SUMMARY REPORT 116 FOXGLOVE STREET (FORMERLY 1015 FOXGLOVE 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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9324 Virginia Avenue Norfolk, Virginia 23511-3095

**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



Summary Report 116 Foxglove Street (Formerly 1015 Foxglove Street) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort 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
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 116 Foxglove Street (Formerly 1015 Foxglove 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 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 116 Foxglove Street (Formerly 1015 Foxglove Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1015 Foxglove Street* (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 – May and June 2015* (Resolution Consultants, 2015). 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 12, 2012, a single 280 gallon heating oil UST was removed from the rear patio area at 116 Foxglove Street (Formerly 1015 Foxglove Street). 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 6'4" 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 116 Foxglove Street (Formerly 1015 Foxglove Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated May 15, 2014, SCDHEC requested an IGWA for 116 Foxglove Street (Formerly 1015 Foxglove Street (Formerly 1015 Foxglove Street) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

#### 2.3 Groundwater Sampling

On May 18, 2015, a temporary monitoring well was installed at 116 Foxglove Street (Formerly 1015 Foxglove Street), 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 – May and June 2015* (Resolution Consultants, 2015).



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 – May and June 2015* (Resolution Consultants, 2015).

#### 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 116 Foxglove Street (Formerly 1015 Foxglove Street) 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 116 Foxglove Street (Formerly 1015 Foxglove Street). This NFA determination was obtained in a letter dated February 22, 2016. 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 1015 Foxglove Street, Laurel Bay Military Housing Area*, April 2013.
- Resolution Consultants, 2015. *Initial Groundwater Investigation Report May and June 2015 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, October 2015.
- 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 1Laboratory Analytical Results - Soil116 Foxglove Street (Formerly 1015 Foxglove Street)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 11/12/12				
olatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)						
Benzene	0.003	ND				
Ethylbenzene	1.15	ND				
Naphthalene	0.036	2.54				
Toluene	0.627	ND				
Xylenes, Total	13.01	ND				
Semivolatile Organic Compounds Ana	lyzed 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:

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 2.0 (SCDHEC, April 2013).

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 116 Foxglove Street (Formerly 1015 Foxglove Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 05/18/15	
Volatile Organic Compounds Analyzed	l by EPA Method 8260B (µg	/L)		
Benzene	5	16.24	ND	
Ethylbenzene	700	45.95	ND	
Naphthalene	25	29.33	ND	
Toluene	1000	105,445	ND	
Xylenes, Total	10,000	2,133	ND	
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270	D (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:

<sup>(1)</sup> 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).

<sup>(2)</sup> 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<sup>-6</sup>, 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





#### **Appendix A - Multi-Media Selection Process for LBMH**

Appendix B UST Assessment Report



4125113

Attachment 1

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



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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, Command:	ing Officer Attn: NF	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 Mil Facility Name or Comp	itary Housing Area, Marine any Site Identifier	e Corps Air St	ation, Beau	fort,	SC
1015 Foxglove Street Address or State	St., Laurel Bay Military H Road (as applicable)	lousing Area			
Beaufort,	Beaufort				
	County		Attachmont	2	
1015 Foxglove Street Address or State Beaufort, City	St., Laurel Bay Military H Road (as applicable) Beaufort County	lousing Area	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

	Destant (or Car Kanaga)	Heating Oil
А.	Product(ex. Gas, Kerosene)	
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	6'4"
G.	Spill Prevention Equipment Y/N	No
		No
H.	Overfill Prevention Equipment Y/N	
I.	Method of Closure Removed/Filled	Removed
 J.	Date Tanks Removed/Filled	11/12/2012
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 1015Foxglove 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 1015Foxglove 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

		1015Foxglove
		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	Yes
F.	Visible Corrosion or Pitting Y/N	Yes
G	Visible Holes V/N	No
U.		
H.	Age	Late 1950S
I.	If any corrosion, pitting, or holes were observed, de	scribe the location and extent for each piping run.

Corrosion and pitting were found on the surface of the steel vent pipe. The 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	COND	ITIONS

	Yes	No	Unk
<ul> <li>A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?</li> <li>If yes, indicate depth and location on the site map.</li> </ul>		х	
<ul> <li>B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?</li> <li>If yes, indicate location on site map and describe the odor (strong, mild. etc.)</li> </ul>		х	
C. Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)?		x	
<ul> <li>D. Did contaminated soils remain stockpiled on site after closure?</li> <li>If yes, indicate the stockpile location on the site map.</li> <li>Name of DHEC representative authorizing soil removal:</li> </ul>		х	
<ul><li>E. Was a petroleum sheen or free product detected on any excavation or boring waters?</li><li>If yes, indicate location and thickness.</li></ul>		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 #
1015 Foxglove	Excav at fill end	Soil	Sandy	6'4"	11/12/12 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	cana	ls
	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, electric	city.	
	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		x
	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.		

#### **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)









Picture 1: Location of UST 1015Foxglove.



Picture 2: UST 1015Foxglove tank pit.

#### 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	1015 Foxglov	0			
Benzene	ND				
Toluene	ND				
Ethylbenzene	ND				
Xylenes	ND				
Naphthalene	2.54 mg/kg				
Benzo (a) anthracene	ND				
Benzo (b) fluoranthene	ND				
Benzo (k) fluoranthene	ND				
Chrysene	ND				
Dibenz (a, h) anthracene	ND				
ТРН (ЕРА 3550)					
			1		
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 Drive Nashville, TN 37204 Tel: (615)726-0177

#### TestAmerica Job ID: 490-12211-1

TestAmerica Sample Delivery Group: 1063 Client Project/Site: Laurel Bay Housing Project

#### For:

Environmental Enterprise Group 10179 Highway 78 Ladson, South Carolina 29456

Attn: Mr. Tom McElwee

Kuth Hay

Authorized for release by: 11/30/2012 12:25:42 PM

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

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#### Sample Summary

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

TestAmerica Job ID: 490-12211-1 SDG: 1063

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-12211-1	1015 Foxglove	Solid	11/12/12 14:45	11/20/12 08:10
490-12211-2	1361 Cardinal	Solid	11/12/12 14:30	11/20/12 08:10
490-12211-3	1046 Gardenia	Solid	11/13/12 13:45	11/20/12 08:10
490-12211-4	1024 Foxglove	Solid	11/13/12 13:55	11/20/12 08:10
490-12211-5	1038 Iris	Solid	11/14/12 12:45	11/20/12 08:10
490-12211-6	1031 Foxglove	Solid	11/14/12 13:30	11/20/12 08:10
490-12211-7	1029 Foxglove	Solid	11/15/12 14:45	11/20/12 08:10

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#### Job ID: 490-12211-1

#### Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-12211-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 11/20/2012 8:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

#### GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1361 Cardinal (490-12211-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1046 Gardenia (490-12211-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 38791. See LCS/LCSD

Method(s) 8260B: The following sample(s) was diluted due to the nature of the sample matrix: 1031 Foxglove (490-12211-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 39051.

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.

#### **Definitions/Glossary**

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-12211-1 SDG: 1063

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#### 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.
х	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)

TestAmerica Nashville

#### **Client Sample ID: 1015 Foxglove**

Date Collected: 11/12/12 14:45 Date Receiv

Date Received: 11/20/12 0							Percent Solids: 86.0		
Method: 8260B - Volatile	Organic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.08	0.696	mg/Kg	ø	11/20/12 16:30	11/26/12 18:25	1
Ethylbenzene	ND		2.08	0.696	mg/Kg	<b>\$</b>	11/20/12 16:30	11/26/12 18:25	1
Naphthalene	2.54	J	5.19	1.76	mg/Kg	\$	11/20/12 16:30	11/26/12 18:25	1
Toluene	ND		2.08	0.768	mg/Kg	\$	11/20/12 16:30	11/26/12 18:25	1
Xylenes, Total	ND		5.19	0.696	mg/Kg	¢	11/20/12 16:30	11/26/12 18:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
4-Bromofluorobenzene (Surr)	109		70 - 130
Dibromofluoromethane (Surr)	91		70 - 130
Toluene-d8 (Surr)	115		70 - 130

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0659	0.00984	mg/Kg	ø	11/23/12 11:00	11/25/12 16:53	1
Acenaphthylene	ND		0.0659	0.00886	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
Anthracene	ND		0.0659	0.00886	mg/Kg	ø	11/23/12 11:00	11/25/12 16:53	1.5
Benzo[a]anthracene	ND		0.0659	0.0148	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
Benzo[a]pyrene	ND		0.0659	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
Benzo[b]fluoranthene	ND		0.0659	0.0118	mg/Kg	Ó	11/23/12 11:00	11/25/12 16:53	1
Benzo[g,h,i]perylene	ND		0.0659	0.00886	mg/Kg	0	11/23/12 11:00	11/25/12 16:53	1
Benzo[k]fluoranthene	ND		0.0659	0.0138	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
1-Methylnaphthalene	ND		0.0659	0.0138	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
Pyrene	ND		0.0659	0.0118	mg/Kg	ą.	11/23/12 11:00	11/25/12 16:53	1
Phenanthrene	ND		0.0659	0.00886	mg/Kg	¢	11/23/12 11:00	11/25/12 16:53	1
Chrysene	ND		0.0659	0.00886	mg/Kg	ф.	11/23/12 11:00	11/25/12 16:53	1
Dibenz(a,h)anthracene	ND		0.0659	0.00689	mg/Kg	¢ε	11/23/12 11:00	11/25/12 16:53	1
Fluoranthene	ND		0.0659	0.00886	mg/Kg	ġ	11/23/12 11:00	11/25/12 16:53	1
Fluorene	ND		0.0659	0.0118	mg/Kg	9	11/23/12 11:00	11/25/12 16:53	1
Indeno[1,2,3-cd]pyrene	ND		0.0659	0.00984	mg/Kg	\$	11/23/12 11:00	11/25/12 16:53	1
Naphthalene	ND		0.0659	0.00886	mg/Kg	ø	11/23/12 11:00	11/25/12 16:53	1
2-Methylnaphthalene	ND		0.0659	0.0157	mg/Kg	Ø	11/23/12 11:00	11/25/12 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		29 - 120				11/23/12 11:00	11/25/12 16:53	1
Terphenyl-d14 (Surr)	80		13 - 120				11/23/12 11:00	11/25/12 16:53	1
Nitrobenzene-d5 (Surr)	60		27 - 120				11/23/12 11:00	11/25/12 16:53	1
General Chemistry		0			11-14			Antimad	Dil Fas
Analyte	Result	Qualifier	RL 0.10	RL 0.40	onit o/	D	Prepared	Analyzed	UII Fac
Percent Solids	86		0.10	0.10	70			1/21/12 11:06	1

#### Lab Sample ID: 490-12211-1 Matrix: Solid

11/20/12 16:30 11/26/12 18:25

11/20/12 16:30 11/26/12 18:25

11/20/12 16:30 11/26/12 18:25

11/20/12 16:30 11/26/12 18:25

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#### Client Sample ID: 1361 Cardinal

Date Collected: 11/12/12 14:30 Date Received: 11/20/12 08:10

Method: 8260B - Volatile Orga	nic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.23	0.749	mg/Kg	ø	11/20/12 16:30	11/26/12 18:57	1
Ethylbenzene	6.17		2.23	0.749	mg/Kg	0	11/20/12 16:30	11/26/12 18:57	1
Naphthalene	14.7		5.59	1.90	mg/Kg	\$	11/20/12 16:30	11/26/12 18:57	1
Toluene	1.74	J	2.23	0.827	mg/Kg	0	11/20/12 16:30	11/26/12 18:57	1
Xylenes, Total	29.5		5.59	0.749	mg/Kg	٥	11/20/12 16:30	11/26/12 18:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 130				11/20/12 16:30	11/26/12 18:57	1
4-Bromofluorobenzene (Surr)	395	x	70 - 130				11/20/12 16:30	11/26/12 18:57	1
Dibromofluoromethane (Surr)	93		70 - 130				11/20/12 16:30	11/26/12 18:57	1
Toluene-d8 (Surr)	123		70 - 130				11/20/12 16:30	11/26/12 18:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0659	0.00983	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Acenaphthylene	0.0400	J	0.0659	0.00885	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Anthracene	ND		0.0659	0.00885	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Benzo[a]anthracene	ND		0.0659	0.0148	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Benzo[a]pyrene	ND		0.0659	0.0118	mg/Kg	ø	11/23/12 11:00	11/25/12 17:58	1
Benzo[b]fluoranthene	ND		0.0659	0.0118	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Benzo[g,h,i]perylene	ND		0.0659	0.00885	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Benzo[k]fluoranthene	ND		0.0659	0.0138	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
1-Methylnaphthalene	ND		0.0659	0.0138	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Pyrene	0.126		0.0659	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Phenanthrene	0.0563	J	0.0659	0.00885	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Chrysene	ND		0.0659	0.00885	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Dibenz(a,h)anthracene	ND		0.0659	0.00688	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Fluoranthene	0.0353	J	0.0659	0.00885	mg/Kg	0	11/23/12 11:00	11/25/12 17:58	1
Fluorene	ND		0.0659	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Indeno[1,2,3-cd]pyrene	ND		0.0659	0.00983	mg/Kg	\$	11/23/12 11:00	11/25/12 17:58	1
Naphthalene	ND		0.0659	0.00885	mg/Kg	¢	11/23/12 11:00	11/25/12 17:58	1
2-Methylnaphthalene	ND		0.0659	0.0157	mg/Kg	¢	11/23/12 11:00	11/25/12 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		29 - 120				11/23/12 11:00	11/25/12 17:58	1
Terphenyl-d14 (Surr)	90		13 - 120				11/23/12 11:00	11/25/12 17:58	1
Nitrobenzene-d5 (Surr)	52		27 - 120				11/23/12 11:00	11/25/12 17:58	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78		0.10	0.10	%			11/21/12 11:06	1

#### Lab Sample ID: 490-12211-2 Matrix: Solid Percent Solids: 77.8

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#### Client Sample ID: 1046 Gardenia

Date Collected: 11/13/12 13:45 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-3 Matrix: Solid

Percent Solids: 85.4

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Method: 8260B - Volatile Orga	nic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.34	0.785	mg/Kg	Ô	11/20/12 16:30	11/26/12 21:33	1
Ethylbenzene	ND		2.34	0.785	mg/Kg	\$	11/20/12 16:30	11/26/12 21:33	1
Naphthalene	2.16	J	5.86	1.99	mg/Kg	\$	11/20/12 16:30	11/26/12 21:33	1
Toluene	ND		2.34	0.867	mg/Kg	\$	11/20/12 16:30	11/26/12 21:33	1
Xylenes, Total	ND		5.86	0.785	mg/Kg	Ø	11/20/12 16:30	11/26/12 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130				11/20/12 16:30	11/26/12 21:33	1
4-Bromofluorobenzene (Surr)	141	x	70 - 130				11/20/12 16:30	11/26/12 21:33	1
Dibromofluoromethane (Surr)	93		70 - 130				11/20/12 16:30	11/26/12 21:33	1
Toluene-d8 (Surr)	112		70 - 130				11/20/12 16:30	11/26/12 21:33	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0667	0.00996	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Acenaphthylene	ND		0.0667	0.00896	mg/Kg	Ø.	11/23/12 11:00	11/25/12 18:19	1
Anthracene	ND		0.0667	0.00896	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Benzo[a]anthracene	ND		0.0667	0.0149	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Benzo[a]pyrene	ND		0.0667	0.0120	mg/Kg	<i>\$</i>	11/23/12 11:00	11/25/12 18:19	1
Benzo[b]fluoranthene	ND		0.0667	0.0120	mg/Kg	¢.	11/23/12 11:00	11/25/12 18:19	1
Benzo[g,h,i]perylene	ND		0.0667	0.00896	mg/Kg	0	11/23/12 11:00	11/25/12 18:19	1
Benzo[k]fluoranthene	ND		0.0667	0.0139	mg/Kg	¢	11/23/12 11:00	11/25/12 18:19	1
1-Methylnaphthalene	ND		0.0667	0.0139	mg/Kg	2	11/23/12 11:00	11/25/12 18:19	1
Pyrene	ND		0.0667	0.0120	mg/Kg	0	11/23/12 11:00	11/25/12 18:19	1
Phenanthrene	ND		0.0667	0.00896	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Chrysene	ND		0.0667	0.00896	mg/Kg	¢	11/23/12 11:00	11/25/12 18:19	1
Dibenz(a,h)anthracene	ND		0.0667	0.00697	mg/Kg	0	11/23/12 11:00	11/25/12 18:19	1
Fluoranthene	ND		0.0667	0.00896	mg/Kg	0	11/23/12 11:00	11/25/12 18:19	1
Fluorene	ND		0.0667	0.0120	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Indeno[1,2,3-cd]pyrene	ND		0.0667	0.00996	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
Naphthalene	ND		0.0667	0.00896	mg/Kg	\$	11/23/12 11:00	11/25/12 18:19	1
2-Methylnaphthalene	ND		0.0667	0.0159	mg/Kg	ø	11/23/12 11:00	11/25/12 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	62		29 - 120				11/23/12 11:00	11/25/12 18:19	1
Terphenyl-d14 (Surr)	79		13 - 120				11/23/12 11:00	11/25/12 18:19	1
Nitrobenzene-d5 (Surr)	54		27 - 120				11/23/12 11:00	11/25/12 18:19	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85		0.10	0.10	%			11/21/12 11:06	1

#### Client Sample ID: 1024 Foxglove

Date Collected: 11/13/12 13:55 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-4 Matrix: Solid

Percent Solids: 96.6

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Method: 8260B - Volatile Orga	nic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00230	0.000769	mg/Kg	¢	11/20/12 16:30	11/27/12 19:18	1
Ethylbenzene	ND		0.00230	0.000769	mg/Kg	\$	11/20/12 16:30	11/27/12 19:18	1
Naphthalene	ND		0.00574	0.00195	mg/Kg	¢.	11/20/12 16:30	11/27/12 19:18	1
Toluene	ND		0.00230	0.000849	mg/Kg	¢.	11/20/12 16:30	11/27/12 19:18	1
Xylenes, Total	ND		0.00574	0.000769	mg/Kg	Ø	11/20/12 16:30	11/27/12 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				11/20/12 16:30	11/27/12 19:18	1
4-Bromofluorobenzene (Surr)	105		70 - 130				11/20/12 16:30	11/27/12 19:18	1
Dibromofluoromethane (Surr)	97		70 - 130				11/20/12 16:30	11/27/12 19:18	1
Toluene-d8 (Surr)	94		70 - 130				11/20/12 16:30	11/27/12 19:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0658	0.00982	mg/Kg	ò	11/23/12 11:00	11/25/12 18:41	1
Acenaphthylene	ND		0.0658	0.00884	mg/Kg	¢	11/23/12 11:00	11/25/12 18:41	1
Anthracene	ND		0.0658	0.00884	mg/Kg	-\$2	11/23/12 11:00	11/25/12 18:41	1
Benzo[a]anthracene	ND		0.0658	0.0147	mg/Kg	÷.	11/23/12 11:00	11/25/12 18:41	1
Benzo[a]pyrene	ND		0.0658	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 18:41	1
Benzo[b]fluoranthene	ND		0.0658	0.0118	mg/Kg	ø	11/23/12 11:00	11/25/12 18:41	1
Benzo[g,h,i]perylene	ND		0.0658	0.00884	mg/Kg	-02-	11/23/12 11:00	11/25/12 18:41	1
Benzo[k]fluoranthene	ND		0.0658	0.0137	mg/Kg	¢	11/23/12 11:00	11/25/12 18:41	1
1-Methylnaphthalene	ND		0.0658	0.0137	mg/Kg	¢	11/23/12 11:00	11/25/12 18:41	1
Pyrene	ND		0.0658	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 18:41	1
Phenanthrene	ND		0.0658	0.00884	mg/Kg	\$	11/23/12 11:00	11/25/12 18:41	1
Chrysene	ND		0.0658	0.00884	mg/Kg	ø	11/23/12 11:00	11/25/12 18:41	1
Dibenz(a,h)anthracene	ND		0.0658	0.00687	mg/Kg	\$	11/23/12 11:00	11/25/12 18:41	1
Fluoranthene	ND		0.0658	0.00884	mg/Kg	40	11/23/12 11:00	11/25/12 18:41	1
Fluorene	ND		0.0658	0.0118	mg/Kg	ø	11/23/12 11:00	11/25/12 18:41	1
Indeno[1,2,3-cd]pyrene	ND		0.0658	0.00982	mg/Kg	\$	11/23/12 11:00	11/25/12 18:41	1
Naphthalene	ND		0.0658	0.00884	mg/Kg	10	11/23/12 11:00	11/25/12 18:41	1
2-Methylnaphthalene	ND		0.0658	0.0157	mg/Kg	Ø	11/23/12 11:00	11/25/12 18:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	62		29 - 120				11/23/12 11:00	11/25/12 18:41	1
Terphenyl-d14 (Surr)	75		13 - 120				11/23/12 11:00	11/25/12 18:41	1
Nitrobenzene-d5 (Surr)	60		27 - 120				11/23/12 11:00	11/25/12 18:41	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97		0.10	0.10	%			11/21/12 11:06	1

#### Client Sample ID: 1038 Iris

Date Collected: 11/14/12 12:45 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-5 Matrix: Solid Percent Solids: 85.0

ľ

Method: 8260B - Volatile Orga	nic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00243	0.000813	mg/Kg	亞	11/20/12 16:30	11/27/12 19:45	1
Ethylbenzene	ND		0.00243	0.000813	mg/Kg	\$	11/20/12 16:30	11/27/12 19:45	1
Naphthalene	ND		0.00607	0.00206	mg/Kg	\$	11/20/12 16:30	11/27/12 19:45	1
Toluene	ND		0.00243	0.000898	mg/Kg	<i>\$</i> .	11/20/12 16:30	11/27/12 19:45	1
Xylenes, Total	ND		0.00607	0.000813	mg/Kg	¢	11/20/12 16:30	11/27/12 19:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				11/20/12 16:30	11/27/12 19:45	1
4-Bromofluorobenzene (Surr)	104		70 - 130				11/20/12 16:30	11/27/12 19:45	1
Dibromofluoromethane (Surr)	98		70 - 130				11/20/12 16:30	11/27/12 19:45	1
Toluene-d8 (Surr)	95		70 - 130				11/20/12 16:30	11/27/12 19:45	1

Method: 8270D - Semivolati Analyte	le Organic Compou Result	Qualifier	S) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0662	0.00989	mg/Kg	<i>ф</i>	11/23/12 11:00	11/25/12 19:03	1
Acenaphthylene	ND		0.0662	0.00890	mg/Kg	-63-	11/23/12 11:00	11/25/12 19:03	1
Anthracene	ND		0.0662	0.00890	mg/Kg	ġ.	11/23/12 11:00	11/25/12 19:03	1
Benzo[a]anthracene	ND		0.0662	0.0148	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Benzo[a]pyrene	ND		0.0662	0.0119	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Benzo[b]fluoranthene	ND		0.0662	0.0119	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Benzo[g,h,i]perylene	ND		0.0662	0.00890	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Benzo[k]fluoranthene	ND		0.0662	0.0138	mg/Kg	0	11/23/12 11:00	11/25/12 19:03	1
1-Methylnaphthalene	ND		0.0662	0.0138	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Pyrene	ND		0.0662	0.0119	mg/Kg	ø	11/23/12 11:00	11/25/12 19:03	1
Phenanthrene	ND		0.0662	0.00890	mg/Kg	φ.	11/23/12 11:00	11/25/12 19:03	1
Chrysene	ND		0.0662	0.00890	mg/Kg	Ø	11/23/12 11:00	11/25/12 19:03	1
Dibenz(a,h)anthracene	ND		0.0662	0.00692	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Fluoranthene	ND		0.0662	0.00890	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Fluorene	ND		0.0662	0.0119	mg/Kg	\$2	11/23/12 11:00	11/25/12 19:03	1
ndeno[1,2,3-cd]pyrene	ND		0.0662	0.00989	mg/Kg	- 33r	11/23/12 11:00	11/25/12 19:03	1
Naphthalene	ND		0.0662	0.00890	mg/Kg	Ø	11/23/12 11:00	11/25/12 19:03	1
2-Methylnaphthalene	ND		0.0662	0.0158	mg/Kg	\$	11/23/12 11:00	11/25/12 19:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72		29 - 120				11/23/12 11:00	11/25/12 19:03	1
Terphenyl-d14 (Surr)	84		13 - 120				11/23/12 11:00	11/25/12 19:03	1
Nitrobenzene-d5 (Surr)	67		27 - 120				11/23/12 11:00	11/25/12 19:03	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85		0.10	0.10	%			11/21/12 11:06	1

#### Client Sample ID: 1031 Foxglove

Date Collected: 11/14/12 13:30 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-6 Matrix: Solid

Percent Solids: 79.9

Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.130	0.0443	mg/Kg	\$	11/20/12 16:28	11/27/12 20:39	1
Ethylbenzene	ND		0.130	0.0443	mg/Kg	0	11/20/12 16:28	11/27/12 20:39	
Naphthalene	0.133	J	0.326	0.111	mg/Kg	0	11/20/12 16:28	11/27/12 20:39	
Toluene	ND		0.130	0.0482	mg/Kg	¢.	11/20/12 16:28	11/27/12 20:39	
Xylenes, Total	ND		0.326	0.0443	mg/Kg	\$	11/20/12 16:28	11/27/12 20:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	89		70 - 130				11/20/12 16:28	11/27/12 20:39	1
4-Bromofluorobenzene (Surr)	113		70 - 130				11/20/12 16:28	11/27/12 20:39	
Dibromofluoromethane (Surr)	92		70 - 130				11/20/12 16:28	11/27/12 20:39	
Toluene-d8 (Surr)	97		70 - 130				11/20/12 16:28	11/27/12 20:39	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0775		0.0666	0.00994	mg/Kg	52	11/23/12 11:00	11/25/12 19:24	1
Acenaphthylene	0.0389	J	0.0666	0.00895	mg/Kg	ø	11/23/12 11:00	11/25/12 19:24	1
Anthracene	0.144		0.0666	0.00895	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Benzo[a]anthracene	0.0491	J	0.0666	0.0149	mg/Kg	Ø	11/23/12 11:00	11/25/12 19:24	1
Benzo[a]pyrene	ND		0.0666	0.0119	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Benzo[b]fluoranthene	ND		0.0666	0.0119	mg/Kg	ø	11/23/12 11:00	11/25/12 19:24	1
Benzo[g,h,i]perylene	ND		0.0666	0.00895	mg/Kg	荣	11/23/12 11:00	11/25/12 19:24	1
Benzo[k]fluoranthene	ND		0.0666	0.0139	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
1-Methylnaphthalene	0.381		0.0666	0.0139	mg/Kg	ø	11/23/12 11:00	11/25/12 19:24	1
Pyrene	0.318		0.0666	0.0119	mg/Kg	ø	11/23/12 11:00	11/25/12 19:24	1
Phenanthrene	0.933		0.0666	0.00895	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Chrysene	0.0459	J	0.0666	0.00895	mg/Kg	-52	11/23/12 11:00	11/25/12 19:24	1
Dibenz(a,h)anthracene	ND		0.0666	0.00696	mg/Kg	0	11/23/12 11:00	11/25/12 19:24	1
Fluoranthene	0.496		0.0666	0.00895	mg/Kg	Q	11/23/12 11:00	11/25/12 19:24	1
Fluorene	0.176		0.0666	0.0119	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Indeno[1,2,3-cd]pyrene	ND		0.0666	0.00994	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Naphthalene	ND		0.0666	0.00895	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
2-Methylnaphthalene	0.659		0.0666	0.0159	mg/Kg	\$	11/23/12 11:00	11/25/12 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	58		29 - 120				11/23/12 11:00	11/25/12 19:24	1
Terphenyl-d14 (Surr)	68		13 - 120				11/23/12 11:00	11/25/12 19:24	1
Nitrobenzene-d5 (Surr)	56		27 - 120				11/23/12 11:00	11/25/12 19:24	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80		0.10	0.10	%			11/21/12 11:06	1

#### Client Sample ID: 1029 Foxglove

Date Collected: 11/15/12 14:45 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-7 Matrix: Solid

Percent Solids: 92.9

1

ALC: NOTE:

Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00223	0.000748	mg/Kg	\$	11/20/12 16:30	11/27/12 20:12	1
Ethylbenzene	ND		0.00223	0.000748	mg/Kg	\$	11/20/12 16:30	11/27/12 20:12	1
Naphthalene	ND		0.00558	0.00190	mg/Kg	٢	11/20/12 16:30	11/27/12 20:12	1
Toluene	ND		0.00223	0.000826	mg/Kg	\$	11/20/12 16:30	11/27/12 20:12	1
Xylenes, Total	ND		0.00558	0.000748	mg/Kg	\$	11/20/12 16:30	11/27/12 20:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				11/20/12 16:30	11/27/12 20:12	1
4-Bromofluorobenzene (Surr)	106		70 - 130				11/20/12 16:30	11/27/12 20:12	1
Dibromofluoromethane (Surr)	98		70 - 130				11/20/12 16:30	11/27/12 20:12	1
Toluene-d8 (Surr)	95		70 - 130				11/20/12 16:30	11/27/12 20:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0658	0.00981	mg/Kg	Ø.	11/23/12 11:00	11/25/12 19:46	1
Acenaphthylene	ND		0.0658	0.00883	mg/Kg	ø	11/23/12 11:00	11/25/12 19:46	1
Anthracene	ND		0.0658	0.00883	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Benzo[a]anthracene	ND		0.0658	0.0147	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Benzo[a]pyrene	ND		0.0658	0.0118	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Benzo[b]fluoranthene	ND		0.0658	0.0118	mg/Kg	\$	11/23/12 11:00	11/25/12 19:46	1
Benzo[g,h,i]perylene	ND		0.0658	0.00883	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Benzo[k]fluoranthene	ND		0.0658	0.0137	mg/Kg	¢.	11/23/12 11:00	11/25/12 19:46	1
1-Methylnaphthalene	ND		0.0658	0.0137	mg/Kg	ō.	11/23/12 11:00	11/25/12 19:46	1
Pyrene	ND		0.0658	0.0118	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Phenanthrene	ND		0.0658	0.00883	mg/Kg	O.	11/23/12 11:00	11/25/12 19:46	1
Chrysene	ND		0.0658	0.00883	mg/Kg	\$	11/23/12 11:00	11/25/12 19:46	1
Dibenz(a,h)anthracene	ND		0.0658	0.00687	mg/Kg	\$	11/23/12 11:00	11/25/12 19:46	1
Fluoranthene	ND		0.0658	0.00883	mg/Kg	ð	11/23/12 11:00	11/25/12 19:46	1
Fluorene	ND		0.0658	0.0118	mg/Kg	ø	11/23/12 11:00	11/25/12 19:46	1
Indeno[1,2,3-cd]pyrene	ND		0.0658	0.00981	mg/Kg	0	11/23/12 11:00	11/25/12 19:46	1
Naphthalene	ND		0.0658	0.00883	mg/Kg	\$	11/23/12 11:00	11/25/12 19:46	1
2-Methylnaphthalene	ND		0.0658	0.0157	mg/Kg	\$	11/23/12 11:00	11/25/12 19:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	64		29 - 120				11/23/12 11:00	11/25/12 19:46	1
Terphenyl-d14 (Surr)	76		13 - 120				11/23/12 11:00	11/25/12 19:46	1
Nitrobenzene-d5 (Surr)	58		27 - 120				11/23/12 11:00	11/25/12 19:46	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93		0.10	0.10	%			11/21/12 11:06	1

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

Lab Sample ID: MB 490-38791/8 Matrix: Solid							Client S	ample ID: Metho	d Blank
Analysis Batch: 38791	мв	мв						riep type. i	otaintA
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.00	0.670	mg/Kg			11/26/12 14:15	1
Ethylbenzene	ND		2.00	0.670	mg/Kg			11/26/12 14:15	1
Naphthalene	ND		5.00	1.70	mg/Kg			11/26/12 14:15	1
Toluene	ND		2.00	0.740	mg/Kg			11/26/12 14:15	1
Xylenes, Total	ND		5.00	0.670	mg/Kg			11/26/12 14:15	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Surroyate	recovery quantier	Linno	ricpared Analyzed	Diriac
1,2-Dichloroethane-d4 (Surr)	105	70 - 130	11/26/12 14:15	1
4-Bromofluorobenzene (Surr)	107	70 - 130	11/26/12 14:15	1
Dibromofluoromethane (Surr)	92	70 - 130	11/26/12 14:15	1
Toluene-d8 (Surr)	112	70 - 130	11/26/12 14:15	1

#### Lab Sample ID: LCS 490-38791/5 Matrix: Solid Analysis Batch: 38791

		Spike	LCS	LCS				%Rec.
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene		0.0500	0.04096		mg/Kg		82	75 - 127
Ethylbenzene		0.0500	0.05411		mg/Kg		108	80 - 134
Naphthalene		0.0500	0.05253		mg/Kg		105	69 - 150
Toluene		0.0500	0.04974		mg/Kg		99	80 - 132
Xylenes, Total		0.150	0.1608		mg/Kg		107	80 - 137
	105 105							

0.0500

0.0500

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	109		70 - 130
Dibromofluoromethane (Surr)	92		70 - 130
Toluene-d8 (Surr)	114		70 - 130

#### Lab Sample ID: LCSD 490-38791/6 Matrix: Solid

Analysis Batch: 38791

Analyte

Benzene Ethylbenzene

Toluene

Naphthalene

%Rec	

Client Sample ID: Lab Control Sample

Prep	Type:	Total/NA

<b>Client Sample</b>	ID:	Lab	Control	Sar	nple	Dup
			Prep Ty	pe:	Tota	I/NA

69 - 150

80 - 132

80 - 137

103

94

102

						Prep I	ype: 10	tal/NA
Spike	LCSD	LCSD				%Rec.		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.0500	0.04133		mg/Kg		83	75 - 127	1	50
0.0500	0.05162		mg/Kg		103	80 - 134	5	50

mg/Kg

mg/Kg

mg/Kg

0.05170

0.04708

Xylenes, Total			0.150	0.1532
	LCSD	LCSD		
Surrogate	%Recovery	Qualifier	Limits	
1,2-Dichloroethane-d4 (Surr)	103		70 - 130	
4-Bromofluorobenzene (Surr)	106		70 - 130	
Dibromofluoromethane (Surr)	92		70 - 130	
Toluene-d8 (Surr)	106		70 - 130	
Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	LCSD %Recovery 103 106 92 106	LCSD Qualifier	Limits 70 - 130 70 - 130 70 - 130 70 - 130	

50

50

50

2

5

5

TestAmerica Job ID: 490-12211-1 SDG: 1063

**Client Sample ID: Method Blank** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

p

Prep Type: Total/NA

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

Lab Sample ID: MB 490-39051/6
Matrix: Solid
Analysis Batch: 39051

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0335	mg/Kg			11/27/12 12:05	1
Ethylbenzene	ND		0.100	0.0335	mg/Kg			11/27/12 12:05	1
Naphthalene	ND		0.250	0.0850	mg/Kg			11/27/12 12:05	1
Toluene	ND		0.100	0.0370	mg/Kg			11/27/12 12:05	1
Xylenes, Total	ND		0.250	0.0335	mg/Kg			11/27/12 12:05	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90	1	70 - 130					11/27/12 12:05	1
4-Bromofluorobenzene (Surr)	104		70 - 130					11/27/12 12:05	1
Dibromofluoromethane (Surr)	94		70 - 130					11/27/12 12:05	1
Toluene-d8 (Surr)	96		70 - 130					11/27/12 12:05	1

#### Lab Sample ID: MB 490-39051/7 Matrix: Solid Analysis Batch: 39051

Analysis Daton. 53051									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			11/27/12 12:32	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			11/27/12 12:32	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			11/27/12 12:32	1
Toluene	ND		0.00200	0.000740	mg/Kg			11/27/12 12:32	1
Xylenes, Total	ND		0.00500	0.000670	mg/Kg			11/27/12 12:32	1
	110	Cited .							

	nin D	ine				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		70 - 130		11/27/12 12:32	1
4-Bromofluorobenzene (Surr)	107		70 - 130		11/27/12 12:32	1
Dibromofluoromethane (Surr)	98		70 - 130		11/27/12 12:32	1
Toluene-d8 (Surr)	97		70 - 130		11/27/12 12:32	1

#### Lab Sample ID: LCS 490-39051/3 Matrix: Solid

Analysis Batch: 39051

		Spike	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene		0.0500	0.05012		mg/Kg		100	75 - 127	
Ethylbenzene		0.0500	0.04909		mg/Kg		98	80 - 134	
Naphthalene		0.0500	0.05516		mg/Kg		110	69 - 150	
Toluene		0.0500	0.04878		mg/Kg		98	80 - 132	
Xylenes, Total		0.150	0.1431		mg/Kg		95	80 - 137	
	LCS LCS								

	LUS	LUS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	106		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	95		70 - 130

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

#### TestAmerica Nashville

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

#### Lab Sample ID: LCSD 490-39051/4 Matrix: Solid alveis Ratch: 20051

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

		Spike	LCSD	LCSD				%Rec.		RPD
		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
		0.0500	0.05035		mg/Kg		101	75 - 127	0	50
		0.0500	0.04961		mg/Kg		99	80 - 134	1	50
		0.0500	0.05590		mg/Kg		112	69 - 150	1	50
		0.0500	0.04917		mg/Kg		98	80 - 132	1	50
		0.150	0.1440		mg/Kg		96	80 - 137	1	50
LCSD	LCSD									
%Recovery	Qualifier	Limits								
94		70 - 130								
108		70 - 130								
	LCSD %Recovery 94 108	LCSD LCSD %Recovery Qualifier 94 108	Spike         Added           Added         0.0500           0.0500         0.0500           0.0500         0.0500           0.0500         0.150           LCSD         LCSD           %Recovery         Qualifier         Limits           94         70 - 130           108         70 - 130	Spike         LCSD           Added         Result           0.0500         0.05035           0.0500         0.04961           0.0500         0.04961           0.0500         0.0590           0.0500         0.0590           0.0500         0.04917           0.150         0.1440           LCSD         LCSD           %Recovery         Qualifier         Limits           94         70 - 130           108         70 - 130	Spike         LCSD         LCSD           Added         Result         Qualifier           0.0500         0.05035         0.05005           0.0500         0.04961         0.0500           0.0500         0.05590         0.0500           0.0500         0.04917         0.150           0.1500         0.1440         0.1440           LCSD         LCSD         LCSD           %Recovery         Qualifier         Limits           94         70 - 130           108         70 - 130	Spike         LCSD         LCSD           Added         Result         Qualifier         Unit           0.0500         0.05035         mg/Kg           0.0500         0.04961         mg/Kg           0.0500         0.05590         mg/Kg           0.0500         0.04917         mg/Kg           0.150         0.1440         mg/Kg           %Recovery         Qualifier         Limits           94         70 - 130         70 - 130           108         70 - 130         70 - 130	Spike         LCSD         LCSD           Added         Result         Qualifier         Unit         D           0.0500         0.05035         mg/Kg           0.0500         0.04961         mg/Kg           0.0500         0.05590         mg/Kg           0.0500         0.04917         mg/Kg           0.150         0.1440         mg/Kg           Kg         Mg/Kg         Mg/Kg           0.150         0.1440         mg/Kg           Kg         Mg/Kg         Mg/Kg           0.150         0.1440         mg/Kg           Kg         Mg/Kg         Mg/Kg           108         70 - 130         108	Spike         LCSD         LCSD           Added         Result         Qualifier         Unit         D         %Rec           0.0500         0.05035         mg/Kg         101           0.0500         0.04961         mg/Kg         99           0.0500         0.05590         mg/Kg         912           0.0500         0.04917         mg/Kg         98           0.150         0.1440         mg/Kg         96           LCSD         LCSD         0.150         0.1440         mg/Kg         96           VRecovery         Qualifier         Limits         94         70 - 130         108         70 - 130	Spike         LCSD         LCSD         with         M         M         M         M         Limits           0.0500         0.05035         mg/Kg         101         75 - 127           0.0500         0.05035         mg/Kg         99         80 - 134           0.0500         0.05590         mg/Kg         112         69 - 150           0.0500         0.04917         mg/Kg         98         80 - 132           0.1500         0.1440         mg/Kg         96         80 - 137           LCSD         LCSD         LCSD         Minits         Minits<	Spike         LCSD         LCSD         Spike         NRec.           Added         Result         Qualifier         Unit         D         %Rec.         RPD           0.0500         0.05035         mg/Kg         101         75.127         0           0.0500         0.04961         mg/Kg         99         80.134         1           0.0500         0.05590         mg/Kg         112         69.150         1           0.0500         0.04917         mg/Kg         98         80.132         1           0.0500         0.1440         mg/Kg         96         80.137         1           LCSD         LCSD         70.130         70.130         70.130         1         1

70 - 130

70 - 130

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

97

96

MD

#### Lab Sample ID: MB 490-38418/1-A Matrix: Solid

Analysis Batch: 38717

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

#### **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 38418

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Anthracene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Pyrene	ND		0.0670	0.0120	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Chrysene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Fluorene	ND		0.0670	0.0120	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		11/23/12 11:00	11/25/12 16:31	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		29 - 120				11/23/12 11:00	11/25/12 16:31	1
Terphenyl-d14 (Surr)	80		13 - 120				11/23/12 11:00	11/25/12 16:31	1
Nitrobenzene-d5 (Surr)	64		27 - 120				11/23/12 11:00	11/25/12 16:31	1

1.67

1.67

1.67

1.67

1.67

81

74

80

79

73

46 - 120

42 - 120

41 - 121

32 - 120

28 - 120

Client Sample ID: 1015 Foxglove

Prep Type: Total/NA

Prep Batch: 38418

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

#### Lab Sample ID: LCS 490-38418/2-A Matrix: Solid Analysis Batch: 38717

Analyte

Pyrene

Chrysene

Fluorene

Phenanthrene

Fluoranthene

Naphthalene

Acenaphthylene

Benzo[a]pyrene Benzo[b]fluoranthene

Benzo[a]anthracene

Benzo[g,h,i]perylene

Benzo[k]fluoranthene

1-Methylnaphthalene

Dibenz(a,h)anthracene

Indeno[1,2,3-cd]pyrene

2-Methylnaphthalene

Anthracene

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA Prep Batch: 38418 Spike LCS LCS %Rec. Result Qualifier %Rec Limits Added Unit D 1.67 1.351 mg/Kg 81 38 - 120 1.67 1.340 80 46 - 124 mg/Kg 1.67 1.154 mg/Kg 69 45 - 120 75 45 - 120 1.67 1.245 mg/Kg 1.67 1.161 mg/Kg 70 42 - 120 1.67 84 38 - 120 1.397 mg/Kg 1.67 1.178 mg/Kg 71 42 - 120 70 32 - 120 1 171 1.67 mg/Kg 68 1.67 1.138 mg/Kg 43 - 120 1.67 1.325 80 45 - 120 mg/Kg 1.67 1.204 mg/Kg 72 43 - 120 1.67 1.334 mg/Kg 80 32 - 128

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

1.354

1.226

1.339

1.312

1.211

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	62		29 - 120
Terphenyl-d14 (Surr)	67		13 - 120
Nitrobenzene-d5 (Surr)	54		27 - 120

#### Lab Sample ID: 490-12211-1 MS Matrix: Solid Analysis Batch: 38717

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthylene	ND		1.65	1.496		mg/Kg	\$	91	25 - 120
Anthracene	ND		1.65	1.533		mg/Kg	43	93	28 - 125
Benzo[a]anthracene	ND		1.65	1.332		mg/Kg	Ø	81	23 - 120
Benzo[a]pyrene	ND		1.65	1.440		mg/Kg	0	87	15 - 128
Benzo[b]fluoranthene	ND		1.65	1.327		mg/Kg	9	80	12 - 133
Benzo[g,h,i]perylene	ND		1.65	1.546		mg/Kg	\$	94	22 - 120
Benzo[k]fluoranthene	ND		1.65	1.357		mg/Kg	Ø	82	28 - 120
1-Methylnaphthalene	ND		1.65	1.310		mg/Kg	¢-	79	10 - 120
Pyrene	ND		1.65	1.308		mg/Kg	¢	79	20 - 123
Phenanthrene	ND		1.65	1.519		mg/Kg	\$	92	21 - 122
Chrysene	ND		1.65	1.365		mg/Kg	¢	83	20 - 120
Dibenz(a,h)anthracene	ND		1.65	1.489		mg/Kg	¢	90	12 - 128
Fluoranthene	ND		1.65	1.523		mg/Kg	Ð	92	10 - 143
Fluorene	ND		1.65	1.362		mg/Kg	\$	83	20 - 120
Indeno[1,2,3-cd]pyrene	ND		1.65	1.516		mg/Kg	\$	92	22 - 121
Naphthalene	ND		1.65	1.471		mg/Kg	à	89	10 - 120
2-Methylnaphthalene	ND		1.65	1.379		mg/Kg	Ø	84	13 - 120

TestAmerica Nashville

TestAmerica Job ID: 490-12211-1 SDG: 1063

Client Sample ID: 1015 Foxglove

Client Sample ID: 1015 Foxglove

Prep Type: Total/NA

Prep Type: Total/NA

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Prep Batch: 38418

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

#### Lab Sample ID: 490-12211-1 MS Matrix: Solid Analysis Batch: 38717

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	65		29 - 120
Terphenyl-d14 (Surr)	74		13 - 120
Nitrobenzene-d5 (Surr)	59		27 - 120

#### Lab Sample ID: 490-12211-1 MSD Matrix: Solid

Analysis Batch: 38717									Prep	Batch:	38418
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthylene	ND		1.66	1.420		mg/Kg	\$	86	25 - 120	5	50
Anthracene	ND		1.66	1.425		mg/Kg	\$	86	28 - 125	7	49
Benzo[a]anthracene	ND		1.66	1.245		mg/Kg	Ø	75	23 - 120	7	50
Benzo[a]pyrene	ND		1.66	1.366		mg/Kg	2	82	15 - 128	5	50
Benzo[b]fluoranthene	ND		1.66	1.241		mg/Kg	÷	75	12 - 133	7	50
Benzo[g,h,i]perylene	ND		1.66	1.486		mg/Kg	\$	90	22 - 120	4	50
Benzo[k]fluoranthene	ND		1.66	1.271		mg/Kg	¢	77	28 - 120	7	45
1-Methylnaphthalene	ND		1.66	1.237		mg/Kg	\$	75	10 - 120	6	50
Pyrene	ND		1.66	1.230		mg/Kg	\$	74	20 - 123	6	50
Phenanthrene	ND		1.66	1.408		mg/Kg	\$	85	21 - 122	8	50
Chrysene	ND		1.66	1.280		mg/Kg	Ø	77	20 - 120	6	49
Dibenz(a,h)anthracene	ND		1.66	1.429		mg/Kg	¢	86	12 - 128	4	50
Fluoranthene	ND		1.66	1.442		mg/Kg	0	87	10 - 143	5	50
Fluorene	ND		1.66	1.277		mg/Kg	٥	77	20 - 120	6	50
Indeno[1,2,3-cd]pyrene	ND		1.66	1.433		mg/Kg	$\diamond$	86	22 - 121	6	50
Naphthalene	ND		1.66	1.406		mg/Kg	0	85	10 - 120	5	50
2-Methylnaphthalene	ND		1.66	1.290		mg/Kg	ð	78	13 - 120	7	50
	MSD	MSD									
0	P/Decessory	Qualifian	1 imite								

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	59		29 - 120
Terphenyl-d14 (Surr)	67		13 - 120
Nitrobenzene-d5 (Surr)	57		27 - 120

#### Method: Moisture - Percent Moisture

Lab Sample ID: 490-12185-C-8 DU Matrix: Solid						Client Sample ID: Dup Prep Type: Tot	licate	
Analysis Batch: 38035							60.3 (d) 60.00	
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	75		74		%		2	20

#### **QC Association Summary**

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-12211-1 SDG: 1063

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#### GC/MS VOA

#### Prep Batch: 37825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-6	1031 Foxglove	Total/NA	Solid	5035	
Prep Batch: 37827					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-1	1015 Foxglove	Total/NA	Solid	5035	
490-12211-2	1361 Cardinal	Total/NA	Solid	5035	
490-12211-3	1046 Gardenia	Total/NA	Solid	5035	
490-12211-4	1024 Foxglove	Total/NA	Solid	5035	
490-12211-5	1038 Iris	Total/NA	Solid	5035	
490-12211-7	1029 Foxglove	Total/NA	Solid	5035	
Analysis Batch: 38791					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-1	1015 Foxglove	Total/NA	Solid	8260B	37827
490-12211-2	1361 Cardinal	Total/NA	Solid	8260B	37827
490-12211-3	1046 Gardenia	Total/NA	Solid	8260B	37827
LCS 490-38791/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-38791/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-38791/8	Method Blank	Total/NA	Solid	8260B	
Analysis Batch: 39051					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-4	1024 Foxglove	Total/NA	Solid	8260B	37827
490-12211-5	1038 Iris	Total/NA	Solid	8260B	37827
490-12211-6	1031 Foxglove	Total/NA	Solid	8260B	37825
490-12211-7	1029 Foxglove	Total/NA	Solid	8260B	37827
LCS 490-39051/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-39051/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-39051/6	Method Blank	Total/NA	Solid	8260B	
MB 490-39051/7	Method Blank	Total/NA	Solid	8260B	
GC/MS Semi VOA					

#### Prep Batch: 38418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-1	1015 Foxglove	Total/NA	Solid	3550C	
490-12211-1 MS	1015 Foxglove	Total/NA	Solid	3550C	
490-12211-1 MSD	1015 Foxglove	Total/NA	Solid	3550C	
490-12211-2	1361 Cardinal	Total/NA	Solid	3550C	
490-12211-3	1046 Gardenia	Total/NA	Solid	3550C	
490-12211-4	1024 Foxglove	Total/NA	Solid	3550C	
490-12211-5	1038 Iris	Total/NA	Solid	3550C	
490-12211-6	1031 Foxglove	Total/NA	Solid	3550C	
490-12211-7	1029 Foxglove	Total/NA	Solid	3550C	
LCS 490-38418/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-38418/1-A	Method Blank	Total/NA	Solid	3550C	
Analysis Batch: 38717	7				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-1	1015 Foxglove	Total/NA	Solid	8270D	38418

TestAmerica Nashville

#### **QC Association Summary**

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

#### Analysis Batch: 38717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12211-1 MS	1015 Foxglove	Total/NA	Solid	8270D	38418
490-12211-1 MSD	1015 Foxglove	Total/NA	Solid	8270D	38418
490-12211-2	1361 Cardinal	Total/NA	Solid	8270D	38418
490-12211-3	1046 Gardenia	Total/NA	Solid	8270D	38418
490-12211-4	1024 Foxglove	Total/NA	Solid	8270D	38418
490-12211-5	1038 Iris	Total/NA	Solid	8270D	38418
490-12211-6	1031 Foxglove	Total/NA	Solid	8270D	38418
490-12211-7	1029 Foxglove	Total/NA	Solid	8270D	38418
LCS 490-38418/2-A	Lab Control Sample	Total/NA	Solid	8270D	38418
MB 490-38418/1-A	Method Blank	Total/NA	Solid	8270D	38418

#### **General Chemistry**

#### Analysis Batch: 38035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-12185-C-8 DU	Duplicate	Total/NA	Solid	Moisture	
490-12211-1	1015 Foxglove	Total/NA	Solid	Moisture	
490-12211-2	1361 Cardinal	Total/NA	Solid	Moisture	
490-12211-3	1046 Gardenia	Total/NA	Solid	Moisture	
490-12211-4	1024 Foxglove	Total/NA	Solid	Moisture	
190-12211-5	1038 Iris	Total/NA	Solid	Moisture	
190-12211-6	1031 Foxglove	Total/NA	Solid	Moisture	
90-12211-7	1029 Foxglove	Total/NA	Solid	Moisture	

SDG: 1063

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TestAmerica Job ID: 490-12211-1

Date Collected: 11/12/12 14:45 Date Received: 11/20/12 08:10

#### Lab Sample ID: 490-12211-1

Lab Sample ID: 490-12211-2

TestAmerica Job ID: 490-12211-1

#### Matrix: Solid Percent Solids: 86.0

Matrix: Solid

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Percent Solids: 77.8

Batch Dilution Prepared Batch Batch Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 5035 37827 11/20/12 16:30 ML TAL NSH Total/NA Analysis 8260B 1 38791 11/26/12 18:25 KK TAL NSH Total/NA 3550C Prep 38418 11/23/12 11:00 AK TAL NSH Total/NA Analysis 8270D 1 38717 11/25/12 16:53 KP TAL NSH Total/NA Analysis Moisture 1 38035 11/21/12 11:06 DF TAL NSH

#### Client Sample ID: 1361 Cardinal Date Collected: 11/12/12 14:30

Date Received: 11/12/12 08:10

Batch	Batch		Dilution	Batch	Prepared		
Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Prep	5035			37827	11/20/12 16:30	ML	TAL NSH
Analysis	8260B		1	38791	11/26/12 18:57	кк	TAL NSH
Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Analysis	8270D		1	38717	11/25/12 17:58	KP	TAL NSH
Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH
	Batch Type Prep Analysis Prep Analysis Analysis	BatchBatchTypeMethodPrep5035Analysis8260BPrep3550CAnalysis8270DAnalysisMoisture	BatchBatchTypeMethodRunPrep5035Analysis8260BPrep3550CAnalysis8270DAnalysisMoisture	BatchDilutionTypeMethodRunFactorPrep50351Analysis8260B1Prep3550C1Analysis8270D1AnalysisMoisture1	BatchDilutionBatchTypeMethodRunFactorNumberPrep503537827Analysis8260B138791Prep3550C38418Analysis8270D138717AnalysisMoisture138035	Batch         Batch         Dilution         Batch         Prepared           Type         Method         Run         Factor         Number         or Analyzed           Prep         5035         37827         11/20/12 16:30           Analysis         8260B         1         38791         11/26/12 18:57           Prep         3550C         38418         11/23/12 11:00           Analysis         8270D         1         38717         11/25/12 17:58           Analysis         Moisture         1         38035         11/21/12 11:06	Batch         Batch         Dilution         Batch         Prepared           Type         Method         Run         Factor         Number         or Analyzed         Analyst           Prep         5035         37827         11/20/12 16:30         ML           Analysis         8260B         1         38791         11/26/12 18:57         KK           Prep         3550C         38418         11/23/12 11:00         AK           Analysis         8270D         1         38717         11/25/12 17:58         KP           Analysis         Moisture         1         38035         11/21/12 11:06         DF

#### Client Sample ID: 1046 Gardenia Date Collected: 11/13/12 13:45

#### Date Received: 11/20/12 08:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			37827	11/20/12 16:30	ML	TAL NSH
Total/NA	Analysis	8260B		1	38791	11/26/12 21:33	КК	TAL NSH
Total/NA	Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Total/NA	Analysis	8270D		1	38717	11/25/12 18:19	KP	TAL NSH
Total/NA	Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH

#### Client Sample ID: 1024 Foxglove Date Collected: 11/13/12 13:55

#### Date Received: 11/20/12 08:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			37827	11/20/12 16:30	ML	TAL NSH
Total/NA	Analysis	8260B		1	39051	11/27/12 19:18	МН	TAL NSH
Total/NA	Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Total/NA	Analysis	8270D		1	38717	11/25/12 18:41	KP	TAL NSH
Total/NA	Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH

Lab Sample ID: 490-12211-3 Matrix: Solid

Percent Solids: 85.4

#### Lab Sample ID: 490-12211-4

Matrix: Solid Percent Solids: 96.6

SDG: 1063

#### Lab Sample ID: 490-12211-5

Lab Sample ID: 490-12211-6

Lab Sample ID: 490-12211-7

TestAmerica Job ID: 490-12211-1

Matrix: Solid Percent Solids: 85.0

Matrix: Solid Percent Solids: 79.9

Matrix: Solid

Percent Solids: 92.9

Batch	Batch		Dilution	Batch	Prepared		
Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Prep	5035			37827	11/20/12 16:30	ML	TAL NSH
Analysis	8260B		1	39051	11/27/12 19:45	МН	TAL NSH
Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Analysis	8270D		1	38717	11/25/12 19:03	KP	TAL NSH
Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH
	Batch Type Prep Analysis Prep Analysis Analysis	BatchBatchTypeMethodPrep5035Analysis8260BPrep3550CAnalysis8270DAnalysisMoisture	BatchBatchTypeMethodRunPrep5035	BatchBatchDilutionTypeMethodRunFactorPrep50351Analysis8260B1Prep3550C1Analysis8270D1AnalysisMoisture1	BatchBatchDilutionBatchTypeMethodRunFactorNumberPrep503537827Analysis8260B139051Prep3550C38418Analysis8270D138717AnalysisMoisture138035	Batch         Batch         Dilution         Batch         Prepared           Type         Method         Run         Factor         Number         or Analyzed           Prep         5035         37827         11/20/12 16:30           Analysis         8260B         1         39051         11/27/12 19:45           Prep         3550C         38418         11/23/12 11:00           Analysis         8270D         1         38717         11/25/12 19:03           Analysis         Moisture         1         38035         11/21/12 11:06	BatchBatchDilutionBatchPreparedTypeMethodRunFactorNumberor AnalyzedAnalystPrep50353782711/20/12 16:30MLAnalysis8260B13905111/27/12 19:45MHPrep3550C3841811/23/12 11:00AKAnalysis8270D13871711/25/12 19:03KPAnalysisMoisture13803511/21/12 11:06DF

#### **Client Sample ID: 1031 Foxglove** Date Collected: 11/14/12 13:30

#### Date Received: 11/20/12 08:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			37825	11/20/12 16:28	ML	TAL NSH
Total/NA	Analysis	8260B		1	39051	11/27/12 20:39	MH	TAL NSH
Total/NA	Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Total/NA	Analysis	8270D		1	38717	11/25/12 19:24	KP	TAL NSH
Total/NA	Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH

#### **Client Sample ID: 1029 Foxglove**

#### Date Collected: 11/15/12 14:45 Date Received: 11/20/12 08:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			37827	11/20/12 16:30	ML	TAL NSH
Total/NA	Analysis	8260B		1	39051	11/27/12 20:12	MH	TAL NSH
Total/NA	Prep	3550C			38418	11/23/12 11:00	AK	TAL NSH
Total/NA	Analysis	8270D		1	38717	11/25/12 19:46	KP	TAL NSH
Total/NA	Analysis	Moisture		1	38035	11/21/12 11:06	DF	TAL NSH

#### Laboratory References:

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

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

TestAmerica Nashville

TestAmerica Job ID: 490-12211-1 SDG: 1063

#### 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 Nashville

estAmerica .	Char
HE LEADER IN ENVIRONMENTAL TESTING ashville, TN COOLER RECEIPT FORM	
ooler Received/Opened On <u>11/20/2012 @ 0810</u>	490-12211 Chair
Tracking # (023) (last 4 digits, FedEx)	
ourier: FedEx IR Gun ID 14740456	
Temperature of rep. sample or temp blank when opened: $2.7$ Degrees Celsius	
If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen	YES NO
Were custody seals on outside of cooler?	YES. NO NA
If yes, how many and where: d Front/Bdck	-
Were the seals intact, signed, and dated correctly?	YES.NONA
Were custody papers inside cooler?	YES.NONA
certify that I opened the cooler and answered questions 1-6 (intial)	- <del>0</del> -
Were custody seals on containers: YES NO and Intact	YESNO.
Were these signed and dated correctly?	YESNO.
Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pap	er Other None
Cooling process: Ice-pack Ice (direct contact) Dry ice	e Other Non
Did all containers arrive in good condition (unbroken)?	ESNONA
. Were all container labels complete (#, date, signed, pres., etc)?	YES NO NA
. Did all container labels and tags agree with custody papers?	ES NO NA
a. Were VOA vials received?	ESNONA
a. Were VOA vials received? b. Was there any observable headspace present in any VOA vial?	YES. NO NA
a. Were VOA vials received? b. Was there any observable headspace present in any VOA vial? . Was there a Trip Blank in this cooler? YES	YESNONA
a. Were VOA vials received? b. Was there any observable headspace present in any VOA vial? . Was there a Trip Blank in this cooler? YESMDNA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)	YES:NONA
a. Were VOA vials received? b. Was there any observable headspace present in any VOA vial? . Was there a Trip Blank in this cooler? YES(D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (initial) a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level	YESNONA YESNONA nce # @ YESNO.MA
<ul> <li>Were VOA vials received?</li> <li>Was there any observable headspace present in any VOA vial?</li> <li>Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque sertify that I unloaded the cooler and answered questions 7-14 (initial)</li> <li>On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> </ul>	YESNONA YESNONA nce # ? YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (initial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>Was residual chlorine present?</li> </ul>	YESNONA YESNONA nce # YESNONA YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>b. Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)</li> </ul>	YESNONA YESNONA nce # YESNONA YESNONA YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>c. Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)</li> <li>c. Were custody papers properly filled out (ink, signed, etc)?</li> </ul>	YESNONA YESNONA YESNONA YESNONA YESNONA
<ul> <li>Were VOA vials received?</li> <li>Was there any observable headspace present in any VOA vial?</li> <li>Was there a Trip Blank in this cooler? YES(D)NA If multiple coolers, seque entify that I unloaded the cooler and answered questions 7-14 (initial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial)</li> <li>Were custody papers properly filled out (ink, signed, etc)?</li> <li>Did you sign the custody papers in the appropriate place?</li> </ul>	YESNONA YESNONA YESNONA YESNONA YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>c. Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)</li> <li>c. Were custody papers properly filled out (ink, signed, etc)?</li> <li>c. Did you sign the custody papers in the appropriate place?</li> <li>c. Were correct containers used for the analysis requested?</li> </ul>	YESNONA YESNONA YESNONA YESNONA YESNONA YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>b. Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)</li> <li>c. Were custody papers properly filled out (ink, signed, etc)?</li> <li>c. Did you sign the custody papers in the appropriate place?</li> <li>c. Were correct containers used for the analysis requested?</li> <li>c. Was sufficient amount of sample sent in each container?</li> </ul>	YESNONA YESNONA YESNONA YESNONA YESNONA YESNONA YESNONA
<ul> <li>a. Were VOA vials received?</li> <li>b. Was there any observable headspace present in any VOA vial?</li> <li>b. Was there a Trip Blank in this cooler? YES (D)NA If multiple coolers, seque ertify that I unloaded the cooler and answered questions 7-14 (intial)</li> <li>a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level</li> <li>b. Did the bottle labels indicate that the correct preservatives were used</li> <li>b. Was residual chlorine present?</li> <li>ertify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)</li> <li>b. Were custody papers properly filled out (ink, signed, etc)?</li> <li>c. Did you sign the custody papers in the appropriate place?</li> <li>b. Were correct containers used for the analysis requested?</li> <li>c. Was sufficient amount of sample sent in each container?</li> <li>ertify that I entered this project into LIMS and answered questions 17-20 (intial)</li> </ul>	YESNONA YESNONA YESNONA YESNONA YESNONA YESNONA (ES)NONA (ES)NONA (ES)NONA

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		Nashville I 2960 Foste Nashville,	Division er Creigh TN 37204	ton		Phone Toll Free Fax	: 615-726-017 : 800-765-0980 : 615-726-3404				To assist us in methods, is thi regulatory purp	using the pro s work being poses?	per analytical conducted for		
Client Name/Account #:	EEG - SBG # 24	49							-			Complian	nce Monitoring?	Yes	No
Address:	10179 Highway	78	-				onte		_			Enforce	ement Action?	Yes	No
City/State/Zip:	Ladson, SC 294	56					-	-		Site State	SC -			_	
Project Manager:	Tom McElwee e	mail: mcelwe	e@eegin	c.net			1)		_	-PO#	106	3			
Telephone Number	843.412.2097				Fa	x No.: 843.	- 8797	040	1	TA Quote #	-			_	
Sampler Name: (Print)	PRI	4# _	Sha	i					_	Project ID	Laurel Bay Ho	using Project			-
Sampler Signature:		2P	14				1			Project #					
	'		/		Г	Preserva	ative 1	Ma	trix	1		Analyze F	or:		7_
Inple ID / Description 1015 Foxglova 1361 CARdinat 1046 EARDENIA 1024 Foxclova 1038 IRIS 1031 Foxglova 1029 Foxslova	11/12/12 11/12/12 11/12/12 11/12/12 11/12/12 11/12/12 11/12/12	1945 1945 1349 1353 1245 1330 1445	A A A A A A A A A A A A A A A A A A A	Composite	Field Filtered	North Contraction (Red Label)	Algorithment of the second sec	Wastewater Drinking Waster	Sludge X X X Sol	XXXXX BITEX + Napth - 826 XXXX DAH - 8270D				01 62 03 04 04 04 04 04 04 04 04 04 04 04 04 04	RUSH TAT (Pre-Schedu
pecial Instructions:		*	11	1		Method of Shipm	ment:		FEC		Laboratory C Tempe VOCs	omments: rature Upon F	Receipt: 2.7 c		Y
elinquished by	11/19/1 Date	12-	Time H-09	Rec	eived by	CALX TestAmerica:		D D il·te	ate ate (7	Time Time					

then were not not that they see that had had been build

Page 25 of 26

#### Login Sample Receipt Checklist

#### Client: Environmental Enterprise Group

#### Login Number: 12211 List Number: 1

Creator: McBride, Mike

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a<br 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	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 490-12211-1 SDG Number: 1063

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List Source: TestAmerica Nashville

#### ATTACHMENT A



# **NON-HAZARDOUS MANIFEST**

	1. Generator's US	EPA ID No.	Manifest Doc	No.	2. Page 1	of			
NUN-HAZARDOUS MANIFEST					1	L			
3. Generator's Mailing Address:		Generator's Site Addres	S (If different than m	ailing):	A. Manife	est Number			
MCAS, BEAUFORT				0.	WMNA 00316841				
LAUREL BAY HOUSING						B. State	Generator'	s ID	
BEAUFORT, SC 29907									
4. Generator's Phone 843-2	28-6461								
5. Transporter 1 Company Name		6. US EI	PA ID Number					<u>1917</u> (171	
EEG, INC.	•		C. State 1	ransporter's	ID	070.04			
7. Transporter 2 Company Name		8 US FI			D. Transp	orter's Phon	e 843-	5/9-04.	11
					E. State T	ransporter's	ID		<u> </u>
					F. Transp	orter's Phone	5		<u>.</u>
9. Designated Facility Name and Site	Address	10. US I	EPA ID Number						
HICKORY HILL LANDFILL					G. State F	acility ID			
2621 LOW COUNTRY ROAD					H. State F	acility Phone	843-	987-464	13
RIDGELAND, SC 29936				Area					
			12. Co	ntainers	13. Total	14 Unit	1		
G 11. Description of Waste Materials			No.	Түре	Quantity	Wt./Vol.	I. N	lisc. Comme	ents
E   a. HEATING OIL TANKS FILLED	WITH SAND							,	
E					PER MILLION				
R WM Profi	ile # 1026555C				<u>18239 - 1</u>		1,52,6419		1976,000
A) <b>D</b> . T									
0									
R WM Profile #									
L.									
WM Profile #									
d.					<u> na strada</u>	i		<u>i a stalita</u>	<u>, na Manié věladu s</u>
					ł				
WM Profile #					- TARAGE			- <u>Angel</u> a († 19	
J. Additional Descriptions for Materi	ials Listed Above		K. Dispos	al Location	1. S. (1979) - 1975	1 : :	<u>na e massaro</u>		<u></u>
				·····					
			Cell				Level		
15. Special Handling Instructions and	Additional Informat	ion	4) 1131	1 I.I.	5 6	1015	Foxe	100	Z
NETZC I	- 201103 201777	Plus la Il	5)114	270					$\square$
Purchase Order #	<u></u>				1.21	<u></u>			
16 GENERATOR'S CERTIFICATE		EnEroEiter	contractivitie						
I hereby certify that the above-describ	ed materials are no	t hazardous wastes as d	efined by CFR Pa	art 261 or a	ny applicable	e state law. ł	nave b <b>e</b> en fu	llv and	
accurately described, classified and pa	ickaged and are in p	roper condition for tran	sportation accor	ding to app	olicable regu	lations.		.,	
Printed Name		Signature "On b	ehalf of" 🔪 🗧				Month	Day	Year
17 Transporter 1 Acknowledgement	of Receipt of Materi	]		A Contraction	and the second sec	·		× \	
Printed Name	or necerpt of materi	Signature					Month	Dav	Year
James BALdu	sed.	-1. Jugar	er Ba	John	L		1	10	12
18. Transporter 2 Acknowledgement of	of Receipt of Materi	als V	•						- <b>I</b> <sup>8</sup> <sup>6</sup>
Printed Name		Signature					Month	Day	Year
19. Certificate of Final Treatment/Disc	posal						<b>I</b> ,		<u> </u>
I certify, on behalf of the above listed t	treatment facility, th	hat to the best of my kno	owledge, the ab	ove-describ	ed waste wa	as managed	in compliand	e with al	I
applicable laws, regulations, permits a	nd licenses on the d	ates listed above.							
20. Facility Owner or Operator: Certif	ication of receipt of	non-hazardous materia	ls covered by th	is manifest.	· · · · · · · · · · · · · · · · · · ·				
Printed Name	1	Signature	and the second		1		Month	Day	Year
Milita TREATAGENT STORAGE DISCO		Physical Contract	67.42	and the second	<u>^ / الادم</u>		1/2	<u></u>	
Bials EACH TREATIVIENT, STURAGE, DISPUS	DAL FACILITY COPY	BIUE- GENEKAT	UR #2 CUPY		Yel	IOW- GENERA	410K #1 CO	1	

Appendix C Laboratory Analytical Report - Groundwater



#### Volatile Organic Compounds by GC/MS

#### Client: AECOM - Resolution Consultants

#### Description: BEALB1015TW01WG20150518

Laboratory ID: QE20007-001 Matrix: Aqueous

Date Sampled:05/18/2015 1640

Date Received: 05/20/2015											
RunPrepMethod15030B	Analytical Metho 8260	od Dilution	<b>Analysi</b> 05/22/20	<b>5 Date Analys</b> 15 0132 PMM	st Prep 2	Date	<b>Batch</b> 75589				
Parameter		Nur	CAS mber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71-	-43-2	8260B	0.45	U	5.0	0.45	0.21	ug/L	1
Ethylbenzene		100-	41-4	8260B	0.51	U	5.0	0.51	0.17	ug/L	1
Naphthalene		91-	-20-3	8260B	0.96	U	5.0	0.96	0.32	ug/L	1
Toluene		108-	-88-3	8260B	0.48	U	5.0	0.48	0.16	ug/L	1
Xylenes (total)		1330-	-20-7	8260B	0.57	U	5.0	0.57	0.19	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptar Limits	ice							
Bromofluorobenzene		86	75-120	)							
1,2-Dichloroethane-d4		88	70-120	)							
Toluene-d8		95	85-120	)							
Dibromofluoromethane		85	85-11	5							

PQL = Practical quantitation limitB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeH = Out of holding timeQ = Surrogate failureND = Not detected at or above the MDLJ = Estimated result < PQL and  $\geq$  MDLP = The RPD between two GC columns exceeds 40%N = Recovery is out of criteriaL = LCS/LCSD failureWhere applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"S = MS/MSD failureS = 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

Level 1 Report v2.1

#### Semivolatile Organic Compounds by GC/MS (SIM)

#### Client: AECOM - Resolution Consultants

Description: BEALB1015TW01WG20150518

Laboratory ID: QE20007-001

Date Sampled:05/18/2015 1640

Matrix: Aqueous

#### Date Received: 05/20/2015

Run Prep Method 1 3520C	Analytical Method Dilution A 8270D (SIM) 1 05	nalysis Date Analysi 5/27/2015 1012 RBH	t Prep Date 05/21/2015 16	<b>Batch</b> 44 75496		
Parameter	C/ Numb	AS Analytical er Method	Result Q	LOQ	LOD	DL Units Run
Benzo(a)anthracene	56-55	-3 8270D (SIM)	0.040 U	0.20	0.040	0.019 ug/L 1
Benzo(b)fluoranthene	205-99	-2 8270D (SIM)	0.040 U	0.20	0.040	0.019 ug/L 1
Benzo(k)fluoranthene	207-08	-9 8270D (SIM)	0.040 U	0.20	0.040	0.024 ug/L 1
Chrysene	218-01	-9 8270D (SIM)	0.040 U	0.20	0.040	0.021 ug/L 1
Dibenzo(a,h)anthracene	53-70	-3 8270D (SIM)	0.080 U	0.20	0.080	0.040 ug/L 1
Surrogate	Run 1 Ac Q % Recovery	cceptance Limits				
2-MethyInaphthalene-d10	69	15-139				
Fluoranthene-d10	78	23-154				

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  $J = Estimated result < PQL and <math>\ge MDL$  $\mathsf{P}=\mathsf{The}\;\mathsf{RPD}$  between two GC columns exceeds 40% N = Recovery is out of criteria L = LCS/LCSD failure S = MS/MSD failure Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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

Level 1 Report v2.1

Appendix D Regulatory Correspondence



## DHEC

PROMOTE PROTECT PROSPER Catherine B. Templeton, Director

May 15, 2014

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 Storage Tank Assessment Reports for: *See attached sheet* 

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received the above referenced Underground Storage Tank 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 et seq., as amended).

The Department has reviewed the referenced assessment 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 this site.

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)

## DHEC

PROMOLE PROTECT PROSPER

Catherine B. Templeton, Director

Attachment to: Krieg to Drawdy Subject: IGWA Dated 5/15/2014

Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks)

137 Laurel Bay Tank 2	387 Acorn
139 Laurel Bay	392 Acorn Tank 2
229 Cypress Tank 2 ·	396 Acorn Tank 1
261 Beech Tank 1 •	396 Acorn Tank 2
261 Beech Tank 3	430 Elderberry
273 Birch Tank 1 🔹	433 Elderberry
273 Birch Tank 2	439 Elderberry
273 Birch Tank 3	440 Elderberry
276 Birch Tank 2	442 Elderberry
278 Birch Tank 2	443 Elderberry
291 Birch Tank 2	444 Elderberry Tank 1
300 Ash -	445 Elderberry
304 Ash •	446 Elderberry
314 Ash Tank 1	448 Elderberry
314 Ash Tank 2	449 Elderberry
322 Ash Tank 2 *	451 Elderberry
323 Ash *	453 Elderberry
324 Ash *	456 Elderberry Tank 1
325 Ash Tank 1 •	456 Elderberry Tank 2
325 Ash Tank 2	458 Elderberry Tank 1
326 Ash -	458 Elderberry Tank 3
336 Ash •	464 Dogwood
339 Ash •	466 Dogwood
343 Ash Tank 1 *	467 Dogwood
344 Ash Tank 1 *	468 Dogwood
348 Ash *	469 Dogwood
349 Ash Tank 1 *	471 Dogwood Tank 2
353 Ash Tank 1 *	471 Dogwood Tank 3
362 Aspen	475 Dogwood Tank 1
376 Aspen *	475 Dogwood Tank 2
380 Aspen	516 Laurel Bay Tank 1 (UST#03747)
383 Aspen Tank 2 *	518 Laurel Bay

2600 Bull Street \* Columbia, SC23201 \* Phone; (803) 808/3452 \* www.scdhee.gow

#### Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks) cont.

531 Laurel Bay	1219 Cardinal	
532 Laurel Bay	1272 Albatross	
635 Dahlia Tank 2	1305 Eagle	
638 Dahlia	1353 Cardinal	
640 Dahlia Tank 1	1356 Cardinal	
640 Dahlia Tank 2	1357 Cardinal	
645 Dahlia	1359 Cardinal	
647 Dahlia	1360 Cardinal	
648 Dahlia Tank 2	1361 Cardinal	
650 Dahlia Tank 1	1368 Cardinal	
650 Dahlia Tank 2	1370 Cardinal Tank 1	
652 Dahlia Tank 1	1377 Dove	
652 Dahlia Tank 2	1381 Dove	
760 Althea	1382 Dove	
763 Althea	1384 Dove	
771 Althea	1385 Dove	
927 Albacore	1389 Dove	
1015 Foxglove	1391 Dove	
1046 Gardenia	1392 Dove	
1062 Gardenia Tank 2	1393 Dove Tank 1	
1070 Heather	1393 Dove Tank 2	
1072 Heather	1406 Eagle	
1102 Iris Tank 1	1407 Eagle Tank 1	
1107 Iris	1411 Eagle Tank 1	
1126 Iris	1411 Eagle Tank 2	
1129 Iris	1412 Eagle	
1132 Iris	1413 Albatross	
1133 Iris Tank 1	1414 Albatross	
1138 Iris	1422 Albatross	
1144 Iris Tank 1	1425 Albatross	
1144 Iris Tank 2	1426 Albatross	
1148 Iris Tank 1	1432 Dove	
1148 Iris Tank 2	1434 Dove	
1161 Jasmine	1436 Dove	
1167 Jasmine	1438 Dove Tank 1	
1170 Jasmine	1440 Dove	
1190 Bobwhite	1442 Dove Tank 1	
1192 Bobwhite		



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

> Division of Waste Management Bureau of Land and Waste Management

February 22, 2016

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

RE: Approval and Concurrence with Draft Final Initial Groundwater Investigation Report-May and June 2015 Laurel Bay Military Housing Area Multiple Properties Dated October 2015

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received groundwater data in the above referenced Groundwater Investigation Report for the addresses attached. 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 the Department's request, groundwater samples were collected from the attached referenced addresses. The Department 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 wells should be installed at the 52 stated addresses. For the remaining 91 addresses, there is no indication of contamination on the property 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 petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

LINT

Laurel Petrus RCRA Federal Facilities Section

Attachment: Specific Property Recommendations

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 Subject: Draft Final Initial Groundwater Investigation Report-May and June 2015 Specific Property Recommendations Dated February 22, 2016

#### Draft Final Initial Groundwater Investigation Report for (143 addresses)

Permanent Monitoring Well Investigation recommendation (52 addresses)					
273 Birch Drive	1192 Bobwhite Drive				
325 Ash Street	1194 Bobwhite Drive				
326 Ash Street	1272 Albatross Drive				
336 Ash Street	1352 Cardinal Lane				
343 Ash Street	1356 Cardinal Lane				
353 Ash Street	1359 Cardinal Lane				
430 Elderberry Drive	1360 Cardinal Lane				
440 Elderberry Drive	1362 Cardinal Lane				
456 Elderberry Drive	1370 Cardinal Lane				
458 Elderberry Drive	1382 Dove Lane				
468 Dogwood Drive	1384 Dove lane				
518 Laurel Bay Blvd	1385 Dove Lane				
635 Dahlia Drive	1389 Dove Lane				
638 Dahlia Drive	1392 Dove Lane				
640 Dahlia Drive	1393 Dove Lane				
647 Dahlia Drive	1407 Eagle Lane				
648 Dahlia Drive	1411 Eagle Lane				
650 Dahlia Drive	1418 Albatross Drive				
652 Dahlia Drive	1420 Albatross Drive				
760 Althea Street	1426 Albatross Drive				
1102 Iris Lane	1429 Albatross Drive				
1132 Iris Lane	1434 Dove Lane				
1133 Iris Lane	1436 Dove Lane				
1144 Iris Lane	1440 Dove Lane				
1148 Iris Lane	1442 Dove Lane				
1186 Bobwhite Drive	1444 Dove Lane				
No Further Action recommendation (91 addresses):					
137 Laurel Bay Blvd	771 Althea Street				
139 Laurel Bay Blvd	927 Albacore Street				
229 Cypress Street	1015 Foxglove Street				
261 Beech Street	1046 Gardenia Drive				
276 Birch Drive	1062 Gardenia Drive				
278 Birch Drive	1070 Heather Street				
291 Birch Drive	1072 Heather Street				

300 Ash Street	1107 Iris Lane
304 Ash Street	1126 Iris Lane
314 Ash Street	1129 Iris Lane
322 Ash Street	1138 Iris Lane
323 Ash Street	1161 Jasmine Street
324 Ash Street	1167 Jasmine Street
339 Ash Street	1170 Jasmine Street
344 Ash Street	1190 Bobwhite Drive
348 Ash Street	1219 Cardinal Lane
349 Ash Street	1305 Eagle Lane
362 Asnen Street	1353 Cardinal Lane
376 Aspen Street	1354 Cardinal Lane
380 Aspen Street	1357 Cardinal Lane
383 Aspen Street	1361 Cardinal Lane
387 Acom Drive	1364 Cardinal Lane
392 Acom Drive	1368 Cardinal Lane
396 Acom Drive	1377 Dove Lane
433 Elderberry Drive	1381 Dove Lane
439 Elderberry Drive	1391 Dove Lane
442 Elderberry Drive	1403 Eagle Lane
443 Elderberry Drive	1404 Eagle Lane
444 Elderberry Drive	1405 Eagle Lane
445 Elderberry Drive	1406 Eagle Lane
446 Elderberry Drive	1408 Eagle Lane
448 Elderberry Drive	1410 Eagle Lane
449 Elderberry Drive	1412 Eagle Lane
451 Elderberry Drive	1413 Albatross Drive
453 Elderberry Drive	1414 Albatross Drive
464 Dogwood Drive	1417 Albatross Drive
466 Dogwood Drive	1421 Albatross Drive
467 Dogwood Drive	1422 Albatross Drive
469 Dogwood Drive	1425 Albatross Drive
471 Dogwood Drive	1427 Albatross Drive
475 Dogwood Drive	1430 Dove Lane
516 Laurel Bay Blvd	1432 Dove Lane
531 Laurel Bay Blvd	1438 Dove Lane
532 Laurel Bay Blvd	1453 Cardinal Lane
645 Dablia Drive	1455 Cardinal Lane
763 Althea Street	

Attachment to: Petrus to Drawdy Subject: Draft Final Initial Groundwater Investigation Report-May and June 2015 Specific Property Recommendations Dated February 22, 2016, Page 2