SUMMARY REPORT
79 BANYAN DRIVE (FORMERLY 121 BANYAN DRIVE)
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 SUMMARY REPORT
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Prepared by:



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**Contract Number: N62470-14-D-9016** 

CTO WE52

**JUNE 2021** 



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## **List of Acronyms**

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



#### 1.0 INTRODUCTION

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

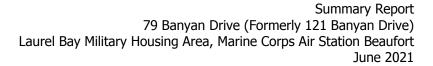
As of January 2014, the LBMH addresses were re-numbered to comply with the E-911 emergency response addressing system; however, in order to remain consistent with historical sampling and reporting for LBMH area, the residences will continue to be referenced with their original address numbers in sample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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 79 Banyan Drive (Formerly 121 Banyan Drive). 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, May 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 79 Banyan Drive (Formerly 121 Banyan Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 121 Banyan Drive* (MCAS Beaufort, 2015). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

### 2.1 UST Removal and Soil Sampling

On June 30, 2015, a single 280 gallon heating oil UST was removed from the concrete porch area at 79 Banyan Drive (Formerly 121 Banyan Drive). The former UST location is indicated on Figures 1 and 2 of the UST Assessment Report (Appendix B). The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). There was



no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 6'0" 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. The base of the excavation was resampled on July 9, 2015, due to the original sample being out of tolerance when received by the lab. 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 79 Banyan Drive (Formerly 121 Banyan Drive) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated August 1, 2016, SCDHEC requested an IGWA for 84 Banyan Drive (Formerly 120 Banyan Drive) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

# 2.3 Groundwater Sampling

On March 3, 2017, a temporary monitoring well was installed at 79 Banyan Drive (Formerly 121 Banyan Drive), 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 1 and 2 of the UST Assessment Report (Appendix B). Further details



are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

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

# 2.4 Groundwater Analytical Results

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

The groundwater results collected from 79 Banyan Drive (Formerly 121 Banyan Drive) 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.

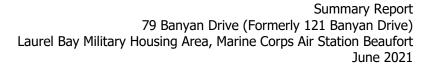
#### 3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 79 Banyan Drive (Formerly 121 Banyan Drive). This NFA determination was obtained in a letter dated July 27, 2017. SCDHEC's NFA letter is provided in Appendix D.

### 4.0 REFERENCES

Marine Corps Air Station Beaufort, 2015. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 121 Banyan Drive, Laurel Bay Military Housing Area, November 2015.

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





- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations*, March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

# **Tables**



# Table 1 Laboratory Analytical Results - Soil 79 Banyan Drive (Formerly 121 Banyan Drive) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort

**Beaufort, South Carolina** 

Constituent	SCDHEC RBSLs (1)	Results Sample Collected 07/9/2015
<b>Volatile Organic Compounds Analyz</b>	ed by EPA Method 8260B (mg/kg)	
Benzene	0.003	0.000810
Ethylbenzene	1.15	0.0125
Naphthalene	0.036	0.0985
Toluene	0.627	0.000683
Xylenes, Total	13.01	0.0326
Semivolatile Organic Compounds A	nalyzed by EPA Method 8270D (mg/kg)	
Benzo(a)anthracene	0.66	0.293
Benzo(b)fluoranthene	0.66	0.271
Benzo(k)fluoranthene	0.66	0.125
Chrysene	0.66	0.340
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 3.0 and 3.1 (SCDHEC, May 2015 and SCDHEC, February 2016) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

# Table 2 Laboratory Analytical Results - Groundwater 79 Banyan Drive (Formerly 121 Banyan Drive) Laurel Bay Military Housing Area

Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Site-Specific Groundwater VISLs (μg/L) <sup>(2)</sup>	Results Sample Collected 03/03/17
<b>Volatile Organic Compounds Anal</b>	yzed by EPA Method 8260B	(μg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	ND
Naphthalene	25	29.33	1.2
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
<b>Semivolatile Organic Compounds</b>	<b>Analyzed by EPA Method 82</b>	70D (μg/L)	
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

#### Notes:

- (1) South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.1 (SCDHEC, February 2016).
- (2) Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1x10<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

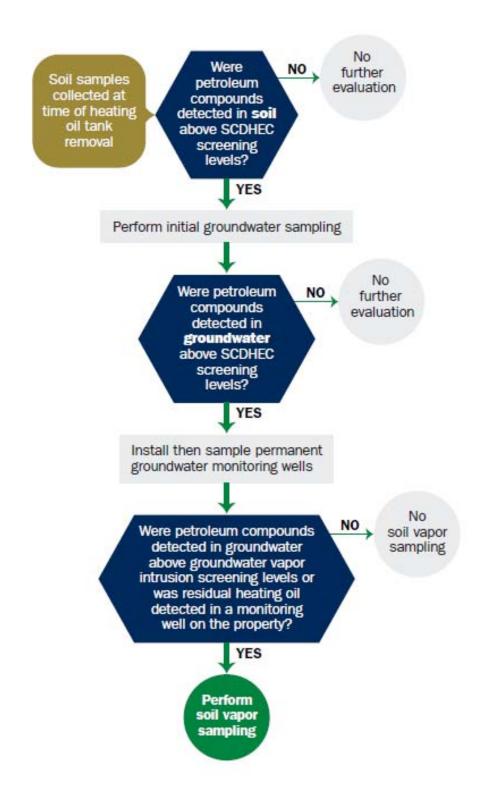
SCDHEC - South Carolina Department Of Health and Environmental Control

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



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

Date Received		
	State Use Only	

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

I. OWNERSHIP OF UST (S)

	ommanding Officer Attn: NI n, Individual, Public Agency, Other)	(01015 11100)
P.O. Box 55001 Mailing Address		
Beaufort,	South Carolina	29904-5001
City	State	Zip Code
843	228-7317	Craig Ehde
	Telephone Number	Contact Person

# II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #								
Laurel Bay	Military	Housing Area	, Marine	Corps	Air	Station,	Beaufort,	SC
Facility Name or	Company Sit	e Identifier						
121 Banyan	Drive, L	aurel Bay Mil	itary Ho	using A	Area			
Street Address or	State Road (a	as applicable)						
Beaufort,		Beaufor	t					
City		County						

Attachment 2

# III. INSURANCE INFORMATION

	Insurance	Statement	
The petroleum release repo qualify to receive state monies to p allowed in the State Clean-up fund insurance policy is required. This	ay for appropriate site, written confirmation	e rehabilitation activities. B	efore participation is
Is there now, or has there e UST release? YES	NO(check one)		
My r The	policy provider is:policy deductible is:policy limit is:		owing information;
If you have this type of inst	urance, please include	a copy of the policy with the	his report.
I DO/DO NOT wish to		PERB Program. (Circle one To be signed by the US)	
I certify that I have personally e attached documents; and that h information, I believe that the su	examined and am fai	miliar with the information	on submitted in this and all
Name (Type or print.)		-	
Signature	3.5-7.0-1	- 1	
To be completed by Notar	y Public:		
Sworn before me this	day of	, 20	
(Name)		=	
Notary Public for the state of Please affix State seal if you are co	ommissioned outside S	South Carolina	

VI. UST INFORMATION	121Banyan
Product(ex. Gas, Kerosene)	Heating oil
Capacity(ex. 1k, 2k)	280 gal
Age	Late 1950s
Construction Material(ex. Steel, FRP)	Steel
Month/Year of Last Use	Mid 80s
Depth (ft.) To Base of Tank	61
Spill Prevention Equipment Y/N	No
Overfill Prevention Equipment Y/N	No
Method of Closure Removed/Filled	Removed
Date Tanks Removed/Filled	6/30/2015
Visible Corrosion or Pitting Y/N	Yes
Visible Holes Y/N	Yes
Method of disposal for any USTs removed from UST 121Banvan was removed from	the ground (attach disposal manifests) the ground and disposed at a Sub
"D" landfill. See Attachment "	7.5
Method of disposal for any liquid petroleum, sludisposal manifests)	A".  adges, or wastewaters removed from the USTs (a sly filled with sand by others.

# VII. PIPING INFORMATION

Construction Material(ex. Steel, FRP)  Distance from UST to Dispenser		121Banyan
Distance from UST to Dispenser		Steel
Number of Dispensers	Construction Material(ex. Steel, FRP)	& Copper
Type of System Pressure or Suction	Distance from UST to Dispenser	N/A
Was Piping Removed from the Ground? Y/N  Visible Corrosion or Pitting Y/N	Number of Dispensers	N/A
Was Piping Removed from the Ground? Y/N  Visible Corrosion or Pitting Y/N	Гуре of System Pressure or Suction	Suction
Visible Holes Y/N	Was Piping Removed from the Ground? Y/N	No
Late 1950s  Late 1950s  If any corrosion, pitting, or holes were observed, describe the location and extent for each Steel vent piping was corroded and pitted.  Copper supply and return piping was sound.  VIII. BRIEF SITE DESCRIPTION AND HISTORY  The USTs at the residences are constructed of single wall st	Visible Corrosion or Pitting Y/N	Yes
fany corrosion, pitting, or holes were observed, describe the location and extent for each Steel vent piping was corroded and pitted.  Copper supply and return piping was sound.  VIII. BRIEF SITE DESCRIPTION AND HISTORY  The USTs at the residences are constructed of single wall st	Visible Holes Y/N	No
fany corrosion, pitting, or holes were observed, describe the location and extent for each Steel vent piping was corroded and pitted.  Copper supply and return piping was sound.  VIII. BRIEF SITE DESCRIPTION AND HISTORY  The USTs at the residences are constructed of single wall st	Age	Late 1950s
Steel vent piping was corroded and pitted.  Copper supply and return piping was sound.  VIII. BRIEF SITE DESCRIPTION AND HISTORY  The USTs at the residences are constructed of single wall st		describe the location and extent for each pir
VIII. BRIEF SITE DESCRIPTION AND HISTORY The USTs at the residences are constructed of single wall st		
The USTs at the residences are constructed of single wall st		
The USTs at the residences are constructed of single wall st	Copper supply and return piping	was sound.
The USTs at the residences are constructed of single wall st	Copper supply and return piping	was sound.
	Copper supply and return piping	was sound.
and formerly contained fuel oil for heating. These USTs were	VIII. BRIEF SITE DESCR	RIPTION AND HISTORY
installed in the late 1950s and last used in the mid 1980s.	VIII. BRIEF SITE DESCR The USTs at the residences are cand formerly contained fuel oil	CIPTION AND HISTORY  onstructed of single wall stee  for heating. These USTs were
	VIII. BRIEF SITE DESCR The USTs at the residences are c and formerly contained fuel oil	CIPTION AND HISTORY  onstructed of single wall stee  for heating. These USTs were
	VIII. BRIEF SITE DESCR The USTs at the residences are cand formerly contained fuel oil	CIPTION AND HISTORY  onstructed of single wall stee  for heating. These USTs were
	VIII. BRIEF SITE DESCR The USTs at the residences are cand formerly contained fuel oil	CIPTION AND HISTORY  onstructed of single wall stee  for heating. These USTs were
	VIII. BRIEF SITE DESCR The USTs at the residences are cand formerly contained fuel oil	CIPTION AND HISTORY  onstructed of single wall stee  for heating. These USTs were

# IX. SITE CONDITIONS

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the U excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map.	ST	Х	
<ul> <li>B. Were any petroleum odors detected in the excavation, soil boring 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 trenche  If yes, how far below land surface (indicate location and depth)?	es?	Х	
D. Did contaminated soils remain stockpiled on site after closure?  If yes, indicate the stockpile location on the site map.  Name of DHEC representative authorizing soil removal:		х	
E. Was a petroleum sheen or free product detected on any excavatio or boring waters?  If yes, indicate location and thickness.	n	Х	1-

# X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

В.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
121 Banyan	Excav at fill end		Sandy	6'	7/9/15 1200 hrs	P. Shaw	
		esampled be	100000000000000000000000000000000000000	riginal	sample was	out of	
toleran	ce when	received by	the lab.				
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

<sup>\* =</sup> 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.

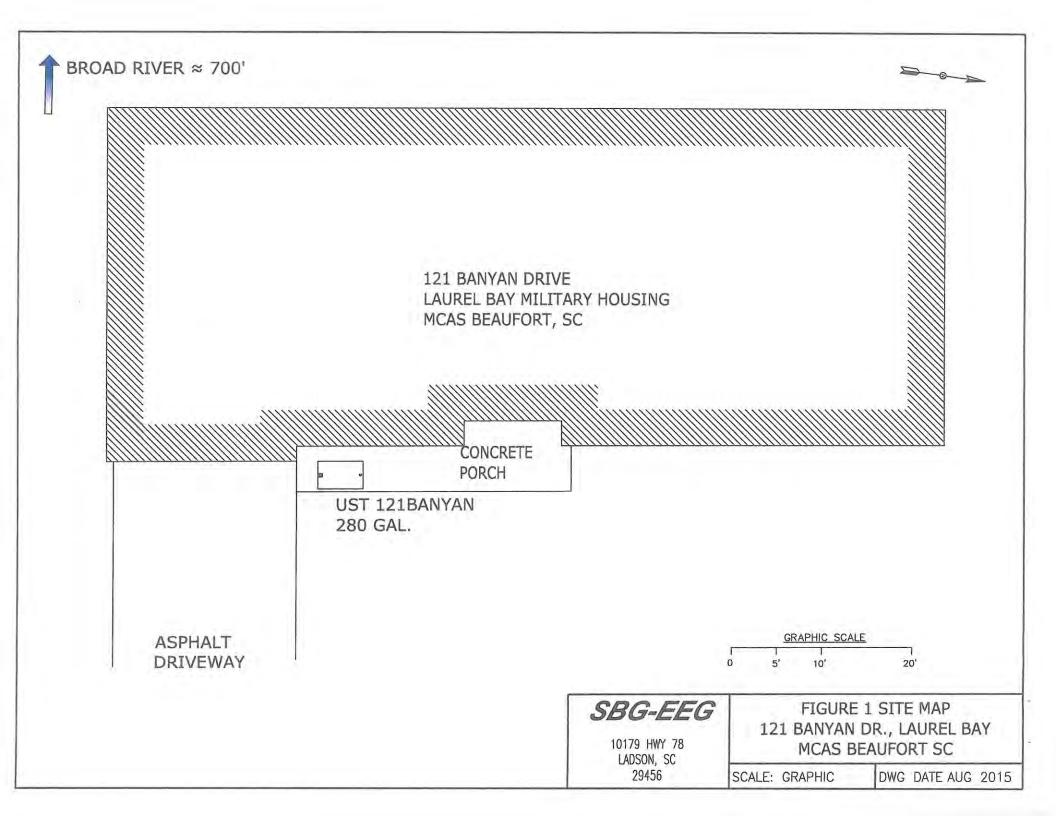
# XII. RECEPTORS

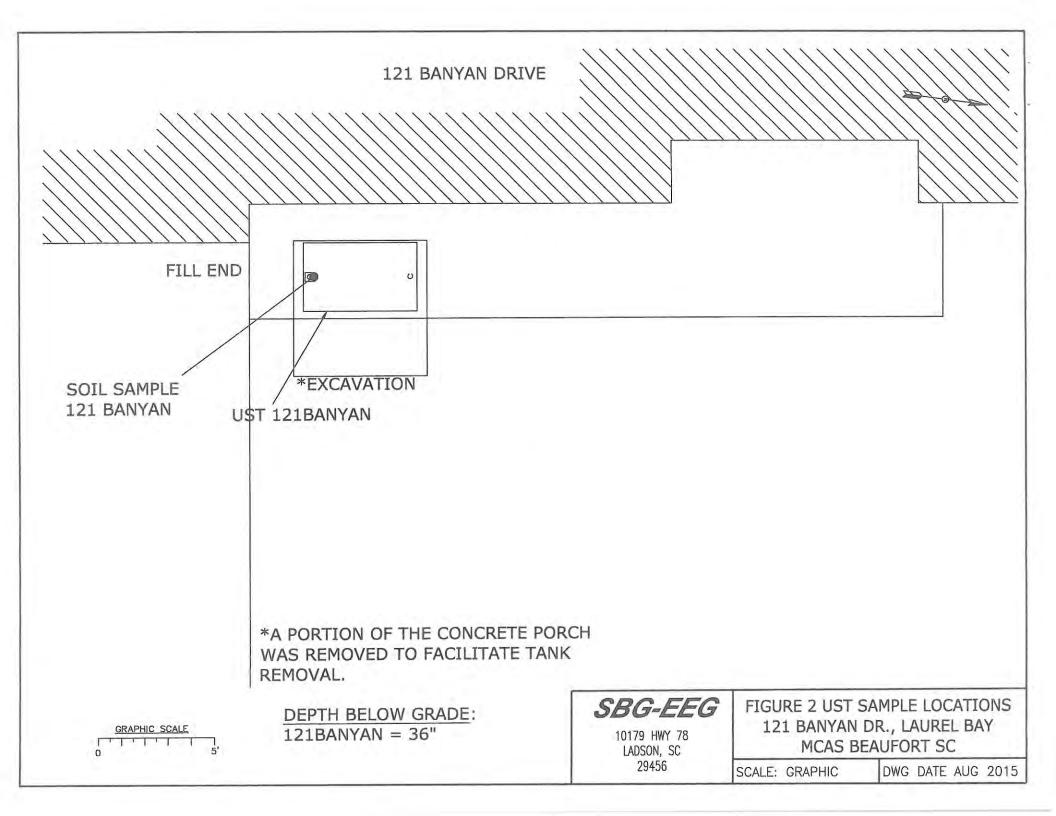
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?	*X	
	*Broad River		
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		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, elec	ctric	ty,
	If yes, indicate the type of utility, distance, and direction on the site map.		
E.	Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?		Х
	If yes, indicate the area of contaminated soil on the site map.		

# XIII. SITE MAP

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

(Attach Site Map Here)







Picture 1: Location of UST 121Banyan.



Picture 2: Excavation in progress.



Picture 3: Tank pit.



Picture 3: Site after completion of work.

# 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	121Banyan
Benzene	0.000810 mg/kg
Toluene	0.000683 mg/kg
Ethylbenzene	0.0125 mg/kg
Xylenes	0.0326 mg/kg
Naphthalene	0.0985 mg/kg
Benzo (a) anthracene	0.293 mg/kg
Benzo (b) fluoranthene	0.271 mg/kg
Benzo (k) fluoranthene	0.125 mg/kg
Chrysene	0.340 mg/kg
Dibenz (a, h) anthracene	ND
TPH (EPA 3550)	
CoC	
Benzene	
Toluene	
Ethylbenzene	
Xylenes	
Naphthalene	
Benzo (a) anthracene	
Benzo (b) fluoranthene	
Benzo (k) fluoranthene	
Chrysene	
Dibenz (a, h) anthracene	
TPH (EPA 3550)	

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

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

# XV. ANALYTICAL RESULTS

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

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



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: 490-82596-1

Client Project/Site: Laurel Bay Housing Project

For

Small Business Group Inc. 10179 Highway 78 Ladson, South Carolina 29456

Attn: Tom McElwee

Authorized for release by: 7/27/2015 5:09:42 PM

Kuntle Stage

Ken Hayes, Project Manager II (615)301-5035

ken.hayes@testamericainc.com

.....LINKS .....

Review your project results through

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

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# Sample Summary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

3

Lab Sample ID	Client Sample ID	Matrix	Collected Received
490-82596-1	1139 Iris	Solid	07/07/15 14:00 07/11/15 09:00
490-82596-2	724 Bluebell	Solid	07/09/15 10:15 07/11/15 09:00
490-82596-3	611 Dahlia	Solid	07/09/15 10:45 07/11/15 09:00
490-82596-4	114 Banyan	Solid	07/09/15 11:30 07/11/15 09:00
490-82596-5	121 Banyan	Solid	07/09/15 12:00 07/11/15 09:00

# Case Narrative

Client: Small Business Group Inc.
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

Job ID: 490-82596-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-82596-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/11/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9° C.

#### GC/MS VOA

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 490-266566.

Method(s) 8260B: The method blank for analytical batch 490-266566 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: Surrogate recovery for the following samples was outside control limits: 724 Bluebell (490-82596-2) and 611 Dahlia (490-82596-3). 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/sample duplicate (MS/MSD/DUP) associated with analytical batch 490-267093.

Method(s) 8260B: Surrogate recovery for the following sample was outside control limits: 724 Bluebell (490-82596-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-266092 and analytical batch 490-266292.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

4

#### TestAmerica Job ID: 490-82596-1

# Definitions/Glossary Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

#### Qualifiers

#### GC/MS VOA

Qualifier Qualifier Description

B Compound was found in the blank and sample.

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

X Surrogate is outside control limits

#### GC/MS Semi VOA

Qualifier Qualifier Description

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

#### Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Eisted under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains no Free Liquid

DER Duplicate error ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision level concentration
MDA Minimum detectable activity
EDL Estimated Detection Limit

MDC Minimum detectable concentration

MDL Method Detection Limit
ML Minimum Level (Dioxin)

NC Not Calculated

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

Client Sample ID: 1139 Iris Date Collected: 07/07/15 14:00 Lab Sample ID: 490-82596-1

Matrix: Solid

Date Collected: 07/07/15 14:00 Date Received: 07/11/15 09:00

General Chemistry

Analyte
Percent Solids

Result Qualifier 82 RL 0.10 RL Unit

D Prepared

Analyzed 07/14/15 16:20

Dil Fac

Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

Client Sample ID: 1139 Iris

Date Collected: 07/07/15 14:00 Date Received: 07/11/15 09:00 TestAmerica Job ID: 490-82596-1

Lab Sample ID: 490-82596-1

Matrix: Solid Percent Solids: 81.7

Method: 8260B - Volatile O Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	qualifier	0.00200		mg/Kg	Ş	07/07/15 14:00	Secretary of Company and a second	1
Ethylbenzene	ND		0.00200	0.000671	mg/Kg	Q	07/07/15 14:00	07/21/15 21:04	1
Naphthalene	0.00213	JB	0.00501	0.00170	0 0	4	07/07/15 14:00	07/21/15 21:04	1
Toluene	ND		0.00200	0.000741	mg/Kg	4	07/07/15 14:00		1
Xylenes, Total	0.00183	J	0.00501	0.00123		٠	07/07/15 14:00	07/21/15 21:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130				07/07/15 14:00	07/21/15 21:04	1
4-Bromofluorobenzene (Surr)	112		70 - 130				07/07/15 14:00	07/21/15 21:04	1
Dibromofluoromethane (Surr)	99		70 - 130				07/07/15 14:00	07/21/15 21:04	1
Toluene-d8 (Surr)	100		70 - 130				07/07/15 14:00	07/21/15 21:04	1
Method: 8270D - Semivolat	ile Organic Co	mpounds	(GC/MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0668	0.00997	mg/Kg	42	07/18/15 14:52	07/20/15 16:16	1
Acenaphthylene	ND		0.0668	0.00898	mg/Kg	₽.	07/18/15 14:52	07/20/15 16:16	1
Anthracene	ND		0.0668	0.00898	mg/Kg	0	07/18/15 14:52	07/20/15 16:16	1
Benzo[a]anthracene	0.0900		0.0668	0.0150	mg/Kg	٠	07/18/15 14:52	07/20/15 16:16	1
Benzo[a]pyrene	ND		0.0668	0.0120	mg/Kg	4	07/18/15 14:52	07/20/15 16:16	1
Benzo[b]fluoranthene	0.0519	j	0.0668	0.0120	mg/Kg	~	07/18/15 14:52	07/20/15 16:16	1
Benzo[g,h,i]perylene	ND		0.0668	0.00898	mg/Kg	÷	07/18/15 14:52	07/20/15 16:16	1
Benzo[k]fluoranthene	0.0301	J	0.0668	0.0140	mg/Kg	4	07/18/15 14:52	07/20/15 16:16	1
1-Methylnaphthalene	ND		0.0668	0.0140	mg/Kg	5	07/18/15 14:52	07/20/15 16:16	1
Pyrene	0.142		0.0668	0.0120	mg/Kg	0	07/18/15 14:52	07/20/15 16:16	1
Phenanthrene	ND		0.0668	0.00898	mg/Kg	\$	07/18/15 14:52	07/20/15 16:16	1
Chrysene	0.0908		0.0668	0.00898	mg/Kg	<b>\$</b>	07/18/15 14:52	07/20/15 16:16	1
Dibenz(a,h)anthracene	ND		0.0668	0.00698	mg/Kg	0	07/18/15 14:52	07/20/15 16:16	1
Fluoranthene	0.183		0.0668	0.00898	mg/Kg	4	07/18/15 14:52	07/20/15 16:16	1
Fluorene	ND		0.0668	0.0120	mg/Kg	*	07/18/15 14:52	07/20/15 16:16	1
Indeno[1,2,3-cd]pyrene	ND		0.0668	0.00997	mg/Kg	-	07/18/15 14:52	07/20/15 16:16	1
Naphthalene	ND		0.0668	0.00898	mg/Kg	÷	07/18/15 14:52	07/20/15 16:16	1
2-Methylnaphthalene	ND		0.0668	0.0160	mg/Kg	÷	07/18/15 14:52	07/20/15 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		29 - 120				07/18/15 14:52	07/20/15 16:16	1
Terphenyl-d14 (Surr)	100		13 - 120				07/18/15 14:52	07/20/15 16:16	1
Nitrobenzene-d5 (Surr)	76		27 - 120				07/18/15 14:52	07/20/15 16:16	1

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 724 Bluebell

Date Collected: 07/09/15 10:15 Date Received: 07/11/15 09:00

Lab Sample ID: 490-82596-2

Matrix: Solid

**General Chemistry** 

Analyte Percent Solids Result Qualifier 87

RL 0.10

RL Unit 0.10 %

Prepared

Analyzed 07/14/15 16:20

Dil Fac

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

Client Sample ID: 724 Bluebell

Date Collected: 07/09/15 10:15 Date Received: 07/11/15 09:00 TestAmerica Job ID: 490-82596-1

Lab Sample ID: 490-82596-2

Matrix: Solid Percent Solids: 87.0

Method: 8260B - Volatile Organic Compounds (GC/MS)  Analyte Result Qualifier RL						
# [17] 12개 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17] 12 [17]						
A STATE OF THE STA	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene ND 0.00209 0.	.000701	mg/Kg	4	07/09/15 10:15	07/21/15 20:35	1
Ethylbenzene 0.00128 J 0.00209 0.	.000701	mg/Kg	\$	07/09/15 10:15	07/21/15 20:35	1
Naphthalene 0.00952 0.00520 0	0.00177	mg/Kg	4	07/09/15 10:15	07/22/15 18:28	1
Toluene 0.000890 J 0.00209 0.	.000774	mg/Kg	\$	07/09/15 10:15	07/21/15 20:35	1
Xylenes, Total 0.0192 0.00523 0	0.00129	mg/Kg	0	07/09/15 10:15	07/21/15 20:35	1
Surrogate %Recovery Qualifier Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr) 98 70 - 130				07/09/15 10:15	07/21/15 20:35	1
1,2-Dichloroethane-d4 (Surr) 92 70 - 130				07/09/15 10:15	07/22/15 18:28	1
4-Bromofluorobenzene (Surr) 162 X 70 - 130				07/09/15 10:15	07/21/15 20:35	1
4-Bromofluorobenzene (Surr) 147 X 70 - 130				07/09/15 10:15	07/22/15 18:28	1
Dibromofluoromethane (Surr) 106 70 - 130				07/09/15 10:15	07/21/15 20:35	1
Dibromofluoromethane (Surr) 103 70 - 130				07/09/15 10:15	07/22/15 18:28	1
Toluene-d8 (Surr) 103 70 - 130				07/09/15 10:15	07/21/15 20:35	1
Toluene-d8 (Surr) 103 70 - 130				07/09/15 10:15	07/22/15 18:28	1
Method: 8270D - Semivolatile Organic Compounds (GC/MS)						
Analyte Result Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	0.00990	mg/Kg	-2	07/18/15 14:52	07/20/15 16:43	1
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	0.00891	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
	0.00891	mg/Kg	0.	07/18/15 14:52	07/20/15 16:43	1
Benzo[a]anthracene ND 0.0663	0.0148	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
Benzo[a]pyrene ND 0.0663	0.0119	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
Benzo[b]fluoranthene ND 0.0663	0.0119	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
Benzo[g,h,i]perylene ND 0.0663	0.00891	mg/Kg	9	07/18/15 14:52	07/20/15 16:43	1
Benzo[k]fluoranthene ND 0.0663	0.0139	mg/Kg	0	07/18/15 14:52	07/20/15 16:43	1
1-Methylnaphthalene ND 0.0663	0.0139	mg/Kg	1	07/18/15 14:52	07/20/15 16:43	1
Pyrene ND 0.0663	0.0119	mg/Kg	-	07/18/15 14:52	07/20/15 16:43	1
Phenanthrene ND 0.0663	0.00891	mg/Kg	-4	07/18/15 14:52	07/20/15 16:43	1
Chrysene ND 0.0663	0.00891	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
Dibenz(a,h)anthracene ND 0.0663	0.00693	mg/Kg	0	07/18/15 14:52	07/20/15 16:43	1
Fluoranthene ND 0.0663	0.00891	mg/Kg	-\$	07/18/15 14:52	07/20/15 16:43	1
Fluorene ND 0.0663	0.0119	mg/Kg	4	07/18/15 14:52	07/20/15 16:43	1
	0.00990	mg/Kg	100	07/18/15 14:52	07/20/15 16:43	1
	0.00891	mg/Kg	0	07/18/15 14:52	07/20/15 16:43	1
2-Methylnaphthalene ND 0.0663	0.0158	mg/Kg	ф	07/18/15 14:52	07/20/15 16:43	1
Surrogate %Recovery Qualifier Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr) 71 29 - 120				07/18/15 14:52	07/20/15 16:43	1
Terphenyl-d14 (Surr) 93 13 - 120				07/18/15 14:52	07/20/15 16:43	1
Nitrobenzene-d5 (Surr) 69 27 - 120				07/18/15 14:52	07/20/15 16:43	1

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

Client Sample ID: 611 Dahlia

Lab Sample ID: 490-82596-3

Matrix: Solid

Date Collected: 07/09/15 10:45 Date Received: 07/11/15 09:00

General Chemistry

Analyte Percent Solids Result Qualifier

RL 0.10 RL Unit

D Prepared

Analyzed 07/14/15 16:20

Dil Fac



Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 611 Dahlia

Date Collected: 07/09/15 10:45 Date Received: 07/11/15 09:00 Lab Sample ID: 490-82596-3

Matrix: Solid Percent Solids: 90.4

	_
_	ALC: N
	- 1

Method: 8260B - Volatile 0	Organic Compo	unds (GC	/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00196	0.000655	mg/Kg	74.	07/09/15 10:45	07/21/15 20:04	1
Ethylbenzene	ND		0.00196	0.000655	mg/Kg	\$	07/09/15 10:45	07/21/15 20:04	1
Naphthalene	ND		0.00489	0.00166	mg/Kg	4	07/09/15 10:45	07/21/15 20:04	1
Toluene	ND		0.00196	0.000724	mg/Kg	0	07/09/15 10:45	07/21/15 20:04	1
Xylenes, Total	ND		0.00489	0.00120	mg/Kg	٥	07/09/15 10:45	07/21/15 20:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				07/09/15 10:45	07/21/15 20:04	1
4-Bromofluorobenzene (Surr)	134	X	70-130				07/09/15 10:45	07/21/15 20:04	1
Dibromofluoromethane (Surr)	106		70 - 130				07/09/15 10:45	07/21/15 20:04	1
Toluene-d8 (Surr)	105		70 - 130				07/09/15 10:45	07/21/15 20:04	1
Method: 8270D - Semivola	itile Organic Co	mpounds	(GC/MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0665	0.00992	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
Acenaphthylene	ND		0.0665	0.00893	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
Anthracene	ND		0.0665	0.00893	mg/Kg	\$	07/18/15 14:52	07/20/15 17:09	1
Benzo[a]anthracene	ND		0.0665	0.0149	mg/Kg	3	07/18/15 14:52	07/20/15 17:09	1
Benzo[a]pyrene	ND		0.0665	0.0119	mg/Kg	8	07/18/15 14:52	07/20/15 17:09	1
Benzo[b]fluoranthene	0.0581	J	0.0665	0.0119	mg/Kg	. P.	07/18/15 14:52	07/20/15 17:09	1
Benzo[g,h,i]perylene	0.0601	J	0.0665	0.00893	mg/Kg	-\$	07/18/15 14:52	07/20/15 17:09	1
Benzo[k]fluoranthene	0.0220	J	0.0665	0.0139	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
1-Methylnaphthalene	ND		0.0665	0.0139	mg/Kg	45	07/18/15 14:52	07/20/15 17:09	1
Pyrene	ND		0.0665	0.0119	mg/Kg	\$	07/18/15 14:52	07/20/15 17:09	1
Phenanthrene	ND		0.0665	0.00893	mg/Kg	0	07/18/15 14:52	07/20/15 17:09	1
Chrysene	ND		0.0665	0.00893	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
Dibenz(a,h)anthracene	ND		0.0665	0.00695	mg/Kg	-\$	07/18/15 14:52	07/20/15 17:09	1
Fluoranthene	ND		0.0665	0.00893	mg/Kg	0	07/18/15 14:52	07/20/15 17:09	1
Fluorene	ND		0.0665	0.0119	mg/Kg	<b>\$</b>	07/18/15 14:52	07/20/15 17:09	1
Indeno[1,2,3-cd]pyrene	0.0538	J	0.0665	0.00992	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
Naphthalene	ND		0.0665	0.00893	mg/Kg	4	07/18/15 14:52	07/20/15 17:09	1
2-Methylnaphthalene	ND		0.0665	0.0159	mg/Kg	٥	07/18/15 14:52	07/20/15 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	48		29 - 120				07/18/15 14:52	07/20/15 17:09	1
Terphenyl-d14 (Surr)	64		13-120				07/18/15 14:52	07/20/15 17:09	1
Nitrobenzene-d5 (Surr)	37		27 - 120				07/18/15 14:52	07/20/15 17:09	1

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

Client Sample ID: 114 Banyan

Lab Sample ID: 490-82596-4

Date Collected: 07/09/15 11:30 Date Received: 07/11/15 09:00

Matrix: Solid

**General Chemistry** 

Analyte Percent Solids Result Qualifier 81

RL 0.10

RL Unit 0.10 %

Prepared

Dil Fac Analyzed

07/14/15 16:20

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 114 Banyan

Date Collected: 07/09/15 11:30 Date Received: 07/11/15 09:00 Lab Sample ID: 490-82596-4

Matrix: Solid Percent Solids: 81.2

Section 1
100

Analyte Benzene	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			0.00404	0.00000	0.0	2	The state of the state of the state of	Section of the sectio	
			0.00181	0.000605		•	07/09/15 11:30		1
Ethylbenzene	0.00243		0.00181	0.000605	mg/Kg	0	07/09/15 11:30	07/21/15 19:35	1
Naphthalene	0.00743		0.00455	0.00155		÷	07/09/15 11:30		1
Toluene	0.00199		0.00181	0.000668		4		07/21/15 19:35	1
Xylenes, Total	0.00271	J	0.00451	0.00111	mg/Kg	· O	07/09/15 11:30	07/21/15 19:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 130				07/09/15 11:30	07/21/15 19:35	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 130				07/09/15 11:30	07/22/15 18:01	1
4-Bromofluorobenzene (Surr)	124		70 - 130				07/09/15 11:30	07/21/15 19:35	1
4-Bromofluorobenzene (Surr)	115		70 - 130				07/09/15 11:30	07/22/15 18:01	1
Dibromofluoromethane (Surr)	99		70 - 130				07/09/15 11:30	07/21/15 19:35	1
Dibromofluoromethane (Surr)	103		70 - 130				07/09/15 11:30	07/22/15 18:01	1
Toluene-d8 (Surr)	104		70 - 130				07/09/15 11:30	07/21/15 19:35	1
Toluene-d8 (Surr)	104		70 - 130				07/09/15 11:30	07/22/15 18:01	1
Method: 8270D - Semivolat	ile Organic Co	mpounds	(GC/MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0663	0.00990	mg/Kg	<b>\$</b>	07/18/15 14:52	07/20/15 17:36	1
Acenaphthylene	ND		0.0663	0.00891	mg/Kg	4	07/18/15 14:52	07/20/15 17:36	1
Anthracene	ND		0.0663	0.00891	mg/Kg	0	07/18/15 14:52	07/20/15 17:36	1
Benzo[a]anthracene	0.0605	J	0.0663	0.0148	mg/Kg	4	07/18/15 14:52	07/20/15 17:36	1
Benzo[a]pyrene	0.0562	J	0.0663	0.0119	mg/Kg		07/18/15 14:52	07/20/15 17:36	1
Benzo[b]fluoranthene	0.0990		0.0663	0.0119	mg/Kg	<b>\$</b>	07/18/15 14:52	07/20/15 17:36	1
Benzo[g,h,i]perylene	ND		0.0663	0.00891	mg/Kg	4	07/18/15 14:52	07/20/15 17:36	1
Benzo[k]fluoranthene	0.0308	J	0.0663	0.0139	mg/Kg	\$	07/18/15 14:52	07/20/15 17:36	1
1-Methylnaphthalene	ND		0.0663	0.0139	mg/Kg	4	07/18/15 14:52	07/20/15 17:36	1
Pyrene	0.0489	J	0.0663	0.0119	mg/Kg	0	07/18/15 14:52	07/20/15 17:36	- 1
Phenanthrene	ND		0.0663	0.00891	mg/Kg	0	07/18/15 14:52	07/20/15 17:36	1
Chrysene	0.0810		0.0663	0.00891	mg/Kg	0	07/18/15 14:52	07/20/15 17:36	1
Dibenz(a,h)anthracene	ND		0.0663	0.00693	mg/Kg	4)	07/18/15 14:52	07/20/15 17:36	1
Fluoranthene	0.0413	J	0.0663	0.00891	mg/Kg	0	07/18/15 14:52	07/20/15 17:36	1
Fluorene	ND		0.0663	0.0119		la E	07/18/15 14:52	07/20/15 17:36	1
Indeno[1,2,3-cd]pyrene	ND		0.0663	0.00990		ø		07/20/15 17:36	1
Naphthalene	ND		0.0663	0.00891		<b>O</b>		07/20/15 17:36	1
2-Methylnaphthalene	ND		0.0663		mg/Kg	٥		07/20/15 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	52		29 - 120				07/18/15 14:52	07/20/15 17:36	1
2-Fluorobiphenyl (Surr)	UZ								
2-Fluorobiphenyl (Surr) Terphenyl-d14 (Surr)	72		13 - 120				07/18/15 14:52	07/20/15 17:36	1

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 121 Banyan

Lab Sample ID: 490-82596-5

Date Collected: 07/09/15 12:00 Date Received: 07/11/15 09:00 Matrix: Solid

**General Chemistry** 

Analyte Percent Solids Result Qualifier 85 RL 0.10 RL Unit 0.10 % D Prepared

Analyzed 07/14/15 16:20

Dil Fac



Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

Client Sample ID: 121 Banyan

Date Collected: 07/09/15 12:00 Date Received: 07/11/15 09:00

TestAmerica Job ID: 490-82596-1

Lab Sample ID: 490-82596-5

Matrix: Solid Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0,000810	J	0.00175	0.000587	mg/Kg	ø	07/09/15 12:00	07/21/15 19:06	1
Ethylbenzene	0.0125		0.00175	0.000587	mg/Kg	0	07/09/15 12:00	07/21/15 19:06	1
Naphthalene	0.0985	В	0.00438	0.00149	mg/Kg	0	07/09/15 12:00	07/21/15 19:06	1
Toluene	0.000683	J	0.00175	0.000648	mg/Kg	0	07/09/15 12:00	07/21/15 19:06	1
Xylenes, Total	0.0326		0.00438	0.00108	mg/Kg	7	07/09/15 12:00	07/21/15 19:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 130				07/09/15 12:00	07/21/15 19:06	1
4-Bromofluorobenzene (Surr)	129		70 - 130				07/09/15 12:00	07/21/15 19:06	1
Dibromofluoromethane (Surr)	101		70 - 130				07/09/15 12:00	07/21/15 19:06	1
Toluene-d8 (Surr)	100		70 - 130				07/09/15 12:00	07/21/15 19:06	1
Method: 8270D - Semivola	tile Organic Co	mpounds	(GC/MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0656	0.00979	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Acenaphthylene	ND		0.0656	0.00881	mg/Kg	1	07/18/15 14:52	07/20/15 18:03	1
Anthracene	0.0293	J	0.0656	0.00881	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Benzo[a]anthracene	0.293		0.0656	0.0147	mg/Kg	Ö	07/18/15 14:52	07/20/15 18:03	1
Benzo[a]pyrene	0.163		0.0656	0.0118	mg/Kg	+,	07/18/15 14:52	07/20/15 18:03	1
Benzo[b]fluoranthene	0.271		0.0656	0.0118	mg/Kg	<b>\$</b>	07/18/15 14:52	07/20/15 18:03	1
Benzo[g,h,i]perylene	0.0740		0.0656	0.00881	mg/Kg	45	07/18/15 14:52	07/20/15 18:03	1
Benzo[k]fluoranthene	0.125		0.0656	0.0137	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
1-Methylnaphthalene	ND		0.0656	0.0137	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Pyrene	0.356		0.0656	0.0118	mg/Kg	142	07/18/15 14:52	07/20/15 18:03	1
Phenanthrene	0.0697		0.0656	0.00881	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Chrysene	0.340		0.0656	0.00881	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Dibenz(a,h)anthracene	ND		0.0656	0.00686	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
Fluoranthene	0.447		0.0656	0.00881	mg/Kg	0	07/18/15 14:52	07/20/15 18:03	1
Fluorene	ND		0.0656	0.0118	mg/Kg	->	07/18/15 14:52	07/20/15 18:03	1
Indeno[1,2,3-cd]pyrene	0.0682		0.0656	0.00979	mg/Kg	0	07/18/15 14:52	07/20/15 18:03	1
Naphthalene	ND		0.0656	0.00881	mg/Kg	4	07/18/15 14:52	07/20/15 18:03	1
2-Methylnaphthalene	ND		0.0656	0.0157	mg/Kg	٥	07/18/15 14:52	07/20/15 18:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	54		29 - 120				07/18/15 14:52	07/20/15 18:03	1
Terphenyl-d14 (Surr)	72		13 - 120				07/18/15 14:52	07/20/15 18:03	1
Nitrobenzene-d5 (Surr)	51		27 - 120				07/40/45 44.50	07/20/15 18:03	1

# QC Sample Results

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

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

MB MB

Lab Sample ID: MB 490-266566/8

Matrix: Solid

Analysis Batch: 266566

Client Sample ID: Method Blank

Prep Type: Total/NA

	111.00	10000							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			07/21/15 13:05	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			07/21/15 13:05	1
Naphthalene	0.003108	J	0.00500	0.00170	mg/Kg			07/21/15 13:05	1
Toluene	ND		0.00200	0.000740	mg/Kg			07/21/15 13:05	1
Xylenes, Total	ND		0.00500	0.00123	mg/Kg			07/21/15 13:05	1
	MB	MB							
	0/5						4.00		

	MB MB			
Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91	70 - 130	07/21/15 13:0	5 1
4-Bromofluorobenzene (Surr)	100	70 - 130	07/21/15 13:0	5 1
Dibromofluoromethane (Surr)	101	70 - 130	07/21/15 13:0	5 1
Toluene-d8 (Surr)	100	70 - 130	07/21/15 13:0	5 1

Lab Sample ID: LCS 490-266566/4

Matrix: Solid

Analysis Batch: 266566

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.05481		mg/Kg		110	75 - 127
Ethylbenzene	0.0500	0.05546		mg/Kg		111	80 - 134
Naphthalene	0.0500	0.05610		mg/Kg		112	69 - 150
Toluene	0.0500	0.05083		mg/Kg		102	80 - 132
Xylenes, Total	0.100	0.1098		mg/Kg		110	80 - 137

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 490-266566/5

Matrix: Solid

Analysis Batch: 266566

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.05625		mg/Kg		113	75 - 127	3	50
Ethylbenzene	0.0500	0.05809		mg/Kg		116	80 - 134	5	50
Naphthalene	0.0500	0.06293		mg/Kg		126	69 - 150	11	50
Toluene	0.0500	0.05245		mg/Kg		105	80 - 132	3	50
Xylenes, Total	0.100	0.1146		mg/Kg		115	80 - 137	4	50

Limits

	LCSD	LCSD	
rrogate	%Recovery	Qualifier	

1,2-Dichloroethane-d4 (Surr)	96	70 - 130
4-Bromofluorobenzene (Surr)	102	70 - 130
Dibromofluoromethane (Surr)	100	70 - 130
Toluene-d8 (Surr)	101	70 - 130

TestAmerica Nashville

# QC Sample Results

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

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

Lab Sample ID: MB 490-267093/7

Matrix: Solid

Analysis Batch: 267093

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

in the state of th	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	44	0.00200	0.000670	mg/Kg			07/22/15 17:06	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			07/22/15 17:06	1
Toluene	ND		0.00200	0.000740	mg/Kg			07/22/15 17:06	1
Xylenes, Total	ND		0.00500	0.00123	mg/Kg			07/22/15 17:06	1
		***							

MB MB %Recovery Qualifier Limits Prepared Analyzed Dil Fac Surrogate 70 - 130 07/22/15 17:06 86 1,2-Dichloroethane-d4 (Surr) 70 - 130 07/22/15 17:06 1 100 4-Bromofluorobenzene (Surr) 70 - 130 07/22/15 17:06 Dibromofluoromethane (Surr) 100 1 70 - 130 07/22/15 17:06 Toluene-d8 (Surr) 103

Lab Sample ID: LCS 490-267093/3

Matrix: Solid

Analysis Batch: 267093

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

Spike	LCS	LCS				%Rec.
Added	Result	Qualifier	Unit	D	%Rec	Limits
0.0500	0.06067		mg/Kg		121	75 - 127
0.0500	0.05906		mg/Kg		118	80 - 134
0.0500	0.06138		mg/Kg		123	69 - 150
0.0500	0.05664		mg/Kg		113	80 - 132
0.100	0.1203		mg/Kg		120	80 - 137
	Added 0.0500 0.0500 0.0500 0.0500	Added Result 0.0500 0.06067 0.0500 0.05906 0.0500 0.06138 0.0500 0.05664	Added Result Qualifier 0.0500 0.06067 0.0500 0.05906 0.0500 0.06138 0.0500 0.05664	Added         Result Qualifier         Unit           0.0500         0.06067         mg/Kg           0.0500         0.05906         mg/Kg           0.0500         0.06138         mg/Kg           0.0500         0.05664         mg/Kg	Added         Result Qualifier         Unit D mg/Kg           0.0500         0.06067         mg/Kg           0.0500         0.05906         mg/Kg           0.0500         0.06138         mg/Kg           0.0500         0.05664         mg/Kg	Added         Result Qualifier         Unit         D         %Rec           0.0500         0.06067         mg/Kg         121           0.0500         0.05906         mg/Kg         118           0.0500         0.06138         mg/Kg         123           0.0500         0.05664         mg/Kg         113

LCS LCS %Recovery Qualifier Limits Surrogate 70 - 130 1,2-Dichloroethane-d4 (Surr) 93 70 - 130 96 4-Bromofluorobenzene (Surr) 70 - 130 105 Dibromofluoromethane (Surr) 102 70 - 130 Toluene-d8 (Surr)

Lab Sample ID: LCSD 490-267093/4

Matrix: Solid

Analysis Batch: 267093

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

LCSD LCSD Spike %Rec. RPD Limits Result Qualifier D %Rec RPD Added Unit Limit Analyte 75 - 127 0.0500 0.05834 mg/Kg 117 50 Benzene 0.0500 0.05651 113 80 - 134 50 mg/Kg Ethylbenzene 105 69-150 0.0500 0.05235 mg/Kg 50 Naphthalene 16 Toluene 0.0500 0.05472 mg/Kg 109 80 - 132 3 50 0.100 80 - 137 50 Xylenes, Total 0.1149 mg/Kg 115 5

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	102		70 - 130

TestAmerica Nashville

# **QC Sample Results**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

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

Lab Sample ID: MB 490-266092/1-A

Matrix: Solid

Analysis Batch: 266292

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 266092

interjoid Batton Labela							rich parcii.	200002
	MB MB							
Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	0.0670	0.0100	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Acenaphthylene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Anthracene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Benzo[a]anthracene	ND	0.0670	0.0150	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Benzo[a]pyrene	ND	0.0670	0.0120	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Benzo[b]fluoranthene	ND	0.0670	0.0120	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Benzo[g,h,i]perylene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Benzo[k]fluoranthene	ND	0.0670	0.0140	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
1-Methylnaphthalene	ND	0.0670	0.0140	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Pyrene	ND	0.0670	0.0120	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Phenanthrene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Chrysene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Dibenz(a,h)anthracene	ND	0.0670	0.00700	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Fluoranthene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Fluorene	ND	0.0670	0.0120	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Indeno[1,2,3-cd]pyrene	ND	0.0670	0.0100	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
Naphthalene	ND	0.0670	0.00900	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
2-Methylnaphthalene	ND	0.0670	0.0160	mg/Kg		07/18/15 14:52	07/20/15 13:09	1
	MB MB	3						
Surrogate	%Recovery Qua	alifier Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70	29 - 120				07/18/15 14:52	07/20/15 13:09	1
Terphenyl-d14 (Surr)	85	13 - 120				07/18/15 14:52	07/20/15 13:09	1
Nitrobenzene-d5 (Surr)	69	27 - 120				07/18/15 14:52	07/20/15 13:09	1

Lab Sample ID: LCS 490-266092/2-A

Matrix: Solid

Analysis Batch: 266292

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 266092

Allalysis Datch. 200292	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result		Unit	D	%Rec	Limits	
Acenaphthylene	1.67	1,200		mg/Kg		72	38 - 120	
Anthracene	1.67	1.348		mg/Kg		81	46 - 124	
Benzo[a]anthracene	1.67	1.399		mg/Kg		84	45 - 120	
Benzo[a]pyrene	1.67	1.415		mg/Kg		85	45 - 120	
Benzo[b]fluoranthene	1.67	1.427		mg/Kg		86	42 - 120	
Benzo[g,h,i]perylene	1.67	1.433		mg/Kg		86	38 - 120	
Benzo[k]fluoranthene	1.67	1.488		mg/Kg		89	42 - 120	
1-Methylnaphthalene	1.67	1.337		mg/Kg		80	32 - 120	
Pyrene	1.67	1.332		mg/Kg		80	43 - 120	
Phenanthrene	1.67	1.326		mg/Kg		80	45 - 120	
Chrysene	1.67	1.394		mg/Kg		84	43 - 120	
Dibenz(a,h)anthracene	1.67	1.480		mg/Kg		89	32 - 128	
Fluoranthene	1.67	1.417		mg/Kg		85	46 - 120	
Fluorene	1.67	1.405		mg/Kg		84	42 - 120	
Indeno[1,2,3-cd]pyrene	1.67	1.423		mg/Kg		85	41 - 121	
Naphthalene	1.67	1.263		mg/Kg		76	32 - 120	
2-Methylnaphthalene	1.67	1.240		mg/Kg		74	28 - 120	

# 7

# QC Sample Results

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

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

Lab Sample ID: LCS 490-266092/2-A

Matrix: Solid

Analysis Batch: 266292

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 266092

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	73		29 - 120
Terphenyl-d14 (Surr)	88		13 - 120
Nitrobenzene-d5 (Surr)	79		27 - 120

Lab Sample ID: LCSD 490-266092/3-A

Matrix: Solid

Analysis Batch: 266292

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 266092

Spike LCSD LCSD %Rec. RPD Added Result Qualifier Unit %Rec Limits Limit Analyte RPD 1.67 1.210 mg/Kg 73 38 - 120 50 Acenaphthylene 1.67 1.467 mg/Kg 88 46 - 124 8 49 Anthracene 91 45 - 120 50 1.509 8 Benzo[a]anthracene 1.67 mg/Kg 91 45 - 120 Benzo[a]pyrene 1.67 1.510 mg/Kg 6 50 1.67 1.571 94 42 - 120 10 50 Benzo[b]fluoranthene mg/Kg 1.526 92 38 - 120 6 50 Benzo[g,h,i]perylene 1.67 mg/Kg 42 - 120 94 5 Benzo[k]fluoranthene 1.67 1.565 mg/Kg 45 80 32 - 120 1-Methylnaphthalene 1.67 1.335 mg/Kg 0 50 85 43 - 120 Pyrene 1.67 1.416 mg/Kg 6 50 1.67 1.426 86 45 - 120 7 Phenanthrene mg/Kg 50 89 43 - 120 7 Chrysene 1.67 1.488 mg/Kg 49 32 - 128 Dibenz(a,h)anthracene 1.67 1.582 mg/Kg 95 7 50 46-120 Fluoranthene 1.67 1.556 mg/Kg 93 9 50 87 42 - 120 Fluorene 1.67 1.450 mg/Kg 3 50 41-121 Indeno[1,2,3-cd]pyrene 1.67 1.514 mg/Kg 91 6 50 Naphthalene 1.67 1.241 mg/Kg 74 32 - 120 2 50 2-Methylnaphthalene 1.67 1.253 mg/Kg 28 - 120 50

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	71		29 - 120
Terphenyl-d14 (Surr)	92		13-120
Nitrobenzene-d5 (Surr)	75		27 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 490-82587-E-1 DU

Matrix: Solid

Analysis Batch: 264718

Analyte Sample Sample
Analyte Result Qualifier
Percent Solids 81

Client Sample ID: Duplicate
Prep Type: Total/NA

Prep Type: Total/NA

RPD RPD Limit 2 20

DU DU

80

Result Qualifier Unit

%

# **QC Association Summary**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

#### GC/MS VOA

Pro	n R	ato	h.	265028	2
rie	PP	all	11.	200020	•

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82596-1	1139 Iris	Total/NA	Solid	5035	0.000
490-82596-2	724 Bluebell	Total/NA	Solid	5035	
490-82596-2	724 Bluebell	Total/NA	Solid	5035	
490-82596-3	611 Dahlia	Total/NA	Solid	5035	
490-82596-4	114 Banyan	Total/NA	Solid	5035	
490-82596-4	114 Banyan	Total/NA	Solid	5035	
490-82596-5	121 Banyan	Total/NA	Solid	5035	

#### Analysis Batch: 266566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82596-1	1139 Iris	Total/NA	Solid	8260B	265028
490-82596-2	724 Bluebell	Total/NA	Solid	8260B	265028
490-82596-3	611 Dahlia	Total/NA	Solid	8260B	265028
490-82596-4	114 Banyan	Total/NA	Solid	8260B	265028
490-82596-5	121 Banyan	Total/NA	Solid	8260B	265028
LCS 490-266566/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-266566/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-266566/8	Method Blank	Total/NA	Solid	8260B	

#### Analysis Batch: 267093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82596-2	724 Bluebell	Total/NA	Solid	8260B	265028
490-82596-4	114 Banyan	Total/NA	Solid	8260B	265028
LCS 490-267093/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-267093/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-267093/7	Method Blank	Total/NA	Solid	8260B	

#### GC/MS Semi VOA

#### Prep Batch: 266092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82596-1	1139 Iris	Total/NA	Solid	3550C	Day Chart
490-82596-2	724 Bluebell	Total/NA	Solid	3550C	
490-82596-3	611 Dahlia	Total/NA	Solid	3550C	
490-82596-4	114 Banyan	Total/NA	Solid	3550C	
490-82596-5	121 Banyan	Total/NA	Solid	3550C	
LCS 490-266092/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-266092/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
MB 490-266092/1-A	Method Blank	Total/NA	Solid	3550C	

### Analysis Batch: 266292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82596-1	1139 Iris	Total/NA	Solid	8270D	266092
490-82596-2	724 Bluebell	Total/NA	Solid	8270D	266092
490-82596-3	611 Dahlia	Total/NA	Solid	8270D	266092
490-82596-4	114 Banyan	Total/NA	Solid	8270D	266092
490-82596-5	121 Banyan	Total/NA	Solid	8270D	266092
LCS 490-266092/2-A	Lab Control Sample	Total/NA	Solid	8270D	266092
LCSD 490-266092/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	266092
MB 490-266092/1-A	Method Blank	Total/NA	Solid	8270D	266092

TestAmerica Nashville

# 8

# **QC** Association Summary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

# General Chemistry

#### Analysis Batch: 264718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-82587-E-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-82596-1	1139 Iris	Total/NA	Solid	Moisture	
490-82596-2	724 Bluebell	Total/NA	Solid	Moisture	
490-82596-3	611 Dahlia	Total/NA	Solid	Moisture	
490-82596-4	114 Banyan	Total/NA	Solid	Moisture	
490-82596-5	121 Banyan	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 1139 Iris

Date Collected: 07/07/15 14:00 Date Received: 07/11/15 09:00 Lab Sample ID: 490-82596-1

Matrix: Solid

	Batch	Batch		DII	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		-1			264718	07/14/15 16:20	MAA	TAL NSH

Client Sample ID: 1139 Iris

Date Collected: 07/07/15 14:00 Date Received: 07/11/15 09:00 Lab Sample ID: 490-82596-1

Matrix: Solid Percent Solids: 81.7

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.111 g	5.0 mL	265028	07/07/15 14:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.111 g	5.0 mL	266566	07/21/15 21:04	JPV	TAL NSH
Total/NA	Prep	3550C			36.83 g	1 mL	266092	07/18/15 14:52	LDC	TAL NSH
Total/NA	Analysis	8270D		1	36.83 g	1 mL	266292	07/20/15 16:16	SNR	TAL NSH

Client Sample ID: 724 Bluebell

Date Collected: 07/09/15 10:15

Date Received: 07/11/15 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			264718	07/14/15 16:20	MAA	TAL NSH

Client Sample ID: 724 Bluebell

Date Collected: 07/09/15 10:15

Date Received: 07/11/15 09:00

Lab	Sample	ID:	490-82596-2

Lab Sample ID: 490-82596-3

Lab Sample ID: 490-82596-2

Matrix: Solid Percent Solids: 87.0

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.494 g	5.0 mL	265028	07/09/15 10:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.494 g	5.0 mL	266566	07/21/15 20:35	JPV	TAL NSH
Total/NA	Prep	5035			5.53 g	5.0 mL	265028	07/09/15 10:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.53 g	5.0 mL	267093	07/22/15 18:28	NC	TAL NSH
Total/NA	Prep	3550C			34.84 g	1 mL	266092	07/18/15 14:52	LDC	TAL NSH
Total/NA	Analysis	8270D		1	34.84 g	1 mL	266292	07/20/15 16:43	SNR	TAL NSH

Client Sample ID: 611 Dahlia

Date Collected: 07/09/15 10:45

Date Received: 07/11/15 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			264718	07/14/15 16:20	MAA	TAL NSH

Matrix: Solid

#### Lab Chronicle

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

Client Sample ID: 611 Dahlia

Date Collected: 07/09/15 10:45 Date Received: 07/11/15 09:00

Lab Sample ID: 490-82596-3

Matrix: Solid

Percent Solids: 90.4

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.654 g	5.0 mL	265028	07/09/15 10:45	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.654 g	5.0 mL	266566	07/21/15 20:04	JPV	TAL NSH
Total/NA	Prep	3550C			33.43 g	1 mL	266092	07/18/15 14:52	LDC	TAL NSH
Total/NA	Analysis	8270D		1	33.43 g	1 mL	266292	07/20/15 17:09	SNR	TAL NSH

Lab Sample ID: 490-82596-4

Matrix: Solid

Date Collected: 07/09/15 11:30 Date Received: 07/11/15 09:00

Client Sample ID: 114 Banyan

Client Sample ID: 114 Banyan

Date Collected: 07/09/15 11:30

Date Received: 07/11/15 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			264718	07/14/15 16:20	MAA	TAL NSH

Lab Sample ID: 490-82596-4

Lab Sample ID: 490-82596-5

Matrix: Solid

Matrix: Solid

Percent Solids: 81.2

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.821 g	5.0 mL	265028	07/09/15 11:30	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.821 g	5.0 mL	266566	07/21/15 19:35	JPV	TAL NSH
Total/NA	Prep	5035			6.768 g	5.0 mL	265028	07/09/15 11:30	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.768 g	5.0 mL	267093	07/22/15 18:01	NC	TAL NSH
Total/NA	Prep	3550C			37.33 g	1 mL	266092	07/18/15 14:52	LDC	TAL NSH
Total/NA	Analysis	8270D		1	37.33 g	1 mL	266292	07/20/15 17:36	SNR	TAL NSH

Client Sample ID: 121 Banyan

Date Collected: 07/09/15 12:00

Date Received: 07/11/15 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			264718	07/14/15 16:20	MAA	TAL NSH

Date Collected: 07/09/15 12:00

Date Received: 07/11/15 09:00

Lab Sample ID: 490-82596-5 Client Sample ID: 121 Banyan Matrix: Solid Percent Solids: 85.1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.712 g	5.0 mL	265028	07/09/15 12:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.712 g	5.0 mL	266566	07/21/15 19:06	JPV	TAL NSH
Total/NA	Prep	3550C			36.01 g	1 mL	266092	07/18/15 14:52	LDC	TAL NSH
Total/NA	Analysis	8270D		1	36.01 g	1 mL	266292	07/20/15 18:03	SNR	TAL NSH

Laboratory References:

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

TestAmerica Nashville

# **Method Summary**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-82596-1

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

#### Protocol References:

EPA = US Environmental Protection Agency

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

#### Laboratory References:

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

# **Certification Summary**

Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-82596-1

Laboratory: TestAmerica Nashville

Unless otherwise noted, all analytes for this laboratory were occurred under each certification below

Authority North Carolina (WW/SW) Program State Program EPA Region

Certification ID 387

Expiration Date 12-31-15

72.42

The following analytes are included in this report, but certification is not offered by the governing authority;

Analysis Method Moisture Prep Method

Matrix Solid Analyte Percent Solids

South Carolina

State Program

84009 (001)

02-28-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method 8270D Prep Method 3550C Matrix Solid Analyte

1-Methylnaphthalene

Moisture

Solid

Percent Solids



#### COOLER RECEIPT FORM



CI DII/OI O 7/44/0045 @ 000	82596 Chain of Custody
1. Tracking # 3579 (last 4 digits, FedEx)	VUUUUZ
Courier: Fed-ex IR Gun ID 17960358	
2. Temperature of rep. sample or temp blank when opened: 2 19 Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank froze	en? YES NO. NA
4. Were custody seals on outside of cooler?	YES NO NA
If yes, how many and where:	
5. Were the seals intact, signed, and dated correctly?	E.NONA
6. Were custody papers inside cooler?	(YE)NONA
I certify that I opened the cooler and answered questions 1-6 (initial)	
7. Were custody seals on containers: YES 500 and Intact	YESNO., ADA
Were these signed and dated correctly?	YESNO(NA)
8. Packing mat'l used? Pubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pa	aper Other None
9. Cooling process: time> Ice-pack Ice (direct contact) Dry	
10. Did all containers arrive in good condition (unbroken)?	ŒSNONA
11. Were all container labels complete (#, date, signed, pres., etc)?	VES NONA
12. Did all container labels and tags agree with custody papers?	ESNONA
13a. Were VOA vials received?	ESNONA
b. Was there any observable headspace present in any VOA vial?	YES. NO.NA
14. Was there a Trip Blank in this cooler? YESNO. (NA) If multiple coolers, sequ	
I certify that I unloaded the cooler and answered questions 7-14 (intial)	A T
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH lev	el? YESNO(NA)
b. Did the bottle labels indicate that the correct preservatives were used	(ES).NONA
16. Was residual chlorine present?	YESNO(NA)
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intia	
17. Were custody papers properly filled out (ink, signed, etc)?	ÆSNONA
18. Did you sign the custody papers in the appropriate place?	S.NONA
19. Were correct containers used for the analysis requested?	ESNONA
20. Was sufficient amount of sample sent in each container?	ES.NONA
	ATNA
I certify that I entered this project into LIMS and answered questions 17-20 (Intial)	AT:
I certify that I attached a label with the unique LIMS number to each container (intial)	

TestAmer		Nashville 2960 Fost Nashville,	er Crei	ghton	1				hone: Free: Fax:	: 800		0980	0						п	o assist us in nethods, is this egulatory purp	s work bei										
Client Name/Account #:	SBG - EEG # 24	49													20						Comp			700.5		Yes		- No			
Address:	10179 Highway	78									_				_						Enfo	rceme	nt Ac	tion?		Yes		No			
City/State/Zip:	Ladson, SC 294	56															Sit	e Sta	ate: S		,								_		
Project Manager:	Tom McElwee e	mail: mcelw	/ee@ee	ginc.n	net		1	1	3						_			P	O#: _	1400	0										
Telephone Number:			1			Fa	x No.	8	13/	8	79	-	0	40			TA	Quote	e#:_												
Sampler Name: (Print)	(4)	AH S	164	w			(	9									Pro	oject	ID: L	aurel Bay Hou	ising Proje	ect									
Sampler Signature:		811	11						1		9	\					P	rojec	t#:_												
	t	X)	/			ſ		Pre	serva	tive	-	3		Ma	trix		T				Analyz	e For:									
Sample ID/Description  1139 Iris  724 Blunbull  611 DahliA  114 BANYAN  121 BANYAN	7/9/15 7/9/15 7/9/15	1400 1015 1045 1130 1200	CASS OF CA No. of Containers Shipped	X X X Grab	Composite	Field Filtered	HNO <sub>3</sub> (Red Label)	SPOOL HOPEBUOLEBOOK SINGER	- NaOHT (Orange Label) H-SO, Plastic (Yellow Label)	H <sub>2</sub> SO <sub>4</sub> Glass(Yellow Label)	el)	Groundwaler	Chundwater	Drinking Water		X X Soll	7	( )	XXXX XPAH-8270D					490				RUSH TAT (Pre-Schedule	Standard TAT	Fax Results	Rage 27 of 28 with report
	1											+	-	-									-1	5	1	1					TI.
											$\prod$						T														
										IE.																-	-	-		-	-
Special Instructions:  Relinquished by:  Relinquished by:	7/10/1 Date	15	Tin 100	00	1	ived by	Method	- X		nent:		0.0			ate	FED	T	ime			omments rature Upo ree of He	on Rec						Y		N	
resiliquistico by:	, Date		1 100	110	7	1	1000		1	/		P.C		7-1			09		0												

# Login Sample Receipt Checklist

Client: Small Business Group Inc.

Job Number: 490-82596-1

SDG Number:

Login Number: 82596 List Source: TestAmerica Nashville

List Number: 1

Creator: Ford, Easton

oronion con a marine		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	

# ATTACHMENT A



# **NON-HAZARDOUS MANIFEST**

	1. Generator's US E	PA ID No.	Manifest Doo	No.	2. Page 1	of			
NON-HAZARDOUS MANIFEST					1				
3. Generator's Mailing Address:	Ge	enerator's Site Address	(If different than	mailing):	A. Manife	st Number			
MCAS BEAUFORT		200000000000000000000000000000000000000	X 42- 71120-1	o,	W	MNA	01519	122	
LAUREL BAY HOUSING BEAUFORT, SC 29904							Generator's		
The state of the s	379-0411	T. LIGHT	. 15 .1						
5. Transporter 1 Company Name		6. US EP	A ID Number		C State T	ransporter's I	0		
						orter's Phone			
7. Transporter 2 Company Name		8. US EP.	A ID Number		3, 1,0,100	orter or more			
0.0000000000000000000000000000000000000					E. State T	ransporter's I	D	-	
					F. Transp	orter's Phone			
9. Designated Facility Name and Site	e Address	10. US E	PA ID Numbe	r					
HICKORY HILL LANDFILL					G. State F	acility ID			
2621 LOW COUNTRY DRIVE					H. State F	acility Phone	843-9	87-4643	3
RIDGELAND, SC 29936									
44 Deministra Statement Managel	_		12.0	Containers	13. Total	14. Unit			
11. Description of Waste Materials			No.	Туре	Quantity	Wt./Vol.	1. Mi	isc. Commen	is .
a. HEATING OIL TANK FILLED	WITH SAND		i	1200	1, 1	200	7 7	- 1	
	40055500		-1	, has	1	1,91	1	4 / /	
	file # 102655SC			-			-		
b.									
				-					
WM Profile #				+			1		
c.									
WM Profile #			-	+	-				
d.				-			1		-
WM Profile #							-		
J. Additional Descriptions for Mate			K. Disp	osal Location	1				-
A second of the second of the second									
			Cell				Level		
			Grid	-		7		-	
15. Special Handling Instructions and Purchase Order #		39 123		1020			J. 1616 3.	(mpl) it	SI SI
16. GENERATOR'S CERTIFICATE:		LIVIENGENCY	CONTACT / P	HONE NO.			-		
Thereby certify that the above-descri	ibad matarials ass wat	hannedaye weeten as d	ofined by 10	CER D=+ 36			in the second for the	6.11	
accurately described, classified and p							w, nave beer	riuny and	
Printed Name		Signature "On b		_			Month	Day	Year
		4			*			X	V -
17. Transporter 1 Acknowledgemen	t of Receipt of Materia								
Printed Name		Signature					Month	Day	Year
19 Transportor 2 Administrator	t of Bossipt of Marteut	ule .							
18. Transporter 2 Acknowledgement Printed Name	t of neceipt of Materia	Signature			_		1 34-41	-	
Printed Name		Signature					Month	Day	Year
19. Certificate of Final Treatment/Di I certify, on behalf of the above listed	treatment facility, th		owledge, the	above-desci	ribed waste v	was managed	in compliand	ce with all	
applicable laws, regulations, permits				- AV					
20. Facility Owner or Operator: Cert	tification of receipt of		ils covered by	this manife	st.		-1		
Printed Name		Signature					Month	Day	Year
White-TREATMENT STORAGE DISD		Plus GENERA	The Car	1				1	

# Appendix C Laboratory Analytical Report - Groundwater



# **Volatile Organic Compounds by GC/MS**

Client: AECOM - Resolution Consultants

Laboratory ID: SC04007-008

Description: BEALB121TW01WG20170303

Matrix: Aqueous

Date Sampled: 03/03/2017 1640 Date Received: 03/04/2017

Run Prep Method Analytical Method Dilution **Analysis Date Analyst Prep Date** Batch 1 5030B 8260B 03/07/2017 1659 PMV 36403

	CAS	Analytical							
Parameter	Number	Method	Result	Q	LOQ	LOD	DL	Units R	Run
Benzene	71-43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Naphthalene	91-20-3	8260B	1.2		1.0	0.80	0.40	ug/L	1
Toluene	108-88-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	0.80	U	1.0	0.80	0.40	ug/L	1

Run 1 Q % Recovery	Acceptance Limits
109	85-114
108	80-119
99	81-118
101	89-112
	Q % Recovery 109 108 99

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

Q = Surrogate failure L = LCS/LCSD failure

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

S = MS/MSD failure

Shealy Environmental Services, Inc.

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

# Semivolatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Laboratory ID: SC04007-008

Description: BEALB121TW01WG20170303

Date Sampled: 03/03/2017 1640

Matrix: Aqueous

Date Received: 03/04/2017

Analysis Date Analyst Run Prep Method Analytical Method Dilution **Prep Date** Batch 3520C 8270D 03/15/2017 1621 RBH 03/07/2017 1304 36374

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

Surrogate	Q	Run 1 % Recovery	Acceptance Limits			
Nitrobenzene-d5		66	44-120			
2-Fluorobiphenyl		62	44-119			
Terphenyl-d14		80	50-134			

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

Q = Surrogate failure L = LCS/LCSD failure

ND = Not detected at or above the MDL Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Appendix D Regulatory Correspondence





August 1, 2016

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

RE: **IGWA** 

> Laurel Bay Underground Tank Assessment Reports Dated July 2015, November 2015, March 2016

Dear Mr. Drawdy,

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

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

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

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

Sincerely,

Allt

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

Cc: Russell Berry, EQC Region 8 (via email)

> Shawn Dolan, Resolution Consultants (via email) Bryan Beck, NAVFAC MIDATLANTIC (via email)

Craig Ehde (via email)

Attachment to: Petrus to Drawdy, August 1, 2016

Subject: IGWA, Laurel Bay Underground Tank Assessment Reports

Dated July 2015, November 2015, March 2016

Draft Final Initial Groundwater Investigation Report for (7 addresses/8 tanks)

Permanent Monitoring Well Investigati	on recommendation	
465 Dogwood Tank 2	254 Beech Tank 2	
1352 Cardinal Tank 2*	641 Dahlia Tank 2	
121 Banyan	1346 Cardinal	
254 Beech Tank 1	1177 Bobwhite	11-11

<sup>\*</sup> IGWA well has already been installed along with 1352 Cardinal Tank 1 and a recommendation for permanent wells and groundwater monitoring was approved 2/22/16



July 27, 2017

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

RE:

Draft Final Initial Groundwater Investigation Report, February and March 2017

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received groundwater data from temporary monitoring well installations in the Draft Final Groundwater Investigation Report, Laurel Bay Military Housing Area for the fifty two (52) addresses shown in the attachment. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

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

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

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

Sincerely,

Lal Rt

Cc: Russell Berry, EQC Region 8

Bureau of Land and Waste Management

Shawn Dolan, Resolution Consultants

Bryan Beck, NAVFAC MIDLANT

Laurel Petrus, Environmental Engineer Associate

Attachment to:

Petrus to Drawdy

Dated July 27, 2017

Draft Final Initial Groundwater Investigation Report for (52 addresses)

#### Permanent Well Installation recommedation (3 Addresses):

- 254 Beech Street (110 ug/L)
- 268 Beech Street (28 ug/L) 0
- 774 Althea Street (35 ug/L)

#### No Further Action recommendation (49 addresses):

- 113 Birch Drive
- 121 Banyan Drive
- 122 Banyan Drive
- 159 Cypress Street 0
- 221 Cypress Street 0
- 274 Birch Drive 0
- 279 Birch Drive 0
- 283 Birch Drive 0
- 328 Ash Street
- 346 Ash Street
- 359 Aspen Street
- 370 Aspen Street 0
- 377 Aspen Street 0
- 409 Elderberry Drive 0
- 465 Dogwood Drive
- 0 480 Laurel Bay Boulevard
- 0 486 Laurel Bay Boulevard
- 0 515 Laurel Bay Boulevard O
- 542 Laurel Bay Boulevard
- 593 Aster Street
- 630 Dahlia Drive
- 641 Dahlia Drive
- 693 Camelia Drive 0
- 723 Bluebell Lane 0
- 860 Dolphin Street 0
- 873 Cobia Drive 0
- 883 Cobia Drive 0
- 905 Barracuda Drive 0
- 921 Barracuda Drive
- 935 Albacore Street 0
- 946 Albacore Street 0
- 1037 Iris Lane 0
- 1039 Iris Lane 0
- 1110 Iris Lane 0
- 1134 Iris Lane 0
- 1143 Iris Lane 0
- 1177 Bobwhite Drive
- 1202 Cardinal Lane
- 1212 Cardinal Lane
- 0 1222 Cardinal Lane 1224 Cardinal Lane
- 1226 Dove Lane
- 1236 Dove Lane
- 1245 Dove Lane
- 1247 Dove Lane
- 0 1274 Albatross Drive
- 1319 Albatross Drive 0
- 1337 Albatross Drive 0
- 1346 Cardinal Lane