# SUMMARY REPORT
# EMPTY LOT (FORMERLY 397 ACORN DRIVE)
# LAUREL BAY MILITARY HOUSING AREA
# MARINE CORPS AIR STATION BEAUFORT
# BEAUFORT, SC

Revision: 0

Prepared for:

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

and


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

JUNE 2021

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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 2021

# Table of Contents



## Table



## Appendices

## List of Acronyms

| | |
|---|---|
| bgs | below ground surface |
| BTEX | benzene, toluene, ethylbenzene, and xylenes |
| CTO | Contract Task Order |
| COPC | constituents of potential concern |
| 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 the empty lot located at former 397 Acorn Drive. This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

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

### 1.1 Background Information

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

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

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

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

## 1.2 UST Removal and Assessment Process

During the UST removal process, a soil sample was collected from beneath the UST excavations (approximately 4 to 6 feet [ft] below ground surface [bgs]) and analyzed for a predetermined list of constituents of potential concern (COPCs) associated with the petroleum compounds found in home heating oil. These COPCs, derived from the *Quality Assurance Program Plan (QAPP) for the Underground Storage Tank Management Division, Revision 3.1* (SCDHEC, 2016) and the *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service,* (SCDHEC, 2018), are as follows:

- benzene, toluene, ethylbenzene, and xylenes (BTEX),
- naphthalene, and
- five select polynuclear aromatic hydrocarbon (PAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

Soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form. In accordance with SCDHEC's *QAPP for the UST Management*

*Division* (SCDHEC, 2016), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs). It should be noted that the RBSLs for select PAHs were revised in Revision 2.0 of the QAPP (SCDHEC, 2013) and were revised again in Revision 3.0 (SCDHEC, 2015). The screening levels used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The results of the IGWA sampling (if necessary) are used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations will require additional delineation of COPCs in groundwater. In order to delineate the extent of impact to groundwater, permanent wells are installed and a sampling program is established for those former UST locations where IGWA sampling has indicated the presence of COPCs in excess of the SCDHEC RBSLs for groundwater. Groundwater analytical results are also compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion and the necessity for an investigation associated with this media. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

## 2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for the empty lot located at former 397 Acorn Drive. Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 397 Acorn Drive* (MCAS Beaufort, 2009). The UST Assessment Report is provided in Appendix B.

### 2.1 UST Removal and Soil Sampling

On April 30, 2009, two 280 gallon heating oil USTs were removed from the empty lot located at former 397 Acorn Drive. The former UST locations are indicated on Figures 2 and 3 of the UST Assessment Report (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 Report (Appendix B), the depths to the bases of the USTs were 4'2" bgs (Tank 1) and 5'2" bgs (Tank 2) and a single soil sample was collected for each from those depths. The

samples were collected from the fill port side of the former USTs 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 report is included in the UST Assessment Report presented in Appendix B. The laboratory analytical data report includes the soil results for the additional PAHs that were analyzed, but do not have associated RBSLs.

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from the empty lot located at former 397 Acorn Drive were less than the SCDHEC RBSLs, which indicated the subsurface was not impacted by COPCs associated with the former UST at concentrations that presented a potential risk to human health and the environment.

# 3.0 PROPERTY STATUS

Based on the analytical results for soil, SCDHEC made the determination that NFA was required for the empty lot located at former 397 Acorn Drive. This NFA determination was obtained in a letter dated July 22, 2009. SCDHEC's NFA letter is provided in Appendix C.

# 4.0 REFERENCES

Marine Corps Air Station Beaufort, 2009. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 397 Acorn Drive, Laurel Bay Military Housing Area*, June 2009.

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.

**Table**

**Table 1**
**Laboratory Analytical Results - Soil**
**Empty Lot (Formerly 397 Acorn Drive)**
**Laurel Bay Military Housing Area**
**Marine Corps Air Station Beaufort**
**Beaufort, South Carolina**

| Constituent | SCDHEC RBSLs [1] | Results Samples Collected 04/30/09 | |
|---|---|---|---|
| | | 397 Acorn-1 | 397 Acorn-2 |
| **Volatile Organic Compounds Analyzed by EPA Method 8260B (mg/kg)** | | | |
| Benzene | 0.003 | ND | ND |
| Ethylbenzene | 1.15 | ND | ND |
| Naphthalene | 0.036 | **0.0123** | **0.00619** |
| Toluene | 0.627 | ND | ND |
| Xylenes, Total | 13.01 | ND | ND |
| **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 1.0 and 1.1 (SCDHEC, May 2001 and SCDHEC, February 2011) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligram per kilogram

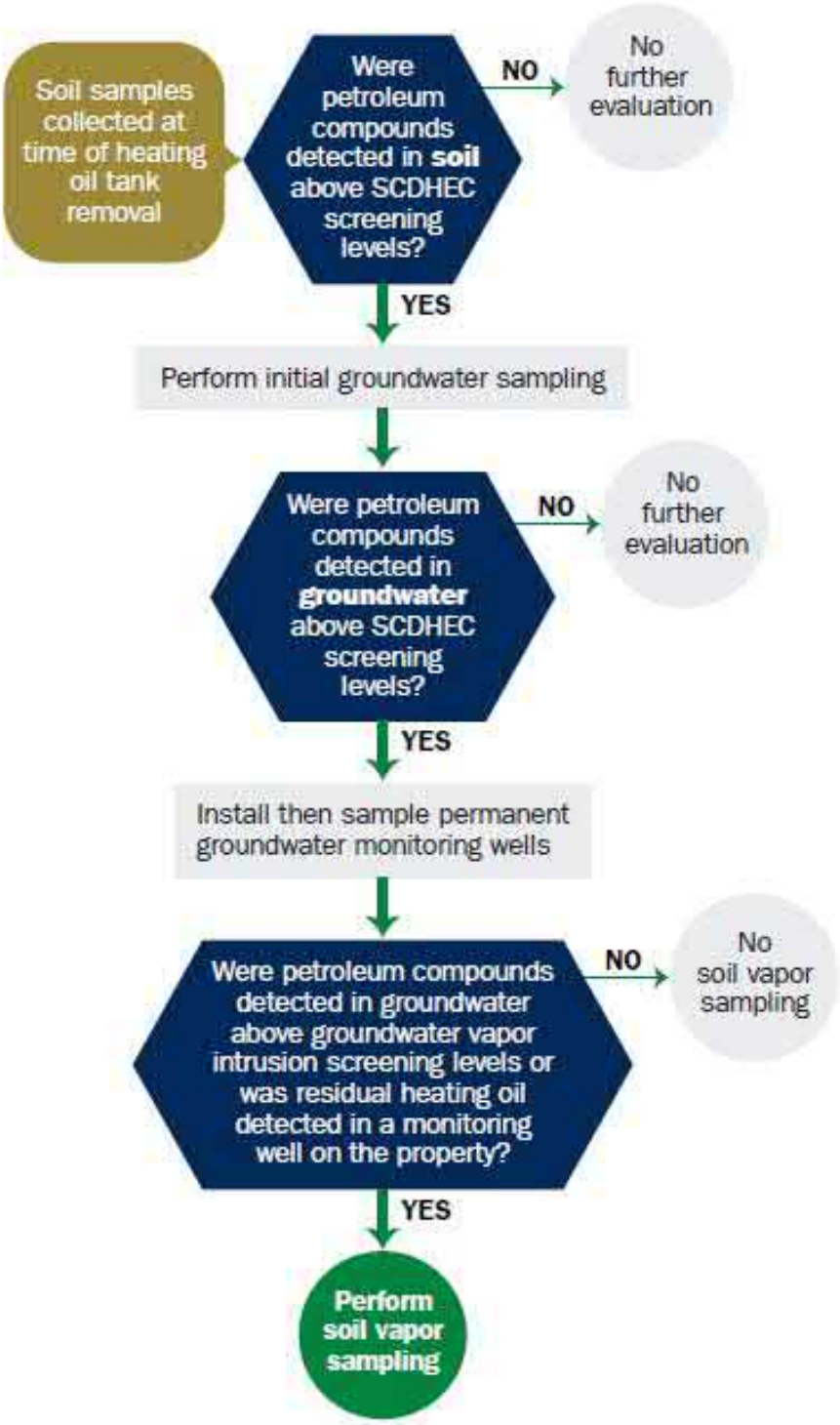
ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The laboratory report is provided in Appendix B.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

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

CDM - AECOM
Multimedia Joint Venture




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

**Appendix B**
**UST Assessment Report**

CDM - AECOM
Multimedia Joint Venture

Attachment 1

South Carolina Department of Health and Environmental Control (SCDHEC)

# Underground Storage Tank (UST) Assessment Report

| Date Received<br><br>State Use Only |
|---|

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

04231
NFA

RECEIVED
JUN 29 2009
SITE ASSESSMENT, REMEDIATION & REVITALIZATION

## 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 | |
| 397 Acorn Dr., 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

| | | | |
|---|---|---|---|
| 397 Acorn-1 | | 397 Acorn-2 | |
| Heating oil | | Heating oil | |
| 280 gal | | 280 gal | |
| Late 1950s | | Late 1950s | |
| Steel | | Steel | |
| Mid 1980s | | Mid 1980s | |
| 4'2" | | 5'2" | |
| No | | No | |
| No | | No | |
| Removed | | Removed | |
| 4/30/09 | | 4/30/09 | |
| Yes | | Yes | |
| Yes | | Yes | |

A. Product...(ex. Gas, Kerosene).....

B. Capacity..(ex. 1k, 2k).....

C. Age.....

D. Construction Material..(ex. Steel, FRP).....

E. Month/Year of Last Use.....

F. Depth (ft.) To Base of Tank.....

G. Spill Prevention Equipment Y/N.....

H. Overfill Prevention Equipment Y/N.....

I. Method of Closure Removed/Filled.....

J. Date Tanks Removed/Filled.....

K. Visible Corrosion or Pitting Y/N.....

L. Visible Holes Y/N.....

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

UST 397Acorn-1 was removed from the ground, and disposed of at a Subtitle "D" landfill.
UST 397Acorn-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)

UST 397Acorn-1 was filled with sand. UST 397Acorn-2 was empty.

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

Corrosion, pitting and holes were found on the entire surface of both tanks.

## VII. PIPING INFORMATION

| | | | |
|---|---|---|---|
| 397Acorn-1 | | 397Acorn-2 | |
| A. Construction Material..(ex. Steel, FRP)..... | Steel & Copper | | Steel & Copper | |
| B. Distance from UST to Dispenser..... | N/A | | N/A | |
| C. Number of Dispensers..... | N/A | | N/A | |
| D. Type of System Pressure or Suction..... | Suction | | Suction | |
| E. Was Piping Removed from the Ground? Y/N | Unknown* | | Unknown* | |
| F. Visible Corrosion or Pitting Y/N..... | Unknown | | Unknown | |
| G. Visible Holes Y/N..... | Unknown | | Unknown | |
| H. Age..... | Late 1950s | | Late 1950s | |

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

*All piping from both tanks was previously removed by others.

## VIII. BRIEF SITE DESCRIPTION AND HISTORY

This lot once contained a single family home as part of MCAS base housing.

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?<br><br>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?<br><br>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?<br><br>If yes, how far below land surface (indicate location and depth)? | | X | |
| D. Did contaminated soils remain stockpiled on site after closure?<br><br>If yes, indicate the stockpile location on the site map.<br><br>Name of DHEC representative authorizing soil removal: | | X | |
| E. Was a petroleum sheen or free product detected on any excavation or boring waters?<br><br>If yes, indicate location and thickness. | | X | |

# X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 96012001

B.

| | Sample # | Location | Sample Type (Soil/Water) | Soil Type (Sand/Clay) | Depth* | Date/Time of Collection | Collected by | OVA # |
|---|---|---|---|---|---|---|---|---|
| 397 | Acorn-1 | Excav at fill end | Soil | Sandy clay | 4'2" | 4/30/09 1030 hrs | P. Shaw | |
| | | | | | | | | |
| 397 | Acorn-2 | Excav at fill end | Soil | Sandy clay | 5'2" | 4/30/09 1140 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?<br><br>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?<br><br>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?<br><br>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?<br>*Sewer and water.<br><br>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?<br><br>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.**

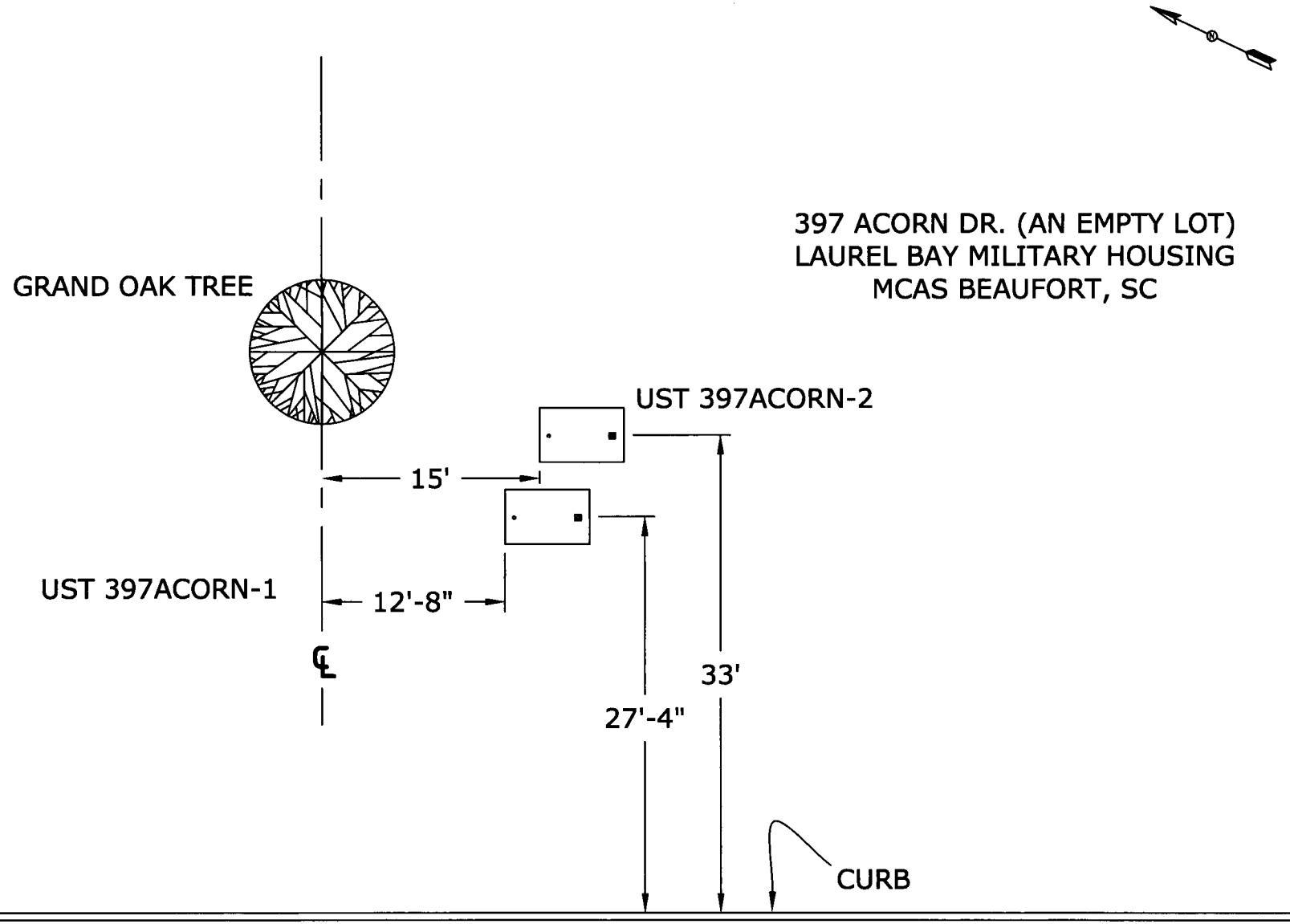
(Attach Site Map Here)


**SBG-EEG, Inc.**
Small Business Group, Inc.
10179 Hwy 78
Ladson, SC 29456
Ph. (843) 879-0400

Drawn By: L. DiAsio

Dwg Date: May 2009

FIGURE 1: LOCATION MAP
397 ACORN DR., LAUREL BAY
MCAS BEAUFORT SC

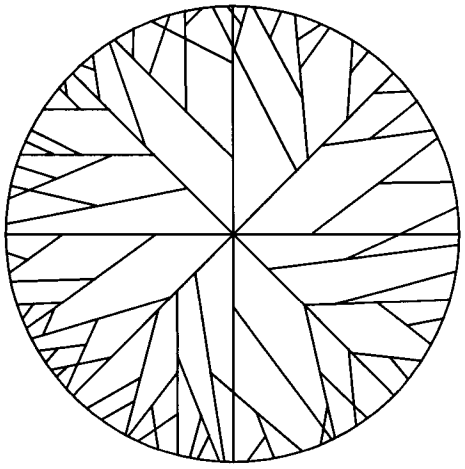




**SBG-EEG**
10179 HWY 78
LADSON, SC 29456
ph. (843) 879-0400

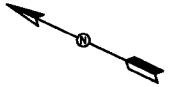

FIGURE 2 SITE MAP
397 ACORN DR., LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE MAY 2009



GRAND
OAK TREE

397 ACORN DR. (AN EMPTY LOT)
LAUREL BAY MILITARY HOUSING
MCAS BEAUFORT, SC




EXCAVATION

280 GALLON
UST
397ACORN-2

FILL END

SOIL SAMPLE
397ACORN-2

280 GALLON
UST
397ACORN-1

FILL END

EXCAVATION

SOIL SAMPLE
397ACORN-1

GRASS

UST 397ACORN-1 WAS
14" BELOW GRADE.

UST 397ACORN-2 WAS
26" BELOW GRADE.

TO ACORN DR.

GRAPHIC SCALE
0 5'


**SBG-EEG**
10179 HWY 78
LADSON, SC 29456
ph. (843) 879-0400


FIGURE 3 UST SAMPLE LOCATIONS
397 ACORN DR., LAUREL BAY
MCAS BEAUFORT SC

SCALE: GRAPHIC | DWG DATE MAY 2009


Picture 1: 397 Acorn Drive UST removal site.

## 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 | 397 Acorn-1 | | 397 Acorn-2 | | | |
|---|---|---|---|---|---|---|
| Benzene | ND | | ND | | | |
| Toluene | ND | | ND | | | |
| Ethylbenzene | ND | | ND | | | |
| Xylenes | ND | | ND | | | |
| Naphthalene | 0.0123 mg/kg | | 0.00619 mg/kg | | | |
| Benzo (a) anthracene | ND | | ND | | | |
| Benzo (b) fluoranthene | ND | | ND | | | |
| Benzo (k) fluoranthene | ND | | ND | | | |
| Chrysene | ND | | ND | | | |
| Dibenz (a, h) anthracene | ND | | 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
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

May 15, 2009 1:45:00PM

Client: EEG - Env. Enterprise Group (2449)
10179 Highway 78
Ladson, SC 29456
Attn: Tom McElwee

Work Order: NSE0094
Project Name: Laurel Bay Housing Project
Project Nbr: [none]
P/O Nbr: 0829
Date Received: 05/01/09

| SAMPLE IDENTIFICATION | LAB NUMBER | COLLECTION DATE AND TIME |
|---|---|---|
| 295 Birch-1 | NSE0094-01 | 04/27/09 10:45 |
| 295 Birch-2 | NSE0094-02 | 04/27/09 13:00 |
| 289 Birch | NSE0094-03 | 04/28/09 11:30 |
| 386 Acorn | NSE0094-04 | 04/29/09 11:15 |
| 397 Acorn-1 | NSE0094-05 | 04/30/09 10:30 |
| 397 Acorn-2 | NSE0094-06 | 04/30/09 11:40 |

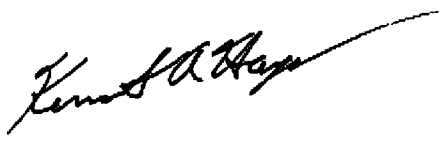
An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.



The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

All solids results are reported in wet weight unless specifically stated.
Estimated uncertainty is available upon request.
This report has been electronically signed.
Report Approved By:



Ken A. Hayes

Senior Project Manager

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-01 (295 Birch-1 - Soil) Sampled: 04/27/09 10:45** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **81.6** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00205 | 1 | 05/06/09 05:20 | SW846 8260B | 9050171 |
| Ethylbenzene | **0.00317** | | mg/kg dry | 0.00205 | 1 | 05/06/09 05:20 | SW846 8260B | 9050171 |
| Naphthalene | **0.0628** | B | mg/kg dry | 0.00511 | 1 | 05/06/09 05:20 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00205 | 1 | 05/06/09 05:20 | SW846 8260B | 9050171 |
| Xylenes, total | ND | B | mg/kg dry | 0.00511 | 1 | 05/06/09 05:20 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *116 %* | | | | | *05/06/09 05:20* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *102 %* | | | | | *05/06/09 05:20* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *96 %* | | | | | *05/06/09 05:20* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *107 %* | | | | | *05/06/09 05:20* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Anthracene | **0.0812** | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Chrysene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Fluoranthene | **0.139** | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Fluorene | **0.115** | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Naphthalene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Phenanthrene | **0.771** | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| Pyrene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | ND | | mg/kg dry | 0.0800 | 1 | 05/08/09 12:51 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *56 %* | | | | | *05/08/09 12:51* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *50 %* | | | | | *05/08/09 12:51* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *48 %* | | | | | *05/08/09 12:51* | *SW846 8270D* | *9050227* |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-02 (295 Birch-2 - Soil) Sampled: 04/27/09 13:00** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **74.8** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00219 | 1 | 05/06/09 05:51 | SW846 8260B | 9050171 |
| Ethylbenzene | ND | | mg/kg dry | 0.00219 | 1 | 05/06/09 05:51 | SW846 8260B | 9050171 |
| Naphthalene | **0.0151** | B | mg/kg dry | 0.00548 | 1 | 05/06/09 05:51 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00219 | 1 | 05/06/09 05:51 | SW846 8260B | 9050171 |
| Xylenes, total | ND | B | mg/kg dry | 0.00548 | 1 | 05/06/09 05:51 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *119 %* | | | | | *05/06/09 05:51* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *103 %* | | | | | *05/06/09 05:51* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *103 %* | | | | | *05/06/09 05:51* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *113 %* | | | | | *05/06/09 05:51* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Anthracene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Chrysene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Fluoranthene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Fluorene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Naphthalene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Phenanthrene | **0.207** | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| Pyrene | ND | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | **0.585** | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | **0.0980** | | mg/kg dry | 0.0888 | 1 | 05/07/09 19:29 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *88 %* | | | | | *05/07/09 19:29* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *87 %* | | | | | *05/07/09 19:29* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *64 %* | | | | | *05/07/09 19:29* | *SW846 8270D* | *9050227* |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-03 (289 Birch - Soil) Sampled: 04/28/09 11:30** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **84.8** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00196 | 1 | 05/06/09 06:21 | SW846 8260B | 9050171 |
| Ethylbenzene | ND | | mg/kg dry | 0.00196 | 1 | 05/06/09 06:21 | SW846 8260B | 9050171 |
| Naphthalene | **0.00797** | B | mg/kg dry | 0.00491 | 1 | 05/06/09 06:21 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00196 | 1 | 05/06/09 06:21 | SW846 8260B | 9050171 |
| Xylenes, total | ND | B | mg/kg dry | 0.00491 | 1 | 05/06/09 06:21 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *115 %* | | | | | *05/06/09 06:21* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *100 %* | | | | | *05/06/09 06:21* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *102 %* | | | | | *05/06/09 06:21* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *130 %* | | | | | *05/06/09 06:21* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Anthracene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Chrysene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Fluoranthene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Fluorene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Naphthalene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Phenanthrene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| Pyrene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | ND | RL1 | mg/kg dry | 0.395 | 5 | 05/08/09 13:20 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *47 %* | | | | | *05/08/09 13:20* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *45 %* | | | | | *05/08/09 13:20* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *44 %* | | | | | *05/08/09 13:20* | *SW846 8270D* | *9050227* |

| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-04 (386 Acorn - Soil) Sampled: 04/29/09 11:15** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **72.5** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00220 | 1 | 05/06/09 06:51 | SW846 8260B | 9050171 |
| Ethylbenzene | **0.00712** | | mg/kg dry | 0.00220 | 1 | 05/06/09 06:51 | SW846 8260B | 9050171 |
| Naphthalene | **0.163** | B | mg/kg dry | 0.00549 | 1 | 05/06/09 06:51 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00220 | 1 | 05/06/09 06:51 | SW846 8260B | 9050171 |
| Xylenes, total | **0.00660** | B | mg/kg dry | 0.00549 | 1 | 05/06/09 06:51 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *115 %* | | | | | *05/06/09 06:51* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *101 %* | | | | | *05/06/09 06:51* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *110 %* | | | | | *05/06/09 06:51* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *142 %* | | | | | *05/06/09 06:51* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Anthracene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Chrysene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Fluoranthene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Fluorene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Naphthalene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Phenanthrene | **0.699** | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| Pyrene | ND | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | **1.52** | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | **2.22** | | mg/kg dry | 0.450 | 5 | 05/08/09 13:51 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *59 %* | | | | | *05/08/09 13:51* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *57 %* | | | | | *05/08/09 13:51* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *53 %* | | | | | *05/08/09 13:51* | *SW846 8270D* | *9050227* |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-05 (397 Acorn-1 - Soil) Sampled: 04/30/09 10:30** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **80.3** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00217 | 1 | 05/06/09 07:21 | SW846 8260B | 9050171 |
| Ethylbenzene | ND | | mg/kg dry | 0.00217 | 1 | 05/06/09 07:21 | SW846 8260B | 9050171 |
| Naphthalene | **0.0123** | B | mg/kg dry | 0.00542 | 1 | 05/06/09 07:21 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00217 | 1 | 05/06/09 07:21 | SW846 8260B | 9050171 |
| Xylenes, total | ND | B | mg/kg dry | 0.00542 | 1 | 05/06/09 07:21 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *117 %* | | | | | *05/06/09 07:21* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *102 %* | | | | | *05/06/09 07:21* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *104 %* | | | | | *05/06/09 07:21* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *122 %* | | | | | *05/06/09 07:21* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Anthracene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Chrysene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Fluoranthene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Fluorene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Naphthalene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Phenanthrene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| Pyrene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | ND | | mg/kg dry | 0.0815 | 1 | 05/07/09 20:37 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *62 %* | | | | | *05/07/09 20:37* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *71 %* | | | | | *05/07/09 20:37* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *63 %* | | | | | *05/07/09 20:37* | *SW846 8270D* | *9050227* |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## ANALYTICAL REPORT

| Analyte | Result | Flag | Units | MRL | Dilution Factor | Analysis Date/Time | Method | Batch |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: NSE0094-06 (397 Acorn-2 - Soil) Sampled: 04/30/09 11:40** | | | | | | | | |
| General Chemistry Parameters | | | | | | | | |
| % Dry Solids | **79.3** | | % | 0.500 | 1 | 05/11/09 09:44 | SW-846 | 9051163 |
| Selected Volatile Organic Compounds by EPA Method 8260B | | | | | | | | |
| Benzene | ND | | mg/kg dry | 0.00214 | 1 | 05/06/09 07:51 | SW846 8260B | 9050171 |
| Ethylbenzene | ND | | mg/kg dry | 0.00214 | 1 | 05/06/09 07:51 | SW846 8260B | 9050171 |
| Naphthalene | **0.00619** | B | mg/kg dry | 0.00536 | 1 | 05/06/09 07:51 | SW846 8260B | 9050171 |
| Toluene | ND | B | mg/kg dry | 0.00214 | 1 | 05/06/09 07:51 | SW846 8260B | 9050171 |
| Xylenes, total | ND | B | mg/kg dry | 0.00536 | 1 | 05/06/09 07:51 | SW846 8260B | 9050171 |
| *Surr: 1,2-Dichloroethane-d4 (41-150%)* | *115 %* | | | | | *05/06/09 07:51* | *SW846 8260B* | *9050171* |
| *Surr: Dibromofluoromethane (55-139%)* | *100 %* | | | | | *05/06/09 07:51* | *SW846 8260B* | *9050171* |
| *Surr: Toluene-d8 (57-148%)* | *102 %* | | | | | *05/06/09 07:51* | *SW846 8260B* | *9050171* |
| *Surr: 4-Bromofluorobenzene (58-150%)* | *125 %* | | | | | *05/06/09 07:51* | *SW846 8260B* | *9050171* |
| Polyaromatic Hydrocarbons by EPA 8270D | | | | | | | | |
| Acenaphthene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Acenaphthylene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Anthracene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Benzo (a) anthracene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Benzo (a) pyrene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Benzo (b) fluoranthene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Benzo (g,h,i) perylene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Benzo (k) fluoranthene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Chrysene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Dibenz (a,h) anthracene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Fluoranthene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Fluorene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Indeno (1,2,3-cd) pyrene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Naphthalene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Phenanthrene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| Pyrene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| 1-Methylnaphthalene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| 2-Methylnaphthalene | ND | RL1 | mg/kg dry | 0.411 | 5 | 05/08/09 14:20 | SW846 8270D | 9050227 |
| *Surr: Terphenyl-d14 (26-128%)* | *40 %* | | | | | *05/08/09 14:20* | *SW846 8270D* | *9050227* |
| *Surr: 2-Fluorobiphenyl (19-109%)* | *50 %* | | | | | *05/08/09 14:20* | *SW846 8270D* | *9050227* |
| *Surr: Nitrobenzene-d5 (22-104%)* | *45 %* | | | | | *05/08/09 14:20* | *SW846 8270D* | *9050227* |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## SAMPLE EXTRACTION DATA

| Parameter | Batch | Lab Number | Wt/Vol Extracted | Extracted Vol | Date | Analyst | Extraction Method |
|---|---|---|---|---|---|---|---|
| **Polyaromatic Hydrocarbons by EPA 8270D** | | | | | | | |
| SW846 8270D | 9050227 | NSE0094-01 | 30.78 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-02 | 30.27 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-03 | 30.00 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-03RE1 | 30.00 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-04 | 30.79 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-04RE1 | 30.79 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-05 | 30.72 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-06 | 30.83 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| SW846 8270D | 9050227 | NSE0094-06RE1 | 30.83 | 1.00 | 05/06/09 11:20 | TEM | EPA 3550B |
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | | |
| SW846 8260B | 9050171 | NSE0094-01 | 5.99 | 5.00 | 04/27/09 10:45 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-02 | 6.10 | 5.00 | 04/27/09 13:00 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-03 | 6.01 | 5.00 | 04/28/09 11:30 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-04 | 6.28 | 5.00 | 04/29/09 11:15 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-05 | 5.74 | 5.00 | 04/30/09 10:30 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-06 | 5.88 | 5.00 | 04/30/09 11:40 | JRL | EPA 5035 |
| SW846 8260B | 9050171 | NSE0094-06RE1 | 4.57 | 5.00 | 04/30/09 11:40 | JRL | EPA 5035 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA
## Blank

| Analyte | Blank Value | Q | Units | Q.C. Batch | Lab Number | Analyzed Date/Time |
|---|---|---|---|---|---|---|
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | |
| **9050171-BLK1** | | | | | | |
| Benzene | <0.000670 | | mg/kg wet | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| Ethylbenzene | <0.000670 | | mg/kg wet | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| Naphthalene | 0.00199 | B | mg/kg wet | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| Toluene | 0.00107 | B | mg/kg wet | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| Xylenes, total | 0.00284 | B | mg/kg wet | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| *Surrogate: 1,2-Dichloroethane-d4* | 117% | | | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| *Surrogate: Dibromofluoromethane* | 102% | | | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| *Surrogate: Toluene-d8* | 95% | | | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| *Surrogate: 4-Bromofluorobenzene* | 103% | | | 9050171 | 9050171-BLK1 | 05/06/09 02:19 |
| **Polyaromatic Hydrocarbons by EPA 8270D** | | | | | | |
| **9050227-BLK1** | | | | | | |
| Acenaphthene | <0.0310 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Acenaphthylene | <0.0320 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Anthracene | <0.0330 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Benzo (a) anthracene | <0.0380 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Benzo (a) pyrene | <0.0290 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Benzo (b) fluoranthene | <0.0320 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Benzo (g,h,i) perylene | <0.0290 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Benzo (k) fluoranthene | <0.0290 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Chrysene | <0.0390 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Dibenz (a,h) anthracene | <0.0310 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Fluoranthene | <0.0340 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Fluorene | <0.0390 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Indeno (1,2,3-cd) pyrene | <0.0310 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Naphthalene | <0.0410 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Phenanthrene | <0.0340 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| Pyrene | <0.0410 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| 1-Methylnaphthalene | <0.0320 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| 2-Methylnaphthalene | <0.0330 | | mg/kg wet | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| *Surrogate: Terphenyl-d14* | 95% | | | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| *Surrogate: 2-Fluorobiphenyl* | 72% | | | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |
| *Surrogate: Nitrobenzene-d5* | 69% | | | 9050227 | 9050227-BLK1 | 05/06/09 18:56 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA
### Duplicate

| Analyte | Orig. Val. | Duplicate | Q | Units | RPD | Limit | Batch | Sample Duplicated | % Rec. | Analyzed Date/Time |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry Parameters** | | | | | | | | | | |
| **9051163-DUP1** | | | | | | | | | | |
| % Dry Solids | 90.7 | 90.2 | | % | 0.6 | 20 | 9051163 | NSE0088-03 | | 05/11/09 09:44 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA
## LCS

| Analyte | Known Val. | Analyzed Val | Q | Units | % Rec. | Target Range | Batch | Analyzed Date/Time |
|---|---|---|---|---|---|---|---|---|
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | |
| **9050171-BS1** | | | | | | | | |
| Benzene | 50.0 | 45.4 | | ug/kg | 91% | 76 - 130 | 9050171 | 05/06/09 00:18 |
| Ethylbenzene | 50.0 | 39.8 | | ug/kg | 80% | 80 - 128 | 9050171 | 05/06/09 00:18 |
| Naphthalene | 50.0 | 53.2 | | ug/kg | 106% | 63 - 144 | 9050171 | 05/06/09 00:18 |
| Toluene | 50.0 | 41.0 | | ug/kg | 82% | 80 - 125 | 9050171 | 05/06/09 00:18 |
| Xylenes, total | 150 | 121 | | ug/kg | 81% | 79 - 130 | 9050171 | 05/06/09 00:18 |
| *Surrogate: 1,2-Dichloroethane-d4* | 50.0 | 59.5 | | | 119% | 41 - 150 | 9050171 | 05/06/09 00:18 |
| *Surrogate: Dibromofluoromethane* | 50.0 | 52.5 | | | 105% | 55 - 139 | 9050171 | 05/06/09 00:18 |
| *Surrogate: Toluene-d8* | 50.0 | 49.0 | | | 98% | 57 - 148 | 9050171 | 05/06/09 00:18 |
| *Surrogate: 4-Bromofluorobenzene* | 50.0 | 52.3 | | | 105% | 58 - 150 | 9050171 | 05/06/09 00:18 |
| **Polyaromatic Hydrocarbons by EPA 8270D** | | | | | | | | |
| **9050227-BS1** | | | | | | | | |
| Acenaphthene | 1.67 | 1.41 | MNR | mg/kg wet | 84% | 52 - 106 | 9050227 | 05/06/09 19:19 |
| Acenaphthylene | 1.67 | 1.46 | MNR | mg/kg wet | 88% | 53 - 109 | 9050227 | 05/06/09 19:19 |
| Anthracene | 1.67 | 1.65 | MNR | mg/kg wet | 99% | 54 - 124 | 9050227 | 05/06/09 19:19 |
| Benzo (a) anthracene | 1.67 | 1.52 | MNR | mg/kg wet | 91% | 53 - 111 | 9050227 | 05/06/09 19:19 |
| Benzo (a) pyrene | 1.67 | 1.48 | MNR | mg/kg wet | 89% | 52 - 122 | 9050227 | 05/06/09 19:19 |
| Benzo (b) fluoranthene | 1.67 | 1.19 | MNR | mg/kg wet | 71% | 48 - 115 | 9050227 | 05/06/09 19:19 |
| Benzo (g,h,i) perylene | 1.67 | 1.47 | MNR | mg/kg wet | 88% | 46 - 114 | 9050227 | 05/06/09 19:19 |
| Benzo (k) fluoranthene | 1.67 | 1.36 | MNR | mg/kg wet | 82% | 41 - 121 | 9050227 | 05/06/09 19:19 |
| Chrysene | 1.67 | 1.50 | MNR | mg/kg wet | 90% | 49 - 113 | 9050227 | 05/06/09 19:19 |
| Dibenz (a,h) anthracene | 1.67 | 1.29 | MNR | mg/kg wet | 77% | 47 - 117 | 9050227 | 05/06/09 19:19 |
| Fluoranthene | 1.67 | 1.46 | MNR | mg/kg wet | 87% | 52 - 113 | 9050227 | 05/06/09 19:19 |
| Fluorene | 1.67 | 1.48 | MNR | mg/kg wet | 89% | 54 - 107 | 9050227 | 05/06/09 19:19 |
| Indeno (1,2,3-cd) pyrene | 1.67 | 1.33 | MNR | mg/kg wet | 80% | 47 - 115 | 9050227 | 05/06/09 19:19 |
| Naphthalene | 1.67 | 1.14 | MNR | mg/kg wet | 69% | 34 - 107 | 9050227 | 05/06/09 19:19 |
| Phenanthrene | 1.67 | 1.44 | MNR | mg/kg wet | 86% | 53 - 108 | 9050227 | 05/06/09 19:19 |
| Pyrene | 1.67 | 1.56 | MNR | mg/kg wet | 94% | 54 - 113 | 9050227 | 05/06/09 19:19 |
| 1-Methylnaphthalene | 1.67 | 1.04 | MNR | mg/kg wet | 63% | 36 - 100 | 9050227 | 05/06/09 19:19 |
| 2-Methylnaphthalene | 1.67 | 1.13 | MNR | mg/kg wet | 68% | 42 - 112 | 9050227 | 05/06/09 19:19 |
| *Surrogate: Terphenyl-d14* | 1.67 | 1.52 | | | 91% | 26 - 128 | 9050227 | 05/06/09 19:19 |
| *Surrogate: 2-Fluorobiphenyl* | 1.67 | 1.38 | | | 83% | 19 - 109 | 9050227 | 05/06/09 19:19 |
| *Surrogate: Nitrobenzene-d5* | 1.67 | 1.11 | | | 67% | 22 - 104 | 9050227 | 05/06/09 19:19 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA

### LCS Dup

| Analyte | Orig. Val. | Duplicate | Q | Units | Spike Conc | % Rec. | Target Range | RPD | Limit | Batch | Sample Duplicated | Analyzed Date/Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | | | | | |
| **9050171-BSD1** | | | | | | | | | | | | |
| Benzene | | 46.0 | | ug/kg | 50.0 | 92% | 76 - 130 | 1 | 43 | 9050171 | | 05/06/09 00:48 |
| Ethylbenzene | | 39.9 | | ug/kg | 50.0 | 80% | 80 - 128 | 0.3 | 48 | 9050171 | | 05/06/09 00:48 |
| Naphthalene | | 54.2 | | ug/kg | 50.0 | 108% | 63 - 144 | 2 | 50 | 9050171 | | 05/06/09 00:48 |
| Toluene | | 40.5 | | ug/kg | 50.0 | 81% | 80 - 125 | 1 | 44 | 9050171 | | 05/06/09 00:48 |
| Xylenes, total | | 122 | | ug/kg | 150 | 81% | 79 - 130 | 0.5 | 48 | 9050171 | | 05/06/09 00:48 |
| *Surrogate: 1,2-Dichloroethane-d4* | | 59.2 | | ug/kg | 50.0 | 118% | 41 - 150 | | | 9050171 | | 05/06/09 00:48 |
| *Surrogate: Dibromofluoromethane* | | 52.3 | | ug/kg | 50.0 | 105% | 55 - 139 | | | 9050171 | | 05/06/09 00:48 |
| *Surrogate: Toluene-d8* | | 48.3 | | ug/kg | 50.0 | 97% | 57 - 148 | | | 9050171 | | 05/06/09 00:48 |
| *Surrogate: 4-Bromofluorobenzene* | | 51.8 | | ug/kg | 50.0 | 104% | 58 - 150 | | | 9050171 | | 05/06/09 00:48 |

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA
### Matrix Spike

| Analyte | Orig. Val. | MS Val | Q | Units | Spike Conc | % Rec. | Target Range | Batch | Sample Spiked | Analyzed Date/Time |
|---|---|---|---|---|---|---|---|---|---|---|
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | | | |
| **9050171-MS1** | | | | | | | | | | |
| Benzene | ND | 1.16 | | mg/kg dry | 3.45 | 34% | 33 - 146 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| Ethylbenzene | ND | 1.11 | | mg/kg dry | 3.45 | 32% | 16 - 160 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| Naphthalene | 0.179 | 1.35 | | mg/kg dry | 3.45 | 34% | 10 - 151 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| Toluene | ND | 1.06 | | mg/kg dry | 3.45 | 31% | 30 - 145 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| Xylenes, total | 0.197 | 3.37 | | mg/kg dry | 10.3 | 31% | 16 - 159 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| *Surrogate: 1,2-Dichloroethane-d4* | | 57.0 | | ug/kg | 50.0 | 114% | 41 - 150 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| *Surrogate: Dibromofluoromethane* | | 50.6 | | ug/kg | 50.0 | 101% | 55 - 139 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| *Surrogate: Toluene-d8* | | 46.8 | | ug/kg | 50.0 | 94% | 57 - 148 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |
| *Surrogate: 4-Bromofluorobenzene* | | 54.7 | | ug/kg | 50.0 | 109% | 58 - 150 | 9050171 | NSE0094-06RE1 | 05/06/09 08:52 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## PROJECT QUALITY CONTROL DATA

### Matrix Spike Dup

| Analyte | Orig. Val. | Duplicate | Q | Units | Spike Conc | % Rec. | Target Range | RPD | Limit | Batch | Sample Duplicated | Analyzed Date/Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Selected Volatile Organic Compounds by EPA Method 8260B** | | | | | | | | | | | | |
| **9050171-MSD1** | | | | | | | | | | | | |
| Benzene | ND | 0.784 | M8 | mg/kg dry | 3.45 | 23% | 33 - 146 | 38 | 43 | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| Ethylbenzene | ND | 0.706 | | mg/kg dry | 3.45 | 20% | 16 - 160 | 44 | 48 | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| Naphthalene | 0.179 | 0.966 | | mg/kg dry | 3.45 | 23% | 10 - 151 | 33 | 50 | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| Toluene | ND | 0.696 | M8 | mg/kg dry | 3.45 | 20% | 30 - 145 | 41 | 44 | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| Xylenes, total | 0.197 | 2.16 | | mg/kg dry | 10.3 | 19% | 16 - 159 | 44 | 48 | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| *Surrogate: 1,2-Dichloroethane-d4* | | 59.4 | | ug/kg | 50.0 | 119% | 41 - 150 | | | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| *Surrogate: Dibromofluoromethane* | | 51.2 | | ug/kg | 50.0 | 102% | 55 - 139 | | | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| *Surrogate: Toluene-d8* | | 46.6 | | ug/kg | 50.0 | 93% | 57 - 148 | | | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |
| *Surrogate: 4-Bromofluorobenzene* | | 54.1 | | ug/kg | 50.0 | 108% | 58 - 150 | | | 9050171 | NSE0094-06RE1 | 05/06/09 09:22 |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## CERTIFICATION SUMMARY

**TestAmerica Nashville**

| Method | Matrix | AIHA | Nelac | South Carolina |
|---|---|---|---|---|
| SW846 8260B | Soil | N/A | X | X |
| SW846 8270D | Soil | | | X |
| SW-846 | Soil | | | |

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| | | | |
|---|---|---|---|
| Client | EEG - Env. Enterprise Group (2449) | Work Order: | NSE0094 |
| | 10179 Highway 78 | Project Name: | Laurel Bay Housing Project |
| | Ladson, SC 29456 | Project Number: | [none] |
| Attn | Tom McElwee | Received: | 05/01/09 08:00 |

## DATA QUALIFIERS AND DEFINITIONS

| | |
|---|---|
| **B** | Analyte was detected in the associated Method Blank. |
| **M8** | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |
| **MNR** | No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit. |
| **RL1** | Reporting limit raised due to sample matrix effects. |
| **ND** | Not detected at the reporting limit (or method detection limit if shown) |

## METHOD MODIFICATION NOTES

**NSE0094**
05/15/09 23:59

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 # 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) Prath, Shaw
Sampler Signature:

Site State: SC
PO#: 0829
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 | Preservative: HNO3 (Red Label) NaSgl | Preservative: HCl (Blue Label) | Preservative: NaOH (Orange Label) | Preservative: $H_2SO_4$ Plastic (Yellow Label) | Preservative: $H_2SO_4$ Glass (Yellow Label) | Preservative: None (Black Label) | Preservative: Other (Specify) Methanol | Matrix: Groundwater | Matrix: Wastewater | Matrix: Drinking Water | Matrix: Sludge | Matrix: Soil | Matrix: Other (specify): | Analyze For: BTEX + Napth - 8260B | Analyze For: PAH - 8270C | | | | | | | | | RUSH TAT (Pre-Schedule) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 295 Birch - 1 | 4/27/09 | 1045 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | NSE0094-01 | | | |
| 295 Birch - 2 | 4/27/09 | 1300 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | 02 | | | |
| 289 Birch | 4/28/09 | 1130 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | 03 | | | |
| 386 Acorn | 4/29/09 | 1115 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | 04 | | | |
| 397 Acorn-1 | 4/30/09 | 1030 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | 05 | | | |
| 397 Acorn - 2 | 4/30/09 | 1140 | 5 | X | | | | 2 | | | | | 2 | 1 | | | | | X | | 3 | 2 | | | | | | 06 | | | |

Special Instructions:

Method of Shipment: FEDEX

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| | 4/30/09 | 1800 | FedEx | | |
| Relinquished by: | Date | Time | Received by TestAmerica: | Date | Time |
| | | | | 5.1.09 | 0610 |

Laboratory Comments:
Temperature Upon Receipt: 5.3c
VOCs Free of Headspace? Y

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 397Acorn-2, 397 Acorn Dr., 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. McAbee / 5/19/09

(Name) (Date)

# NON-HAZARDOUS MANIFEST

WASTE MANAGEMENT

CWMI

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

**NON-HAZARDOUS MANIFEST**

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address
MCAS, Beaufort
Laurel Bay Housing
Beaufort SC 29904

4. Generator's Phone 843 228-6460

A. Manifest Number WMNA 10825480

B. State Generator's ID

5. Transporter 1 Company Name: EEG, Inc.

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone 843 879-0411

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
HICKORY HILL LANDFILL
ROUTE 1, BOX 121
RIDGELAND SC 29936

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone 843 987-4643

GENERATOR

| 11. Description of Waste Materials | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt./Vol. | I. Misc. Comments |
|---|---|---|---|---|---|
| a. Heating Oil Tank filled with Sand<br>WM Profile # 1026558SC | 001 | | 9.17 | | |
| b.<br>WM Profile # | | | | | |
| c.<br>WM Profile # | | | | | |
| d.<br>WM Profile # | | | | | |

J. Additional Descriptions for Materials Listed Above

Landfill _____ Solidification _____

Bio Remediation _____

K. Disposal Location

Cell Level

Grid

15. Special Handling Instructions and Additional Information
6 UST's
1) 263 Birch - 2
2) 295 Birch - 2
3) 386 Acorn
4) 395 Acorn - 1
5) 399 Acorn - 2
6) 399 Acorn - 1

Purchase Order #

EMERGENCY CONTACT: ~~6) 1000 Bobwhite~~ N/A

16. GENERATOR'S CERTIFICATION:

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/Typed Name | Signature "On behalf of" | Month | Day | Year |
|---|---|---|---|---|
| Charles H. Herron | Charles H. Herron | 10 | 15 | 09 |

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| James Baldwin | James Baldwin | 10 | 15 | 09 |

18. Transporter 2 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

FACILITY

19. Certificate of Final Treatment/Disposal

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

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

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Jan Collins | | 10 | 15 | 09 |

CWM - NHM - 1 - 5/97

#2 - GENERATOR/#1 COPY

**Appendix C**
**Regulatory Correspondence**

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

July 22, 2009

Commanding Officer
ATTN: S-4 NREAO (Craig Ehde)
MCAS
PO Box 55001
Beaufort, SC 29904-5001

Re: MCAS – Laurel Bay Housing – 397 Acorn St.
**Site ID # 04231**
UST Closure Reports received June 29, 2009
No Further Action

Dear Mr. Ehde:

The Department has reviewed the referenced closure report. Based upon the geotechnical data in the referenced report, the soil samples are non-detect and/or below risk based screening levels.

As the Department did not specifically request this data, and the work conducted at this site received no prior review by the Department, we cannot provide any comments on the completeness of the work performed or the overall environmental conditions of the site. Based on the information and analytical data submitted, there is no evidence to indicate that a violation of the Pollution Control Act has occurred. Consequently, no investigation will be required at this time. Please note, this statement pertains only to the data submitted and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions, please contact me at 803-896-4179 (office phone) or cookejt@dhec.sc.gov.

Sincerely,

Jan T. Cooke, Hydrogeologist
AST Petroleum Restoration & Site Environmental Investigations Section
Division of Site Assessment, Remediation & Revitalization
Bureau of Land and Waste Management

B. Thomas Knight, Manager

cc: Region 8 District EQC