SUMMARY REPORT 140 BANYAN DRIVE (FORMERLY 126 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

**JUNE 2021** 

SUMMARY REPORT 140 BANYAN DRIVE (FORMERLY 126 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

**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 140 Banyan Drive (Formerly 126 Banyan Drive) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort June 2021

# **Table of Contents**

1.0	INTRODUCTION	1
1.1 1.2	BACKGROUND INFORMATION UST REMOVAL AND ASSESSMENT PROCESS	.1 .2
2.0	SAMPLING ACTIVITIES AND RESULTS	3
2.1	UST REMOVAL AND SOIL SAMPLING	.3
2.2	SOIL ANALYTICAL RESULTS	.4
2.3	GROUNDWATER SAMPLING	.4
2.4	GROUNDWATER ANALYTICAL RESULTS	.5
3.0	PROPERTY STATUS	5
4.0	REFERENCES	5

## Tables

Table 1	Laboratory Analytical Results - Soil
Table 2	Laboratory Analytical Results - Groundwater

# Appendices

- Appendix A Multi-Media Selection Process for LBMH
- Appendix B UST Assessment Report
- Appendix C Laboratory Analytical Report Groundwater
- Appendix D Regulatory Correspondence



# 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 140 Banyan Drive (Formerly 126 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 140 Banyan Drive (Formerly 126 Banyan Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 126 Banyan Drive* (MCAS Beaufort, 2011). 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 – November and December 2015* (Resolution Consultants, 2016). 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 August 16, 2011, a single 280 gallon heating oil UST was removed from the landscaped area adjacent to the driveway at 140 Banyan Drive (Formerly 126 Banyan Drive). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e.,



staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 5'11" 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 140 Banyan Drive (Formerly 126 Banyan Drive) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated July 1, 2015, SCDHEC requested an IGWA for 140 Banyan Drive (Formerly 126 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 November 4, 2015, a temporary monitoring well was installed at 140 Banyan Drive (Formerly 126 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 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016).



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 – November and December 2015* (Resolution Consultants, 2016).

# 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 140 Banyan Drive (Formerly 126 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 140 Banyan Drive (Formerly 126 Banyan Drive). This NFA determination was obtained in a letter dated June 8, 2016. SCDHEC's NFA letter is provided in Appendix D.

## 4.0 **REFERENCES**

- Marine Corps Air Station Beaufort, 2011. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 126 Banyan Drive, Laurel Bay Military Housing Area*, December 2011.
- Resolution Consultants, 2016. *Initial Groundwater Investigation Report November and December 2015 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, April 2016.



- 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 - Soil140 Banyan Drive (Formerly 126 Banyan Drive)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 08/16/11				
Volatile Organic Compounds Analyzed	d by EPA Method 8260B (mg/kg)					
Benzene	0.003	0.0858				
Ethylbenzene	1.15	1.21				
Naphthalene	0.036	7.33				
Toluene	0.627	0.00276				
Xylenes, Total	13.01	4.27				
Semivolatile Organic Compounds Ana	Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)					
Benzo(a)anthracene	0.66	1.27				
Benzo(b)fluoranthene	0.66	0.635				
Benzo(k)fluoranthene	0.66	0.500				
Chrysene	0.66	1.09				
Dibenz(a,h)anthracene	0.66	0.0675				

#### 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 140 Banyan Drive (Formerly 126 Banyan Drive) 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 11/04/15			
Volatile Organic Compounds Analyzed	by EPA Method 8260B (	μg/L)				
Benzene	5	16.24	ND			
Ethylbenzene	700	45.95	0.45			
Naphthalene	25 29.33		4.0			
Toluene	1000	105,445	ND			
Xylenes, Total	10,000	2,133	ND			
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)						
Benzo(a)anthracene	10	NA	ND			
Benzo(b)fluoranthene	10	NA	ND			
Benzo(k)fluoranthene	10	NA	ND			
Chrysene	10	NA	ND			
Dibenz(a,h)anthracene	10	NA	ND			

#### Notes:

<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  $1 \times 10^{-6}$ , a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A Multi-Media Selection Process for LBMH





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

Appendix B UST Assessment Report



Attachment 1

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

Date Received State Use Only DEC 0 8 2011	)	Submit Completed Form To: UST Program SCDHEC 2600 Bull Street Columbia, South Carolina 29201 Telephone (803) 896-7957
SC DHEC - Bureau of Land & Waste Manageme	nt OWNEDSHID OF	
1	OWNERSHIP OF	UST (S)
MCAS Beaufort, Commanding C	fficer Attn: NREAC	) (Craig Ehde)
Owner Wante (Corporation, Individual, P	ublic Agency, Other)	
P.O. Box 55001		
Maning Address		
Beaufort, Sc	outh Carolina	29904-5001
City	State	Zip Code
843	228-7317	Craig Ehde
Area Code Te	lephone Number	Contact Person

# II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # Laurel Bay Military Ho Facility Name or Company Site Io	ousing Area, Marine Corps Air Station, Beaufort, SC
126 Banyan Drive, Lau Street Address or State Road (as a	rel Bay Military Housing Area pplicable)
$\frac{\text{Beaufort,}}{\text{City}}$	Beaufort County

Attachment 2

# **III. INSURANCE INFORMATION**

# **Insurance Statement**

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

Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? YES\_\_\_\_ NO\_\_\_\_ (check one)

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

My policy provider is: \_\_\_\_\_ The policy deductible is: \_\_\_\_\_ The policy limit is:

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

# IV. REQUEST FOR SUPERB FUNDING

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

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

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

Name (Type or print.)

Signature

# To be completed by Notary Public:

Sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20

(Name)

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

# VI. UST INFORMATION

		126Banyan
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
Е·	Month/Year of Last Use	Mid 80s
F.	Depth (ft.) To Base of Tank	5'11"
G.	Spill Prevention Equipment Y/N	No
H·	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J <sub>.</sub>	Date Tanks Removed/Filled	8/16/2011
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 126Banyan was removed from the ground, cleaned and recycled.

See Attachment "A".

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) Contaminated water was pumped from 126Banyan and disposed by MCAS.

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

# VII. PIPING INFORMATION

	126Banyan		
	Steel		
Construction Material(ex. Steel, FRP)	& Copper		
Distance from UST to Dispenser	N/A		
Number of Dispensers	N/A		
Type of System Pressure or Suction	Suction		
Was Piping Removed from the Ground? Y/N	Yes		
Visible Corrosion or Pitting Y/N	Yes		
Visible Holes Y/N	No		
Age	Late 1950s		
If any corrosion, pitting, or holes were observed, des	cribe the location and extent for each piping run.		
Steel vent piping for was corroded and pitted. All copper			
	Construction Material(ex. Steel, FRP) Distance from UST to Dispenser Number of Dispensers Type of System Pressure or Suction Was Piping Removed from the Ground? Y/N Visible Corrosion or Pitting Y/N Visible Holes Y/N Age If any corrosion, pitting, or holes were observed, des Steel vent piping for was corroded		

supply and return piping were sound.

# VIII. BRIEF SITE DESCRIPTION AND HISTORY

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

# Yes No Unk A. Were any petroleum-stained or contaminated soils found in the UST Х excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map. B. Were any petroleum odors detected in the excavation, soil borings, \*Х trenches, or monitoring wells? \*Slight odor in tank excavation. If yes, indicate location on site map and describe the odor (strong, mild, etc.) C. Was water present in the UST excavation, soil borings, or trenches? Х If yes, how far below land surface (indicate location and depth)? D. Did contaminated soils remain stockpiled on site after closure? Х If yes, indicate the stockpile location on the site map.

Name of DHEC representative authorizing soil removal:

or boring waters?

If yes, indicate location and thickness.

E. Was a petroleum sheen or free product detected on any excavation

# IX. SITE CONDITIONS

X

#### X. SAMPLE INFORMATION

#### SCDHEC Lab Certification Number 84009 A.

В.	1/							
Sam	ple # Loca	tion San (So	nple Type il/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
126 <u>Bany</u>	an fill	vat end S	oil	Sandy-clay	5'11"	8/16/11 1345 hrs	P. Shaw	
						-		
8								
9								
10	)							
11	()							
12	2							
13	3							
14								
15	2							
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	
	*Approx 720' to 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?		x
	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 contamination?	*X	
	*Sewer, water, ele	ectric	city,
	cable & fiber opt: If yes, indicate the type of utility, distance, and direction on the site map.	.c	
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?		X
	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: UST 126Banyan location.



Picture 2: UST 126Banyan.

# 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	126Banyan
Benzene	0.0858 mg/kg
Toluene	0.00276 mg/kg
Ethylbenzene	1.21 mg/kg
Xylenes	4.27 mg/kg
Naphthalene	7.33 mg/kg
Benzo (a) anthracene	1.27 mg/kg
Benzo (b) fluoranthene	0.635 mg/kg
Benzo (k) fluoranthene	0.500 mg/kg
Chrysene	1.09 mg/kg
Dibenz (a, h) anthracene	0.0675 mg/kg
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				
МТВЕ	40				
Naphthalene	25				
Benzo (a) anthracene	10				
Benzo (b) flouranthene	10				
Benzo (k) flouranthene	10				
Chrysene	10				
Dibenz (a, h) anthracene	10				
EDB	.05				
1,2-DCA	5				
Lead	Site specific				

# XV. ANALYTICAL RESULTS

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

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



## THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

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

### TestAmerica Job ID: NUH2891

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

## For:

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

Attn: Tom McElwee

fa Ha

Authorized for release by: 09/06/2011 12:19:13 PM

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

LINKS Review your project results through TOTOLACCESS Have a Question? Ask The Expert Visit us at: Www.testamericainc.com

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

# **Table of Contents**

Cover Page	1
Table of Contents	2
Sample Summary	3
Definitions	4
Client Sample Results	5
QC Sample Results	10
QC Association	16
Chronicle	18
Method Summary	19
Certification Summary	20
Chain of Custody	21

Sample Summary

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

TestAmerica Job ID: NUH2891

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
NUH2891-01	130 Banyan -1	Soil	08/15/11 13:45	08/20/11 08:00
NUH2891-02	126 Banyan	Soil	08/16/11 13:45	08/20/11 08:00
NUH2891-03	127 Banyan	Soil	08/17/11 12:30	08/20/11 08:00

RPD

TEF

TEQ

Qualifiers		3
GCMS Volatil	es	A
Qualifier	Qualifier Description	1 Long to
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.	5
GCMS Semive	olatiles	
Qualifier	Qualifier Description	6
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	005403
		7
Glossary		10/12/00
Abbreviation	These commonly used abbreviations may or may not be present in this report.	8
¢.	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample	10
EDL	Estimated Detection Limit (Dioxin)	10
EPA	United States Environmental Protection Agency	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
ND	Not detected at the reporting limit (or method detection limit if shown)	
PQL	Practical Quantitation Limit	
RL	Reporting Limit	

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

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

TestAmerica Job ID: NUH2891

#### Client Sample ID: 130 Banyan -1 Date Collected: 08/15/11 13:45 Date Received: 08/20/11 08:00

# Lab Sample ID: NUH2891-01

Matrix: Soil Percent Solids: 78.6

4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Eac
Benzene	ND		0.00211	0.00116	mg/kg dry	- <del>a</del>	08/15/11 13:45	08/23/11 14:00	1.00
Ethylbenzene	0.0471		0.00211	0.00104	ma/ka drv	ø	08/15/11 13:45	08/23/11 14:00	1.00
Toluene	ND		0.00211	0.000941	ma/ka drv	ø	08/15/11 13:45	08/23/11 14:00	1.00
Xylenes, total	0.0203		0.00528	0.00201	mg/kg dry	¢	08/15/11 13:45	08/23/11 14:00	1.00
Surrogate	% Recovery	Qualifier	Limits				Prenared	Analized	D# 5
1,2-Dichloroethane-d4	93		67 - 138				08/15/11 12:45	Analyzed	DIFac
Dibromofluoromethane	91		75 125				00/15/11 13:45	06/23/11 14:00	1.00
Toluene-d8	155	74	76 100				08/15/11 13:45	08/23/11 14:00	1.00
4 Bromofilianshamana	155	24	76 - 129				08/15/11 13:45	08/23/11 14:00	1.00
4-Dromonuoropenzene	426	7X	67 147				0045444045		

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzod	
Naphthalene	1.39		0.258	0.0876	mg/kg dry	- 7	08/15/11 13:45	08/24/11 16:00	50.0
Surrogate	% Recovery	Qualifier	Limits				Prenared	Analyzed	
1,2-Dichloroethane-d4	88		67 - 138				08/15/11 12:45	Analyzed	Direc
Dibromofluoromethane	84		75 405				00/15/11 13:45	08/24/11 16:00	50.0
T. (	04		15-125				08/15/11 13:45	08/24/11 16:00	50.0
Toluene-d8	114		76 - 129				08/15/11 13:45	08/24/11 16:00	50.0
4-Bromofluorobenzene	127		67 147				00/1 5/14 10.15	00/2 //// /0.00	00.0
			0				08/15/11 13:45	08/24/11 16:00	50.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.393		0.0852	0.0178	mg/kg dry	- <del>0</del>	08/23/11 13:21	08/23/11 19:12	1.00
Acenaphthylene	0.0962		0.0852	0.0254	mg/kg dry	¢	08/23/11 13:21	08/23/11 19:12	1.00
Anthracene	0.644		0.0852	0.0114	mg/kg dry	\$	08/23/11 13:21	08/23/11 19:12	1.00
Benzo (a) anthracene	1.69		0.0852	0.0140	ma/ka dry	¢	08/23/11 13:21	08/23/11 10:12	1.00
Benzo (a) pyrene	0.764		0.0852	0.0102	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:12	1.00
Benzo (b) fluoranthene	0.872		0.0852	0.0483	ma/ka dry	¢	08/23/11 13:21	08/23/11 19:12	1.00
Benzo (g,h,i) perylene	0.205		0.0852	0.0114	ma/ka dry	à	08/23/11 13:21	08/23/11 19:12	1.00
Benzo (k) fluoranthene	0.814		0.0852	0.0470	ma/ka dry	ö	08/23/11 13:21	08/23/11 19:12	1.00
Chrysene	1.34		0.0852	0 0394	ma/ka dry	a	08/23/11 13:21	08/23/11 19.12	1.00
Dibenz (a,h) anthracene	0.0962		0.0852	0.0191	mg/kg dry	ö	08/23/11 13:21	08/23/11 19:12	1.00
Fluoranthene	4.12		0.0852	0.0140	ma/ka day	8	08/23/11 13:21	08/23/11 19:12	1.00
Fluorene	0.684		0.0852	0.0254	mg/kg dry	~	08/23/11 13.21	08/23/11 19:12	1.00
Indeno (1,2,3-cd) pyrene	0.228		0.0852	0.0204	mg/kg day	~	08/23/11 13:21	08/23/11 19:12	1.00
Naphthalene	0.582		0.0052	0.0394	mg/kg ary	**	08/23/11 13:21	08/23/11 19:12	1.00
Phenanthrene	3.11		0.0852	0.0178	mg/kg ary	~	08/23/11 13:21	08/23/11 19:12	1.00
Pyrene	3.10		0.0852	0.0127	mg/kg dry	*	08/23/11 13:21	08/23/11 19:12	1.00
1-Methylnaphthalene	1.90		0.0852	0.0292	mg/kg dry	*	08/23/11 13:21	08/23/11 19:12	1.00
2-Methylnaphthalene	1.09		0.0852	0.0153	mg/kg dry	\$	08/23/11 13:21	08/23/11 19:12	1.00
2 meany mapminatene	3.21		0.0852	0.0267	mg/kg dry	Q	08/23/11 13:21	08/23/11 19:12	1.00
Surrogate	% Recovery	Qualifier	Limits				Propared	Antonia	
Terphenyl-d14	92		18 - 120				08/23/11 12:21	Analyzed	DII Fac
2-Fluorobiphenyl	71		14 - 120				08/23/11 13:21	08/23/11 19.12	1.00
Nitrobenzene-d5	69		17 - 120				08/23/11 13:21	08/23/11 19:12	1.00
							00/23/11 13.21	00/23/11 19:12	1.00
Method: SW-846 - General Cl	hemistry Paramete	rs							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Eso
% Dry Solids	78.6		0.500	0.500	%	2 2	08/23/11 12:40	08/24/11 10:32	1.00

TestAmerica Job ID: NUH2891

#### Client Sample ID: 126 Banyan Date Collected: 08/16/11 13:45 Date Received: 08/20/11 08:00

# Lab Sample ID: NUH2891-02

Matrix: Soil Percent Solids: 78.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
Benzene	0.0858		0.00216	0.00119	ma/ka dry		08/16/11 13:45	09/02/11 14.04	Dirrac
Toluene	0.00276		0.00040			142	00/10/11 10.40	00/23/11 14.31	1.00
	0.00276		0.00216	0.000962	mg/kg dry	Q	08/16/11 13:45	08/23/11 14:31	1.00
Surrogate	% Recovery	Qualifier	Limits				Prenared	Analigad	D# 5++
1,2-Dichloroethane-d4	94		67 . 138				08/16/14 40:45	Analyzeu	Dirrac
Dibromofluoromethane	07						00/10/11 13:45	08/23/11 14:31	1.00
	87		75 - 125				08/16/11 13:45	08/23/11 14:31	1.00
Toluene-d8	161	ZX	76 - 129				08/16/11 12:45	08/02/44 44:04	4.00
4-Bromofluorobenzene	207	71					00/10/11 13.45	00/23/11 14:31	1.00
	221	28	67 - 147				08/16/11 13:45	08/23/11 14:31	1.00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Applyrod	DUF
Ethylbenzene	1.21		0.106	0.0510	mallin day		Fiepareu	Analyzed	Dil Fac
Nanhthalana			0.100	0.0519	mg/kg ary	340	08/16/11 13:45	08/24/11 16:31	50.0
Naphthalene	7.33		0.265	0.0900	mg/kg dry	\$	08/16/11 13:45	08/24/11 16:31	50.0
Xylenes, total	4.27		0.265	0.101	mg/kg dry	¢	08/16/11 13:45	08/24/11 16:31	50.0
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzod	Dil Fac
1,2-Dichloroethane-d4	90		67 - 138				08/16/11 12:45	00/04/44 40.04	Dirrac
Dibromofluoromethane	84		75 105				00/10/11 13.45	06/24/11 16:31	50.0
Tel	04		15-125				08/16/11 13:45	08/24/11 16:31	50.0
l oluene-d8	114		76 - 129				08/16/11 13:45	08/24/11 16:21	50.0
4-Bromofluorobenzene	123		67 - 147				08/16/11 13:45	08/24/11 16:31	50.0

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

t Qualifier	RL	MDL	Unit	D	Prenared	Applyzod	DUE
3	0.0848	0.0177	mg/kg dry	- <del>0</del>	08/23/11 13:21	08/23/11 19:33	1.00
3	0.0848	0.0253	ma/ka dry	ø	08/23/11 13:21	08/23/11 10:33	1.00
1	0.0848	0.0114	ma/ka dry	ø	08/23/11 13:21	09/23/11 19:33	1.00
	0.0848	0.0139	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:33	1.00
· · · · ·	0.0848	0.0101	ma/ka dry	-0	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0481	mg/kg dry	ö	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0114	mg/kg day	15	08/23/11 13:21	08/23/11 19:33	1.00
0.1	0.0848	0.0114	mg/kg dry	~	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0400	mg/kg dry	**	08/23/11 13:21	08/23/11 19:33	1.00
	0.0048	0.0392	mg/kg ary	*	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0190	mg/kg dry	8	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0253	mg/kg dry	Q	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0392	mg/kg dry	Q	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0177	mg/kg dry	¢	08/23/11 13:21	08/23/11 19:33	1.00
	0.0848	0.0291	mg/kg dry	\$	08/23/11 13:21	08/23/11 19:33	1.00
Qualifier	Limits				Browned		-
	18,120				Prepared	Analyzed	Dil Fac
	14 120				08/23/11 13:21	08/23/11 19:33	1.00
	17 120				08/23/11 13:21	08/23/11 19:33	1.00
	t Qualifier	Qualifier     RL       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.0848     0.0848       0.10848     0.10848       0.10848     0.10848       0.10848     0.10848       0.10848     0.10848       0.10848     0.10848       0.10848     0.10848       0.10848     0.10848       110     1120       114 - 120     114 - 120	Qualifier     RL     MDL       0.0848     0.0177       0.0848     0.0253       0.0848     0.0253       0.0848     0.0114       0.0848     0.0139       0.0848     0.0101       0.0848     0.0101       0.0848     0.0101       0.0848     0.0481       0.0848     0.0481       0.0848     0.0481       0.0848     0.0481       0.0848     0.0392       0.0848     0.0392       0.0848     0.0253       0.0848     0.0392       0.0848     0.0291       Qualifier     Limits       18 - 120     14 - 120       17 - 120     14 - 120	Qualifier     RL     MDL     Unit       0.0848     0.0177     mg/kg dry       0.0848     0.0253     mg/kg dry       0.0848     0.0114     mg/kg dry       0.0848     0.0139     mg/kg dry       0.0848     0.0101     mg/kg dry       0.0848     0.0114     mg/kg dry       0.0848     0.0392     mg/kg dry       0.0848     0.0253     mg/kg dry       0.0848     0.0392     mg/kg dry       0.0848     0.0177     mg/kg dry       0.0848     0.0291     mg/kg dry       0.0848     0.0291     mg/kg dry       0.0848     0.0291 <td>Qualifier     RL     MDL     Unit     D       0.0848     0.0177     mg/kg dry     0       0.0848     0.0253     mg/kg dry     0       0.0848     0.0114     mg/kg dry     0       0.0848     0.0139     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0114     mg/kg dry     0       0.0848     0.0481     mg/kg dry     0       0.0848     0.0481     mg/kg dry     0       0.0848     0.0468     mg/kg dry     0       0.0848     0.0392     mg/kg dry     0       0.0848     0.0291     mg/kg dry     0       0.0848     0.0291     mg/kg dry     0 &lt;</td> <td>Qualifier     RL     MDL     Unit     D     Prepared       0.0848     0.0177     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0392     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0291     mg/kg dry     0     08/23</td> <td>Qualifier     RL     MDL     Unit     D     Prepared     Analyzed       0.0848     0.0177     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0139     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0481     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0468     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0392     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0253     mg/kg dry     <t< td=""></t<></td>	Qualifier     RL     MDL     Unit     D       0.0848     0.0177     mg/kg dry     0       0.0848     0.0253     mg/kg dry     0       0.0848     0.0114     mg/kg dry     0       0.0848     0.0139     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0101     mg/kg dry     0       0.0848     0.0114     mg/kg dry     0       0.0848     0.0481     mg/kg dry     0       0.0848     0.0481     mg/kg dry     0       0.0848     0.0468     mg/kg dry     0       0.0848     0.0392     mg/kg dry     0       0.0848     0.0291     mg/kg dry     0       0.0848     0.0291     mg/kg dry     0 <	Qualifier     RL     MDL     Unit     D     Prepared       0.0848     0.0177     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0392     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 13:21       0.0848     0.0291     mg/kg dry     0     08/23	Qualifier     RL     MDL     Unit     D     Prepared     Analyzed       0.0848     0.0177     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0253     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0139     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0101     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0114     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0481     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0468     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0392     mg/kg dry     0     08/23/11 13:21     08/23/11 19:33       0.0848     0.0253     mg/kg dry <t< td=""></t<>

# Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prenared	Applyzed	DUCAS
Fluoranthene	3 17		0.949	0.120	maile des		Fiepaieu	Analyzed	DIFac
Dhananthana	0.11		0.040	0.139	mg/kg ary	24	08/23/11 13:21	08/25/11 17:51	10.0
Phenanthrene	6.31		0.848	0.127	mg/kg dry	ø	08/23/11 13:21	08/25/11 17:51	10.0
1-Methylnaphthalene	8.89		0.848	0.152	mg/kg dry	ø	08/23/11 13:21	08/25/11 17:51	10.0
2-Methylnaphthalene	15.3		0.848	0.266	mg/kg dry	¢	08/23/11 13:21	08/25/11 17:51	10.0

17 - 120

1.00

08/23/11 13:21 08/23/11 19:33

TestAmerica Job ID: NUH2891

#### Client Sample ID: 126 Banyan Date Collected: 08/16/11 13:45 Date Received: 08/20/11 08:00

#### Lab Sample ID: NUH2891-02 Matrix: Soil Percent Solids: 78.3

Method: SW-846 - General (	Chemistry Paramete	ers							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	78.3		0.500	0.500	%		08/23/11 12:40	08/24/11 10:32	1.00

TestAmerica Job ID: NUH2891

#### Client Sample ID: 127 Banyan Date Collected: 08/17/11 12:30 Date Received: 08/20/11 08:00

# Lab Sample ID: NUH2891-03

Matrix: Soil Percent Solids: 82.1

4

Method: SW846 8260B - Vo	platile Organic Comp	ounds by E	EPA Method 8	260B					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00247	0.00136	mg/kg dry	- <del>a</del>	08/17/11 12:30	08/23/11 20:46	1.00
Toluene	ND		0.00247	0.00110	mg/kg dry	¢	08/17/11 12:30	08/23/11 20:46	1.00
Xylenes, total	0.463		0.00619	0.00235	mg/kg dry	٥	08/17/11 12:30	08/23/11 20:46	1.00
Surrogate	% Recovery	Qualifier	Limits				Prenared	Anabrad	Dil Ess
1,2-Dichloroethane-d4	92		67 - 138				09/17/11 12:20	Analyzeu	DirFac
Dibromofluoromethane	88		75 125				00/17/11 12.30	08/23/11 20:46	1.00
Toluene-d8	210	7	70 - 120				08/1//11 12:30	08/23/11 20:46	1.00
	219	28	76 - 129				08/17/11 12:30	08/23/11 20:46	1.00
4-Bromofluorobenzene	225	ZX	67 - 147				08/17/11 12:30	08/23/11 20:46	1.00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Applured	DUE
Ethylbenzene	1.22		0 127	0.0624	ma/ka day		00/47/44 40.00	Analyzed	Dil Fac
Manhahalana			0.127	0.0024	my/kg ury	44	08/17/11 12:30	08/24/11 17:02	50.0
Naphthalene	10.9		0.318	0.108	mg/kg dry	\$	08/17/11 12:30	08/24/11 17:02	50.0
Surrogate	% Recovery	Qualifier	Limits				Propored	Anatomid	
1,2-Dichloroethane-d4	88		67 120				Frepared	Analyzed	Dil Fac
	00		07 - 138				08/17/11 12:30	08/24/11 17:02	50.0
Dibromofluoromethane	84		75 - 125				08/17/11 12:30	08/24/11 17:02	50.0
Toluene-d8	114		76 120					00/2 // / //.02	50.0
10 0	Carl Contractor Contractor		10-123				08/17/11 12:30	08/24/11 17:02	50.0
4-Bromotiuorobenzene	122		67 - 147				08/17/11 12:30	08/24/11 17:02	50.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
Acenaphthene	2.20		0.0811	0.0170	ma/ka drv	- 7	08/23/11 13:21	08/23/11 10:54	1.00
Acenaphthylene	ND		0.0811	0.0242	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Anthracene	ND		0.0811	0.0109	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Benzo (a) anthracene	0.390		0.0811	0.0133	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Benzo (a) pyrene	0.186		0.0811	0.00969	ma/ka dry	ø	08/23/11 13:21	08/23/11 19.54	1.00
Benzo (b) fluoranthene	0.203		0.0811	0.0460	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Benzo (g,h,i) perylene	0.0577	J	0.0811	0.0109	ma/ka dry	¢	08/23/11 13:21	08/23/11 19:54	1.00
Benzo (k) fluoranthene	0.166		0.0811	0 0448	ma/ka dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Chrysene	0.454		0.0811	0.0375	mg/kg doy	ö	08/23/11 13:21	08/23/11 19.54	1.00
Dibenz (a,h) anthracene	ND		0.0811	0.0182	mg/kg dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Fluoranthene	1.24		0.0811	0.0133	mg/kg dry	ö	08/23/11 13:21	08/23/11 19:54	1.00
Fluorene	4.01		0.0811	0.0242	mg/kg dry	ö	08/23/11 13:21	08/23/11 19:54	1.00
Indeno (1,2,3-cd) pyrene	0.0589	J	0.0811	0.0275	mg/kg dry	ö	08/23/11 13:21	08/23/11 19:54	1.00
Pyrene	0.858		0.0811	0.0279	mg/kg dry	ø	08/23/11 13:21	08/23/11 19:54	1.00
Surrogate	% Recovery	Qualifier	Limits				Propared	Anatomid	0115
Terphenyl-d14	72	Automotive	18 - 120				08/22/11 12:21	Analyzed	Dil Fac
2-Fluorobiphenyl	77		14 - 120				08/23/11 13:21	08/23/11 19:54	1.00
Nitrobenzene-d5	42		17 120				00/20/11 13.21	00/23/11 19:54	1.00

# Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzod	
Naphthalene	9.00		0.811	0.170	ma/ka dry	- <del>a</del>	08/23/11 13:21	08/25/11 18:12	10.0
Phenanthrene	10.4		0.811	0.121	mg/kg dry	ø	08/23/11 13:21	08/25/11 18:12	10.0
1-Methylnaphthalene	23.4		0.811	0.145	mg/kg dry	ø	08/23/11 13:21	08/25/11 18:12	10.0
2-Methylnaphthalene	42.5		0.811	0.254	mg/kg dry	¢	08/23/11 13:21	08/25/11 18:12	10.0

17 - 120

08/23/11 19:54

1.00

08/23/11 13:21

# **Client Sample Results**

		Client	Sample F	Results							
Client: EEG - Small Business Group, In Project/Site: [none]	c. (2449)					TestAmerica Job ID: NUH2891					
Client Sample ID: 127 Banyan Date Collected: 08/17/11 12:30 Date Received: 08/20/11 08:00	Lab Sample ID: NUH2891-0 Matrix: So Percent Solids: 82										
Method: SW-846 - General Chemistr	y Paramete	ers Qualifian	ы	MDI	11-34				0		
% Dry Solids	82.1	Quaimer	0.500	0.500	%		08/23/11 12:40	08/24/11 10:32	1.00		

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

Blank Blank

#### Lab Sample ID: 11H3847-BLK1 Matrix: Soil Analysis Batch: U015146

#### **Client Sample ID: Method Blank** Prep Type: Total Prep Batch: 11H3847 P

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Eac
Benzene	ND		0.00200	0.00110	ma/ka wet		08/16/11 15:37	08/24/11 12:20	1.00
Ethylbenzene	ND		0.00200	0.000980	ma/ka wet		08/16/11 15:37	08/24/11 12:20	1.00
Naphthalene	ND		0.00500	0.00170	ma/ka wet		08/16/11 15:37	08/24/11 12:20	1.00
Toluene	ND		0.00200	0.000890	ma/ka wet		08/16/11 15:37	08/24/11 12:20	1.00
Xylenes, total	ND		0.00500	0.00190	mg/kg wet		08/16/11 15:37	08/24/11 12:20	1.00
	Blank	Blank							
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	
1,2-Dichloroethane-d4	95	-	67 - 138				08/16/11 15:37	08/24/11 12:20	1.00
Dibromofluoromethane	92		75 - 125				08/16/11 15:37	08/24/11 12:20	1.00
Toluene-d8	115		76 129				08/16/11 15:37	00/24/11 12.20	1.00
4-Bromofluorobenzene	111		67 - 147				08/16/11 15:37	08/24/11 12:20	1.00

#### Lab Sample ID: 11H3847-BLK2 Matrix: Soil Analysis Batch: U015146

	Blank	Blank						Tep Daten. Th	304/_P	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.100	0.0550	mg/kg wet		08/16/11 15:37	08/24/11 12:51	50.0	
Ethylbenzene	ND		0.100	0.0490	ma/ka wet		08/16/11 15:37	08/24/11 12:51	50.0	
Naphthalene	ND		0.250	0.0850	ma/ka wet		08/16/11 15:37	08/24/11 12:51	50.0	
Toluene	ND		0.100	0.0445	ma/ka wet		08/16/11 15:37	08/24/11 12:51	50.0	
Xylenes, total	ND		0.250	0.0950	mg/kg wet		08/16/11 15:37	08/24/11 12:51	50.0	
	Blank	Blank								
÷										

Surrogate	% Recovery	Qualifier	Limits	Prenared	Analyzed	Dil Eac
1,2-Dichloroethane-d4	88		67 - 138	08/16/11 15:37	08/24/11 12:51	50.0
Dibromofluoromethane	90		75 - 125	08/16/11 15:37	08/24/11 12:51	50.0
Toluene-d8	109		76 - 129	08/16/11 15:37	08/24/11 12:51	50.0
4-Bromofluorobenzene	113		67 - 147	08/16/11 15:37	08/24/11 12:51	50.0

#### Lab Sample ID: 11H3847-BS1 Matrix: Soil

#### Analysis Batch: U015146

	Spike	LCS	LCS				% Rec.
Analyte	Added	Result	Qualifier	Unit	D	% Rec	Limits
Benzene	50.0	56.2		ug/kg	- 8	112	78 - 126
Ethylbenzene	50.0	63.4		ug/kg		127	79 - 130
Naphthalene	50.0	55.3		ug/kg		111	72 - 150
Toluene	50.0	59.2		ua/ka		118	76 126
Xylenes, total	150	191		ug/kg		127	80 - 130

	200	LUU	
Surrogate	% Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	93		67 - 138
Dibromofluoromethane	93		75 - 125
Toluene-d8	113		76 - 129
4-Bromofluorobenzene	112		67 - 147

221 100

#### **Client Sample ID: Method Blank** Prep Type: Total Pren Batch: 11H3847 P

**Client Sample ID: Lab Control Sample** 

Prep Type: Total

**Prep Type: Total** 

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

Lab Sample ID: 11H3847-MS1 Matrix: Soil Analysis Batch: U015146								Client	Sample ID: Ma Prep T Prep Batch: 1	atrix Spike ype: Total
	Sample	Sample	Spike	Matrix Spike	Matrix Spil	ke			% Rec.	1110047_1
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	l imits	
Benzene	ND		0.0460	0.0474	-	mg/kg wet		103	42 . 141	
Ethylbenzene	ND		0.0460	0.0499		ma/ka wet		108	21 . 165	
Naphthalene	ND		0.0460	0.0289		ma/ka wet		63	10 160	
Toluene	0.000953		0.0460	0.0563		ma/ka wet		120	45 145	
Xylenes, total	0.00330		0.138	0.144		mg/kg wet		102	45 - 145 31 - 159	
	Matrix Spike	Matrix Spike								
Surrogate	% Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4	92		67 - 138							
Dibromofluoromethane	91		75 - 125							
Toluene-d8	123		76 - 129							
4-Bromofluorobenzene	172	ZX	67 - 147							
Lab Sample ID: 11H3847-MSD1						Client	t San	nple ID:	Matrix Spike	Dunlicato

#### Matrix: Soil Analysis Batch: U015146

Analysis Batch: U015146		8 N						1	Prep Batch	: 11H3	847_P
Analyte	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spi	ke Dur			% Rec.		RPD
Benzene	ND	quanter	0.0436	0.0509	Qualifier		D	% Rec	Limits	RPD	Limit
Ethylbenzene	ND		0.0400	0.0509		mg/kg wet		11/	42 - 141	7	50
Naphthalene	ND		0.0436	0.0541		mg/kg wet		124	21 - 165	8	50
	ND		0.0436	0.0318		mg/kg wet		73	10 - 160	10	50
Toluene	0.000953		0.0436	0.0605		mg/kg wet		137	45 - 145	7	50
Xylenes, total	0.00330		0.131	0.154		mg/kg wet		115	31 - 159	7	50

## Matrix Spike Dup Matrix Spike Dup

93

116

112

Surrogate	% Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	93		67 - 138
Dibromofluoromethane	93		75 - 125
Toluene-d8	124		76 - 129
4-Bromofluorobenzene	181	ZX	67 - 147

#### Lab Sample ID: 11H5287-BLK1 Matrix: Soil

#### Analysis Batch: U014964

Analyte Benzene Ethylbenzene Naphthalene Toluene Xylenes, total

Surrogate

Toluene-d8

1,2-Dichloroethane-d4

Dibromofluoromethane

4-Bromofluorobenzene

Blank	Blank						Prep Batch: 11H	15287_F
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		0.00200	0.00110	mg/kg wet		08/23/11 00:11	08/23/11 11:43	1.00
ND		0.00200	0.000980	mg/kg wet		08/23/11 00:11	08/23/11 11:43	1.00
ND		0.00500	0.00170	mg/kg wet		08/23/11 00:11	08/23/11 11:43	1.00
ND		0.00200	0.000890	mg/kg wet		08/23/11 00:11	08/23/11 11:43	1.00
ND		0.00500	0.00190	mg/kg wet		08/23/11 00:11	08/23/11 11:43	1.00
Blank	Blank							
% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
96	-	67 - 138				08/23/11 00:11	08/23/11 11:43	1 00

Prepared	Analyzed	Dil Fac
08/23/11 00:11	08/23/11 11:43	1.00
08/23/11 00:11	08/23/11 11:43	1.00
08/23/11 00:11	08/23/11 11:43	1.00
08/23/11 00:11	08/23/11 11:43	1.00

**Client Sample ID: Method Blank** 

Prep Type: Total

75 - 125

76 - 129

67 - 147

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

Lab Sample ID: 11H5287-BLK2 Matrix: Soil Analysis Batch: U014964							Client Sa	mple ID: Metho Prep Typ Prep Batch: 111	od Blank be: Total H5287 P
Analyte	Blank	Blank	PI	MDI			114.010.000		
Benzene	ND	Quaimer		MDL	Unit	D	Prepared	Analyzed	Dil Fac
	ND		0.100	0.0550	mg/kg wet		08/23/11 00:11	08/23/11 12:14	50.0
Ethylbenzene	ND		0.100	0.0490	mg/kg wet		08/23/11 00:11	08/23/11 12:14	50.0
Naphthalene	ND		0.250	0.0850	ma/ka wet		09/22/11 00:11	00/00/44 40.44	50.0
Toluene	ND		0.400		inging ther		00/23/11 00.11	00/23/11 12:14	50.0
Yulanas total	ND		0.100	0.0445	mg/kg wet		08/23/11 00:11	08/23/11 12:14	50.0
Aylenes, total	ND		0.250	0.0950	mg/kg wet		08/23/11 00:11	08/23/11 12:14	50.0
	Blank	Blank							
Surrogate	% Recovery	Qualifier	Limits				Drawand		

	70 Recovery	Quaimer	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	98		67 - 138	08/23/11 00:11	08/23/11 12:14	50.0
Dibromofluoromethane	94		75 - 125	08/22/11 00:11	00/20/11 12.14	50.0
Toluene-d8	116		76 100	08/23/11 00:11	08/23/11 12:14	50.0
4-Bromofluorobonzono	110		78 - 129	08/23/11 00:11	08/23/11 12:14	50.0
	110		67 - 147	08/23/11 00:11	08/23/11 12:14	50.0

#### Lab Sample ID: 11H5287-BS1 Matrix: Soil Analysis Batch: U014964

Analyte	Spike	LCS	LCS				% Rec.
Response	Added	Result	Qualifier	Unit	D	% Rec	Limits
Benzene	50.0	50.7		ug/kg		101	78 - 126
Ethylbenzene	50.0	56.9		ua/ka		114	79 130
Naphthalene	50.0	51.0		ug/lig		114	79 - 130
Toluene	00.0	51.2		ug/kg		102	72 - 150
Totaelle	50.0	53.7		ug/kg		107	76 - 126
Xylenes, total	150	170		ug/kg		114	80 - 130

	LUS	LUS	
Surrogate	% Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	94		67 - 138
Dibromofluoromethane	93		75 - 125
Toluene-d8	114		76 - 129
4-Bromofluorobenzene	112		67 - 147

#### Lab Sample ID: 11H5287-MS1 Matrix: Soil

#### Analysis Batch: U014964

Analysis Datch. 0014504	Samola	Comple							Prep Batch: 11H5287_P
Analyte	Sample	Sample	Spike	Matrix Spike	Matrix Spi	ke			% Rec.
	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits
Benzene	0.0124		0.0497	0.0497		mg/kg wet		75	42 - 141
Ethylbenzene	0.00157		0.0497	0.0502		ma/ka wet		98	21 165
Naphthalene	0.00204		0.0497	0.0329		ma/ka wet		62	10 160
Toluene	0.000963		0.0497	0.0478		mg/kg wet		02	10 - 100
Xvienes total	0.00618			0.0110		inging wet		94	45 - 145
	0.00018		0.149	0.150		mg/kg wet		96	31 - 159
	Matrix Spike	Matrix Spike							
Surrogate	% Recovery	Qualifier	Limite						

Surrogate	% Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	92	1	67 - 138
Dibromofluoromethane	91		75 - 125
Toluene-d8	147	ZX	76 - 129
4-Bromofluorobenzene	143		67 - 147

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

Prep Batch: 11H5287 P

**Client Sample ID: Matrix Spike** 

Prep Type: Total

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

Lab Sample ID: 11H5287-MS Matrix: Soil Analysis Batch: U014964	D1					Clien	t Sa	mple ID:	Matrix Sp Pre	ike Dup p Type:	licate Total
Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup	Matrix Spi	ke Dur			% Rec.	1: 11H5	RPD
Benzene	0.0124		0.0484	0.0536	Quaimer	malkawat		% Rec	Limits	RPD	Limit
thylbenzene	0.00157		0.0484	0.0550		mg/kg wet		85	42 - 141	7	50
aphthalene	0.00204		0.0484	0.0366		mg/kg wet		110	21 - 165	9	50
oluene	0.000963		0.0484	0.0518		mg/kg wet		105	10 - 160	11	50
ylenes, total	0.00618		0.145	0.168		mg/kg wet		111	45 - 145 31 - 159	8 11	50 50
	Matrix Spike Dup	Matrix Spike	e Dup								1.000
Surrogate	% Recovery	Qualifier	Limits								
2-Dichloroethane-d4	91	T	67 - 138								
ibromofluoromethane	92		75 - 125								
oluene-d8	149	ZX	76 - 129								
-Bromofluorobenzene	138		67 - 147								

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

#### Lab Sample ID: 11H5077-BLK1 Matrix: Soil Analysis Batch: 11H5077

	Blank	Blank							-
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Eac
Acenaphthene	ND		0.0670	0.0140	mg/kg wet		08/23/11 13:21	08/23/11 17:49	1.00
Acenaphthylene	ND		0.0670	0.0200	mg/kg wet		08/23/11 13:21	08/23/11 17:49	1.00
Anthracene	ND		0.0670	0.00900	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Benzo (a) anthracene	ND		0.0670	0.0110	ma/ka wet		08/23/11 13:21	08/23/11 17:40	1.00
Benzo (a) pyrene	ND		0.0670	0.00800	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Benzo (b) fluoranthene	ND		0.0670	0.0380	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Benzo (g,h,i) perylene	ND		0.0670	0.00900	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Benzo (k) fluoranthene	ND		0.0670	0.0370	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Chrysene	ND		0.0670	0.0310	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Dibenz (a,h) anthracene	ND		0.0670	0.0150	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Fluoranthene	ND		0.0670	0.0110	mg/kg wet		08/23/11 13:21	08/23/11 17:49	1.00
Fluorene	ND		0.0670	0.0200	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Indeno (1,2,3-cd) pyrene	ND		0.0670	0.0310	ma/ka wet		08/23/11 13:21	08/23/11 17:49	1.00
Naphthalene	ND		0.0670	0.0140	mg/kg wet		08/23/11 13.21	08/23/11 17:49	1.00
Phenanthrene	ND		0.0670	0.0100	mg/kg wet		08/23/11 13:21	08/23/11 17:49	1.00
Pyrene	ND		0.0670	0.0230	mg/kg wet		00/23/11 13:21	08/23/11 17:49	1.00
1-Methylnaphthalene	ND		0.0670	0.0230	mg/kg wet		08/23/11 13:21	08/23/11 17:49	1.00
2-Methylnaphthalene	ND		0.0670	0.0210	mg/kg wet		08/23/11 13:21	08/23/11 17:49 08/23/11 17:49	1.00
	Blank	Blank							
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Eso
Terphenyl-d14	79		18 - 120				08/23/11 13:21	08/23/11 17:49	1.00
2-Fluorobiphenyl	69		14 - 120				08/23/11 13:21	08/23/11 17:49	1.00
Nitrobenzene-d5	65		17 - 120				08/23/11 13:21	08/23/11 17:49	1.00
Lab Sample ID: 11H5077-BS1						C	lient Sample II	): Lab Control 9	Sample
Matrix: Soil						0	ient oanpie it	Prop Ture	Sample
And the Data is a statement								Prep Type	a: iotal

#### atrix: Soll Analysis Batch: 11H50

Analysis Batch. THOUT						F	Prep Batch: 11H	5077 P
	Spike	LCS	LCS				% Rec.	
Analyte	Added	Result	Qualifier	Unit	D	% Rec	Limite	
Acenaphthene					-	70 1100	Linits	
. Is a real state of the state	1.67	1.33		ma/ka wet		80	49 120	S 0

#### **Client Sample ID: Method Blank** Prep Type: Total Prep Batch: 11H5077 P

TestAmerica Nashville 09/06/2011

TestAmerica Job ID: NUH2891

Client Sample ID: 130 Banyan -1

Prep Type: Total

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

Lab Sample ID: 11H5077-BS1 Matrix: Soil				Cli	ent	Sample	ID: Lab Control S	Sample
Analysis Batch: 11H5077						1.5	Prep Type	: Total
Analysis Daten. Thison	Paika	1.00	1.00			1.1	Prep Batch: 11H	5077_P
Analyte	Spike	LUS	LUS	10000	200		% Rec.	
Acenaphthylene	Added	Result	Qualifier	Unit	D	% Rec	Limits	_
Anthracene	1.67	1.36		mg/kg wet		82	52 - 120	
Penza (a) anthrasana	1.67	1.46		mg/kg wet		88	58 - 120	
Belizo (a) antifiacene	1.67	1.44		mg/kg wet		87	57 - 120	
Benzo (a) pyrene	1.67	1.56		mg/kg wet		94	55 - 120	
Benzo (b) fluoranthene	1.67	1.46		mg/kg wet		88	51 - 123	
Benzo (g,h,i) perylene	1.67	1.41		mg/kg wet		84	49 - 121	
Benzo (k) fluoranthene	1.67	1.38		ma/ka wet		83	42 129	
Chrysene	1.67	1.38		ma/ka wet		83	55 120	
Dibenz (a,h) anthracene	1.67	1.47		ma/ka wet		88	50 123	
Fluoranthene	1.67	1.46		ma/ka wet		87	58 - 120	
Fluorene	1.67	1.39		ma/ka wet		83	54 - 120	
Indeno (1,2,3-cd) pyrene	1.67	1.46		ma/ka wet		87	50 - 122	
Naphthalene	1.67	1.30		ma/ka wet		78	28 - 120	
Phenanthrene	1.67	1.40		ma/ka wet		84	56 - 120	
Pyrene	1.67	1.40		ma/ka wet		84	56 120	
1-Methylnaphthalene	1.67	0.995		ma/ka wet		60	36 120	
2-Methylnaphthalene	1.67	1.18		mg/kg wet		71	36 - 120	

	LCS	LCS	
Surrogate	% Recovery	Qualifier	Limits
Terphenyl-d14	86		18 - 120
2-Fluorobiphenyl	68		14 - 120
Nitrobenzene-d5	59		17 - 120

#### Lab Sample ID: 11H5077-MS1 Matrix: Soil Analysis Batch: 11H5077

Analysis Batch: 11H5077									Prep Batch: 11H5077 P
	Sample	Sample	Spike	Matrix Spike	Matrix Spi	ke			% Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits
Acenaphthene	0.393		2.09	2.13	-	mg/kg dry	Ø	83	42 - 120
Acenaphthylene	0.0962		2.09	1.83		mg/kg dry	¢	83	32 - 120
Anthracene	0.644		2.09	2.41		mg/kg dry	\$	85	10 - 200
Benzo (a) anthracene	1.69		2.09	3.44		mg/kg dry	ø	84	41 - 120
Benzo (a) pyrene	0.764		2.09	2.84		mg/kg dry	ø	99	33 - 121
Benzo (b) fluoranthene	0.872		2.09	2.49		mg/kg dry	\$	77	26 - 137
Benzo (g,h,i) perylene	0.205		2.09	2.11		mg/kg dry	ø	91	21 - 124
Benzo (k) fluoranthene	0.814		2.09	2.69		mg/kg dry	ø	90	14 - 140
Chrysene	1.34		2.09	3.11		mg/kg dry	ø	85	28 - 123
Dibenz (a,h) anthracene	0.0962		2.09	2.01		ma/ka dry	ø	91	25 - 127
Fluoranthene	4.12		2.09	5.66		ma/ka dry	ø	73	38 - 120
Fluorene	0.684		2.09	2.55		ma/ka dry	ø	89	41 - 120
Indeno (1,2,3-cd) pyrene	0.228		2.09	2.14		mg/kg dry	¢	91	25 - 123
Naphthalene	0.582		2.09	2.21		mg/kg dry	¢	78	25 - 120
Phenanthrene	3.11		2.09	4.73		mg/kg dry	ø	78	37 - 120
Pyrene	3.19		2.09	4.63		mg/kg dry	\$	69	29 - 125
1-Methylnaphthalene	1.89		2.09	3.29		ma/ka dry	\$	67	19 - 120
2-Methylnaphthalene	3.21		2.09	4.87		mg/kg dry	¢	79	11 - 120
	Matrix Spike	Matrix Spike							
Surrogate	% Recovery	Qualifier	Limits						

THE REAL PROPERTY AND ADDRESS OF THE REAL PROPERTY	USAD STORES STORES	 
Terphenyl-d14	90	18 - 120

#### TestAmerica Job ID: NUH2891

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

#### Lab Sample ID: 11H5077-MS1 Matrix: Soil Analysis Batch: 11H5077

Client Sample ID: 130 Banyan -1 Prep Type: Total Prep Batch: 11H5077\_P

Client Sample ID: 130 Banyan -1

Prep Type: Total

	Matrix Spike	Matrix Spike	
Surrogate	% Recovery	Qualifier	Limits
2-Fluorobiphenyl	71		14 - 120
Nitrobenzene-d5	62		17 - 120

#### Lab Sample ID: 11H5077-MSD1 Matrix: Soil

#### Analysis Batch: 11H5077

	Sample	Sample	Snike	Aatrix Spike Dup	Matrix Snik	e Dur			Prep Batch	1: 11H5	0//_P
Analyte	Result	Qualifier	babbA	Result	Qualifier	Unit			% Rec.		RPD
Acenaphthene	0.393		2 07	2 22	Quaimer	ma/ka day		% Rec	Limits	RPD	Limit
Acenaphthylene	0.0962		2.07	1.80		mg/kg dry	~	88	42 - 120	4	40
Anthracene	0.644		2.07	1.60		mg/kg ary	340	82	32 - 120	2	30
Benzo (a) anthracene	1 69		2.07	2.50		mg/kg ary	**	90	10 - 200	4	50
Benzo (a) pyrene	0 764		2.07	3.56		mg/kg ary	342	90	41 - 120	4	30
Benzo (b) fluoranthene	0.872		2.07	2.91		mg/kg dry	\$2 	104	33 - 121	3	33
Benzo (a, h, i) pervlene	0.205		2.07	2.65		mg/kg dry	\$	96	26 - 137	14	42
Benzo (k) fluoranthene	0.205		2.07	2.15		mg/kg dry	Q	94	21 - 124	2	32
Changes	0.814		2.07	2.31		mg/kg dry	\$	72	14 - 140	15	39
Chrysene	1.34		2.07	3.20		mg/kg dry	\$	90	28 - 123	3	34
Dibenz (a,h) anthracene	0.0962		2.07	2.02		ma/ka drv	\$	93	25 127	0.8	31
Fluoranthene	4.12		2.07	5.80		ma/ka dry	ø	81	38 120	3	25
Fluorene	0.684		2.07	2.62		ma/ka dry	¢	93	41 120	3	37
Indeno (1,2,3-cd) pyrene	0.228		2.07	2.20		ma/ka dry	¢	95	25 123	2	37
Naphthalene	0.582		2.07	2 26		ma/ka day	ö	91	25 - 125	3	32
Phenanthrene	3.11		2.07	4 94		mg/kg day	8	01	25 - 120	3	42
Pyrene	3.19		2 07	4.70		mg/kg day	21	09	37 - 120	4	32
1-Methylnaphthalene	1 89		2.07	4.70		nig/kg ary		73	29 - 125	2	40
2-Methylnaphthalena	1.00		2.07	3.51		mg/kg dry	Q	78	19 - 120	6	45
z-meurymaphunalene	3.21		2.07	5.22		mg/kg dry	\$	98	11 - 120	7	50
	Matrix Spike Dup	Matrix Spike Dup									

Surrogate	% Recovery	Qualifier	Limits
Terphenyl-d14	91		18 - 120
2-Fluorobiphenyl	73		14 - 120
Nitrobenzene-d5	65		17 - 120

## Method: SW-846 - General Chemistry Parameters

Lab Sample ID: 11H5263-DUP1							Client Sample ID: Dur	alicato
Matrix: Soil							Bron Turney	Tatal
Analysis Batch: 11H5263							Pren Batch: 11H5	263 D
	Sample	Sample	Duplicate	Duplicate			Trop Daten. This	RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
% Dry Solids	83.8		84.2	-	%			20

# **QC Association Summary**

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

TestAmerica Job ID: NUH2891

#### **GCMS Volatiles**

11H5077-MS1

NUH2891-01

NUH2891-02

11H5077-MSD1

130 Banyan -1

130 Banyan -1

130 Banyan -1

126 Banyan

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Pren Batal
11H5287-BLK1	Method Blank	Total	Soil	SW846 8260B	11H5287
11H5287-BLK2	Method Blank	Total	Soil	SW846 8260B	11H5287
11H5287-BS1	Lab Control Sample	Total	Soil	SW846 8260B	11H5287
11H5287-MS1	Matrix Spike	Total	Soil	SW846 8260B	11H5287
11H5287-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8260B	1185287
NUH2891-01	130 Banyan -1	Total	Soil	SW846 8260B	1145287
NUH2891-02	126 Banyan	Total	Soil	SW846 8260B	1145287
NUH2891-03	127 Banyan	Total	Soil	SW846 8260B	11H5287_F
Analysis Batch: U015	146				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Pren Batch
11H3847-BLK1	Method Blank	Total	Soil	SW846 8260B	11H3847 P
11H3847-BLK2	Method Blank	Total	Soil	SW846 8260B	11H3847 P
11H3847-BS1	Lab Control Sample	Total	Soil	SW846 8260B	1113047_P
11H3847-MS1	Matrix Spike	Total	Soil	SW/846 8260B	11H3847_P
11H3847-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8260B	11H3047_P
NUH2891-01 - RE1	130 Banyan -1	Total	Soil	SW846 8260B	11H3047_P
NUH2891-02 - RE1	126 Banyan	Total	Soil	SW/846 8260B	11H3047_P
NUH2891-03 - RE1	127 Banyan	Total	Soil	SW846 8260B	11H3847_P
Prep Batch: 11H3847_	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Pren Batch
11H3847-BLK1	Method Blank	Total	Soil	EPA 5035	Thep batch
11H3847-BLK2	Method Blank	Total	Soil	EPA 5035	
11H3847-BS1	Lab Control Sample	Total	Soil	EPA 5035	
11H3847-MS1	Matrix Spike	Total	Soil	EPA 5035	
11H3847-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 5035	
NUH2891-01 - RE1	130 Banyan -1	Total	Soil	EPA 5035	
NUH2891-02 - RE1	126 Banyan	Total	Soil	EPA 5035	
NUH2891-03 - RE1	127 Banyan	Total	Soil	EPA 5035	
Prep Batch: 11H5287_	P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Pren Batch
11H5287-BLK1	Method Blank	Total	Soil	EPA 5035	
11H5287-BLK2	Method Blank	Total	Soil	EPA 5035	
11H5287-BS1	Lab Control Sample	Total	Soil	EPA 5035	
11H5287-MS1	Matrix Spike	Total	Soil	EPA 5035	
11H5287-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 5035	
NUH2891-01	130 Banyan -1	Total	Soil	EPA 5035	
NUH2891-02	126 Banyan	Total	Soil	EPA 5035	
NUH2891-03	127 Banyan	Total	Soil	EPA 5035	
GCMS Semivolatile	S				_
Analysis Batch: 11H50	77		NUMBER OF		_
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prop Batab
11H5077-BLK1	Method Blank	Total	Soil		Frep Batch
		Iotal	301	SVV846 82700	1146077 0

Total

Total

Total

Total

Soil

Soil

Soil

Soil

11H5077\_P

11H5077\_P

11H5077\_P

11H5077\_P

11H5077\_P

SW846 8270D

SW846 8270D

SW846 8270D

SW846 8270D

SW846 8270D

# **QC Association Summary**

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

#### TestAmerica Job ID: NUH2891

GCMS Semivolatiles	(Continued)				
Analysis Batch: 11H507	7 (Continued)				
Lab Sample ID	Client Sample ID	Pren Type	Matrix	Mathad	
NUH2891-03	127 Banyan	Total	Soil	SW846 8270D	Prep Batch
Analysis Batch: U015082	2				1110077_P
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Mathad	
NUH2891-02 - RE1	126 Banyan	Total	Soil	SW/846 8270D	Prep Batch
NUH2891-03 - RE1	127 Banyan	Total	Soil	SW846 8270D	11H5077_P
Prep Batch: 11H5077_P					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Mathed	
11H5077-BLK1	Method Blank	Total	Soil	EPA 3550P	Prep Batch
11H5077-BS1	Lab Control Sample	Total	Soil	EPA 3550B	
11H5077-MS1	130 Banyan -1	Total	Soil	EPA 3550B	
11H5077-MSD1	130 Banyan -1	Total	Soil	EPA 3550B	
NUH2891-01	130 Banyan -1	Total	Soil	EPA 3550B	
NUH2891-02	126 Banyan	Total	Soil	EPA 3550B	
NUH2891-02 - RE1	126 Banyan	Total	Soil	EPA 3550B	
NUH2891-03	127 Banyan	Total	Soil	EPA 3550B	
NUH2891-03 - RE1	127 Banyan	Total	Soil	EPA 3550B	
Extractions					
Analysis Batch: 11H5263		1			
Lab Sample ID	Client Sample ID	Pren Type	Matrix	Mathead	
11H5263-DUP1	Duplicate	Total	Soil	SW/ 846	Prep Batch
NUH2891-01	130 Banyan -1	Total	Soil	SW-846	1145263_P
NUH2891-02	126 Banyan	Total	Soil	SW-946	11H5263_P
NUH2891-03	127 Banyan	Total	Soil	SIN/ 846	11H5263_P
and the second second second			001	300-040	11H5263_P

#### Prep Batch: 11H5263\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Pren Batch
11H5263-DUP1	Duplicate	Total	Soil	% Solids	
NUH2891-01	130 Banyan -1	Total	Soil	% Solids	
NUH2891-02	126 Banyan	Total	Soil	% Solids	
NUH2891-03	127 Banyan	Total	Soil	% Solids	

# Lab Sample ID: NUH2891-01

Matrix: Soil Percent Solids: 78.6

4

Client Sample ID: 130 Banyan -1 Date Collected: 08/15/11 13:45 Date Received: 08/20/11 08:00

Ргер Туре	Batch Type	Batch Method	Run	Dilution Factor	Batch	Prepared Or Analyzed	Applust	1.4
Total	Prep	EPA 5035		0.831	11H5287 P	08/15/11 13:45	Analyst	
Total	Analysis	SW846 8260B		1.00	U014964	08/23/11 14:00	KXC	TAL NSH
Total	Prep	EPA 5035	RE1	0.810	11H3847_P	08/15/11 13:45	AAN	TAL NSH
Total	Analysis	SW846 8260B	RE1	50.0	U015146	08/24/11 16:00	кхс	TAL NSH
Total	Prep	EPA 3550B		0.999	11H5077_P	08/23/11 13:21	JJR	TAL NSH
otal	Analysis	SW846 8270D		1.00	11H5077	08/23/11 19:12	KJP	TAL NSH
Fotal	Prep	% Solids		1.00	11H5263_P	08/23/11 12:40	RRS	TAL NSH
Fotal	Analysis	SW-846		1.00	11H5263	08/24/11 10:32	RRS	TAL NSH

#### Client Sample ID: 126 Banyan Date Collected: 08/16/11 13:45 Date Received: 08/20/11 08:00

Lab Sample ID: NUH2891-02 Matrix: Soil

Lab Sample ID: NUH2891-03

Matrix: Soil

Percent Solids: 82.1

Percent Solids: 78.3

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	EPA 5035		0.846	11H5287 P	08/16/11 13:45	AAN	
Total	Analysis	SW846 8260B		1.00	U014964	08/23/11 14:31	кхс	TAL NSH
<b>Total</b>	Prep	EPA 5035	RE1	0.829	11H3847_P	08/16/11 13:45	AAN	TAL NSH
otal	Analysis	SW846 8260B	RE1	50.0	U015146	08/24/11 16:31	KXC	TAL NSH
otal	Prep	EPA 3550B		0.991	11H5077_P	08/23/11 13:21	JJR	TAL NSH
otal	Analysis	SW846 8270D		1.00	11H5077	08/23/11 19:33	KJP	TAL NSH
otal	Prep	EPA 3550B	RE1	0.991	11H5077_P	08/23/11 13:21	JJR	TAL NSH
otal	Analysis	SW846 8270D	RE1	10.0	U015082	08/25/11 17:51	KJP	TAL NSH
otal	Prep	% Solids		1.00	11H5263 P	08/23/11 12:40	RRS	TAL NSH
otal	Analysis	SW-846		1.00	11H5263	08/24/11 10:32	RRS	TAL NSH

#### Client Sample ID: 127 Banyan Date Collected: 08/17/11 12:30 Date Received: 08/20/11 08:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	EPA 5035		1.02	11H5287 P	08/17/11 12:30	AAN	
Total	Analysis	SW846 8260B		1.00	U014964	08/23/11 20:46	KXC	TAL NSH
Total	Prep	EPA 5035	RE1	1.05	11H3847 P	08/17/11 12:30	AAN	TAL NSH
Total	Analysis	SW846 8260B	RE1	50.0	U015146	08/24/11 17:02	KXC	TAL NSH
Total	Prep	EPA 3550B		0.995	11H5077 P	08/23/11 13:21	JUR	TAL NSH
Total	Analysis	SW846 8270D		1.00	11H5077	08/23/11 19:54	KJP	TAL NSH
Total	Prep	EPA 3550B	RE1	0.995	11H5077 P	08/23/11 13:21	LIR	TAL NSH
Total	Analysis	SW846 8270D	RE1	10.0	U015082	08/25/11 18:12	KJP	TAL NSH
Total	Prep	% Solids		1.00	11H5263 P	08/23/11 12:40	RRS	TAL NEH
Total	Analysis	SW-846		1.00	11H5263	08/24/11 10:32	RRS	TAL NSH

Laboratory References:

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

TestAmerica Job ID: NUH2891

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

#### **Protocol References:**

Laboratory References:

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

# **Certification Summary**

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

#### TestAmerica Job ID: NUH2891

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Nashville	A2LA	ISO/IEC 17025		0453.07
TestAmerica Nashville	A2LA	WY UST		453.07
TestAmerica Nashville	AIHA	IHLAP		100790
TestAmerica Nashville	Alabama	State Program	4	41150
TestAmerica Nashville	Alaska	Alaska UST	10	41150
TestAmerica Nashville	Arizona	State Program	9	031-087
TestAmerica Nashville	Arkansas	State Program	6	A20473
TestAmerica Nashville	CALA	CALA	0	00-0/3/
TestAmerica Nashville	California	NELAC	9	3/44
TestAmerica Nashville	Colorado	State Program	8	NIA
TestAmerica Nashville	Connecticut	State Program	1	N/A DH 0000
TestAmerica Nashville	Florida	NELAC	4	PH-0220
TestAmerica Nashville	Illinois	NELAC		E87358
TestAmerica Nashville	lowa	State Program	7	200010
TestAmerica Nashville	Kansas	NELAC	7	131
TestAmerica Nashville	Kentucky	Kentucky LIST	1	E-10229
TestAmerica Nashville	Kentucky	State Program	4	19
TestAmerica Nashville	Louisiana	NELAC	4	90038
TestAmerica Nashville	Louisiana	NELAC	0	30613
TestAmerica Nashville	Maryland	State Program	0	LA100011
TestAmerica Nashville	Massachusetts	State Program	3	316
TestAmerica Nashville	Minnesota	NELAC	and a second second	M-1N032
TestAmerica Nashville	Mississippi	State Brogram	0	047-999-345
TestAmerica Nashville	Montana		4	N/A
TestAmerica Nashville	Nevada	State Program	8	NA
TestAmerica Nashville	New Hampshire	NELAC	9	TN00032
TestAmerica Nashville	New Jersey	NELAC		2963
TestAmerica Nashville	New York	NELAC	2	10965
TestAmerica Nashville	North Carolina	North Carolina DENR	2	11342
TestAmerica Nashville	North Dakota	State Program	4	387
TestAmerica Nashville	Ohio		8	R-146
TestAmerica Nashville	Oklaboma	State Program	5	CL0033
TestAmerica Nashville	Oregon	NELAC	0	9412
TestAmerica Nashville	Pennsylvania	NELAC	10	TN200001
TestAmerica Nashville	Rhode Island	State Brogram	3	68-00585
TestAmerica Nashville	South Carolina	State Program		LAO00268
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	Tennessee	State Program	4	84009
TestAmerica Nashville	Tevas		4	2008
TestAmerica Nashville	USDA	HEDA	6	T104704077-09-TX
TestAmerica Nashville	Utab	NELAC		S-48469
TestAmerica Nashville	Virginia	NELAC Secondary AD	8	TAN
TestAmerica Nashville	Virginia	State Brosser	3	460152
TestAmerica Nashville	Washington	State Program	3	00323
TestAmerica Nashville	West Virginia	State Program	10	C789
	west virgilia	west virginia DEP	3	219

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



09/06/2011

#### ATTACHMENT A

# **UST Certificate of Disposal**

# CONTRACTOR

Small Business Group, Inc. 10179 Highway 78 Ladson, SC 29456

TEL (843) 879-0403 FAX (843) 879-0401

# TANK ID & LOCATION

UST 126Banyan; 126 Banyan Drive, Laurel Bay Housing Area, MCAS Beaufort, S.C.

# **DISPOSAL LOCATION**

Coastal Auto Salvage Co., Inc. 130 Laurel Bay Road Beaufort, S.C. 29906

# TYPE OF TANK SIZE (GAL)

Steel

280

# **CLEANING/DISPOSAL METHOD**

The tank and piping were unearthed, cut open, cleaned with a pressure washer, cut into sections, and recycled.

# DISPOSAL CERTIFICATION

I certify that the above tank, piping and equipment has been properly cleaned and disposed of.

<u>V. l. L. Dee 1 10/10/11</u> (Name) (Date)

Appendix C Laboratory Analytical Report - Groundwater



Volatile	Organic	Compounds	by	GC/MS
		••••••••••••••••••••••••••••••••••••••	,	

Client: AECOM - Resoluti	ion Consultants						Laboratory ID:	QK05015	-003		
Description: BEALB126TW01W	/G20151104						Matrix:	Aqueous			
Date Sampled:11/04/2015 1135											
Date Received: 11/05/2015											
RunPrep Method15030B	Analytical Method 8260B	Dilution 1	<b>Analys</b> 11/11/2	<b>is Date Analyst</b> 015 1204 ALL	Prep	Date	<b>Batch</b> 89321				
Parameter		C Num	CAS ber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71-4	3-2	8260B	0.45	U	5.0	0.45	0.21	ug/L	1
Ethylbenzene		100-4	1-4	8260B	0.45	J	5.0	0.51	0.21	ug/L	1
Naphthalene		91-2	0-3	8260B	4.0	J	5.0	0.96	0.14	ug/L	1
Toluene		108-8	8-3	8260B	0.48	U	5.0	0.48	0.24	ug/L	1
Xylenes (total)		1330-2	0-7	8260B	0.57	U	5.0	0.57	0.32	ug/L	1
Surrogate	Q % I	Run 1 A Recovery	ccepta Limi	nce ts							
Bromofluorobenzene		92	75-12	0							
1,2-Dichloroethane-d4		93	70-12	0							
Toluene-d8		95	85-12	0							
Dibromofluoromethane		97	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 failure

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

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

8270D (SIM)

0.040

0.080

U

U

#### Client: AECOM - Resolution Consultants

Description: BEALB126TW01WG20151104

Laboratory ID: QK05015-003 Matrix: Aqueous

0.20

0.20

DL

0.019

0.019

0.024

0.021

0.040

0.040

0.080

Units Run

1

1

1

1

1

ug/L

ug/L

ug/L

ug/L

ug/L

Date Sampled:11/04/2015 1135

Chrysene

Run	Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep	Date	Batch	
1	3520C	8270D (SIM)	1	11/17	/2015 1522 RBH	11/10/2	2015 14	44 89221	
				CAS	Analytical				
Para	meter		Nun	nber	Method	Result	Q	LOQ	LOD
Benz	o(a)anthracene		56-	55-3	8270D (SIM)	0.040	U	0.20	0.040
Benz	o(b)fluoranthene		205-	99-2	8270D (SIM)	0.040	U	0.20	0.040
Bonz	o(k)fluoranthene		207-	0.80	8270D (SIM)	0.040	П	0.20	0 040

218-01-9

Dibenzo(a,h)anthracene		53-70	)-3	8270D (SIM)
Surrogate	Q	Run 1 Ao % Recovery	ccepta Lim	ance lits
2-Methylnaphthalene-d10		79	15-13	39
Fluoranthene-d10		76	23-1	54

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 Appendix D Regulatory Correspondence





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

July 1, 2015

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

RE: 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 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 <u>et seq.</u>, 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,

that M. They

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

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



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

Attachment to:

Krieg to Drawdy Subject: IGWA Dated 7/1/2015

# Laurel Bay Underground Storage Tank Assessment Reports for: (97 addresses/110 tanks)

118 Banyan	343 Ash Tank 2
126 Banyan	344 Ash Tank 2
127 Banyan	347 Ash Tank 2
130 Banyan Tank 1	378 Aspen Tank 2
141 Laurel Bay	379 Aspen
151 Laurel Bay	382 Aspen Tank 1
224 Cypress	382 Aspen Tank 2
227 Cypress	394 Acorn Tank 2
256 Beech Tank 2	400 Elderberry
257 Beech Tank 1	432 Elderberry
257 Beech Tank 2	436 Elderberry
264 Beech	473 Dogwood Tank 2
265 Beech Tank 2	482 Laurel Bay
265 Beech Tank 3	517 Laurel Bay
275 Birch	586 Aster
277 Birch Tank 1	632 Dahlia
285 Birch	639 Dahlia Tank 2
292 Birch Tank 3	643 Dahlia Tank 1
297 Birch	644 Dahlia Tank 1
301 Ash	644 Dahlia Tank 2
306 Ash	646 Dahlia Tank 1
310 Ash Tank 1	646 Dahlia Tank 2
313 Ash	665 Camellia
315 Ash Tank 2	699 Abelia
316 Ash	744 Blue Bell
319 Ash	745 Blue Bell Tank 1
320 Ash	747 Blue Bell Tank 1
321 Ash	747 Blue Bell Tank 2
329 Ash	747 Blue Bell Tank 3
330 Ash Tank 2	749 Blue Bell Tank 1
331 Ash	749 Blue Bell Tank 2
332 Ash	751 Blue Bell
333 Ash	762 Althea
335 Ash Tank 1	765 Althea Tank 2
335 Ash Tank 2	766 Althea Tank 4
341 Ash	767 Althea Tank 1
342 Ash Tank 1	768 Althea Tank 2
342 Ash Tank 2	768 Althea Tank 3

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL 2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.gov Laurel Bay Underground Storage Tank Assessment Reports for: (98 addresses/110 tanks) cont.

768 Althea Tank 4	1067 Gardenia
769 Althea Tank 1	1077 Heather
769 Althea Tank 2	1081 Heather
775 Althea	1101 Iris Tank 2
819 Azalea	1104 Iris
840 Azalea	1105 Iris Tank 2
878 Cobia	1124 Iris Tank 2
891 Cobia	1142 Iris Tank 2
913 Barracuda	1146 Iris Tank 2
916 Barracuda	1218 Cardinal
923 Albacore	1240 Dove
1004 Bobwhite	1266 Dove
1022 Foxglove	1292 Eagle
1031 Foxglove	1299 Eagle Tank 1
1034 Foxglove Tank 2	1302 Eagle
1061 Gardenia Tank 3	1336 Albatross
1064 Gardenia	1351 Cardinal



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

June 8, 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-November and December 2015 Laurel Bay Military Housing Area Multiple Properties Dated April 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 attached addresses on May 2, 2016. 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 15 stated addresses. For the remaining 80 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,

LISTS

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-November and December 2015 Specific Property Recommendations Dated June 8, 2016

# Draft Final Initial Groundwater Investigation Report for (95 addresses)

Permanent Monitoring Well Investigation recommendation (15 addresses)				
130 Banyan Drive	473 Dogwood Drive			
256 Beech Street	747 Blue Bell Lane			
285 Birch Drive	749 Blue Bell Lane			
292 Birch Drive	775 Althea Street			
330 Ash Street	1034 Foxglove Street			
331 Ash Street	1104 Iris Lane			
335 Ash Street	1124 Iris Lane	1		
342 Ash Street		-		
		-		
		-		
		-		
		-		
		-		
and the second se				
		-		
		_		

No Further Action recommendation (80 addresses)	
118 Banyan Drive	644 Dahlia Drive
126 Banyan Drive	646 Dahlia Drive
127 Banyan Drive	665 Camellia Drive
141 Laurel Bay Blvd	699 Abelia Street
151 Laurel Bay Blvd	744 Blue Bell Lane
224 Cypress Street	745 Blue Bell Lane
227 Cypress Street	751 Blue Bell Lane
257 Beech Street	762 Althea Street
264 Beech Street	765 Althea Street
265 Beech Street	766 Althea Street
275 Birch Drive	767 Althea Street
277 Birch Drive	768 Althea Street
297 Birch Drive	769 Althea Street
301 Ash Street	819 Azalea Drive
306 Ash Street	840 Azalea Drive
310 Ash Street	878 Cobia Drive
313 Ash Street	891 Cobia Drive
315 Ash Street	913 Barracuda Drive
316 Ash Street	916 Barracuda Drive
319 Ash Street	923 Wren Lane
320 Ash Street	1004 Bobwhite Drive
321 Ash Street	1022 Foxglove Street
329 Ash Street	1031 Foxglove Street
332 Ash Street	1061 Gardenia Drive
333 Ash Street	1064 Gardenia Drive
341 Ash Street	1067 Gardenia Drive
347 Ash Street	1077 Heather Street
378 Aspen Street	1081 Heather Street
379 Aspen Street	1101 Iris Lane
382 Aspen Street	1105 Iris Lane
394 Acorn Street	1142 Iris Lane
400 Elderberry Drive	1146 Iris Lane
432 Elderberry Drive	1218 Cardinal Lane
436 Elderberry Drive	1240 Dove Lane
482 Laurel Bay Blvd	1266 Dove Lane
517 Laurel Bay Blvd	1292 Eagle Lane
586 Aster Street	1299 Eagle Lane
632 Dahlia Drive	1302 Eagle Lane
639 Dahlia Drive	1336 Albatross Drive
643 Dahlia Drive	1351 Cardinal Lane

Attachment to: Petrus to Drawdy Subject: Draft Final Initial Groundwater Investigation Report-November and December 2015 Specific Property Recommendations Dated June 8, 2016, Page 2