/21/12 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*47*		*29 - 120*	*11/17/12 10:46*	*11/21/12 20:23*	*1*
Terphenyl-d14 (Surr)	*68*		*13 - 120*	*11/17/12 10:46*	*11/21/12 20:23*	*1*
Nitrobenzene-d5 (Surr)	*46*		*27 - 120*	*11/17/12 10:46*	*11/21/12 20:23*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	71		0.10	0.10	%			11/14/12 09:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-36345/7
Matrix: Solid
Analysis Batch: 36345

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0335	mg/Kg			11/15/12 19:51	1
Ethylbenzene	ND		0.100	0.0335	mg/Kg			11/15/12 19:51	1
Naphthalene	ND		0.250	0.0850	mg/Kg			11/15/12 19:51	1
Toluene	ND		0.100	0.0370	mg/Kg			11/15/12 19:51	1
Xylenes, Total	ND		0.250	0.0335	mg/Kg			11/15/12 19:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*11/15/12 19:51*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*11/15/12 19:51*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*11/15/12 19:51*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*11/15/12 19:51*	*1*

Lab Sample ID: LCS 490-36345/3
Matrix: Solid
Analysis Batch: 36345

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05030		mg/Kg		101	75 - 127
Ethylbenzene	0.0500	0.04783		mg/Kg		96	80 - 134
Naphthalene	0.0500	0.04962		mg/Kg		99	69 - 150
Toluene	0.0500	0.04840		mg/Kg		97	80 - 132
Xylenes, Total	0.150	0.1454		mg/Kg		97	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 490-36345/4
Matrix: Solid
Analysis Batch: 36345

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05127		mg/Kg		103	75 - 127	2	50
Ethylbenzene	0.0500	0.04747		mg/Kg		95	80 - 134	1	50
Naphthalene	0.0500	0.04891		mg/Kg		98	69 - 150	1	50
Toluene	0.0500	0.04790		mg/Kg		96	80 - 132	1	50
Xylenes, Total	0.150	0.1451		mg/Kg		97	80 - 137	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-36624/6
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			11/16/12 06:20	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			11/16/12 06:20	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			11/16/12 06:20	1
Toluene	ND		0.00200	0.000740	mg/Kg			11/16/12 06:20	1
Xylenes, Total	ND		0.00500	0.000670	mg/Kg			11/16/12 06:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*11/16/12 06:20*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*11/16/12 06:20*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*11/16/12 06:20*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*11/16/12 06:20*	*1*

Lab Sample ID: MB 490-36624/7
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0335	mg/Kg			11/16/12 06:51	1
Ethylbenzene	ND		0.100	0.0335	mg/Kg			11/16/12 06:51	1
Naphthalene	ND		0.250	0.0850	mg/Kg			11/16/12 06:51	1
Toluene	ND		0.100	0.0370	mg/Kg			11/16/12 06:51	1
Xylenes, Total	ND		0.250	0.0335	mg/Kg			11/16/12 06:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*11/16/12 06:51*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*11/16/12 06:51*	*1*
Dibromofluoromethane (Surr)	*85*		*70 - 130*		*11/16/12 06:51*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*11/16/12 06:51*	*1*

Lab Sample ID: LCS 490-36624/3
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05415		mg/Kg		108	75 - 127
Ethylbenzene	0.0500	0.05439		mg/Kg		109	80 - 134
Naphthalene	0.0500	0.05286		mg/Kg		106	69 - 150
Toluene	0.0500	0.05217		mg/Kg		104	80 - 132
Xylenes, Total	0.150	0.1653		mg/Kg		110	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-36624/4
Matrix: Solid
Analysis Batch: 36624

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.04977		mg/Kg		100	75 - 127	8	50
Ethylbenzene	0.0500	0.04927		mg/Kg		99	80 - 134	10	50
Naphthalene	0.0500	0.05198		mg/Kg		104	69 - 150	2	50
Toluene	0.0500	0.04688		mg/Kg		94	80 - 132	11	50
Xylenes, Total	0.150	0.1491		mg/Kg		99	80 - 137	10	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-37031/1-A
Matrix: Solid
Analysis Batch: 38069

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37031

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Anthracene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Pyrene	ND		0.0670	0.0120	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Chrysene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Fluorene	ND		0.0670	0.0120	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		11/17/12 10:46	11/21/12 16:55	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		11/17/12 10:46	11/21/12 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*58*		*29 - 120*	*11/17/12 10:46*	*11/21/12 16:55*	*1*
Terphenyl-d14 (Surr)	*76*		*13 - 120*	*11/17/12 10:46*	*11/21/12 16:55*	*1*
Nitrobenzene-d5 (Surr)	*59*		*27 - 120*	*11/17/12 10:46*	*11/21/12 16:55*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-37031/2-A
Matrix: Solid
Analysis Batch: 38069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	1.67	1.193		mg/Kg		72	38 - 120
Anthracene	1.67	1.152		mg/Kg		69	46 - 124
Benzo[a]anthracene	1.67	1.143		mg/Kg		69	45 - 120
Benzo[a]pyrene	1.67	1.184		mg/Kg		71	45 - 120
Benzo[b]fluoranthene	1.67	1.156		mg/Kg		69	42 - 120
Benzo[g,h,i]perylene	1.67	1.103		mg/Kg		66	38 - 120
Benzo[k]fluoranthene	1.67	1.113		mg/Kg		67	42 - 120
1-Methylnaphthalene	1.67	1.020		mg/Kg		61	32 - 120
Pyrene	1.67	1.168		mg/Kg		70	43 - 120
Phenanthrene	1.67	1.133		mg/Kg		68	45 - 120
Chrysene	1.67	1.117		mg/Kg		67	43 - 120
Dibenz(a,h)anthracene	1.67	1.101		mg/Kg		66	32 - 128
Fluoranthene	1.67	1.138		mg/Kg		68	46 - 120
Fluorene	1.67	1.120		mg/Kg		67	42 - 120
Indeno[1,2,3-cd]pyrene	1.67	1.103		mg/Kg		66	41 - 121
Naphthalene	1.67	1.083		mg/Kg		65	32 - 120
2-Methylnaphthalene	1.67	1.036		mg/Kg		62	28 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*54*		*29 - 120*
Terphenyl-d14 (Surr)	*65*		*13 - 120*
Nitrobenzene-d5 (Surr)	*50*		*27 - 120*

Lab Sample ID: 490-11468-1 MS
Matrix: Soil
Analysis Batch: 38069

Client Sample ID: 516 Laurel Bay
Prep Type: Total/NA
Prep Batch: 37031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	ND		1.66	1.374		mg/Kg		83	25 - 120
Anthracene	ND		1.66	1.286		mg/Kg		78	28 - 125
Benzo[a]anthracene	ND		1.66	1.314		mg/Kg		79	23 - 120
Benzo[a]pyrene	0.0362	J	1.66	1.322		mg/Kg		78	15 - 128
Benzo[b]fluoranthene	ND		1.66	1.340		mg/Kg		81	12 - 133
Benzo[g,h,i]perylene	ND		1.66	1.327		mg/Kg		80	22 - 120
Benzo[k]fluoranthene	ND		1.66	1.258		mg/Kg		76	28 - 120
1-Methylnaphthalene	ND		1.66	1.146		mg/Kg		69	10 - 120
Pyrene	ND		1.66	1.373		mg/Kg		83	20 - 123
Phenanthrene	ND		1.66	1.329		mg/Kg		80	21 - 122
Chrysene	ND		1.66	1.301		mg/Kg		78	20 - 120
Dibenz(a,h)anthracene	ND		1.66	1.286		mg/Kg		78	12 - 128
Fluoranthene	ND		1.66	1.319		mg/Kg		80	10 - 143
Fluorene	ND		1.66	1.328		mg/Kg		80	20 - 120
Indeno[1,2,3-cd]pyrene	ND		1.66	1.297		mg/Kg		78	22 - 121
Naphthalene	ND		1.66	1.241		mg/Kg		75	10 - 120
2-Methylnaphthalene	ND		1.66	1.182		mg/Kg		71	13 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-11468-1 MS
Matrix: Soil
Analysis Batch: 38069

Client Sample ID: 516 Laurel Bay
Prep Type: Total/NA
Prep Batch: 37031

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	61		29 - 120
Terphenyl-d14 (Surr)	79		13 - 120
Nitrobenzene-d5 (Surr)	53		27 - 120

Lab Sample ID: 490-11468-1 MSD
Matrix: Soil
Analysis Batch: 38069

Client Sample ID: 516 Laurel Bay
Prep Type: Total/NA
Prep Batch: 37031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthylene	ND		1.62	1.289		mg/Kg	☼	80	25 - 120	6	50
Anthracene	ND		1.62	1.190		mg/Kg	☼	74	28 - 125	8	49
Benzo[a]anthracene	ND		1.62	1.218		mg/Kg	☼	75	23 - 120	8	50
Benzo[a]pyrene	0.0362	J	1.62	1.254		mg/Kg	☼	75	15 - 128	5	50
Benzo[b]fluoranthene	ND		1.62	1.256		mg/Kg	☼	78	12 - 133	7	50
Benzo[g,h,i]perylene	ND		1.62	1.233		mg/Kg	☼	76	22 - 120	7	50
Benzo[k]fluoranthene	ND		1.62	1.171		mg/Kg	☼	72	28 - 120	7	45
1-Methylnaphthalene	ND		1.62	1.079		mg/Kg	☼	67	10 - 120	6	50
Pyrene	ND		1.62	1.288		mg/Kg	☼	80	20 - 123	6	50
Phenanthrene	ND		1.62	1.220		mg/Kg	☼	75	21 - 122	9	50
Chrysene	ND		1.62	1.182		mg/Kg	☼	73	20 - 120	10	49
Dibenz(a,h)anthracene	ND		1.62	1.226		mg/Kg	☼	76	12 - 128	5	50
Fluoranthene	ND		1.62	1.236		mg/Kg	☼	76	10 - 143	7	50
Fluorene	ND		1.62	1.226		mg/Kg	☼	76	20 - 120	8	50
Indeno[1,2,3-cd]pyrene	ND		1.62	1.225		mg/Kg	☼	76	22 - 121	6	50
Naphthalene	ND		1.62	1.142		mg/Kg	☼	71	10 - 120	8	50
2-Methylnaphthalene	ND		1.62	1.099		mg/Kg	☼	68	13 - 120	7	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	59		29 - 120
Terphenyl-d14 (Surr)	78		13 - 120
Nitrobenzene-d5 (Surr)	53		27 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 250-7878-A-1 DU
Matrix: Solid
Analysis Batch: 35937

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	94		92		%		1	20

GC/MS VOA

Prep Batch: 36161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-6	1143 Iris	Total/NA	Soil	5035	

Prep Batch: 36162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-1	516 Laurel Bay	Total/NA	Soil	5035	
490-11468-2	873 Cobia	Total/NA	Soil	5035	
490-11468-3	1037 Iris	Total/NA	Soil	5035	
490-11468-4	723 Bluebell	Total/NA	Soil	5035	
490-11468-5	1134 Iris	Total/NA	Soil	5035	
490-11468-6	1143 Iris	Total/NA	Soil	5035	

Analysis Batch: 36345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-1	516 Laurel Bay	Total/NA	Soil	8260B	36162
490-11468-2	873 Cobia	Total/NA	Soil	8260B	36162
490-11468-3	1037 Iris	Total/NA	Soil	8260B	36162
490-11468-4	723 Bluebell	Total/NA	Soil	8260B	36162
490-11468-5	1134 Iris	Total/NA	Soil	8260B	36162
LCS 490-36345/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-36345/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-36345/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 36624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-6	1143 Iris	Total/NA	Soil	8260B	36162
490-11468-6	1143 Iris	Total/NA	Soil	8260B	36161
LCS 490-36624/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-36624/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-36624/6	Method Blank	Total/NA	Solid	8260B	
MB 490-36624/7	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 37031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-1	516 Laurel Bay	Total/NA	Soil	3550C	
490-11468-1 MS	516 Laurel Bay	Total/NA	Soil	3550C	
490-11468-1 MSD	516 Laurel Bay	Total/NA	Soil	3550C	
490-11468-2	873 Cobia	Total/NA	Soil	3550C	
490-11468-3	1037 Iris	Total/NA	Soil	3550C	
490-11468-4	723 Bluebell	Total/NA	Soil	3550C	
490-11468-5	1134 Iris	Total/NA	Soil	3550C	
490-11468-6	1143 Iris	Total/NA	Soil	3550C	
LCS 490-37031/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-37031/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 38069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-1	516 Laurel Bay	Total/NA	Soil	8270D	37031
490-11468-1 MS	516 Laurel Bay	Total/NA	Soil	8270D	37031

GC/MS Semi VOA (Continued)

Analysis Batch: 38069 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-11468-1 MSD	516 Laurel Bay	Total/NA	Soil	8270D	37031
490-11468-2	873 Cobia	Total/NA	Soil	8270D	37031
490-11468-3	1037 Iris	Total/NA	Soil	8270D	37031
490-11468-4	723 Bluebell	Total/NA	Soil	8270D	37031
490-11468-5	1134 Iris	Total/NA	Soil	8270D	37031
490-11468-6	1143 Iris	Total/NA	Soil	8270D	37031
LCS 490-37031/2-A	Lab Control Sample	Total/NA	Solid	8270D	37031
MB 490-37031/1-A	Method Blank	Total/NA	Solid	8270D	37031

General Chemistry

Analysis Batch: 35937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-7878-A-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-11468-1	516 Laurel Bay	Total/NA	Soil	Moisture	
490-11468-2	873 Cobia	Total/NA	Soil	Moisture	
490-11468-3	1037 Iris	Total/NA	Soil	Moisture	
490-11468-4	723 Bluebell	Total/NA	Soil	Moisture	
490-11468-5	1134 Iris	Total/NA	Soil	Moisture	
490-11468-6	1143 Iris	Total/NA	Soil	Moisture	

Client Sample ID: 516 Laurel Bay

Date Collected: 11/05/12 15:00
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-1

Matrix: Soil
Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36345	11/15/12 23:30	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 17:42	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Client Sample ID: 873 Cobia

Date Collected: 11/05/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-2

Matrix: Soil
Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36345	11/16/12 00:01	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 18:51	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Client Sample ID: 1037 Iris

Date Collected: 11/07/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-3

Matrix: Soil
Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36345	11/16/12 00:33	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 19:14	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Client Sample ID: 723 Bluebell

Date Collected: 11/07/12 14:30
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-4

Matrix: Soil
Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36345	11/16/12 01:04	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 19:37	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Client Sample ID: 1134 Iris

Date Collected: 11/08/12 14:15
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-5

Matrix: Soil
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36345	11/16/12 01:36	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 20:00	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Client Sample ID: 1143 Iris

Date Collected: 11/08/12 14:45
Date Received: 11/13/12 17:41

Lab Sample ID: 490-11468-6

Matrix: Soil
Percent Solids: 71.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			36162	11/14/12 14:09	ML	TAL NSH
Total/NA	Analysis	8260B		1	36624	11/16/12 08:24	AF	TAL NSH
Total/NA	Prep	5035			36161	11/14/12 14:07	ML	TAL NSH
Total/NA	Analysis	8260B		1	36624	11/16/12 08:56	AF	TAL NSH
Total/NA	Prep	3550C			37031	11/17/12 10:46	AK	TAL NSH
Total/NA	Analysis	8270D		1	38069	11/21/12 20:23	WS	TAL NSH
Total/NA	Analysis	Moisture		1	35937	11/14/12 09:08	RS	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Environmental Enterprise Group
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-11468-1

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	ACIL		393	10-30-13
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-13
Arizona	State Program	9	AZ0473	05-05-13
Arkansas DEQ	State Program	6	88-0737	04-25-13
California	NELAC	9	1168CA	10-31-13
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAC	4	E87358	06-30-13
Illinois	NELAC	5	200010	12-09-12
Iowa	State Program	7	131	05-01-14
Kansas	NELAC	7	E-10229	10-31-13
Kentucky	State Program	4	90038	12-31-12
Kentucky (UST)	State Program	4	19	09-15-13
Louisiana	NELAC	6	LA120025	12-31-12
Louisiana	NELAC	6	30613	06-30-13
Maryland	State Program	3	316	03-31-13
Massachusetts	State Program	1	M-TN032	06-30-13
Minnesota	NELAC	5	047-999-345	12-31-12
Mississippi	State Program	4	N/A	06-30-13
Montana (UST)	State Program	8	NA	01-01-15
Nevada	State Program	9	TN00032	07-31-13
New Hampshire	NELAC	1	2963	10-09-13
New Jersey	NELAC	2	TN965	06-30-13
New York	NELAC	2	11342	04-01-13
North Carolina DENR	State Program	4	387	12-31-12
North Dakota	State Program	8	R-146	06-30-13
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-13
Oregon	NELAC	10	TN200001	04-30-13
Pennsylvania	NELAC	3	68-00585	06-30-13
Rhode Island	State Program	1	LAO00268	12-30-12
South Carolina	State Program	4	84009 (001)	02-28-13
South Carolina	State Program	4	84009 (002)	02-23-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAC	6	T104704077-09-TX	08-31-13
USDA	Federal		S-48469	11-02-13
Utah	NELAC	8	TAN	06-30-13
Virginia	NELAC	3	460152	06-14-13
Washington	State Program	10	C789	07-19-13
West Virginia DEP	State Program	3	219	02-28-13
Wisconsin	State Program	5	998020430	08-31-13
Wyoming (UST)	A2LA	8	453.07	12-31-13

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-11468 Chain of Custody

Cooler Received/Opened On 11/13/2012 @ 0830

1. Tracking # 2536 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 0.6 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: (2) Front / Back

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) (MA)

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13a. Were VOA vials received? (YES)..NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...(NA)

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? YES..(NO) Was a PIPE generated? YES..(NO)..#_____

Loc: 490
11468

11/24/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Toll Free: 800-765-0980
Fax: 615-726-3404

Client Name/Account #: EEG - SBG # 2449
Address: 10179 Highway 78
City/State/Zip: Ladson, SC 29456
Project Manager: Tom McElwee email: mcelwee@eeginc.net
Telephone Number: 843.412.2097 Fax No.: 843 879-0401
Sampler Name: (Print) Pratt Shaw
Sampler Signature:

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring? Yes ____ No ____
Enforcement Action? Yes ____ No ____

Site State: SC
PO#: 1063
TA Quote #:
Project ID: Laurel Bay Housing Project
Project #:

	Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: BTEX + Napth - 8260B	PAH - 8270D	RUSH TAT (Pre-Schedule)
1	576 Laurel Bay	11/5/12	1500	5	X					2				1	1					X		X	X	
2	873 Cobia	11/5/12	1445	5	X					2				1	1					X		X	X	
3	1037 Iris	11/7/12	1445	5	X					2				1	1					X		X	X	
4	723 Bluebell	11/7/12	1430	5	X					2				1	1					X		X	X	
5	1134 Iris	11/6/12	1415	5	X					2				1	1					X		X	X	
6	1143 Iris	11/5/12	1445	5	X					2				1	1					X		X	X	

Special Instructions:

Method of Shipment: FEDEX

Relinquished by:	Date	Time	Received by:	Date	Time
	8/12/12	0900	FedEx		
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
			TAN	11-13-12	0830

Laboratory Comments:
Temperature Upon Receipt: 0.6
VOCs Free of Headspace? Y

Login Sample Receipt Checklist

Client: Environmental Enterprise Group

Job Number: 490-11468-1

Login Number: 11468
List Number: 1
Creator: Armstrong, Daniel

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT A

WASTE MANAGEMENT

NON-HAZARDOUS MANIFEST

NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No.	Manifest Doc No.	2. Page 1 of 1	

3. Generator's Mailing Address:
MCAS, BEAUFORT
LAUREL BAY HOUSING
BEAUFORT, SC 29907
4. Generator's Phone 843-228-6461

Generator's Site Address (If different than mailing):

A. Manifest Number: WMNA 00316841
B. State Generator's ID:

5. Transporter 1 Company Name: EEG, INC.
6. US EPA ID Number:
C. State Transporter's ID:
D. Transporter's Phone: 843-879-0411

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
HICKORY HILL LANDFILL
2621 LOW COUNTRY ROAD
RIDGELAND, SC 29936
10. US EPA ID Number:
G. State Facility ID:
H. State Facility Phone: 843-987-4643

GENERATOR

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. HEATING OIL TANKS FILLED WITH SAND WM Profile # 102655SC					
b. WM Profile #					
c. WM Profile #					
d. WM Profile #					

J. Additional Descriptions for Materials Listed Above

K. Disposal Location
Cell | Level
Grid

15. Special Handling Instructions and Additional Information
1) 1037 Iris 2) 1134 Iris 6) 1015 Foxglove
3) 723 Bluebell 4) 873 Cobia 5) 1143 Iris

Purchase Order #

EMERGENCY CONTACT / PHONE NO.:

16. GENERATOR'S CERTIFICATE:
I hereby certify that the above-described materials are not hazardous wastes as defined by CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of"	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
James Bridwell	James Bridwell	12	6	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year

FACILITY

19. Certificate of Final Treatment/Disposal
I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest.

Printed Name	Signature	Month	Day	Year
		12	6	12

White- TREATMENT, STORAGE, DISPOSAL FACILITY COPY
Blue- GENERATOR #2 COPY
Yellow- GENERATOR #1 COPY
Pink- FACILITY USE ONLY
Gold- TRANSPORTER #1 COPY

Appendix C
Laboratory Analytical Report - Groundwater

CDM - AECOM
Multimedia Joint Venture

Volatile Organic Compounds by GC/MS

Client: **AECOM - Resolution Consultants**
Laboratory ID: **SC08036-012**
Description: **BEALB1134TW01WG20170307**
Matrix: **Aqueous**
Date Sampled: **03/07/2017 1625**
Date Received: **03/08/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/09/2017 1423	PMV		36622

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene	71-43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**0.95**	**J**	**1.0**	0.80	**0.40**	**ug/L**	**1**
Toluene	108-88-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	0.80	U	1.0	0.80	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		108	85-114
Dibromofluoromethane		101	80-119
1,2-Dichloroethane-d4		97	81-118
Toluene-d8		98	89-112

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
Q = Surrogate failure
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
L = LCS/LCSD failure
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"
S = MS/MSD failure

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: **AECOM - Resolution Consultants**
Laboratory ID: **SC08036-012**
Description: **BEALB1134TW01WG20170307**
Matrix: **Aqueous**
Date Sampled: **03/07/2017 1625**
Date Received: **03/08/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	03/16/2017 2312	RBH	03/09/2017 1736	36656

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56-55-3	8270D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Chrysene	218-01-9	8270D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	0.10	UQ	0.20	0.10	0.040	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Nitrobenzene-d5		65	44-120
2-Fluorobiphenyl		58	44-119
Terphenyl-d14	N	44	50-134

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
Q = Surrogate failure
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
L = LCS/LCSD failure
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"
S = MS/MSD failure

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106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Appendix D
Regulatory Correspondence

CDM - AECOM
Multimedia Joint Venture

Healthy People Healthy Communities

August 24, 2016

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

RE: IGWA
Laurel Bay Underground Tank Assessment Reports

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (the Department) received the Underground Storage Tanks (USTs) Assessment Reports for the addresses listed in the attachment. 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 et seq., as amended).

The Department has reviewed the referenced reports. The submitted analytical results indicate that petroleum constituents are above established Risk-Based Screening Levels and additional investigation is warranted. Specifically, the Department requests that a groundwater sampling proposal be generated to determine if there has been an impact to groundwater at these sites.

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 petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

Laurel Petrus, Environmental Engineer Associate
RCRA Federal Facilities Section

Cc: Russell Berry, EQC Region 8 (via email)
Shawn Dolan, Resolution Consultants (via email)
Bryan Beck, NAVFAC MIDATLANTIC (via email)
Craig Ehde (via email)

Attachment to: Petrus to Drawdy, August 24, 2016
Subject: IGWA, Laurel Bay Underground Tank Assessment Reports

Draft Final Initial Groundwater Investigation Report for (41 addresses)

Monitoring Well Investigation Recommendation	
122 Banyan	905 Barracuda
159 Cypress Tank 2	921 Barracuda
221 Cypress	935 Albacore
283 Birch Tank 2	946 Albacore
328 Ash Tank 2	1037 Iris
346 Ash	1039 Iris
359 Aspen	1110 Iris
370 Aspen	1134 Iris
377 Aspen	1143 Iris
409 Elderberry	1202 Cardinal
486 Laurel Bay	1212 Cardinal
515 Laurel Bay	1222 Cardinal
542 Laurel Bay	1224 Cardinal
593 Aster	1226 Dove
630 Dahlia	1236 Dove
693 Camellia	1245 Dove
723 Blue Bell	1247 Dove
774 Althea	1274 Albatross
860 Dolphin	1319 Albatross
873 Cobia	1337 Albatross
883 Cobia	

dhec
Healthy People. Healthy Communities.

July 27, 2017

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

RE: Draft Final Initial Groundwater Investigation Report, February and March 2017

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received groundwater data from temporary monitoring well installations in the Draft Final Groundwater Investigation Report, Laurel Bay Military Housing Area for the fifty two (52) addresses shown in the attachment. 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 et seq., as amended).

Per DHEC's request, groundwater samples were collected from the attached referenced addresses. DHEC reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent groundwater monitoring wells should be installed at the three (3) stated addresses. For the remaining forty nine (49) addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

Please note that DHEC'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, DHEC retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

Laurel Petrus, Environmental Engineer Associate
Bureau of Land and Waste Management

Cc: Russell Berry, EQC Region 8
Shawn Dolan, Resolution Consultants
Bryan Beck, NAVFAC MIDLANT

Attachment to: Petrus to Drawdy Dated July 27, 2017

Draft Final Initial Groundwater Investigation Report for (52 addresses)

Permanent Well Installation recommedation (3 Addresses):

- 254 Beech Street (110 ug/L)
- 268 Beech Street (28 ug/L)
- 774 Althea Street (35 ug/L)

No Further Action recommendation (49 addresses):

- 113 Birch Drive
- 121 Banyan Drive
- 122 Banyan Drive
- 159 Cypress Street
- 221 Cypress Street
- 274 Birch Drive
- 279 Birch Drive
- 283 Birch Drive
- 328 Ash Street
- 346 Ash Street
- 359 Aspen Street
- 370 Aspen Street
- 377 Aspen Street
- 409 Elderberry Drive
- 465 Dogwood Drive
- 480 Laurel Bay Boulevard
- 486 Laurel Bay Boulevard
- 515 Laurel Bay Boulevard
- 542 Laurel Bay Boulevard
- 593 Aster Street
- 630 Dahlia Drive
- 641 Dahlia Drive
- 693 Camelia Drive
- 723 Bluebell Lane
- 860 Dolphin Street
- 873 Cobia Drive
- 883 Cobia Drive
- 905 Barracuda Drive
- 921 Barracuda Drive
- 935 Albacore Street
- 946 Albacore Street
- 1037 Iris Lane
- 1039 Iris Lane
- 1110 Iris Lane
- 1134 Iris Lane
- 1143 Iris Lane
- 1177 Bobwhite Drive
- 1202 Cardinal Lane
- 1212 Cardinal Lane
- 1222 Cardinal Lane
- 1224 Cardinal Lane
- 1226 Dove Lane
- 1236 Dove Lane
- 1245 Dove Lane
- 1247 Dove Lane
- 1274 Albatross Drive
- 1319 Albatross Drive
- 1337 Albatross Drive
- 1346 Cardinal Lane