

N60200.AR.004267  
NAS CECIL FIELD, FL  
5090.3a

SUPPLEMENTAL SOIL ASSESSMENT LETTER REPORT FOR BUILDING 815 WASH RACK  
AREA NAS CECIL FIELD FL  
8/24/2005  
TETRA TECH NUS INC



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Document Tracking Number 05JAX0061

August 24, 2005

Project Number N9945

Mr. David Grabka  
Remedial Project Manager  
Technical Review/Federal Facilities  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Reference: CLEAN III Contract Number N62467-94-D-0888  
Contract Task Order Number 0361

Subject: Supplemental Soil Assessment Letter Report  
Building 815 Wash Rack Area  
Naval Air Station Cecil Field  
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this letter regarding the supplemental soil assessment conducted for the referenced Contract Task Order (CTO) for the subject site. This letter report has been prepared for the United States Navy, Southern Division Naval Facilities Engineering Command (NAVFAC EFD SOUTH) under the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888. Figure 1 indicates the general location of the site at Naval Air Station (NAS) Cecil Field.

Natural attenuation monitoring has been conducted at the site since January 2001. The last semi-annual groundwater monitoring report indicated that concentrations of contaminants of concern (COCs) were not decreasing and recommended that the monitoring be discontinued. Further, preparation of a remedial action plan (RAP) was recommended. The Florida Department of Environmental Protection (FDEP) issued a response on February 5, 2004. A copy of that response is provided in Attachment A that shows agreement with discontinuing the groundwater monitoring while conducting a soil assessment prior to preparation of a RAP.

**FIELD OPERATIONS**

Pursuant to Attachment A, TtNUS mobilized to the site on January 3, 2005, to collect soil samples from under the concrete. Field operations were performed in general accordance with the Base-wide Generic Work Plan Volumes I and II (TtNUS, 1998). The samples were collected at the locations shown on Figure 2. The site is covered by a concrete cover approximately 11 inches thick; therefore, the proposed locations were pre-cored on December 28, 2004. Approximate depth to water was established from monitoring well CEF-815-1S at 5.5 feet (ft) below land surface (bls). Since the deepest interval above the water table and capillary fringe appeared to be at the 3 to 4 ft bls interval, samples from each location were collected at this interval. Following collection, the soil samples were placed on ice and shipped under chain of custody to Accutest Laboratories in Orlando, Florida for analysis. The samples were analyzed for the Gasoline/Kerosene Analytical Group list on Table B of Chapter 62-770, Florida

Mr. David Grabka  
FDEP  
August 24, 2005– Page 2

Administrative Code (FAC), which consists of benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl-tert-butyl ether (MTBE) using United States Environmental Protection Agency (USEPA) Method SW846 8260B; polynuclear aromatic hydrocarbons (PAHs) using USEPA Method SW846 8310; and total recoverable petroleum hydrocarbons (TRPH) using the Florida Petroleum Range Organics method.

## RESULTS

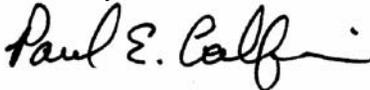
The analytical results for this event are summarized in Table 1, and the laboratory report is provided as Attachment B. The results indicate the soil cleanup target level (SCTL) for TRPH was not exceeded where that analyte was detected (i.e., locations CEF815-B01 and CEF815-B05) (see Figure 2). The other COCs (BTEX, MTBE, and PAHs) were not detected and the reporting limits were below SCTLs.

## CONCLUSIONS AND RECOMMENDATIONS

TtNUS recommends that a RAP be prepared for this site. Since it has been over a year since the last groundwater sampling was conducted at the site, TtNUS recommends that one groundwater sampling event be conducted to provide current groundwater analytical data for the RAP. The sampling event should include the same monitoring wells and analyses included in the monitoring program. As discussed during the February 2005 NAS Cecil Field Partnering meeting, the Base Closure Team has agreed to transfer this site from the Underground Storage Tank Program to the Installation Restoration (IR) program so that site remediation can be conducted concurrently with Site 59. Therefore, the RAP will be prepared under the IR program.

If you have any questions with regard to this submittal, please contact me at (813) 806-0202.

Sincerely,



Paul E. Calligan, P. G.  
Task Order Manager

PC/mwd

Attachments (5)

pc: G. Magwood, NAVFAC EFD SOUTH  
D. Brittain, USEPA  
M. Perry, TtNUS (Unbound)  
D. Humbert, TtNUS (Cover Letter Only)  
CTO 0361 Project File

## TABLES

**TABLE 1**  
**SUMMARY OF FIXED-BASE ANALYTICAL DATA IN SOIL**  
 SUPPLEMENTAL SOIL ASSESSMENT LETTER REPORT  
 BUILDING 815 WASH RACK AREA  
 NAS CECIL FIELD  
 JACKSONVILLE, FLORIDA

Direct Exposure Residential Criteria	Leachability to Groundwater Criteria	Sample Location	CEF815-B01	CEF815-B02	CEF815-B03	CEF815-B04
		Sample ID	815SLB0104	815SLB0204	815SLB0304	815SLB0404
		Sample Date	1/3/05	1/3/05	1/3/05	1/3/05
		Depth Interval (ft bls)	2 to 4	2 to 4	2 to 4	2 to 4
NA	NA	<b>Volatile Organic Compounds (µg/kg)</b>	ND	ND	ND	ND
NA	NA	<b>PAHs (µg/kg)</b>	ND	ND	ND	ND
340	340	<b>TRPH (mg/kg)</b>	6.93 J	6.5 U	6.7 U	6.7 U

Direct Exposure Residential Criteria	Leachability to Groundwater Criteria	Sample Location	CEF815-B05	CEF815-B06	CEF815-B07	CEF815-B08
		Sample ID	815SLB0504	815SLB0604	815SLB0704	815SLB0804
		Sample Date	1/3/05	1/3/05	1/3/05	1/3/05
		Depth Interval (ft bls)	2 to 4	2 to 4	2 to 4	2 to 4
NA	NA	<b>Volatile Organic Compounds (µg/kg)</b>	ND	ND	ND	ND
NA	NA	<b>PAHs (µg/kg)</b>	ND	ND	ND	ND
340	340	<b>TRPH (mg/kg)</b>	11.7	7.3 U	6.7 U	6.6 U

**Notes:**

Direct Exposure Residential Criteria based on Chapter 62-777, FAC.

Leachability to Groundwater Criteria based on Chapter 62-777, FAC.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

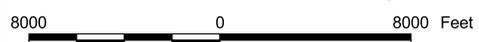
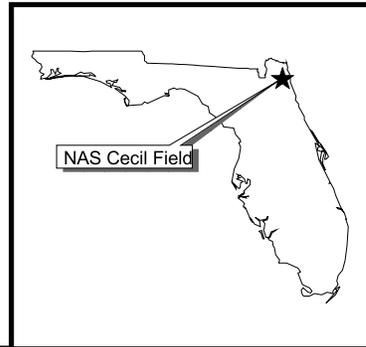
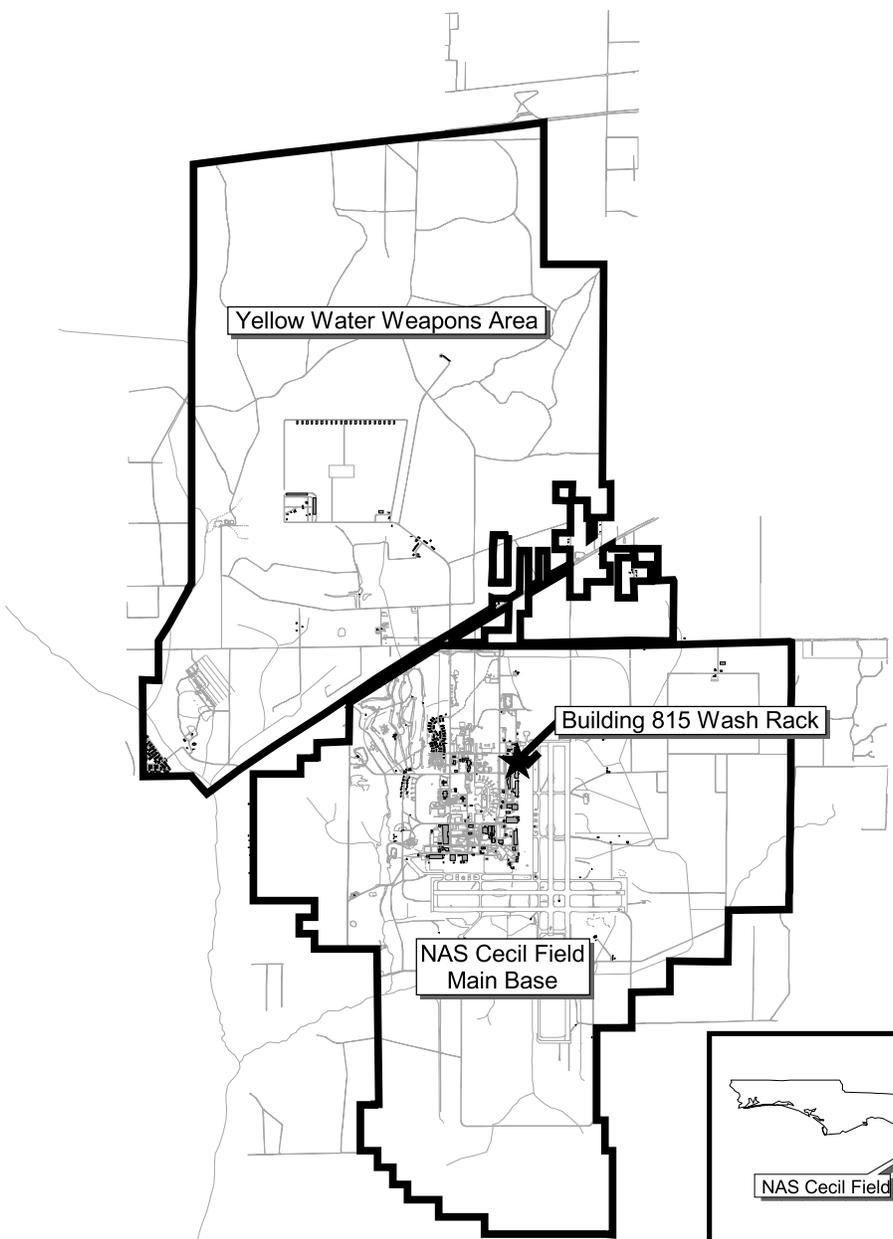
U = not detected

J = estimated

ND = none detected

NA = not applicable

## FIGURES

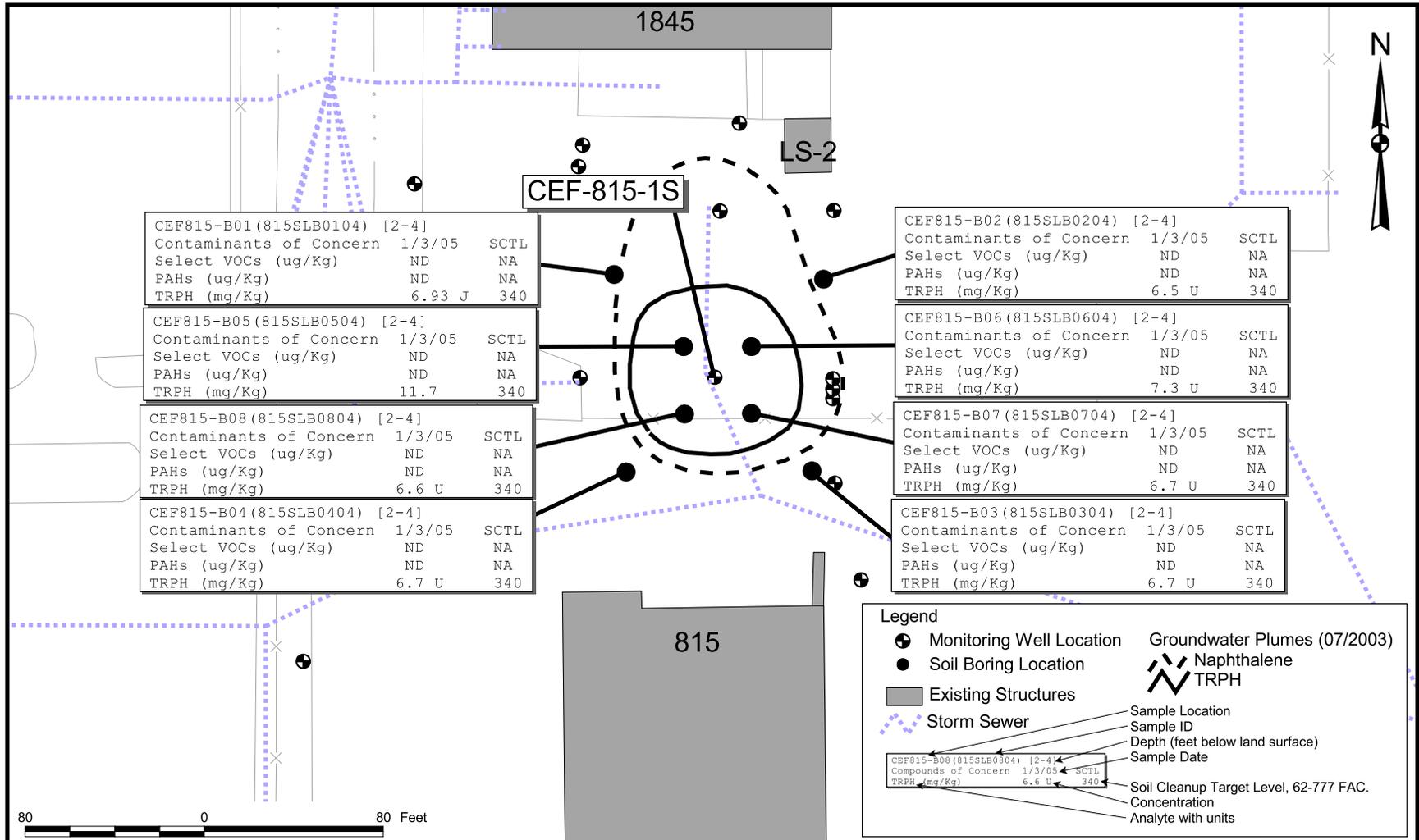


DRAWN BY MJJ	DATE 17Sept04
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



GENERAL LOCATION MAP  
 BUILDING 815, WASH RACK  
 SUPPLEMENTAL SOIL ASSESSMENT  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER 9945	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV 0



CEF815-B01 (815SLB0104) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.93 J	340	

CEF815-B05 (815SLB0504) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	11.7	340	

CEF815-B08 (815SLB0804) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.6 U	340	

CEF815-B04 (815SLB0404) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.7 U	340	

CEF815-B02 (815SLB0204) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.5 U	340	

CEF815-B06 (815SLB0604) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	7.3 U	340	

CEF815-B07 (815SLB0704) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.7 U	340	

CEF815-B03 (815SLB0304) [2-4]			
Contaminants of Concern	1/3/05	SCTL	
Select VOCs (ug/Kg)	ND	NA	
PAHs (ug/Kg)	ND	NA	
TRPH (mg/Kg)	6.7 U	340	

CEF815-B08 (815SLB0804) [2-4]			
Compounds of Concern	1/3/05	SCTL	
TRPH (mg/Kg)	6.6 U	340	

DRAWN BY	DATE
MJJ	08Feb05
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



SOIL SAMPLE LOCATIONS AND ANALYTICAL DATA  
 BUILDING 815, WASH RACK  
 SUPPLEMENTAL SOIL ASSESSMENT  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
9945	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV
FIGURE 2	0

**ATTACHMENT A**

**FDEP LETTER DATED FEBRUARY 5, 2004**



JED BUSH  
Governor

# Department of Environmental Protection

Twin Towers Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

February 5, 2004

Commanding Officer  
Attn: Mr. Gabe Magwood  
Code ES24 (UST RPM)  
Southern Division  
Naval Facilities Engineering Command  
P.O. Box 190010  
North Charleston, South Carolina 29419-9010

RE: Groundwater Monitoring Report, 2<sup>nd</sup> Semi-Annual, 3<sup>rd</sup> Year  
(July 2003), Building 815 Wash Rack Area, Naval Air Station  
Cecil Field, Jacksonville, Florida

Dear Mr. Magwood:

I have completed my review of the Groundwater Monitoring Report, 2<sup>nd</sup> Semi-Annual, 3<sup>rd</sup> Year (July 2003), Building 815 Wash Rack Area, Naval Air Station Cecil Field, dated January 12, 2004 (received January 13, 2004), prepared and submitted by Tetra Tech NUS, Inc. As naphthalene concentrations in source well CEF-815-1S have exceeded action levels specified in the August 31, 2000 Natural Attenuation Monitoring Plan Approval Order in five of the last nine monitoring events and that none of the annual milestone cleanup objectives for naphthalene have been met for this well, I concur that the monitoring program be discontinued. However, prior to a Remedial Action Plan being prepared for this site, I recommend that additional assessment be conducted in the vicinity of source well CEF-815-1S to determine whether there may be a continuing source that potentially could be addressed with a source removal rather than an engineered remediation system. I recommend this based on the complete lack of soil analytical data in the August 2000 Site Assessment Report. Apparently, the groundwater contamination detected at that time was attributed to the wash rack and it was further concluded that there was no continuing source for the groundwater contamination that was detected even though soil assessment was apparently not conducted. If this investigation does not identify a source that can be easily addressed with a source removal, I would then concur that a Remedial Action Plan should be prepared.

If I can be of any further assistance with this matter, please contact me at (850) 245-8997.

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

Mr. Gabe Magwood  
February 6, 2004  
Page two

Sincerely,

David P. Grabka, P.G.  
Remedial Project Manager

---

date

cc: Mike Fitzsimmons, FDEP Northeast District  
Debbie Vaughn-Wright, USEPA Region 4  
Paul Calligan, Tetra Tech NUS, Tampa

JJC \_\_\_\_\_ ESN \_\_\_\_\_

**ATTACHMENT B**  
**SOIL ANALYTICAL REPORT**



03/30/05

**Technical Report for**

**Tetra Tech NUS**

NAS Cecil Field-CTO #361

N9945/PO 1000892

Accutest Job Number: F29049

Sampling Date: 01/03/05

Report to:

Tetra Tech, NUS

dalem@ttnus.com

ATTN: Merv Dale

Total number of pages in report: 34



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

  
Harry Behzadi, Ph.D.  
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK  
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### Sample Summary

Tetra Tech NUS

Job No: F29049

NAS Cecil Field-CTO #361  
 Project No: N9945/PO 1000892

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
F29049-1	01/03/05	11:03 SB	01/04/05	SO	Soil	815SLB0104
F29049-2	01/03/05	11:35 SB	01/04/05	SO	Soil	815SLB0204
F29049-3	01/03/05	11:59 SB	01/04/05	SO	Soil	815SLB0304
F29049-4	01/03/05	12:17 SB	01/04/05	SO	Soil	815SLB0404
F29049-5	01/03/05	13:55 SB	01/04/05	SO	Soil	815SLB0504
F29049-6	01/03/05	14:12 SB	01/04/05	SO	Soil	815SLB0604
F29049-7	01/03/05	14:26 SB	01/04/05	SO	Soil	815SLB0704
F29049-8	01/03/05	14:41 SB	01/04/05	SO	Soil	815SLB0804
F29049-9	01/03/05	00:00 SB	01/04/05	SO	Soil	815SLB0504D

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Tetra Tech NUS

**Job No:** F29049

**Site:** NTC Orlando- CTO #361

**Report Date:** 1/13/2005 3:09:27 PM

9 Samples were collected on 01/03/2005 and were received at Accutest on 01/04/2005 properly preserved, at 0.6 Deg. C and intact. These Samples received an Accutest job number of F29049. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS by Method SW846 8260B

**Matrix:** SO

**Batch ID:** VH1081

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F29046-9MS, F29046-9MSD were used as the QC samples indicated.

**Matrix:** SO

**Batch ID:** VH1082

All samples were analyzed within the recommended method holding time.

Samples F29049-7MS, F29049-7MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Duplicate Recovery for Methyl Tert Butyl Ether is outside control limits. Probable cause: matrix interference.

### Extractables by GC by Method FLORIDA-PRO

**Matrix:** SO

**Batch ID:** OP12197

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F29049-4MS, F29049-4MSD were used as the QC samples indicated.

### Extractables by GC by Method SW846 8310

**Matrix:** SO

**Batch ID:** OP12199

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F29049-8MS, F29049-8MSD were used as the QC samples indicated.

### Wet Chemistry by Method EPA 160.3 M

**Matrix:** SO

**Batch ID:** GN16532

Sample F29049-8DUP was used as the QC sample for Solids, Percent.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

\_\_\_\_\_  
Ellen Pampel, Inorganic QA (signature on file)

Date: January 13, 2005

**Thursday, January 13, 2005**

## Report of Analysis

Client Sample ID: 815SLB0104	Date Sampled: 01/03/05
Lab Sample ID: F29049-1	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 84.4
Method: SW846 8260B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028645.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	3.97 g
Run #2	

**Purgeable Aromatics, MTBE**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.0 U	7.5	3.0	ug/kg	
108-88-3	Toluene	3.0 U	7.5	3.0	ug/kg	
100-41-4	Ethylbenzene	3.0 U	7.5	3.0	ug/kg	
1330-20-7	Xylene (total)	6.7 U	22	6.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.0 U	7.5	3.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	99%		61-157%
17060-07-0	1,2-Dichloroethane-D4	98%		74-125%

U = Not detected      MDL - Method Detection Limit      I = Result >= MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

Client Sample ID: 815SLB0104	Date Sampled: 01/03/05
Lab Sample ID: F29049-1	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 84.4
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024944.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.5 g	5.0 ml
Run #2		

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	190 U	780	190	ug/kg	
208-96-8	Acenaphthylene	190 U	780	190	ug/kg	
120-12-7	Anthracene	190 U	390	190	ug/kg	
56-55-3	Benzo(a)anthracene	97 U	390	97	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	78	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	78	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	78	19	ug/kg	
207 08 9	Benzo(k)fluoranthene	19 U	78	19	ug/kg	
218-01-9	Chrysene	97 U	390	97	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	78	19	ug/kg	
206-44-0	Fluoranthene	97 U	390	97	ug/kg	
86-73-7	Fluorene	190 U	390	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	78	19	ug/kg	
91-20-3	Naphthalene	97 U	390	97	ug/kg	
90 12 0	1-Methylnaphthalene	97 U	390	97	ug/kg	
91-57-6	2-Methylnaphthalene	97 U	390	97	ug/kg	
85-01-8	Phenanthrene	190 U	390	190	ug/kg	
129-00-0	Pyrene	97 U	390	97	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84 15 1	o-Terphenyl	94%		49-124%
92-94-4	p-Terphenyl	100%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L - Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.1  
3

Client Sample ID:	815SLB0104	Date Sampled:	01/03/05
Lab Sample ID:	F29049-1	Date Received:	01/04/05
Matrix:	SO - Soil	Percent Solids:	84.4
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS Cecil Field-CTO #361		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45628.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.93	9.8	6.7	mg/kg	I
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	68%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

32  
3

Client Sample ID: 815SLB0204	Date Sampled: 01/03/05
Lab Sample ID: F29049-2	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 84.6
Method: SW846 8260B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028646.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	4.28 g
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.8 U	6.9	2.8	ug/kg	
108-88-3	Toluene	2.8 U	6.9	2.8	ug/kg	
100-41-4	Ethylbenzene	2.8 U	6.9	2.8	ug/kg	
1330-20-7	Xylene (total)	6.2 U	21	6.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.8 U	6.9	2.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	102%		61-157%
17060-07-0	1,2-Dichloroethane-D4	97%		74-125%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.2  
3

Client Sample ID: 815SLB0204	Date Sampled: 01/03/05
Lab Sample ID: F29049-2	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 84.6
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024945.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	5.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	200 U	780	200	ug/kg	
208-96-8	Acenaphthylene	200 U	780	200	ug/kg	
120-12-7	Anthracene	200 U	390	200	ug/kg	
56-55-3	Benzo(a)anthracene	98 U	390	98	ug/kg	
50-32-8	Benzo(a)pyrene	20 U	78	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	20 U	78	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	20 U	78	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	20 U	78	20	ug/kg	
218-01-9	Chrysene	98 U	390	98	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	20 U	78	20	ug/kg	
206-44-0	Fluoranthene	98 U	390	98	ug/kg	
86-73-7	Fluorene	200 U	390	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	20 U	78	20	ug/kg	
91-20-3	Naphthalene	98 U	390	98	ug/kg	
90-12-0	1-Methylnaphthalene	98 U	390	98	ug/kg	
91-57-6	2-Methylnaphthalene	98 U	390	98	ug/kg	
85-01-8	Phenanthrene	200 U	390	200	ug/kg	
129-00-0	Pyrene	98 U	390	98	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		49-124%
92-94-4	p-Terphenyl	102%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.2  
3

Client Sample ID:	815SLB0204	Date Sampled:	01/03/05
Lab Sample ID:	F29049-2	Date Received:	01/04/05
Matrix:	SO - Soil	Percent Solids:	84.6
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS Cecil Field-CTO #361		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45630.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.7 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.5 U	9.6	6.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

Client Sample ID: 815SLB0304	Date Sampled: 01/03/05
Lab Sample ID: F29049-3	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 83.0
Method: SW846 8260B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028647.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	3.84 g
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.1 U	7.8	3.1	ug/kg	
108-88-3	Toluene	3.1 U	7.8	3.1	ug/kg	
100-41-4	Ethylbenzene	3.1 U	7.8	3.1	ug/kg	
1330-20-7	Xylene (total)	7.1 U	24	7.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.1 U	7.8	3.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	99%		61-157%
17060-07-0	1,2-Dichloroethane-D4	101%		74-125%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.3  
3

Client Sample ID: 815SLB0304	Date Sampled: 01/03/05
Lab Sample ID: F29049-3	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 83.0
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024946.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	5.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	200 U	800	200	ug/kg	
208-96-8	Acenaphthylene	200 U	800	200	ug/kg	
120-12-7	Anthracene	200 U	400	200	ug/kg	
56-55-3	Benzo(a)anthracene	100 U	400	100	ug/kg	
50-32-8	Benzo(a)pyrene	20 U	80	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	20 U	80	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	20 U	80	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	20 U	80	20	ug/kg	
218-01-9	Chrysene	100 U	400	100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	20 U	80	20	ug/kg	
206-44-0	Fluoranthene	100 U	400	100	ug/kg	
86-73-7	Fluorene	200 U	400	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	20 U	80	20	ug/kg	
91-20-3	Naphthalene	100 U	400	100	ug/kg	
90-12-0	1-Methylnaphthalene	100 U	400	100	ug/kg	
91-57-6	2-Methylnaphthalene	100 U	400	100	ug/kg	
85-01-8	Phenanthrene	200 U	400	200	ug/kg	
129-00-0	Pyrene	100 U	400	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		49-124%
92-94-4	p-Terphenyl	99%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

33  
3

Client Sample ID: 815SLB0304	Date Sampled: 01/03/05
Lab Sample ID: F29049-3	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 83.0
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45631.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.7 U	9.8	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	80%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.4  
3

Client Sample ID: 815SLB0404	Date Sampled: 01/03/05
Lab Sample ID: F29049-4	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 81.9
Method: SW846 8260B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028648.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	4.14 g
Run #2	

**Purgeable Aromatics, MTBE**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.9 U	7.4	2.9	ug/kg	
108-88-3	Toluene	2.9 U	7.4	2.9	ug/kg	
100-41-4	Ethylbenzene	2.9 U	7.4	2.9	ug/kg	
1330-20-7	Xylene (total)	6.6 U	22	6.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.9 U	7.4	2.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	100%		61-157%
17060-07-0	1,2-Dichloroethane-D4	97%		74-125%

U = Not detected      MDL - Method Detection Limit      I = Result >= MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.4  
3

Client Sample ID: 815SLB0404	Date Sampled: 01/03/05
Lab Sample ID: F29049-4	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 81.9
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024947.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	5.0 ml
Run #2		

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	200 U	810	200	ug/kg	
208-96-8	Acenaphthylene	200 U	810	200	ug/kg	
120-12-7	Anthracene	200 U	410	200	ug/kg	
56-55-3	Benzo(a)anthracene	100 U	410	100	ug/kg	
50-32-8	Benzo(a)pyrene	20 U	81	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	20 U	81	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	20 U	81	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	20 U	81	20	ug/kg	
218-01-9	Chrysene	100 U	410	100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	20 U	81	20	ug/kg	
206-44-0	Fluoranthene	100 U	410	100	ug/kg	
86-73-7	Fluorene	200 U	410	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	20 U	81	20	ug/kg	
91-20-3	Naphthalene	100 U	410	100	ug/kg	
90-12-0	1-Methylnaphthalene	100 U	410	100	ug/kg	
91-57-6	2-Methylnaphthalene	100 U	410	100	ug/kg	
85-01-8	Phenanthrene	200 U	410	200	ug/kg	
129-00-0	Pyrene	100 U	410	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		49-124%
92-94-4	p-Terphenyl	97%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result >= MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.4  
3

Client Sample ID:	815SLB0404	Date Sampled:	01/03/05
Lab Sample ID:	F29049-4	Date Received:	01/04/05
Matrix:	SO - Soil	Percent Solids:	81.9
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS Cecil Field-CTO #361		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45632.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.7 U	9.9	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	83%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.5  
3

Client Sample ID: 815SLB0504	Date Sampled: 01/03/05
Lab Sample ID: F29049-5	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.9
Method: SW846 8260B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028662.D	1	01/06/05	NAF	n/a	n/a	VH1082
Run #2							

Run #	Initial Weight
Run #1	4.51 g
Run #2	

**Purgeable Aromatics, MTBE**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.6 U	6.5	2.6	ug/kg	
108-88-3	Toluene	2.6 U	6.5	2.6	ug/kg	
100-41-4	Ethylbenzene	2.6 U	6.5	2.6	ug/kg	
1330-20-7	Xylene (total)	5.8 U	19	5.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.6 U	6.5	2.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		78-123%
2037-26-5	Toluene-D8	96%		71-137%
460-00-4	4-Bromofluorobenzene	99%		61-157%
17060-07-0	1,2-Dichloroethane-D4	99%		74-125%

U = Not detected      MDL - Method Detection Limit      I = Result >= MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

Report of Analysis

3.5  
3

Client Sample ID: 815SLB0504	Date Sampled: 01/03/05
Lab Sample ID: F29049-5	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.9
Method: SW846 8310 SW846 3550B	
Project: NAS Cccil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024949.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	5.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	190 U	760	190	ug/kg	
208-96-8	Acenaphthylene	190 U	760	190	ug/kg	
120-12-7	Anthracene	190 U	380	190	ug/kg	
56-55-3	Benzo(a)anthracene	95 U	380	95	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	76	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	76	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	76	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	76	19	ug/kg	
218-01-9	Chrysene	95 U	380	95	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	76	19	ug/kg	
206-44-0	Fluoranthene	95 U	380	95	ug/kg	
86-73-7	Fluorene	190 U	380	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	76	19	ug/kg	
91-20-3	Naphthalene	95 U	380	95	ug/kg	
90-12-0	1-Methylnaphthalene	95 U	380	95	ug/kg	
91-57-6	2-Methylnaphthalene	95 U	380	95	ug/kg	
85-01-8	Phenanthrene	190 U	380	190	ug/kg	
129-00-0	Pyrene	95 U	380	95	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		49-124%
92-94-4	p-Terphenyl	100%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.5  
3

Client Sample ID: 815SLB0504	Date Sampled: 01/03/05
Lab Sample ID: F29049-5	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.9
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45635.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	11.7	9.5	6.5	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	79%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.6  
3

Client Sample ID: 815SLB0604	Date Sampled: 01/03/05
Lab Sample ID: F29049-6	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 77.3
Method: SW846 8260B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028651.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	3.77 g
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.4 U	8.6	3.4	ug/kg	
108-88-3	Toluene	3.4 U	8.6	3.4	ug/kg	
100-41-4	Ethylbenzene	3.4 U	8.6	3.4	ug/kg	
1330-20-7	Xylene (total)	7.7 U	26	7.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.4 U	8.6	3.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	98%		61-157%
17060-07-0	1,2-Dichloroethane-D4	99%		74-125%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L - Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.6  
3

Client Sample ID: 815SLB0604	Date Sampled: 01/03/05
Lab Sample ID: F29049-6	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 77.3
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024950.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	5.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	210 U	860	210	ug/kg	
208-96-8	Acenaphthylene	210 U	860	210	ug/kg	
120-12-7	Anthracene	210 U	430	210	ug/kg	
56-55-3	Benzo(a)anthracene	110 U	430	110	ug/kg	
50-32-8	Benzo(a)pyrene	21 U	86	21	ug/kg	
205-99-2	Benzo(b)fluoranthene	21 U	86	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	21 U	86	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	21 U	86	21	ug/kg	
218-01-9	Chrysene	110 U	430	110	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	21 U	86	21	ug/kg	
206-44-0	Fluoranthene	110 U	430	110	ug/kg	
86-73-7	Fluorene	210 U	430	210	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	21 U	86	21	ug/kg	
91-20-3	Naphthalene	110 U	430	110	ug/kg	
90-12-0	1-Methylnaphthalene	110 U	430	110	ug/kg	
91-57-6	2-Methylnaphthalene	110 U	430	110	ug/kg	
85-01-8	Phenanthrene	210 U	430	210	ug/kg	
129-00-0	Pyrene	110 U	430	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-124%
92-94-4	p-Terphenyl	98%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.6  
3

Client Sample ID: 815SLB0604	Date Sampled: 01/03/05
Lab Sample ID: F29049-6	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 77.3
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45636.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	7.3 U	11	7.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	82%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.7  
3

Client Sample ID: 815SLB0704	Date Sampled: 01/03/05
Lab Sample ID: F29049-7	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 82.9
Method: SW846 8260B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028661.D	1	01/06/05	NAF	n/a	n/a	VH1082
Run #2							

Run #	Initial Weight
Run #1	3.99 g
Run #2	

**Purgeable Aromatics, MTBE**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3.0 U	7.6	3.0	ug/kg	
108-88-3	Toluene	3.0 U	7.6	3.0	ug/kg	
100-41-4	Ethylbenzene	3.0 U	7.6	3.0	ug/kg	
1330-20-7	Xylene (total)	6.8 U	23	6.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.0 U	7.6	3.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		78-123%
2037-26-5	Toluene-D8	96%		71-137%
460-00-4	4-Bromofluorobenzene	97%		61-157%
17060-07-0	1,2-Dichloroethane-D4	99%		74-125%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.7  
3

Client Sample ID: 815SLB0704	Date Sampled: 01/03/05
Lab Sample ID: F29049-7	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 82.9
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024951.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	5.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	200 U	790	200	ug/kg	
208-96-8	Acenaphthylene	200 U	790	200	ug/kg	
120-12-7	Anthracene	200 U	390	200	ug/kg	
56-55-3	Benzo(a)anthracene	99 U	390	99	ug/kg	
50-32-8	Benzo(a)pyrene	20 U	79	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	20 U	79	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	20 U	79	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	20 U	79	20	ug/kg	
218-01-9	Chrysene	99 U	390	99	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	20 U	79	20	ug/kg	
206-44-0	Fluoranthene	99 U	390	99	ug/kg	
86-73-7	Fluorene	200 U	390	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	20 U	79	20	ug/kg	
91-20-3	Naphthalene	99 U	390	99	ug/kg	
90-12-0	1-Methylnaphthalene	99 U	390	99	ug/kg	
91-57-6	2-Methylnaphthalene	99 U	390	99	ug/kg	
85-01-8	Phenanthrene	200 U	390	200	ug/kg	
129-00-0	Pyrene	99 U	390	99	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		49-124%
92-94-4	p-Terphenyl	94%		56-141%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

Client Sample ID: 815SLB0704	Date Sampled: 01/03/05
Lab Sample ID: F29049-7	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 82.9
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45637.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.7 U	9.8	6.7	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	81%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.8  
3

Client Sample ID: 815SLB0804	Date Sampled: 01/03/05
Lab Sample ID: F29049-8	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.8
Method: SW846 8260B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028653.D	1	01/04/05	NAF	n/a	n/a	VH1081
Run #2							

Run #	Initial Weight
Run #1	4.27 g
Run #2	

**Purgeable Aromatics, MTBE**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.7 U	6.8	2.7	ug/kg	
108-88-3	Toluene	2.7 U	6.8	2.7	ug/kg	
100-41-4	Ethylbenzene	2.7 U	6.8	2.7	ug/kg	
1330-20-7	Xylene (total)	6.1 U	20	6.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.7 U	6.8	2.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		78-123%
2037-26-5	Toluene-D8	99%		71-137%
460-00-4	4-Bromofluorobenzene	100%		61-157%
17060-07-0	1,2-Dichloroethane-D4	101%		74-125%

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: 815SLB0804	Date Sampled: 01/03/05
Lab Sample ID: F29049-8	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.8
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024952.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.7 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	190 U	760	190	ug/kg	
208-96-8	Acenaphthylene	190 U	760	190	ug/kg	
120-12-7	Anthracene	190 U	380	190	ug/kg	
56-55-3	Benzo(a)anthracene	95 U	380	95	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	76	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	76	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	76	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	76	19	ug/kg	
218-01-9	Chrysene	95 U	380	95	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	76	19	ug/kg	
206-44-0	Fluoranthene	95 U	380	95	ug/kg	
86-73-7	Fluorene	190 U	380	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	76	19	ug/kg	
91-20-3	Naphthalene	95 U	380	95	ug/kg	
90-12-0	1-Methylnaphthalene	95 U	380	95	ug/kg	
91-57-6	2-Methylnaphthalene	95 U	380	95	ug/kg	
85-01-8	Phenanthrene	190 U	380	190	ug/kg	
129-00-0	Pyrene	95 U	380	95	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	89%		49-124%		
92-94-4	p-Terphenyl	95%		56-141%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.8  
3

Client Sample ID: 815SLB0804	Date Sampled: 01/03/05
Lab Sample ID: F29049-8	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.8
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field-CTO #361	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45638.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	6.6 U	9.6	6.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	66%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.9  
3

Client Sample ID: 815SLB0504D	Date Sampled: 01/03/05
Lab Sample ID: F29049-9	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.3
Method: SW846 8260B	
Project: NAS Cecil Field CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H028663.D	1	01/06/05	NAF	n/a	n/a	VH1082
Run #2							

Run #	Initial Weight
Run #1	4.74 g
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.5 U	6.2	2.5	ug/kg	
108-88-3	Toluene	2.5 U	6.2	2.5	ug/kg	
100-41-4	Ethylbenzene	2.5 U	6.2	2.5	ug/kg	
1330-20-7	Xylene (total)	5.6 U	19	5.6	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.5 U	6.2	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	99%		61-157%
17060-07-0	1,2-Dichloroethane-D4	100%		74-125%

U = Not detected      MDL - Method Detection Limit      I = Result >= MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: 815SLB0504D	Date Sampled: 01/03/05
Lab Sample ID: F29049-9	Date Received: 01/04/05
Matrix: SO - Soil	Percent Solids: 85.3
Method: SW846 8310 SW846 3550B	
Project: NAS Cecil Field-CTO #361	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA024955.D	1	01/05/05	MRE	01/05/05	OP12199	GAA1168
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.3 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	190 U	770	190	ug/kg	
208-96-8	Acenaphthylene	190 U	770	190	ug/kg	
120-12-7	Anthracene	190 U	390	190	ug/kg	
56-55-3	Benzo(a)anthracene	97 U	390	97	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	77	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	77	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	77	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	77	19	ug/kg	
218-01-9	Chrysene	97 U	390	97	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	77	19	ug/kg	
206-44-0	Fluoranthene	97 U	390	97	ug/kg	
86-73-7	Fluorene	190 U	390	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	77	19	ug/kg	
91-20-3	Naphthalene	97 U	390	97	ug/kg	
90-12-0	1-Methylnaphthalene	97 U	390	97	ug/kg	
91-57-6	2-Methylnaphthalene	97 U	390	97	ug/kg	
85-01-8	Phenanthrene	190 U	390	190	ug/kg	
129-00-0	Pyrene	97 U	390	97	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	111%		49-124%
92-94-4	p-Terphenyl	98%		56-141%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.9  
3

Client Sample ID:	815SLB0504D	Date Sampled:	01/03/05
Lab Sample ID:	F29049-9	Date Received:	01/04/05
Matrix:	SO - Soil	Percent Solids:	85.3
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS Cecil Field-CTO #361		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP45639.D	1	01/05/05	AA	01/04/05	OP12197	GOP1366
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	7.34	9.8	6.6	mg/kg	I
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	64%		59-121%		

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

**TETRA TECH NUS, INC.** CHAIN OF CUSTODY **F21049** NUMBER **815.010305** | PAGE **1** OF **1**

PROJECT NO: **N9945 CTD361** FACILITY: **815 WASH BCK** PROJECT MANAGER: **PAUL CALICAN** PHONE NUMBER: **813 806 0202** LABORATORY NAME AND CONTACT: **ADD: DIRECT WEATHER WASH DC/FL**

FIELD OPERATIONS LEADER: **D. LEVERETTE** PHONE NUMBER: **(904) 636-6125** ADDRESS: **4405 VIA DELAND RD., SHE C-15**

CARRIER/WAYBILL NUMBER: **Fedex 8427 1834 9373** CITY, STATE: **CRALENDON, FL**

STANDARD TAT:  24 hr.  48 hr.  72 hr.  7 day  14 day

DATE: **2005**

DATE	TIME	SAMPLE ID	LOCATION ID	TOT DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SQ, SW, SD, OC, ETC.)	COLLECTION METHOD	No. OF CONTAINERS	TYPE OF ANALYSIS	CONTAINER TYPE PLASTIC (P) OR GLASS (G)	PRESERVATIVE USED	COMMENTS
1/2		1103 815SLB0104			90	G	5	1	1	G		*FL-PROCS ARE COMBINED WITH 8310s MARK NO. 1000892
		1135 815SLB0304					4	1	1	G		
		1159 815SLB0304					5	1	1	G		
		1219 815SLB0404					4	1	1	G		
		1355 815SLB0504					4	1	1	G		
		1412 815SLB0604					5	1	1	G		
		1426 815SLB0704					4	1	1	G		
		1441 815SLB0804					5	1	1	G		
		000 815SLB0504ND					4	1	1	G		

**1 COOLER**

1. RECEIVED BY: **[Signature]** DATE: **1/15/05** TIME: **1700**

2. RELINQUISHED BY: **FX** DATE: **1/14/05** TIME: **08:00**

3. RECEIVED BY: **[Signature]** DATE: **1/14/05** TIME: **08:00**

COMMENTS: **Go to 4°C**

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) **06** 402R FORM NO. TINUS-001

4.1  
4

F29049: Chain of Custody  
Page 1 of 2

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F29049  
 Client: TETRA TECH Project: N9945, CTD 761  
 Date Received: 1/4/05 Time Received: 09:00  
 # of Coolers Received: 1 Cooler Temperatures: 0.6  
 Delivery Method:  FedEx  UPS  Accutest Courier  Greyhound  Delivery  Other  
 Air Bill Number: \_\_\_\_\_

Cooler Custody Seals Intact ?  Yes  No  
 Chain of Custody Provided ?  Yes  No  
 COC Match Bottle Label ID's ?  Yes  No  
 Sample Labels Present on all bottles ?  Yes  No  
 All Analytes Marked On COC ?  Yes  No  
 Are All Bottles Intact ?  Yes  No  
 Samples Preserved Correctly ?  Yes  No  
 Correct Number of Containers Used ?  Yes  No  
 Sufficient Sample Volume ?  Yes  No  
 Trip Blank Provided ? Yes  No  
 Trip Blank on COC ? Yes  No  
 Trip Blank Intact ? Yes No  N/A  
 Trip Blank Matrix ? Soil Water  N/A  
 Number of Encores ? 0  
 Number of Soil Field Kits ? 9

Summary of Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 Signature: [Signature] Date: 1/4/05  
 Review Signature: \_\_\_\_\_

ASBD 12/20/04

F29049: Chain of Custody  
 Page 2 of 2