SUMMARY REPORT
331 WEST CARDINAL LANE (FORMERLY 1352 WEST CARDINAL LANE)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC

Revision: 0
Prepared for:

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

and

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

JUNE 202**1**

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Prepared by:

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

Contract Number: N62470-14-D-9016
CTO WE52
JUNE 202**1**

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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 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

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

1.1 Background Information

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area

is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.

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

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential heating oil 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, February 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, February 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, April 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 IGWA sampling process utilizes temporary groundwater sampling points that are typically installed and sampled within the same day. The intent of the sampling point is to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations may require additional delineation of COPCs in groundwater. These sampling points are not subjected to the same installation standards as permanent monitoring wells and, as such; the data obtained from the IGWA wells can sometimes be biased high and is considered preliminary data. In order to confirm the presence of any impact to groundwater, a permanent well is installed where IGWA sampling has indicated the presence of COPCs is in excess of the SCDHEC RBSLs for groundwater. If COPCs are found to be present in the permanent well, additional permanent wells are installed to delineate the extent of impact to groundwater and a sampling program is established. Groundwater analytical results from permanent wells 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 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane). The sampling activities at 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) comprised a soil investigation, IGWA sampling and installation and sampling of a permanent well. Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1352 Cardinal Lane* (MCAS Beaufort, 2014) and the *SCDHEC UST Assessment Report – 1352 Cardinal Lane* (MCAS Beaufort, 2015). The UST Assessment Reports are provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – May and June 2015* (Resolution Consultants, 2015). The laboratory

report that includes the pertinent IGWA analytical results for this site is presented in Appendix C. Details regarding the permanent well installation and sampling activities at this site are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018). The laboratory report that includes the pertinent groundwater analytical results for this site is presented in Appendix D.

2.1 UST Removal and Soil Sampling

In January 2014 and January 2015, two 280 gallon heating oil USTs were removed from the rear patio area at 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane). Tank 1 was removed on January 22, 2014. Tank 2 was removed on January 26, 2015. The former UST locations are indicated on the figures of the UST Assessment Reports (Appendix B). The USTs were 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 removals. According to the UST Assessment Reports (Appendix B), the depths to the bases of the USTs were 4'10" bgs (Tank 1) and 5'2" bgs (Tank 2) and a single soil sample was collected for each at that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removals, a soil sample was collected from the bases of the excavations 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 reports are included in the UST Assessment Reports presented in Appendix B. The laboratory analytical data reports 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 locations (Tanks 1 and 2) 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 the former UST locations (Tanks 1 and 2) at 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) were greater than the SCDHEC RBSLs, which indicated further

investigation was required. In letters dated October 1, 2014 and August 1, 2016, SCDHEC requested IGWAs for 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) to determine if the groundwater was impacted by petroleum COPCs. The letter from August 1, 2016 acknowledged that an IGWA well had already been installed and as such a second IGWA well was not required. SCDHEC's request letters are provided in Appendix E.

2.3 Initial Groundwater Sampling

On June 24, 2015, a temporary monitoring well was installed at 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil USTs (Tanks 1 and 2). The former UST locations are indicated on the figures of the UST Assessment Reports (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – May and June 2015* (Resolution Consultants, 2015).

The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring well. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71.H-I (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – May and June 2015* (Resolution Consultants, 2015).

2.4 Initial 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 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) were greater than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated further investigation was required. In a letter dated February 22, 2016, SCDHEC requested a permanent well be installed for 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) to confirm the impact to groundwater detected in the temporary well sample. SCDHEC's request letter is provided in Appendix E.

2.5 Permanent Well Groundwater Sampling

On November 30, 2017, a permanent monitoring well was installed at 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil USTs (Tanks 1 and 2) and the IGWA sample location. The former UST locations are indicated on the figures of the UST Assessment Reports (Appendix B). Further details are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018).

The sampling strategy for this phase of the investigation required a one-time sampling event of the permanent 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. Field forms are provided in the *Groundwater Assessment Report – November and December 2017* (Resolution Consultants, 2018).

2.6 Permanent Well Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 3. A copy of the laboratory analytical data report is included in Appendix D.

The groundwater results collected from 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 3), which indicated that the groundwater was not impacted by COPCs associated with the former USTs at concentrations that present a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for groundwater collected from the permanent monitoring well, SCDHEC made the determination that NFA was required for 331 West Cardinal Lane (Formerly 1352 West Cardinal Lane). This NFA determination was obtained in a letter dated June 18, 2018. SCDHEC's NFA letter is provided in Appendix E.

4.0 REFERENCES

Marine Corps Air Station Beaufort, 2014. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1352 Cardinal Lane, Laurel Bay Military Housing Area*, September 2014.

Marine Corps Air Station Beaufort, 2015. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1352 Cardinal Lane, Laurel Bay Military Housing Area*, July 2015.

Resolution Consultants, 2015. *Initial Groundwater Investigation Report – May and June 2015 for Laurel Bay Military Housing Area, Multiple Properties, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, October 2015.

Resolution Consultants, 2018. *Groundwater Assessment Report – November and December 2017 for Laurel Bay Military Housing Area, Multiple Properties, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, March 2018.

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
331 West Cardinal Lane (Formerly 1352 West Cardinal Lane)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs [1]	Results Samples Collected 01/22/14 and 01/26/15	
		1352 - 1 Cardinal 01/22/14	1352 Cardinal - 2 01/26/15
Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)			
Benzene	0.003	ND	ND
Ethylbenzene	1.15	0.0303	0.116
Naphthalene	0.036	1.18	2.95
Toluene	0.627	ND	0.00102
Xylenes, Total	13.01	0.0189	0.118
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (mg/kg)			
Benzo(a)anthracene	0.66	ND	ND
Benzo(b)fluoranthene	0.66	ND	ND
Benzo(k)fluoranthene	0.66	ND	ND
Chrysene	0.66	ND	ND
Dibenz(a,h)anthracene	0.66	ND	ND

Notes:
[1] South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 2.0 (SCDHEC, April 2013).
Bold font indicates the analyte was detected.
Bold font and shading indicates the concentration exceeds the SCDHEC RBSL.
EPA - United States Environmental Protection Agency
mg/kg - milligrams per kilogram
ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The soil laboratory report is provided in Appendix B.
RBSL - Risk-Based Screening Level
SCDHEC - South Carolina Department Of Health and Environmental Control

Table 2
Laboratory Analytical Results - Initial Groundwater
331 West Cardinal Lane (Formerly 1352 West Cardinal Lane)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs [1]	Site-Specific Groundwater VISLs (µg/L)[2]	Results Sample Collected 06/25/15
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)			
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	**40**
Naphthalene	25	29.33	**300**
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	**31**
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

[1] South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0 (SCDHEC, May 2015).

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

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - not applicable

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Table 3
Laboratory Analytical Results - Permanent Well Groundwater
331 West Cardinal Lane (Formerly 1352 West Cardinal Lane)
Laurel Bay Military Housing Area
Marine Corps Air Station Beaufort
Beaufort, South Carolina

Constituent	SCDHEC RBSLs [1]	Site-Specific Groundwater VISLs (µg/L)[2]	Results Sample Collected 12/08/17
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)			
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	**1.4**
Naphthalene	25	29.33	**12**
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	**0.47**
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

Notes:

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

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

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - not applicable

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

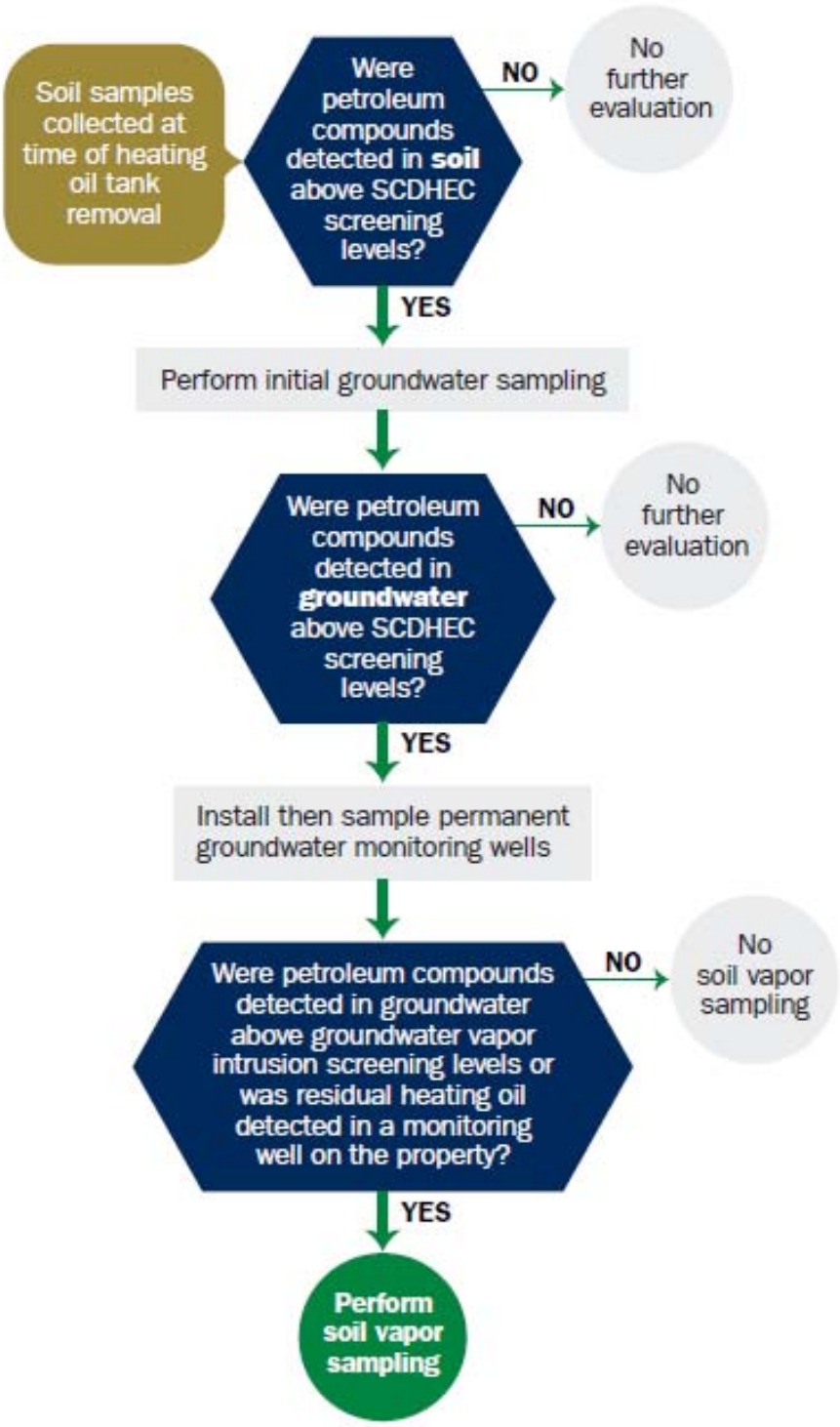
VISL - Vapor Intrusion Screening Level

Appendix A

Multi-Media Selection Process for LBMH

CDM - AECOM

Multimedia Joint Venture



Appendix A - Multi-Media Selection Process for LBMH

Appendix B
UST Assessment Reports

CDM - AECOM
Multimedia Joint Venture

Rec'd 9/11/14

Attachment 1

South Carolina Department of Health and Environmental Control (SCDHEC)

Underground Storage Tank (UST) Assessment Report

Date Received State Use Only

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

I. OWNERSHIP OF UST (S)

MCAS Beaufort, Commanding Officer Attn: NREAO (Craig Ehde)
Owner Name (Corporation, Individual, Public Agency, Other)

P.O. Box 55001
Mailing Address

Beaufort,	South Carolina	29904-5001
City	State	Zip Code

843	228-7317	Craig Ehde
Area Code	Telephone Number	Contact Person

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #
Laurel Bay Military Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Company Site Identifier

1352 Cardinal Lane, Laurel Bay Military Housing Area
Street Address or State Road (as applicable)

Beaufort,	Beaufort
City	County

Attachment 2

III. INSURANCE INFORMATION

Insurance Statement

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

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

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

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

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

IV. REQUEST FOR SUPERB FUNDING

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

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

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

_____
Name (Type or print.)

_____
Signature

To be completed by Notary Public:

Sworn before me this _____ day of_____, 20____

_____
(Name)

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

VI. UST INFORMATION

A.	Product...(ex. Gas, Kerosene).....	1352-1 Cardinal	
B.	Capacity..(ex. 1k, 2k).....	Heating oil	
C.	Age.....	280 gal	
D.	Construction Material..(ex. Steel, FRP).....	Late 1950s	
E.	Month/Year of Last Use.....	Steel	
F.	Depth (ft.) To Base of Tank.....	Mid 80s	
G.	Spill Prevention Equipment Y/N.....	4'10"	
H.	Overfill Prevention Equipment Y/N.....	No	
I.	Method of Closure Removed/Filled.....	No	
J.	Date Tanks Removed/Filled.....	Removed	
K.	Visible Corrosion or Pitting Y/N.....	1/22/2014	
L.	Visible Holes Y/N.....	Yes	
		Yes	

M. Method of disposal for any USTs removed from the ground (attach disposal manifests)

UST 1352-1Cardinal was removed from the ground and disposed at a Subtitle "D" landfill. See Attachment "A".

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)

UST 1352-1Cardinal was previously filled with sand by others.

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

Corrosion, pitting and holes were found throughout the tank.

VII. PIPING INFORMATION

A.	Construction Material..(ex. Steel, FRP).....	1352-1 Cardinal	
B.	Distance from UST to Dispenser.....	Steel & Copper	
C.	Number of Dispensers.....	N/A	
D.	Type of System Pressure or Suction.....	N/A	
E.	Was Piping Removed from the Ground? Y/N	Suction	
F.	Visible Corrosion or Pitting Y/N.....	No	
G.	Visible Holes Y/N.....	Yes	
H.	Age.....	No	
		Late 1950s	

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each piping run.

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

VIII. BRIEF SITE DESCRIPTION AND HISTORY

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

IX. SITE CONDITIONS

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

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1352-1 Cardinal	Excav at fill end	Soil	Sandy	4'10"	1/22/14 1445 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

XI. SAMPLING METHODOLOGY

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

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

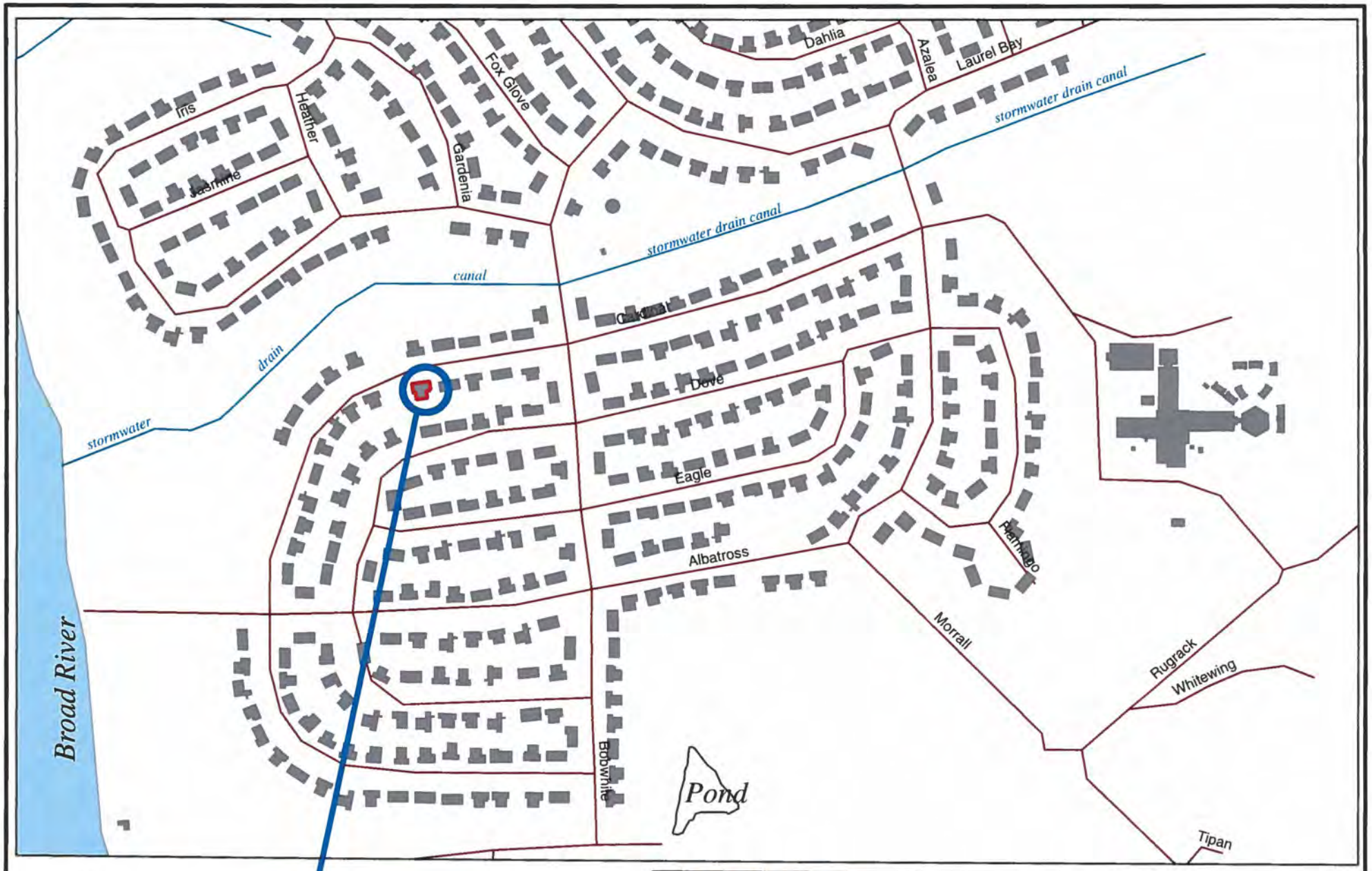
XII. RECEPTORS

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

XIII. SITE MAP

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

(Attach Site Map Here)

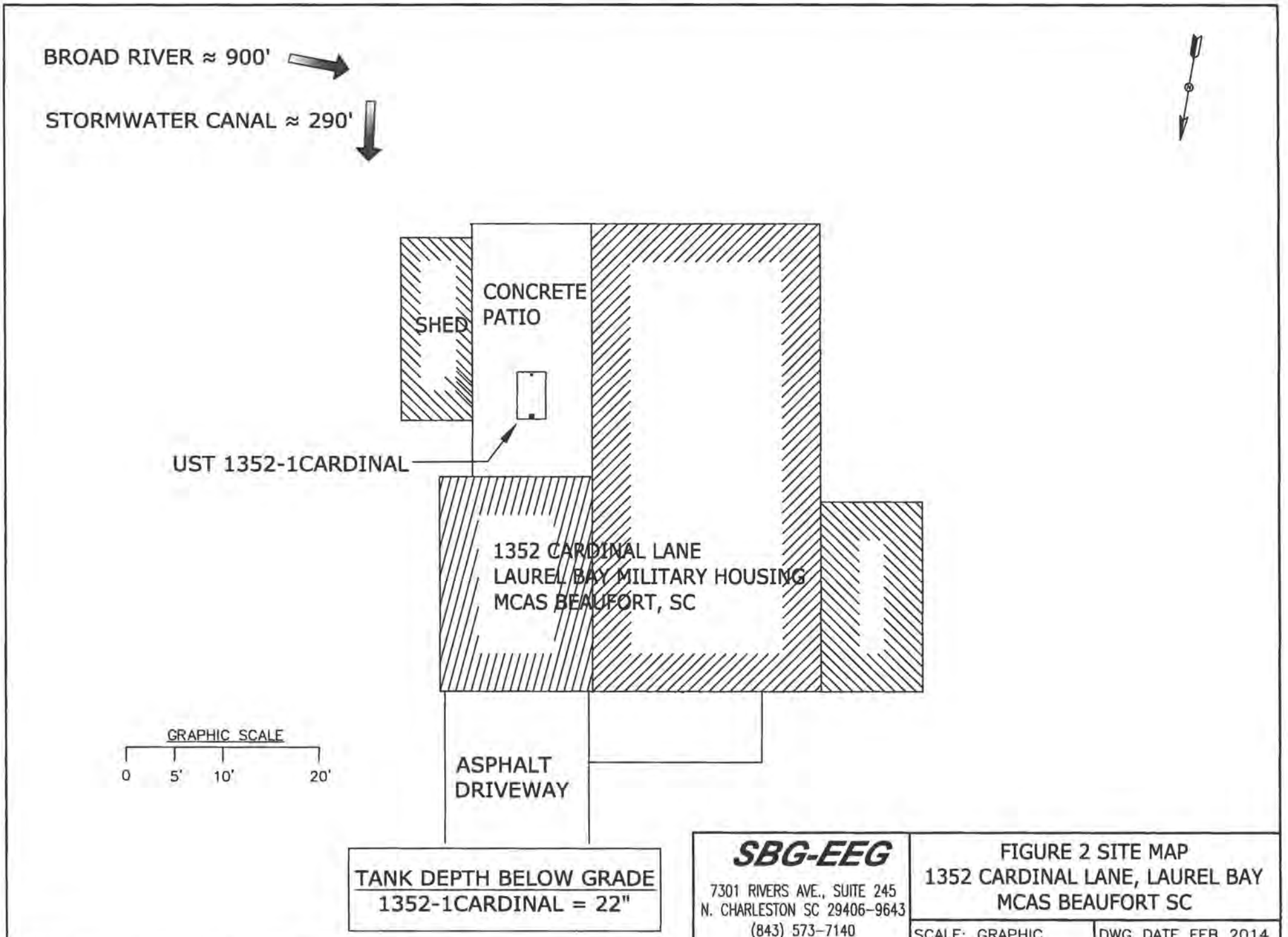


SBG-EEG, Inc.
7301 Rivers Ave., Suite 245
N. Charleston SC 29406-9643
Ph. (843) 573-7140

Drawn By: L. DiAsio

Dwg Date: Feb 2014

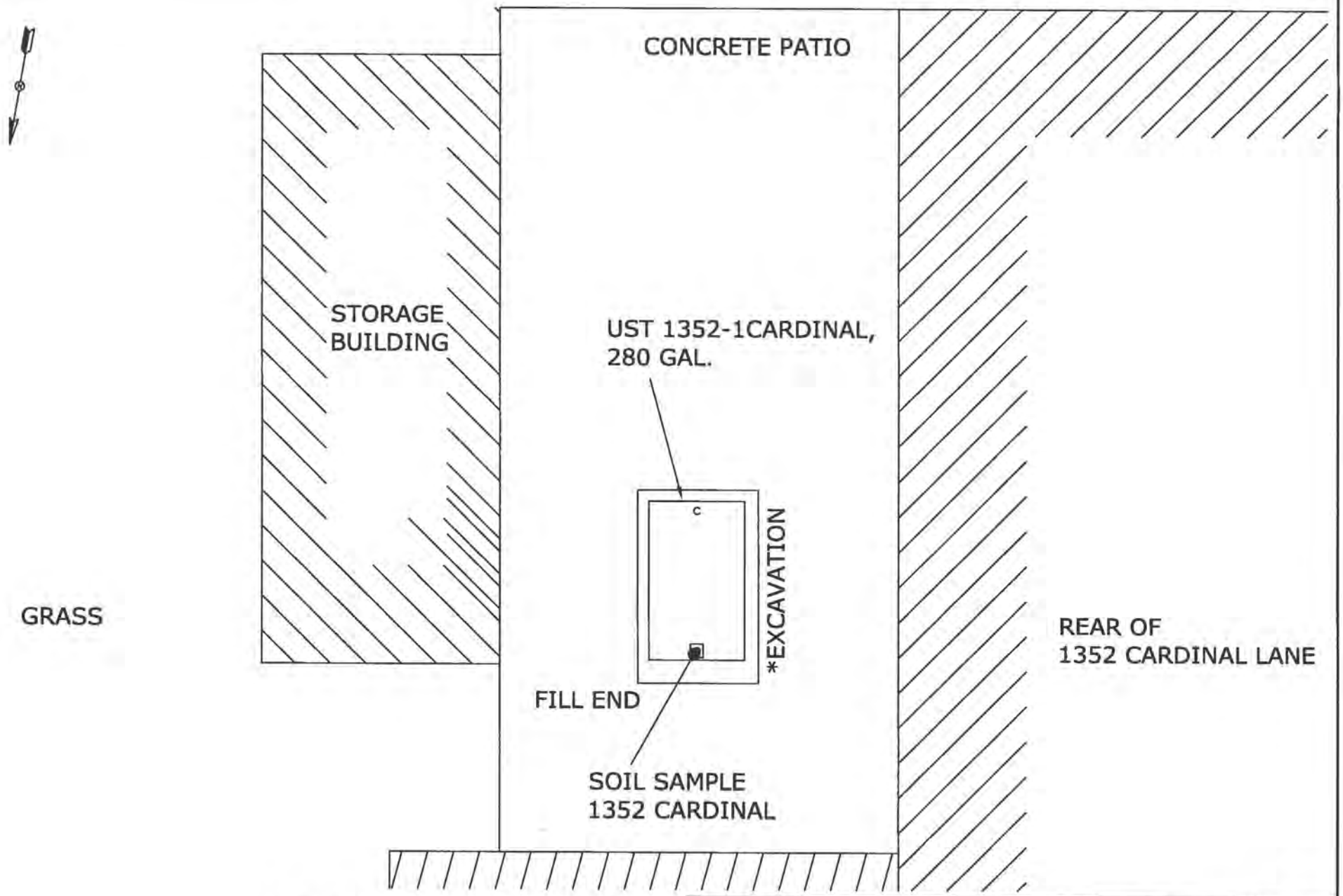
FIGURE 1: LOCATION MAP
1352 CARDINAL LANE
LAUREL BAY, BEAUFORT SC



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

FIGURE 2 SITE MAP
1352 CARDINAL LANE, LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE FEB 2014



GRAPHIC SCALE
0 5'

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

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

FIGURE 3 UST SAMPLE LOCATIONS
1352 CARDINAL LANE, LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE FEB 2014

Picture 1: Location of UST 1352-1 Cardinal.

Picture 2: UST 1352-1 Cardinal excavation.

XIV. SUMMARY OF ANALYSIS RESULTS

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

CoC UST	1352-1Cardinal					
Benzene	ND					
Toluene	ND					
Ethylbenzene	0.0303 mg/kg					
Xylenes	0.0189 mg/kg					
Naphthalene	1.18 mg/kg					
Benzo (a) anthracene	ND					
Benzo (b) fluoranthene	ND					
Benzo (k) fluoranthene	ND					
Chrysene	ND					
Dibenz (a, h) anthracene	ND					
TPH (EPA 3550)						

CoC								
Benzene								
Toluene								
Ethylbenzene								
Xylenes								
Naphthalene								
Benzo (a) anthracene								
Benzo (b) fluoranthene								
Benzo (k) fluoranthene								
Chrysene								
Dibenz (a, h) anthracene								
TPH (EPA 3550)								

SUMMARY OF ANALYSIS RESULTS (cont'd)

Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

XV. ANALYTICAL RESULTS

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

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 490-45557-1
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:
2/6/2014 2:42:49 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 490-45557-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-45557-1	340 Ash-2	Soil	01/21/14 13:15	01/31/14 08:15
490-45557-2	1352 Cardinal	Soil	01/22/14 14:45	01/31/14 08:15
490-45557-3	509 Laurel Bay	Soil	01/23/14 12:15	01/31/14 08:15
490-45557-4	1463 Cardinal	Soil	01/27/14 15:00	01/31/14 08:15

Case Narrative

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

TestAmerica Job ID: 490-45557-1

Job ID: 490-45557-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-45557-1

Comments
No additional comments.

Receipt
The samples were received on 1/31/2014 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4° C.

GC/MS VOA
Method(s) 8260B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): 1352 Cardinal (490-45557-2).

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1352 Cardinal (490-45557-2). 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 batch 138971. See LCS/LCSD.

Method(s) 8260B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample(s): 1463 Cardinal (490-45557-4).

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1463 Cardinal (490-45557-4). 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 batch 139335. See LCS/LCSD.

No other analytical or quality issues were noted.

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

Organic Prep
Method(s) Moisture: The sample duplicate precision for the following sample associated with batch 139043 was outside control limits: (490-45545-1 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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: 490-45557-1

Client Sample ID: 340 Ash-2
Date Collected: 01/21/14 13:15
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-1
Matrix: Soil
Percent Solids: 70.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00125**	**J**	0.00263	0.000881	mg/Kg		02/01/14 10:44	02/01/14 14:49	1
Ethylbenzene	ND		0.00263	0.000881	mg/Kg		02/01/14 10:44	02/01/14 14:49	1
Naphthalene	**0.0114**		0.00657	0.00223	mg/Kg		02/01/14 10:44	02/01/14 14:49	1
Toluene	ND		0.00263	0.000973	mg/Kg		02/01/14 10:44	02/01/14 14:49	1
Xylenes, Total	**0.0104**		0.00657	0.000881	mg/Kg		02/01/14 10:44	02/01/14 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*	*02/01/14 10:44*	*02/01/14 14:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*02/01/14 10:44*	*02/01/14 14:49*	*1*
Dibromofluoromethane (Surr)	*116*		*70 - 130*	*02/01/14 10:44*	*02/01/14 14:49*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*	*02/01/14 10:44*	*02/01/14 14:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0938	0.0140	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Acenaphthylene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Anthracene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Benzo[a]anthracene	ND		0.0938	0.0210	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Benzo[a]pyrene	ND		0.0938	0.0168	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Benzo[b]fluoranthene	ND		0.0938	0.0168	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Benzo[g,h,i]perylene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Benzo[k]fluoranthene	ND		0.0938	0.0196	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
1-Methylnaphthalene	**0.113**		0.0938	0.0196	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Pyrene	ND		0.0938	0.0168	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Phenanthrene	**0.0562**	**J**	0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Chrysene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Dibenz(a,h)anthracene	ND		0.0938	0.00980	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Fluoranthene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Fluorene	ND		0.0938	0.0168	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Indeno[1,2,3-cd]pyrene	ND		0.0938	0.0140	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
Naphthalene	ND		0.0938	0.0126	mg/Kg		02/03/14 10:21	02/03/14 18:49	1
2-Methylnaphthalene	**0.0579**	**J**	0.0938	0.0224	mg/Kg		02/03/14 10:21	02/03/14 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*66*		*29 - 120*	*02/03/14 10:21*	*02/03/14 18:49*	*1*
Terphenyl-d14 (Surr)	*76*		*13 - 120*	*02/03/14 10:21*	*02/03/14 18:49*	*1*
Nitrobenzene-d5 (Surr)	*59*		*27 - 120*	*02/03/14 10:21*	*02/03/14 18:49*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**70**		0.10	0.10	%			02/01/14 14:15	1

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

TestAmerica Job ID: 490-45557-1

Client Sample ID: 1352 Cardinal
Date Collected: 01/22/14 14:45
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-2
Matrix: Soil
Percent Solids: 85.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00211	0.000707	mg/Kg		02/01/14 10:44	02/01/14 15:18	1
Ethylbenzene	**0.0303**		0.00211	0.000707	mg/Kg		02/01/14 10:44	02/01/14 15:18	1
Naphthalene	**1.18**		0.310	0.106	mg/Kg		02/01/14 10:39	02/01/14 20:41	1
Toluene	ND		0.00211	0.000781	mg/Kg		02/01/14 10:44	02/01/14 15:18	1
Xylenes, Total	**0.0189**		0.00527	0.000707	mg/Kg		02/01/14 10:44	02/01/14 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*72*		*70 - 130*	*02/01/14 10:39*	*02/01/14 20:41*	*1*
4-Bromofluorobenzene (Surr)	*426*	**X*	*70 - 130*	*02/01/14 10:44*	*02/01/14 15:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/01/14 10:39*	*02/01/14 20:41*	*1*
Dibromofluoromethane (Surr)	*118*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:18*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*02/01/14 10:39*	*02/01/14 20:41*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:18*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*	*02/01/14 10:39*	*02/01/14 20:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.331	0.0494	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Acenaphthylene	ND		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Anthracene	**0.317**	**J**	0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Benzo[a]anthracene	ND		0.331	0.0742	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Benzo[a]pyrene	ND		0.331	0.0593	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Benzo[b]fluoranthene	ND		0.331	0.0593	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Benzo[g,h,i]perylene	ND		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Benzo[k]fluoranthene	ND		0.331	0.0692	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
1-Methylnaphthalene	**6.25**		0.331	0.0692	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Pyrene	**0.219**	**J**	0.331	0.0593	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Phenanthrene	**2.35**		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Chrysene	ND		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Dibenz(a,h)anthracene	ND		0.331	0.0346	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Fluoranthene	ND		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Fluorene	ND		0.331	0.0593	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Indeno[1,2,3-cd]pyrene	ND		0.331	0.0494	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
Naphthalene	**1.15**		0.331	0.0445	mg/Kg		02/03/14 10:21	02/04/14 18:39	5
2-Methylnaphthalene	**8.46**		0.331	0.0791	mg/Kg		02/03/14 10:21	02/04/14 18:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*97*		*29 - 120*	*02/03/14 10:21*	*02/04/14 18:39*	*5*
Terphenyl-d14 (Surr)	*87*		*13 - 120*	*02/03/14 10:21*	*02/04/14 18:39*	*5*
Nitrobenzene-d5 (Surr)	*79*		*27 - 120*	*02/03/14 10:21*	*02/04/14 18:39*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86		0.10	0.10	%			02/01/14 14:15	1

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

TestAmerica Job ID: 490-45557-1

Client Sample ID: 509 Laurel Bay
Date Collected: 01/23/14 12:15
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-3
Matrix: Soil
Percent Solids: 93.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00246	0.000825	mg/Kg		02/01/14 10:44	02/01/14 15:47	1
Ethylbenzene	ND		0.00246	0.000825	mg/Kg		02/01/14 10:44	02/01/14 15:47	1
Naphthalene	**0.00448**	**J**	0.00616	0.00209	mg/Kg		02/01/14 10:44	02/01/14 15:47	1
Toluene	ND		0.00246	0.000911	mg/Kg		02/01/14 10:44	02/01/14 15:47	1
Xylenes, Total	ND		0.00616	0.000825	mg/Kg		02/01/14 10:44	02/01/14 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:47*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:47*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:47*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*	*02/01/14 10:44*	*02/01/14 15:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0668	0.00997	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Acenaphthylene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Anthracene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Benzo[a]anthracene	ND		0.0668	0.0150	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Benzo[a]pyrene	ND		0.0668	0.0120	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Benzo[b]fluoranthene	ND		0.0668	0.0120	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Benzo[g,h,i]perylene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Benzo[k]fluoranthene	ND		0.0668	0.0140	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
1-Methylnaphthalene	ND		0.0668	0.0140	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Pyrene	ND		0.0668	0.0120	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Phenanthrene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Chrysene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Dibenz(a,h)anthracene	ND		0.0668	0.00698	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Fluoranthene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Fluorene	ND		0.0668	0.0120	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Indeno[1,2,3-cd]pyrene	ND		0.0668	0.00997	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
Naphthalene	ND		0.0668	0.00897	mg/Kg		02/03/14 10:21	02/03/14 20:26	1
2-Methylnaphthalene	ND		0.0668	0.0160	mg/Kg		02/03/14 10:21	02/03/14 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*29 - 120*	*02/03/14 10:21*	*02/03/14 20:26*	*1*
Terphenyl-d14 (Surr)	*74*		*13 - 120*	*02/03/14 10:21*	*02/03/14 20:26*	*1*
Nitrobenzene-d5 (Surr)	*64*		*27 - 120*	*02/03/14 10:21*	*02/03/14 20:26*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93		0.10	0.10	%			02/01/14 14:15	1

Client Sample Results

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

TestAmerica Job ID: 490-45557-1

Client Sample ID: 1463 Cardinal

Date Collected: 01/27/14 15:00
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-4

Matrix: Soil
Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00241	0.000809	mg/Kg		02/01/14 10:44	02/04/14 14:28	1
Ethylbenzene	ND		0.00241	0.000809	mg/Kg		02/01/14 10:44	02/04/14 14:28	1
Naphthalene	**0.624**		0.361	0.123	mg/Kg		02/01/14 10:39	02/04/14 19:11	1
Toluene	ND		0.00241	0.000893	mg/Kg		02/01/14 10:44	02/04/14 14:28	1
Xylenes, Total	**0.000872**	J	0.00604	0.000809	mg/Kg		02/01/14 10:44	02/04/14 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*	*02/01/14 10:44*	*02/04/14 14:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*	*02/01/14 10:39*	*02/04/14 19:11*	*1*
4-Bromofluorobenzene (Surr)	*175*	**X*	*70 - 130*	*02/01/14 10:44*	*02/04/14 14:28*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/01/14 10:39*	*02/04/14 19:11*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/01/14 10:44*	*02/04/14 14:28*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*	*02/01/14 10:39*	*02/04/14 19:11*	*1*
Toluene-d8 (Surr)	*139*	*X*	*70 - 130*	*02/01/14 10:44*	*02/04/14 14:28*	*1*
Toluene-d8 (Surr)	*122*		*70 - 130*	*02/01/14 10:39*	*02/04/14 19:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.333	0.0498	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Acenaphthylene	ND		0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Anthracene	ND		0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Benzo[a]anthracene	**0.269**	J	0.333	0.0746	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Benzo[a]pyrene	ND		0.333	0.0597	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Benzo[b]fluoranthene	**0.376**		0.333	0.0597	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Benzo[g,h,i]perylene	**0.307**	J	0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Benzo[k]fluoranthene	ND		0.333	0.0697	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
1-Methylnaphthalene	ND		0.333	0.0697	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Pyrene	ND		0.333	0.0597	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Phenanthrene	ND		0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Chrysene	**0.271**	J	0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Dibenz(a,h)anthracene	**0.0618**	J	0.333	0.0348	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Fluoranthene	ND		0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Fluorene	ND		0.333	0.0597	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Indeno[1,2,3-cd]pyrene	**0.272**	J	0.333	0.0498	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
Naphthalene	ND		0.333	0.0448	mg/Kg		02/03/14 10:21	02/04/14 19:04	5
2-Methylnaphthalene	ND		0.333	0.0796	mg/Kg		02/03/14 10:21	02/04/14 19:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*29 - 120*	*02/03/14 10:21*	*02/04/14 19:04*	*5*
Terphenyl-d14 (Surr)	*57*		*13 - 120*	*02/03/14 10:21*	*02/04/14 19:04*	*5*
Nitrobenzene-d5 (Surr)	*54*		*27 - 120*	*02/03/14 10:21*	*02/04/14 19:04*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84		0.10	0.10	%			02/01/14 14:15	1

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

Lab Sample ID: MB 490-138971/6
Matrix: Solid
Analysis Batch: 138971

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0335	mg/Kg			02/01/14 11:52	1
Ethylbenzene	ND		0.100	0.0335	mg/Kg			02/01/14 11:52	1
Naphthalene	ND		0.250	0.0850	mg/Kg			02/01/14 11:52	1
Toluene	ND		0.100	0.0370	mg/Kg			02/01/14 11:52	1
Xylenes, Total	ND		0.250	0.0335	mg/Kg			02/01/14 11:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*		*02/01/14 11:52*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*02/01/14 11:52*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*02/01/14 11:52*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*02/01/14 11:52*	*1*

Lab Sample ID: MB 490-138971/7
Matrix: Solid
Analysis Batch: 138971

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			02/01/14 12:21	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/01/14 12:21	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/01/14 12:21	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/01/14 12:21	1
Xylenes, Total	ND		0.00500	0.000670	mg/Kg			02/01/14 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*02/01/14 12:21*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*02/01/14 12:21*	*1*
Dibromofluoromethane (Surr)	*129*		*70 - 130*		*02/01/14 12:21*	*1*
Toluene-d8 (Surr)	*86*		*70 - 130*		*02/01/14 12:21*	*1*

Lab Sample ID: LCS 490-138971/3
Matrix: Solid
Analysis Batch: 138971

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05896		mg/Kg		118	75 - 127
Ethylbenzene	0.0500	0.05966		mg/Kg		119	80 - 134
Naphthalene	0.0500	0.05810		mg/Kg		116	69 - 150
Toluene	0.0500	0.05040		mg/Kg		101	80 - 132
Xylenes, Total	0.100	0.1126		mg/Kg		113	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
Dibromofluoromethane (Surr)	*124*		*70 - 130*
Toluene-d8 (Surr)	*84*		*70 - 130*

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

Lab Sample ID: LCSD 490-138971/4
Matrix: Solid
Analysis Batch: 138971

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05966		mg/Kg		119	75 - 127	1	50
Ethylbenzene	0.0500	0.05449		mg/Kg		109	80 - 134	9	50
Naphthalene	0.0500	0.05805		mg/Kg		116	69 - 150	0	50
Toluene	0.0500	0.05470		mg/Kg		109	80 - 132	8	50
Xylenes, Total	0.100	0.1064		mg/Kg		106	80 - 137	6	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*111*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: MB 490-139335/7
Matrix: Solid
Analysis Batch: 139335

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0335	mg/Kg			02/04/14 13:03	1
Ethylbenzene	ND		0.100	0.0335	mg/Kg			02/04/14 13:03	1
Naphthalene	ND		0.250	0.0850	mg/Kg			02/04/14 13:03	1
Toluene	ND		0.100	0.0370	mg/Kg			02/04/14 13:03	1
Xylenes, Total	ND		0.250	0.0335	mg/Kg			02/04/14 13:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*02/04/14 13:03*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*02/04/14 13:03*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*02/04/14 13:03*	*1*
Toluene-d8 (Surr)	*115*		*70 - 130*		*02/04/14 13:03*	*1*

Lab Sample ID: MB 490-139335/8
Matrix: Solid
Analysis Batch: 139335

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			02/04/14 13:32	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/04/14 13:32	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/04/14 13:32	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/04/14 13:32	1
Xylenes, Total	ND		0.00500	0.000670	mg/Kg			02/04/14 13:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*02/04/14 13:32*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*02/04/14 13:32*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*02/04/14 13:32*	*1*
Toluene-d8 (Surr)	*113*		*70 - 130*		*02/04/14 13:32*	*1*

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

Lab Sample ID: LCS 490-139335/4
Matrix: Solid
Analysis Batch: 139335

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05363		mg/Kg		107	75 - 127
Ethylbenzene	0.0500	0.05520		mg/Kg		110	80 - 134
Naphthalene	0.0500	0.05747		mg/Kg		115	69 - 150
Toluene	0.0500	0.06116		mg/Kg		122	80 - 132
Xylenes, Total	0.100	0.1089		mg/Kg		109	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*117*		*70 - 130*

Lab Sample ID: LCSD 490-139335/5
Matrix: Solid
Analysis Batch: 139335

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05551		mg/Kg		111	75 - 127	3	50
Ethylbenzene	0.0500	0.05824		mg/Kg		116	80 - 134	5	50
Naphthalene	0.0500	0.06417		mg/Kg		128	69 - 150	11	50
Toluene	0.0500	0.06539		mg/Kg		131	80 - 132	7	50
Xylenes, Total	0.100	0.1160		mg/Kg		116	80 - 137	6	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*119*		*70 - 130*

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

Lab Sample ID: MB 490-139169/1-A
Matrix: Solid
Analysis Batch: 139093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 139169

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Anthracene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Pyrene	ND		0.0670	0.0120	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1

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

Lab Sample ID: MB 490-139169/1-A
Matrix: Solid
Analysis Batch: 139093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 139169

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Fluorene	ND		0.0670	0.0120	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		02/03/14 10:21	02/03/14 18:00	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		02/03/14 10:21	02/03/14 18:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*94*		*29 - 120*	*02/03/14 10:21*	*02/03/14 18:00*	*1*
Terphenyl-d14 (Surr)	*107*		*13 - 120*	*02/03/14 10:21*	*02/03/14 18:00*	*1*
Nitrobenzene-d5 (Surr)	*92*		*27 - 120*	*02/03/14 10:21*	*02/03/14 18:00*	*1*

Lab Sample ID: LCS 490-139169/2-A
Matrix: Solid
Analysis Batch: 139093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 139169

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	1.67	1.468		mg/Kg		88	38 - 120
Anthracene	1.67	1.454		mg/Kg		87	46 - 124
Benzo[a]anthracene	1.67	1.500		mg/Kg		90	45 - 120
Benzo[a]pyrene	1.67	1.474		mg/Kg		88	45 - 120
Benzo[b]fluoranthene	1.67	1.383		mg/Kg		83	42 - 120
Benzo[g,h,i]perylene	1.67	1.524		mg/Kg		91	38 - 120
Benzo[k]fluoranthene	1.67	1.548		mg/Kg		93	42 - 120
1-Methylnaphthalene	1.67	1.343		mg/Kg		81	32 - 120
Pyrene	1.67	1.537		mg/Kg		92	43 - 120
Phenanthrene	1.67	1.442		mg/Kg		87	45 - 120
Chrysene	1.67	1.516		mg/Kg		91	43 - 120
Dibenz(a,h)anthracene	1.67	1.551		mg/Kg		93	32 - 128
Fluoranthene	1.67	1.461		mg/Kg		88	46 - 120
Fluorene	1.67	1.439		mg/Kg		86	42 - 120
Indeno[1,2,3-cd]pyrene	1.67	1.482		mg/Kg		89	41 - 121
Naphthalene	1.67	1.246		mg/Kg		75	32 - 120
2-Methylnaphthalene	1.67	1.311		mg/Kg		79	28 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*74*		*29 - 120*
Terphenyl-d14 (Surr)	*86*		*13 - 120*
Nitrobenzene-d5 (Surr)	*72*		*27 - 120*

Lab Sample ID: 490-45557-1 MS
Matrix: Soil
Analysis Batch: 139093

Client Sample ID: 340 Ash-2
Prep Type: Total/NA
Prep Batch: 139169

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	ND		2.30	2.195		mg/Kg		95	25 - 120
Anthracene	ND		2.30	2.146		mg/Kg		93	28 - 125

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

Lab Sample ID: 490-45557-1 MS
Matrix: Soil
Analysis Batch: 139093

Client Sample ID: 340 Ash-2
Prep Type: Total/NA
Prep Batch: 139169

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	ND		2.30	2.287		mg/Kg	☐	99	23 - 120
Benzo[a]pyrene	ND		2.30	2.213		mg/Kg	☐	96	15 - 128
Benzo[b]fluoranthene	ND		2.30	2.063		mg/Kg	☐	90	12 - 133
Benzo[g,h,i]perylene	ND		2.30	2.277		mg/Kg	☐	99	22 - 120
Benzo[k]fluoranthene	ND		2.30	2.190		mg/Kg	☐	95	28 - 120
1-Methylnaphthalene	0.113		2.30	2.052		mg/Kg	☐	84	10 - 120
Pyrene	ND		2.30	2.215		mg/Kg	☐	96	20 - 123
Phenanthrene	0.0562	J	2.30	2.136		mg/Kg	☐	90	21 - 122
Chrysene	ND		2.30	2.174		mg/Kg	☐	94	20 - 120
Dibenz(a,h)anthracene	ND		2.30	2.408		mg/Kg	☐	104	12 - 128
Fluoranthene	ND		2.30	2.230		mg/Kg	☐	97	10 - 143
Fluorene	ND		2.30	2.168		mg/Kg	☐	94	20 - 120
Indeno[1,2,3-cd]pyrene	ND		2.30	2.250		mg/Kg	☐	98	22 - 121
Naphthalene	ND		2.30	1.887		mg/Kg	☐	82	10 - 120
2-Methylnaphthalene	0.0579	J	2.30	2.029		mg/Kg	☐	86	13 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*83*		*29 - 120*
Terphenyl-d14 (Surr)	*94*		*13 - 120*
Nitrobenzene-d5 (Surr)	*83*		*27 - 120*

Lab Sample ID: 490-45557-1 MSD
Matrix: Soil
Analysis Batch: 139093

Client Sample ID: 340 Ash-2
Prep Type: Total/NA
Prep Batch: 139169

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthylene	ND		2.31	2.210		mg/Kg	☐	96	25 - 120	1	50
Anthracene	ND		2.31	2.214		mg/Kg	☐	96	28 - 125	3	49
Benzo[a]anthracene	ND		2.31	2.300		mg/Kg	☐	99	23 - 120	1	50
Benzo[a]pyrene	ND		2.31	2.215		mg/Kg	☐	96	15 - 128	0	50
Benzo[b]fluoranthene	ND		2.31	2.102		mg/Kg	☐	91	12 - 133	2	50
Benzo[g,h,i]perylene	ND		2.31	2.286		mg/Kg	☐	99	22 - 120	0	50
Benzo[k]fluoranthene	ND		2.31	2.232		mg/Kg	☐	97	28 - 120	2	45
1-Methylnaphthalene	0.113		2.31	2.147		mg/Kg	☐	88	10 - 120	5	50
Pyrene	ND		2.31	2.255		mg/Kg	☐	98	20 - 123	2	50
Phenanthrene	0.0562	J	2.31	2.172		mg/Kg	☐	91	21 - 122	2	50
Chrysene	ND		2.31	2.214		mg/Kg	☐	96	20 - 120	2	49
Dibenz(a,h)anthracene	ND		2.31	2.365		mg/Kg	☐	102	12 - 128	2	50
Fluoranthene	ND		2.31	2.304		mg/Kg	☐	100	10 - 143	3	50
Fluorene	ND		2.31	2.173		mg/Kg	☐	94	20 - 120	0	50
Indeno[1,2,3-cd]pyrene	ND		2.31	2.220		mg/Kg	☐	96	22 - 121	1	50
Naphthalene	ND		2.31	1.981		mg/Kg	☐	86	10 - 120	5	50
2-Methylnaphthalene	0.0579	J	2.31	2.103		mg/Kg	☐	88	13 - 120	4	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*86*		*29 - 120*
Terphenyl-d14 (Surr)	*98*		*13 - 120*

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

Lab Sample ID: 490-45557-1 MSD
Matrix: Soil
Analysis Batch: 139093

Client Sample ID: 340 Ash-2
Prep Type: Total/NA
Prep Batch: 139169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	*89*		*27 - 120*

Method: Moisture - Percent Moisture

Lab Sample ID: 490-45545-A-1 DU
Matrix: Solid
Analysis Batch: 139043

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	95		94		%		1	20

GC/MS VOA

Analysis Batch: 138971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-1	340 Ash-2	Total/NA	Soil	8260B	139004
490-45557-2	1352 Cardinal	Total/NA	Soil	8260B	139004
490-45557-2	1352 Cardinal	Total/NA	Soil	8260B	139003
490-45557-3	509 Laurel Bay	Total/NA	Soil	8260B	139004
LCS 490-138971/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-138971/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-138971/6	Method Blank	Total/NA	Solid	8260B	
MB 490-138971/7	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 139003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-2	1352 Cardinal	Total/NA	Soil	5035	
490-45557-4	1463 Cardinal	Total/NA	Soil	5035	

Prep Batch: 139004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-1	340 Ash-2	Total/NA	Soil	5035	
490-45557-2	1352 Cardinal	Total/NA	Soil	5035	
490-45557-3	509 Laurel Bay	Total/NA	Soil	5035	
490-45557-4	1463 Cardinal	Total/NA	Soil	5035	

Analysis Batch: 139335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-4	1463 Cardinal	Total/NA	Soil	8260B	139004
490-45557-4	1463 Cardinal	Total/NA	Soil	8260B	139003
LCS 490-139335/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-139335/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-139335/7	Method Blank	Total/NA	Solid	8260B	
MB 490-139335/8	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Analysis Batch: 139093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-1	340 Ash-2	Total/NA	Soil	8270D	139169
490-45557-1 MS	340 Ash-2	Total/NA	Soil	8270D	139169
490-45557-1 MSD	340 Ash-2	Total/NA	Soil	8270D	139169
490-45557-3	509 Laurel Bay	Total/NA	Soil	8270D	139169
LCS 490-139169/2-A	Lab Control Sample	Total/NA	Solid	8270D	139169
MB 490-139169/1-A	Method Blank	Total/NA	Solid	8270D	139169

Prep Batch: 139169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-1	340 Ash-2	Total/NA	Soil	3550C	
490-45557-1 MS	340 Ash-2	Total/NA	Soil	3550C	
490-45557-1 MSD	340 Ash-2	Total/NA	Soil	3550C	
490-45557-2	1352 Cardinal	Total/NA	Soil	3550C	
490-45557-3	509 Laurel Bay	Total/NA	Soil	3550C	
490-45557-4	1463 Cardinal	Total/NA	Soil	3550C	
LCS 490-139169/2-A	Lab Control Sample	Total/NA	Solid	3550C	

GC/MS Semi VOA (Continued)

Prep Batch: 139169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-139169/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 139392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45557-2	1352 Cardinal	Total/NA	Soil	8270D	139169
490-45557-4	1463 Cardinal	Total/NA	Soil	8270D	139169

General Chemistry

Analysis Batch: 139043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-45545-A-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-45557-1	340 Ash-2	Total/NA	Soil	Moisture	
490-45557-2	1352 Cardinal	Total/NA	Soil	Moisture	
490-45557-3	509 Laurel Bay	Total/NA	Soil	Moisture	
490-45557-4	1463 Cardinal	Total/NA	Soil	Moisture	

Client Sample ID: 340 Ash-2

Date Collected: 01/21/14 13:15
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-1
Matrix: Soil
Percent Solids: 70.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.424 g	5.0 mL	139004	02/01/14 10:44	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.424 g	5.0 mL	138971	02/01/14 14:49	SNR	TAL NSH
Total/NA	Prep	3550C			30.56 g	1.0 mL	139169	02/03/14 10:21	LP	TAL NSH
Total/NA	Analysis	8270D		1	30.56 g	1.0 mL	139093	02/03/14 18:49	KKH	TAL NSH
Total/NA	Analysis	Moisture		1			139043	02/01/14 14:15	JJS	TAL NSH

Client Sample ID: 1352 Cardinal

Date Collected: 01/22/14 14:45
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-2
Matrix: Soil
Percent Solids: 85.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.53 g	5.0 mL	139004	02/01/14 10:44	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.53 g	5.0 mL	138971	02/01/14 15:18	SNR	TAL NSH
Total/NA	Prep	5035			5.427 g	5.0 mL	139003	02/01/14 10:39	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.427 g	5.0 mL	138971	02/01/14 20:41	SNR	TAL NSH
Total/NA	Prep	3550C			35.40 g	1.0 mL	139169	02/03/14 10:21	LP	TAL NSH
Total/NA	Analysis	8270D		5	35.40 g	1.0 mL	139392	02/04/14 18:39	KKH	TAL NSH
Total/NA	Analysis	Moisture		1			139043	02/01/14 14:15	JJS	TAL NSH

Client Sample ID: 509 Laurel Bay

Date Collected: 01/23/14 12:15
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-3
Matrix: Soil
Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.358 g	5.0 mL	139004	02/01/14 10:44	JLP	TAL NSH
Total/NA	Analysis	8260B		1	4.358 g	5.0 mL	138971	02/01/14 15:47	SNR	TAL NSH
Total/NA	Prep	3550C			32.28 g	1.0 mL	139169	02/03/14 10:21	LP	TAL NSH
Total/NA	Analysis	8270D		1	32.28 g	1.0 mL	139093	02/03/14 20:26	KKH	TAL NSH
Total/NA	Analysis	Moisture		1			139043	02/01/14 14:15	JJS	TAL NSH

Client Sample ID: 1463 Cardinal

Date Collected: 01/27/14 15:00
Date Received: 01/31/14 08:15

Lab Sample ID: 490-45557-4
Matrix: Soil
Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.922 g	5.0 mL	139004	02/01/14 10:44	JLP	TAL NSH
Total/NA	Analysis	8260B		1	4.922 g	5.0 mL	139335	02/04/14 14:28	SNR	TAL NSH
Total/NA	Prep	5035			4.732 g	5.0 mL	139003	02/01/14 10:39	JLP	TAL NSH
Total/NA	Analysis	8260B		1	4.732 g	5.0 mL	139335	02/04/14 19:11	SNR	TAL NSH
Total/NA	Prep	3550C			35.82 g	1.0 mL	139169	02/03/14 10:21	LP	TAL NSH
Total/NA	Analysis	8270D		5	35.82 g	1.0 mL	139392	02/04/14 19:04	KKH	TAL NSH
Total/NA	Analysis	Moisture		1			139043	02/01/14 14:15	JJS	TAL NSH

Lab Chronicle

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

TestAmerica Job ID: 490-45557-1

Laboratory References:

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

Method Summary

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

TestAmerica Job ID: 490-45557-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 490-45557-1

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
South Carolina	State Program	4	84009 (001)	02-28-14

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8270D	3550C	Soil	1-Methylnaphthalene
8270D	3550C	Solid	1-Methylnaphthalene

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

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Soil	Percent Solids
Moisture		Solid	Percent Solids

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

Charleston

490-45557 Chain of Custody

Cooler Received/Opened On: 1/31/2014 @0815

1. Tracking # 6636 (last 4 digits, FedEx)

Courier: Fed-Ex IR Gun ID: 14740456

2. Temperature of rep. sample or temp blank when opened: 0.4 *Degrees Celsius*

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

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

If yes, how many and where: 1 Front

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

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

I certify that I opened the cooler and answered questions 1-6 (Intial) ⊕

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

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

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

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

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

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

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

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

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

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

I certify that I unloaded the cooler and answered questions 7-14 (Intial) MDM

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

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

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

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

2/6/2014

Loc: 490
45557

2/6/2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

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

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Compliance Monitoring? Yes ____ No ____

Enforcement Action? Yes ____ No ____

Client Name/Account #: EEG - SBG # 2449

Address: 10179 Highway 78

City/State/Zip: Ladson, SC 29456

Site State: SC

Project Manager: Tom McElwee email: mcelwee@eeginc.net

PO#: 1027

Telephone Number: 843.412.2097 Fax No.: 843-412-2027

TA Quote #:

Sampler Name: (Print) Brad Shaw

Project ID: Laurel Bay Housing Project

Sampler Signature:

Project #:

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: BTEX + Napth - 8260	PAH - 8270D									RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send 96 with report
340Ash-2	1/21/14	1315	5	X					2				2	—					X		X	X								-1				
1352 Cardinal	1/22/14	1445	5	X					2				2	1					X		X	X								2				
509 Laurel Bay	1/23/14	1215	5	X					2				2	1					X		X	X								3				
1463 Cardinal	1/27/14	1500	5	X					2				2	1					X		X	X								4				

Special Instructions:

Method of Shipment: FEDEX

Laboratory Comments:
Temperature Upon Receipt: 0.4c
VOCs Free of Headspace? Y N

Relinquished by:	Date	Time	Received by:	Date	Time
	1/30/14	1000	FedEx		
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
				1-31-14	0815

Login Sample Receipt Checklist

Client: Small Business Group Inc.

Job Number: 490-45557-1

Login Number: 45557
List Number: 1
Creator: McBride, Mike

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4
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

WASTE MANAGEMENT

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

GENERATOR

3. Generator's Mailing Address:	Generator's Site Address (If different than mailing):	A. Manifest Number	
MCAS BEAUFORT LAUREL BAY HOUSING BEAUFORT, SC 29904		WMNA	01519136
4. Generator's Phone 843-879-0411		B. State Generator's ID	

5. Transporter 1 Company Name	6. US EPA ID Number	C. State Transporter's ID
Carolina Containers P.O. Box 1925 Bft SC 29901		D. Transporter's Phone
7. Transporter 2 Company Name	8. US EPA ID Number	843 522 1500 E. State Transporter's ID
		F. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	
HICKORY HILL LANDFILL 2621 LOW COUNTRY DRIVE RIDGELAND, SC 29936		G. State Facility ID H. State Facility Phone 843-987-4643

11. Description of Waste Materials	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
a. HEATING OIL TANK FILLED WITH SAND WM Profile # 102655SC	1	20y	7.07	TON	727474
b. WM Profile #					
c. WM Profile #					
d. WM Profile #					

J. Additional Descriptions for Materials Listed Above	K. Disposal Location			
	Cell		Level	
	Grid			

15. Special Handling Instructions and Additional Information
USTs from:
1) 929 Albacore 2) 340 Ash-2 3) 1352 Cardinal 4) 509 Laurel Bay 5) 1463 Cardinal

Purchase Order # EMERGENCY CONTACT / PHONE NO.:

16. GENERATOR'S CERTIFICATE:
I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Printed Name	Signature "On behalf of"	Month	Day	Year
W.C. Dukes, Jr.		2	10	14

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
Pratt Shaw		2	10	14

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed Name	Signature	Month	Day	Year
Troy Inabinett	Troy Inabinett	2	10	14

FACILITY

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

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

Printed Name	Signature	Month	Day	Year
Paul Corfield	Tom Corfield	2	10	14

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

Attachment 1

South Carolina Department of Health and Environmental Control (SCDHEC)

Underground Storage Tank (UST) Assessment Report

Date Received State Use Only

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

I. OWNERSHIP OF UST (S)

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

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #	
Laurel Bay Military Housing Area, Marine Corps Air Station, Beaufort, SC	
Facility Name or Company Site Identifier	
1352 Cardinal Lane, Laurel Bay Military Housing Area	
Street Address or State Road (as applicable)	
Beaufort,	Beaufort
City	County

Attachment 2

III. INSURANCE INFORMATION

Insurance Statement

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

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

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

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

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

IV. REQUEST FOR SUPERB FUNDING

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

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

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

_____
Name (Type or print.)

_____
Signature

To be completed by Notary Public:

Sworn before me this _____ day of_____, 20____

_____
(Name)

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

VI. UST INFORMATION

A.	Product...(ex. Gas, Kerosene).....	1352 Cardinal-2	
B.	Capacity..(ex. 1k, 2k).....	Heating oil	
C.	Age.....	280 gal	
D.	Construction Material..(ex. Steel, FRP).....	Late 1950s	
E.	Month/Year of Last Use.....	Steel	
F.	Depth (ft.) To Base of Tank.....	Mid 80s	
G.	Spill Prevention Equipment Y/N.....	5'2"	
H.	Overfill Prevention Equipment Y/N.....	No	
I.	Method of Closure Removed/Filled.....	No	
J.	Date Tanks Removed/Filled.....	Removed	
K.	Visible Corrosion or Pitting Y/N.....	1/26/2015	
L.	Visible Holes Y/N.....	Yes	
		Yes	

M. Method of disposal for any USTs removed from the ground (attach disposal manifests)
UST 1352Cardinal-2 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 UST 1352Cardinal-2 and disposed by MCAS.

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

VII. PIPING INFORMATION

	1352 Cardinal-2		
A.	Steel & Copper		
B.	N/A		
C.	N/A		
D.	Suction		
E.	No		
F.	Yes		
G.	No		
H.	Late 1950s		

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each piping run.

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

VIII. BRIEF SITE DESCRIPTION AND HISTORY

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

~~This is the second tank removed from 1352 Cardinal Lane.~~

IX. SITE CONDITIONS

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

X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
1352 Card'1-2	Excav at fill end	Soil	Sandy	5'2"	1/26/15 1415 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

* = Depth Below the Surrounding Land Surface

XI. SAMPLING METHODOLOGY

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

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

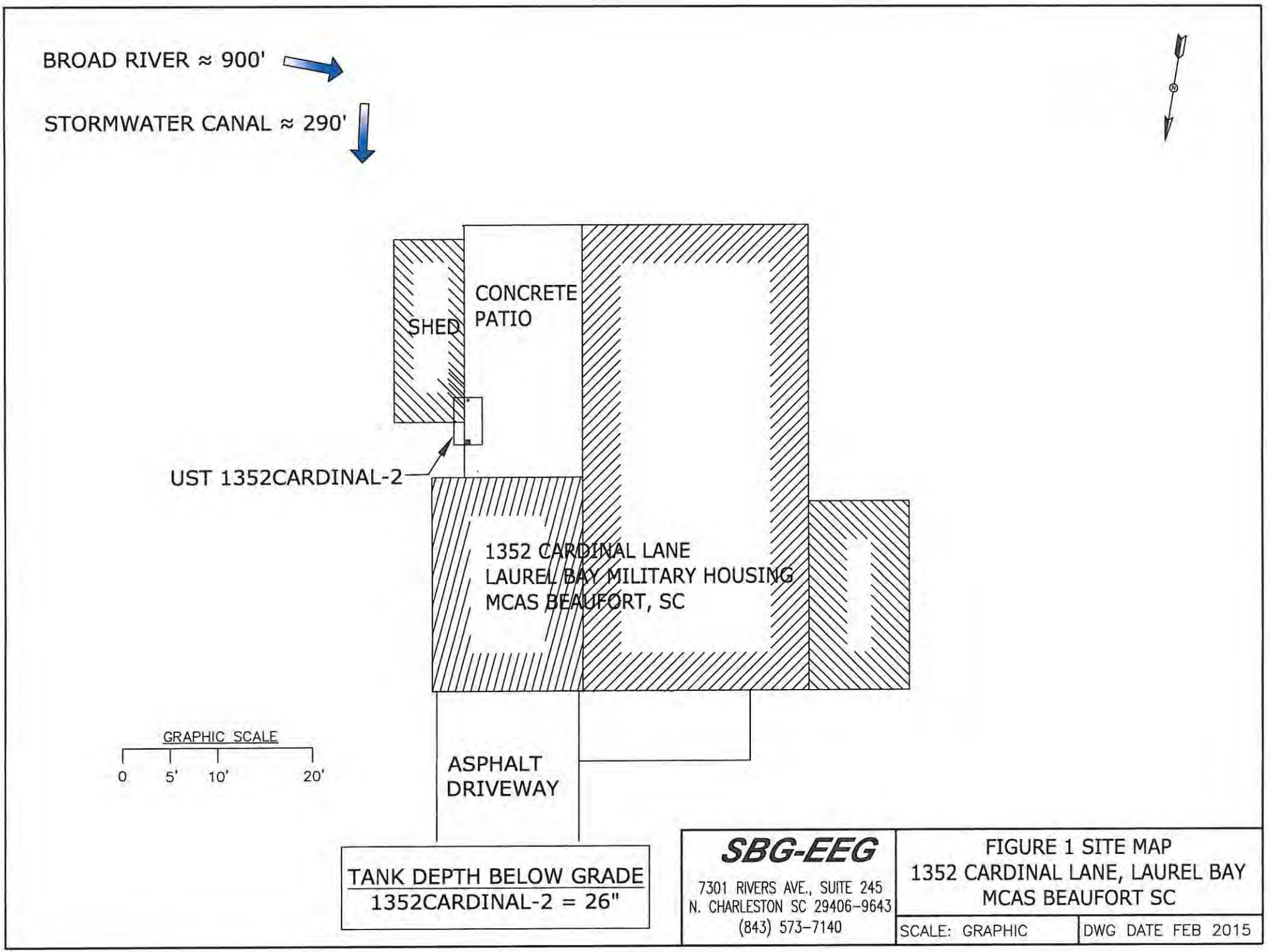
XII. RECEPTORS

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

XIII. SITE MAP

You must supply a <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.

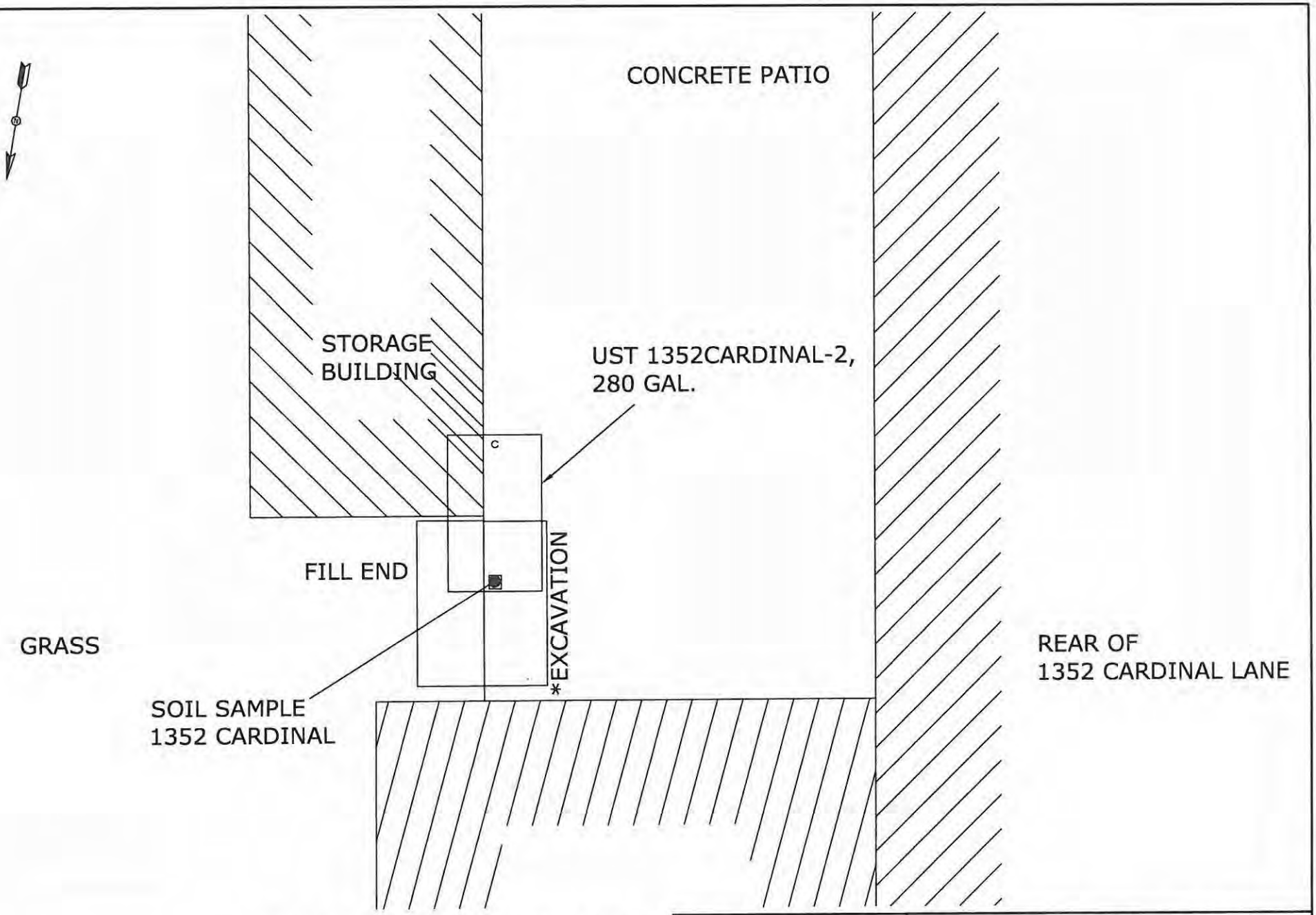
(Attach Site Map Here)



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

FIGURE 1 SITE MAP
1352 CARDINAL LANE, LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE FEB 2015



GRAPHIC SCALE
0 5'

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

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

FIGURE 2 UST SAMPLE LOCATION
1352 CARDINAL LANE, LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE FEB 2015

Picture 1: Location of UST 1352Cardinal-2.

Picture 2: The tank being lifted from the excavation.

Picture 3: UST 1352Cardinal-2's excavation.

Picture 4: UST 1352Cardinal-2's excavation.

XIV. SUMMARY OF ANALYSIS RESULTS

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

CoC UST	1352Cardinal-2					
Benzene	ND					
Toluene	0.00102 mg/kg					
Ethylbenzene	0.116 mg/kg					
Xylenes	0.118 mg/kg					
Naphthalene	2.95 mg/kg					
Benzo (a) anthracene	ND					
Benzo (b) fluoranthene	ND					
Benzo (k) fluoranthene	ND					
Chrysene	ND					
Dibenz (a, h) anthracene	ND					
TPH (EPA 3550)						

CoC								
Benzene								
Toluene								
Ethylbenzene								
Xylenes								
Naphthalene								
Benzo (a) anthracene								
Benzo (b) fluoranthene								
Benzo (k) fluoranthene								
Chrysene								
Dibenz (a, h) anthracene								
TPH (EPA 3550)								

SUMMARY OF ANALYSIS RESULTS (cont'd)

Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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

XV. ANALYTICAL RESULTS

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

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 490-71526-1
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:
2/6/2015 2:29:45 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 490-71526-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-71526-1	1352 Cardinal - 2	Soil	01/26/15 14:15	01/30/15 08:00
490-71526-2	465 Dogwood - 2	Soil	01/28/15 15:15	01/30/15 08:00

Case Narrative

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

TestAmerica Job ID: 490-71526-1

Job ID: 490-71526-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-71526-1

Comments
No additional comments.

Receipt
The samples were received on 1/30/2015 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC/MS VOA
Method(s) 8260B: The method blank for batch 224716 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. (MB 490-224716/8)

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: 1352 Cardinal - 2 (490-71526-1), 465 Dogwood - 2 (490-71526-2). 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 batch 224510

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

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described 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.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

GC/MS Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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 Sample ID: 1352 Cardinal - 2

Date Collected: 01/26/15 14:15
Date Received: 01/30/15 08:00

Lab Sample ID: 490-71526-1

Matrix: Soil
Percent Solids: 80.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00193	0.000648	mg/Kg		01/26/15 14:15	02/01/15 05:23	1
Ethylbenzene	0.116		0.00193	0.000648	mg/Kg		01/26/15 14:15	02/01/15 05:23	1
Naphthalene	2.95	B	0.320	0.109	mg/Kg		01/26/15 14:15	02/02/15 21:00	1
Toluene	0.00102	J	0.00193	0.000716	mg/Kg		01/26/15 14:15	02/01/15 05:23	1
Xylenes, Total	0.118		0.00290	0.000648	mg/Kg		01/26/15 14:15	02/01/15 05:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*01/26/15 14:15*	*02/01/15 05:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*01/26/15 14:15*	*02/02/15 21:00*	*1*
4-Bromofluorobenzene (Surr)	*294*	*X*	*70 - 130*	*01/26/15 14:15*	*02/01/15 05:23*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/26/15 14:15*	*02/02/15 21:00*	*1*
Dibromofluoromethane (Surr)	*110*		*70 - 130*	*01/26/15 14:15*	*02/01/15 05:23*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*01/26/15 14:15*	*02/02/15 21:00*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*	*01/26/15 14:15*	*02/01/15 05:23*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*01/26/15 14:15*	*02/02/15 21:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0675		0.0666	0.00995	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Acenaphthylene	0.0426	J	0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Anthracene	0.0446	J	0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Benzo[a]anthracene	ND		0.0666	0.0149	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Benzo[a]pyrene	ND		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Benzo[b]fluoranthene	ND		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Benzo[g,h,i]perylene	ND		0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Benzo[k]fluoranthene	ND		0.0666	0.0139	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
1-Methylnaphthalene	1.09		0.0666	0.0139	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Pyrene	0.0379	J	0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Phenanthrene	0.408		0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Chrysene	ND		0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Dibenz(a,h)anthracene	ND		0.0666	0.00696	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Fluoranthene	0.0371	J	0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Fluorene	0.178		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Indeno[1,2,3-cd]pyrene	ND		0.0666	0.00995	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
Naphthalene	0.119		0.0666	0.00895	mg/Kg		02/03/15 09:34	02/03/15 22:07	1
2-Methylnaphthalene	1.74		0.0666	0.0159	mg/Kg		02/03/15 09:34	02/03/15 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*29 - 120*	*02/03/15 09:34*	*02/03/15 22:07*	*1*
Terphenyl-d14 (Surr)	*64*		*13 - 120*	*02/03/15 09:34*	*02/03/15 22:07*	*1*
Nitrobenzene-d5 (Surr)	*54*		*27 - 120*	*02/03/15 09:34*	*02/03/15 22:07*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81		0.10	0.10	%			01/30/15 14:20	1

Client Sample ID: 465 Dogwood - 2

Date Collected: 01/28/15 15:15
Date Received: 01/30/15 08:00

Lab Sample ID: 490-71526-2

Matrix: Soil
Percent Solids: 79.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0244		0.00187	0.000626	mg/Kg		01/28/15 15:15	02/01/15 05:56	1
Ethylbenzene	0.167		0.00187	0.000626	mg/Kg		01/28/15 15:15	02/01/15 05:56	1
Naphthalene	0.318		0.00467	0.00159	mg/Kg		01/28/15 15:15	02/01/15 05:56	1
Toluene	0.00119	J	0.00187	0.000691	mg/Kg		01/28/15 15:15	02/01/15 05:56	1
Xylenes, Total	0.0895		0.00280	0.000626	mg/Kg		01/28/15 15:15	02/01/15 05:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*	*01/28/15 15:15*	*02/01/15 05:56*	*1*
4-Bromofluorobenzene (Surr)	*331*	*X*	*70 - 130*	*01/28/15 15:15*	*02/01/15 05:56*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*	*01/28/15 15:15*	*02/01/15 05:56*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*01/28/15 15:15*	*02/01/15 05:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0940		0.0666	0.00994	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Acenaphthylene	0.0692		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Anthracene	0.0922		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Benzo[a]anthracene	0.164		0.0666	0.0149	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Benzo[a]pyrene	0.0670		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Benzo[b]fluoranthene	0.113		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Benzo[g,h,i]perylene	ND		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Benzo[k]fluoranthene	0.0445	J	0.0666	0.0139	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
1-Methylnaphthalene	0.963		0.0666	0.0139	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Pyrene	0.319		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Phenanthrene	0.597		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Chrysene	0.169		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Dibenz(a,h)anthracene	ND		0.0666	0.00696	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Fluoranthene	0.398		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Fluorene	0.188		0.0666	0.0119	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Indeno[1,2,3-cd]pyrene	ND		0.0666	0.00994	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
Naphthalene	0.194		0.0666	0.00894	mg/Kg		02/03/15 09:34	02/03/15 22:29	1
2-Methylnaphthalene	0.921		0.0666	0.0159	mg/Kg		02/03/15 09:34	02/03/15 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*29 - 120*	*02/03/15 09:34*	*02/03/15 22:29*	*1*
Terphenyl-d14 (Surr)	*81*		*13 - 120*	*02/03/15 09:34*	*02/03/15 22:29*	*1*
Nitrobenzene-d5 (Surr)	*72*		*27 - 120*	*02/03/15 09:34*	*02/03/15 22:29*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80		0.10	0.10	%			01/30/15 14:20	1

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

Lab Sample ID: MB 490-224510/6
Matrix: Solid
Analysis Batch: 224510

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			02/01/15 03:47	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/01/15 03:47	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/01/15 03:47	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/01/15 03:47	1
Xylenes, Total	ND		0.00300	0.000670	mg/Kg			02/01/15 03:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*02/01/15 03:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*02/01/15 03:47*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*02/01/15 03:47*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*02/01/15 03:47*	*1*

Lab Sample ID: LCS 490-224510/3
Matrix: Solid
Analysis Batch: 224510

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.06337		mg/Kg		127	75 - 127
Ethylbenzene	0.0500	0.05384		mg/Kg		108	80 - 134
Naphthalene	0.0500	0.06694		mg/Kg		134	69 - 150
Toluene	0.0500	0.06156		mg/Kg		123	80 - 132
Xylenes, Total	0.100	0.1142		mg/Kg		114	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-224510/4
Matrix: Solid
Analysis Batch: 224510

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.06085		mg/Kg		122	75 - 127	4	50
Ethylbenzene	0.0500	0.05368		mg/Kg		107	80 - 134	0	50
Naphthalene	0.0500	0.07343		mg/Kg		147	69 - 150	9	50
Toluene	0.0500	0.06121		mg/Kg		122	80 - 132	1	50
Xylenes, Total	0.100	0.1135		mg/Kg		113	80 - 137	1	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 490-224716/8
Matrix: Solid
Analysis Batch: 224716

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0340	mg/Kg			02/02/15 13:52	1
Ethylbenzene	ND		0.100	0.0340	mg/Kg			02/02/15 13:52	1
Naphthalene	0.08898	J	0.250	0.0850	mg/Kg			02/02/15 13:52	1
Toluene	ND		0.100	0.0370	mg/Kg			02/02/15 13:52	1
Xylenes, Total	ND		0.150	0.0340	mg/Kg			02/02/15 13:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*02/02/15 13:52*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*02/02/15 13:52*	*1*
Dibromofluoromethane (Surr)	*113*		*70 - 130*		*02/02/15 13:52*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*02/02/15 13:52*	*1*

Lab Sample ID: MB 490-224716/9
Matrix: Solid
Analysis Batch: 224716

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000680	mg/Kg			02/02/15 14:21	1
Ethylbenzene	ND		0.00200	0.000680	mg/Kg			02/02/15 14:21	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/02/15 14:21	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/02/15 14:21	1
Xylenes, Total	ND		0.00300	0.000680	mg/Kg			02/02/15 14:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*02/02/15 14:21*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*02/02/15 14:21*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*02/02/15 14:21*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/02/15 14:21*	*1*

Lab Sample ID: LCS 490-224716/3
Matrix: Solid
Analysis Batch: 224716

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05268		mg/Kg		105	75 - 127
Ethylbenzene	0.0500	0.05507		mg/Kg		110	80 - 134
Naphthalene	0.0500	0.05591		mg/Kg		112	69 - 150
Toluene	0.0500	0.05454		mg/Kg		109	80 - 132
Xylenes, Total	0.100	0.1117		mg/Kg		112	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

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

Lab Sample ID: LCS 490-224716/5
Matrix: Solid
Analysis Batch: 224716

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.50	2.603		mg/Kg		104	75 - 127
Ethylbenzene	2.50	2.673		mg/Kg		107	80 - 134
Naphthalene	2.50	2.483		mg/Kg		99	69 - 150
Toluene	2.50	2.567		mg/Kg		103	80 - 132
Xylenes, Total	5.00	5.416		mg/Kg		108	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 490-224716/4
Matrix: Solid
Analysis Batch: 224716

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05413		mg/Kg		108	75 - 127	3	50
Ethylbenzene	0.0500	0.05496		mg/Kg		110	80 - 134	0	50
Naphthalene	0.0500	0.05351		mg/Kg		107	69 - 150	4	50
Toluene	0.0500	0.05454		mg/Kg		109	80 - 132	0	50
Xylenes, Total	0.100	0.1102		mg/Kg		110	80 - 137	1	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*114*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 490-224716/6
Matrix: Solid
Analysis Batch: 224716

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	2.50	2.611		mg/Kg		104	75 - 127	0	50
Ethylbenzene	2.50	2.677		mg/Kg		107	80 - 134	0	50
Naphthalene	2.50	2.486		mg/Kg		99	69 - 150	0	50
Toluene	2.50	2.563		mg/Kg		103	80 - 132	0	50
Xylenes, Total	5.00	5.377		mg/Kg		108	80 - 137	1	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*111*		*70 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

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

Lab Sample ID: 490-71562-B-1 MS
Matrix: Solid
Analysis Batch: 224716

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		0.0500	0.05148		mg/Kg		103	31 - 143
Ethylbenzene	ND		0.0500	0.05623		mg/Kg		112	23 - 161
Naphthalene	ND		0.0500	0.05812		mg/Kg		116	10 - 176
Toluene	ND		0.0500	0.05614		mg/Kg		112	30 - 155
Xylenes, Total	ND		0.100	0.1119		mg/Kg		112	25 - 162

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: 490-71562-C-1 MSD
Matrix: Solid
Analysis Batch: 224716

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		0.0500	0.05066		mg/Kg		101	31 - 143	2	50
Ethylbenzene	ND		0.0500	0.05828		mg/Kg		117	23 - 161	4	50
Naphthalene	ND		0.0500	0.06256		mg/Kg		125	10 - 176	7	50
Toluene	ND		0.0500	0.05790		mg/Kg		116	30 - 155	3	50
Xylenes, Total	ND		0.100	0.1157		mg/Kg		116	25 - 162	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 490-224884/1-A
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Anthracene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Pyrene	ND		0.0670	0.0120	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1

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

Lab Sample ID: MB 490-224884/1-A
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 224884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Fluorene	ND		0.0670	0.0120	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		02/03/15 09:34	02/03/15 18:45	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		02/03/15 09:34	02/03/15 18:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*58*		*29 - 120*	*02/03/15 09:34*	*02/03/15 18:45*	*1*
Terphenyl-d14 (Surr)	*62*		*13 - 120*	*02/03/15 09:34*	*02/03/15 18:45*	*1*
Nitrobenzene-d5 (Surr)	*53*		*27 - 120*	*02/03/15 09:34*	*02/03/15 18:45*	*1*

Lab Sample ID: LCS 490-224884/2-A
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224884

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	1.67	1.359		mg/Kg		82	38 - 120
Anthracene	1.67	1.373		mg/Kg		82	46 - 124
Benzo[a]anthracene	1.67	1.398		mg/Kg		84	45 - 120
Benzo[a]pyrene	1.67	1.369		mg/Kg		82	45 - 120
Benzo[b]fluoranthene	1.67	1.387		mg/Kg		83	42 - 120
Benzo[g,h,i]perylene	1.67	1.356		mg/Kg		81	38 - 120
Benzo[k]fluoranthene	1.67	1.393		mg/Kg		84	42 - 120
1-Methylnaphthalene	1.67	1.266		mg/Kg		76	32 - 120
Pyrene	1.67	1.336		mg/Kg		80	43 - 120
Phenanthrene	1.67	1.345		mg/Kg		81	45 - 120
Chrysene	1.67	1.364		mg/Kg		82	43 - 120
Dibenz(a,h)anthracene	1.67	1.399		mg/Kg		84	32 - 128
Fluoranthene	1.67	1.352		mg/Kg		81	46 - 120
Fluorene	1.67	1.394		mg/Kg		84	42 - 120
Indeno[1,2,3-cd]pyrene	1.67	1.374		mg/Kg		82	41 - 121
Naphthalene	1.67	1.265		mg/Kg		76	32 - 120
2-Methylnaphthalene	1.67	1.299		mg/Kg		78	28 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*75*		*29 - 120*
Terphenyl-d14 (Surr)	*76*		*13 - 120*
Nitrobenzene-d5 (Surr)	*68*		*27 - 120*

Lab Sample ID: 490-71491-F-1-E MS
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 224884

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	ND		1.75	1.312		mg/Kg	☼	75	25 - 120
Anthracene	ND		1.75	1.396		mg/Kg	☼	80	28 - 125

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

Lab Sample ID: 490-71491-F-1-E MS
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 224884

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	ND		1.75	1.393		mg/Kg	¤	80	23 - 120
Benzo[a]pyrene	ND		1.75	1.356		mg/Kg	¤	77	15 - 128
Benzo[b]fluoranthene	ND		1.75	1.429		mg/Kg	¤	82	12 - 133
Benzo[g,h,i]perylene	ND		1.75	1.360		mg/Kg	¤	78	22 - 120
Benzo[k]fluoranthene	ND		1.75	1.329		mg/Kg	¤	76	28 - 120
1-Methylnaphthalene	ND		1.75	1.245		mg/Kg	¤	71	10 - 120
Pyrene	ND		1.75	1.337		mg/Kg	¤	76	20 - 123
Phenanthrene	ND		1.75	1.346		mg/Kg	¤	77	21 - 122
Chrysene	ND		1.75	1.357		mg/Kg	¤	77	20 - 120
Dibenz(a,h)anthracene	ND		1.75	1.447		mg/Kg	¤	83	12 - 128
Fluoranthene	ND		1.75	1.375		mg/Kg	¤	78	10 - 143
Fluorene	ND		1.75	1.368		mg/Kg	¤	78	20 - 120
Indeno[1,2,3-cd]pyrene	ND		1.75	1.388		mg/Kg	¤	79	22 - 121
Naphthalene	ND		1.75	1.226		mg/Kg	¤	70	10 - 120
2-Methylnaphthalene	ND		1.75	1.289		mg/Kg	¤	74	13 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*69*		*29 - 120*
Terphenyl-d14 (Surr)	*72*		*13 - 120*
Nitrobenzene-d5 (Surr)	*64*		*27 - 120*

Lab Sample ID: 490-71491-F-1-F MSD
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 224884

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthylene	ND		1.72	1.257		mg/Kg	¤	73	25 - 120	4	50
Anthracene	ND		1.72	1.316		mg/Kg	¤	76	28 - 125	6	49
Benzo[a]anthracene	ND		1.72	1.353		mg/Kg	¤	78	23 - 120	3	50
Benzo[a]pyrene	ND		1.72	1.289		mg/Kg	¤	75	15 - 128	5	50
Benzo[b]fluoranthene	ND		1.72	1.306		mg/Kg	¤	76	12 - 133	9	50
Benzo[g,h,i]perylene	ND		1.72	1.306		mg/Kg	¤	76	22 - 120	4	50
Benzo[k]fluoranthene	ND		1.72	1.315		mg/Kg	¤	76	28 - 120	1	45
1-Methylnaphthalene	ND		1.72	1.151		mg/Kg	¤	67	10 - 120	8	50
Pyrene	ND		1.72	1.325		mg/Kg	¤	77	20 - 123	1	50
Phenanthrene	ND		1.72	1.259		mg/Kg	¤	73	21 - 122	7	50
Chrysene	ND		1.72	1.286		mg/Kg	¤	75	20 - 120	5	49
Dibenz(a,h)anthracene	ND		1.72	1.352		mg/Kg	¤	78	12 - 128	7	50
Fluoranthene	ND		1.72	1.322		mg/Kg	¤	77	10 - 143	4	50
Fluorene	ND		1.72	1.300		mg/Kg	¤	75	20 - 120	5	50
Indeno[1,2,3-cd]pyrene	ND		1.72	1.294		mg/Kg	¤	75	22 - 121	7	50
Naphthalene	ND		1.72	1.089		mg/Kg	¤	63	10 - 120	12	50
2-Methylnaphthalene	ND		1.72	1.153		mg/Kg	¤	67	13 - 120	11	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*29 - 120*
Terphenyl-d14 (Surr)	*72*		*13 - 120*

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

Lab Sample ID: 490-71491-F-1-F MSD
Matrix: Solid
Analysis Batch: 224923

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 224884

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	58		27 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 490-71501-B-1 DU
Matrix: Solid
Analysis Batch: 224304

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	78		77		%		0.2	20

QC Association Summary

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

TestAmerica Job ID: 490-71526-1

GC/MS VOA

Prep Batch: 224330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	5035	

Prep Batch: 224337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	5035	
490-71526-2	465 Dogwood - 2	Total/NA	Soil	5035	

Analysis Batch: 224510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	8260B	224337
490-71526-2	465 Dogwood - 2	Total/NA	Soil	8260B	224337
LCS 490-224510/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-224510/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-224510/6	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 224716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	8260B	224330
490-71562-B-1 MS	Matrix Spike	Total/NA	Solid	8260B	
490-71562-C-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	
LCS 490-224716/3	Lab Control Sample	Total/NA	Solid	8260B	
LCS 490-224716/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-224716/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
LCSD 490-224716/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-224716/8	Method Blank	Total/NA	Solid	8260B	
MB 490-224716/9	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 224884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71491-F-1-E MS	Matrix Spike	Total/NA	Solid	3550C	
490-71491-F-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	3550C	
490-71526-2	465 Dogwood - 2	Total/NA	Soil	3550C	
LCS 490-224884/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-224884/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 224923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71491-F-1-E MS	Matrix Spike	Total/NA	Solid	8270D	224884
490-71491-F-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8270D	224884
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	8270D	224884
490-71526-2	465 Dogwood - 2	Total/NA	Soil	8270D	224884
LCS 490-224884/2-A	Lab Control Sample	Total/NA	Solid	8270D	224884
MB 490-224884/1-A	Method Blank	Total/NA	Solid	8270D	224884

QC Association Summary

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

TestAmerica Job ID: 490-71526-1

General Chemistry

Analysis Batch: 224304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-71483-A-1 MS	Matrix Spike	Total/NA	Solid	Moisture	
490-71483-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
490-71501-B-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-71526-1	1352 Cardinal - 2	Total/NA	Soil	Moisture	
490-71526-2	465 Dogwood - 2	Total/NA	Soil	Moisture	

Lab Chronicle

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

TestAmerica Job ID: 490-71526-1

Client Sample ID: 1352 Cardinal - 2

Date Collected: 01/26/15 14:15
Date Received: 01/30/15 08:00

Lab Sample ID: 490-71526-1

Matrix: Soil
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.974 g	5.0 mL	224330	01/26/15 14:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.974 g	5.0 mL	224716	02/02/15 21:00	JMG	TAL NSH
Total/NA	Prep	5035			6.418 g	5.0 mL	224337	01/26/15 14:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.418 g	5.0 mL	224510	02/01/15 05:23	SLM	TAL NSH
Total/NA	Prep	3550C			37.44 g	1 mL	224884	02/03/15 09:34	LDC	TAL NSH
Total/NA	Analysis	8270D		1	37.44 g	1 mL	224923	02/03/15 22:07	SNR	TAL NSH
Total/NA	Analysis	Moisture		1			224304	01/30/15 14:20	RRS	TAL NSH

Client Sample ID: 465 Dogwood - 2

Date Collected: 01/28/15 15:15
Date Received: 01/30/15 08:00

Lab Sample ID: 490-71526-2

Matrix: Soil
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.73 g	5.0 mL	224337	01/28/15 15:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.73 g	5.0 mL	224510	02/01/15 05:56	SLM	TAL NSH
Total/NA	Prep	3550C			37.96 g	1 mL	224884	02/03/15 09:34	LDC	TAL NSH
Total/NA	Analysis	8270D		1	37.96 g	1 mL	224923	02/03/15 22:29	SNR	TAL NSH
Total/NA	Analysis	Moisture		1			224304	01/30/15 14:20	RRS	TAL NSH

Laboratory References:

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

Method Summary

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

TestAmerica Job ID: 490-71526-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 490-71526-1

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
South Carolina	State Program	4	84009 (001)	02-28-15

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

Analysis Method	Prep Method	Matrix	Analyte
8270D	3550C	Soil	1-Methylnaphthalene
Moisture		Soil	Percent Solids

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-71526 Chain of Custody

Cooler Received/Opened On 1/30/2015 @ 0800

1. Tracking # 9116 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 12080142

2. Temperature of rep. sample or temp blank when opened: 1.7 *Degrees Celsius*

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

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

If yes, how many and where: one front + Back

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

2/6/2015

Loc: 490
71526

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

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

To assist us in using the proper analytic methods, is this work being conducted fc regulatory purposes?

Compliance Monitoring? Yes ____ No ____

Enforcement Action? Yes ____ No ____

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

Site State: SC
PO#: 1406
TA Quote #:
Project ID: Laurel Bay Housing Project
Project #:

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Ice	HNO_3 (Red Label)	HCl (Blue Label) 8260 HCl	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	None (Black Label)	Other (Specify) Methanol	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: BTEX + Napth - 8260	PAH - 8270D	RUSH TAT (Pre-Schedule)	Standard TAT	Fax Results	Send QC with report
1352 Cardinal-2	1/26/15	1415	5	X					2				2	1					X		X	X				
465 Dogwood-2	1/28/15	1515	5	X					2				2	1					X		X	X				

Special Instructions:

Method of Shipment: FEDEX

Relinquished by:	Date	Time	Received by:	Date	Time
	1/29/15	0930	Fedex		
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
				1/30/15	8:00

Laboratory Comments:
Temperature Upon Receipt: 1.7
VOCs Free of Headspace? Y N

Login Sample Receipt Checklist

Client: Small Business Group Inc.

Job Number: 490-71526-1

Login Number: 71526
List Number: 1
Creator: Huskey, Adam

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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

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 1352Cardinal-2, 1352 Cardinal Lane, 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.

T. L. McQueen 2/16/15

(Name) (Date)

Appendix C

Laboratory Analytical Report - Initial Groundwater

CDM - AECOM

Multimedia Joint Venture

Volatile Organic Compounds by GC/MS

Client: **AECOM - Resolution Consultants**
Laboratory ID: **QF26030-005**
Description: **BEALB1352TW01WG20150625**
Matrix: **Aqueous**
Date Sampled: **06/25/2015 1010**
Date Received: **06/26/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	5	07/07/2015 2222	JJG		79028

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene	71-43-2	8260B	2.3	U	25	2.3	1.1	ug/L	2
Ethylbenzene	**100-41-4**	**8260B**	**40**		**25**	2.6	**1.1**	**ug/L**	**2**
Naphthalene	**91-20-3**	**8260B**	**300**		**25**	4.8	**0.70**	**ug/L**	**2**
Toluene	108-88-3	8260B	2.4	U	25	2.4	1.2	ug/L	2
Xylenes (total)	**1330-20-7**	**8260B**	**31**		**25**	2.9	**0.95**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		105	75-120
1,2-Dichloroethane-d4		102	70-120
Toluene-d8		102	85-120
Dibromofluoromethane		98	85-115

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

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

Semivolatile Organic Compounds by GC/MS (SIM)

Client: **AECOM - Resolution Consultants**
Laboratory ID: **QF26030-005**
Description: **BEALB1352TW01WG20150625**
Matrix: **Aqueous**
Date Sampled: **06/25/2015 1010**
Date Received: **06/26/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D (SIM)	1	07/10/2015 1609	DRB1	06/29/2015 1632	78383

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56-55-3	8270D (SIM)	0.040	U	0.20	0.040	0.019	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D (SIM)	0.040	U	0.20	0.040	0.019	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D (SIM)	0.040	U	0.20	0.040	0.024	ug/L	1
Chrysene	218-01-9	8270D (SIM)	0.040	U	0.20	0.040	0.021	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D (SIM)	0.080	U	0.20	0.080	0.040	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Methylnaphthalene-d10		100	15-139
Fluoranthene-d10		84	23-154

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

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

Appendix D

Laboratory Analytical Report – Permanent Well Groundwater

CDM - AECOM

Multimedia Joint Venture

Volatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants
Laboratory ID: SL09005-023
Description: BEALB1352MW01WG20171208
Matrix: Aqueous
Date Sampled: 12/08/2017 1200
Date Received: 12/09/2017

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/13/2017 1819	JJG		59492

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene	71-43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	1.4		1.0	0.80	0.40	ug/L	1
Naphthalene	91-20-3	8260B	12		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	0.47	J	1.0	0.80	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		98	85-114
Dibromofluoromethane		100	80-119
1,2-Dichloroethane-d4		96	81-118
Toluene-d8		100	89-112

LOQ = Limit of Quantitation
U = Not detected at or above the LOQ
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
LOD = Limit of Detection
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
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: SL09005-023
Description: BEALB1352MW01WG20171208
Matrix: Aqueous
Date Sampled: 12/08/2017 1200
Date Received: 12/09/2017

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/29/2017 1227	CMP2	12/15/2017 1035	59757

Parameter	CAS Number	Analytical 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		72	44-120
2-Fluorobiphenyl		65	44-119
Terphenyl-d14		78	50-134

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
U = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis	LOD = Limit of Detection		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

Appendix E
Regulatory Correspondence

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

October 1, 2014

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

RE: IGWA
Laurel Bay Underground Storage Tank Assessment Reports for:
See attached sheet

Dear Mr. Drawdy,

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

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

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

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

Sincerely,

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

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

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

Attachment to: Krieg to Drawdy
Subject: IGWA
Dated 10/1/2014

Laurel Bay Underground Storage Tank Assessment Reports for: (2 addresses/2 tanks)

1352 Cardinal	1463 Cardinal

D H E C
PROMOTE PROTECT PROSPER

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

Division of Waste Management
Bureau of Land and Waste Management

February 22, 2016

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

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

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received groundwater data in the above referenced Groundwater Investigation Report for the addresses attached. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

Per the Department's request, groundwater samples were collected from the attached referenced addresses. The Department reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent wells should be installed at the 52 stated addresses. For the remaining 91 addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

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

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

Sincerely,

Laurel Petrus
RCRA Federal Facilities Section

Attachment: Specific Property Recommendations

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

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

Draft Final Initial Groundwater Investigation Report for (143 addresses)

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

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

dhec
Healthy People Healthy Communities

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,

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 Investigation 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
* 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	

dhec
Healthy People. Healthy Communities.

June 18, 2018

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

RE: Approved
Draft Groundwater Assessment Report November and December 2017
Laurel Bay Military Housing Area

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received the above referenced report on April 4, 2018. 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).

DHEC has reviewed the report and based on this review, DHEC has not generated any comments. DHEC agrees with the recommendations in the report including the NFA recommendations shown on the list on the attached page. Please note that DHEC's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, DHEC retains the right to request further investigation if deemed necessary. If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

Laurel Petrus
Department of Defense Corrective Action Section

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

Attachment

Approval Draft Final Groundwater Assessment Report — June 18, 2018
November and December 2017
Laurel Bay Military Housing Area

The addresses approved for NFA are:

- 1186 Bobwhite Drive
- 1192 Bobwhite Drive
- 1194 Bobwhite Drive
- 1352 Cardinal Lane
- 1356 Cardinal Lane
- 1382 Dove Lane
- 1384 Dove Lane
- 1411 Eagle Lane
- 1418 Albatross Drive
- 1426 Albatross Drive
- 1434 Dove Lane
- 1436 Dove Lane
- 1440 Dove Lane
- 1442 Dove Lane
- 1444 Dove Lane