N60200.AR.005411
NAS CECIL FIELD, FL
5090.3a

SITE REHABILITATION COMPLETION LETTER REPORT FOR BUILDING 290A TANK G290A

NAS CECIL FIELD FL

12/15/2010

TETRA TECH NUS

TETRA TECH

PITT-12-10-027

December 15, 2010

Project Number 112G00746

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 IV Contract Number N62467-04-D-0055
Contract Task Order 0076

Subject: Site Rehabilitation Completion Letter Report
Building 290A, Tank G290A
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (Tetra Tech) is pleased to submit this Site Rehabilitation Completion Letter Report for the subject site. This report was prepared for Naval Facilities Engineering Command Southeast (NAVFAC SE) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract Number N62467-04-D-0055. This Site Rehabilitation Completion Letter Report addresses the final source removal of petroleum-impacted soils in the vicinity of Building 290A and the former Tank G290A.

BACKGROUND

Tank G290A, an aboveground storage tank (AST), was located immediately north of Building 290A and southeast of the intersection of the north-south and east-west runways at Naval Air Station (NAS) Cecil Field. Building 290A houses a standby generator for Building 290. Tank G290A, with a capacity of 250 gallons, was installed in 1995 and was in compliance with State of Florida tank regulations. Tank G290A replaced Tank G290U, which was an underground storage tank located west of Building 290A. Tank G290U was removed in November 1995 by Innovative Services International and was recognized as a clean closure. Figure 1 shows the location of the site.

A Contamination Assessment Plan was prepared by ABB Environmental Services, Inc. (ABB-ES) in November 1996 for the assessment of soil and groundwater at Tank G290A (ABB-ES, 1996). Confirmatory soil screening was conducted by ABB-ES in 1998 in accordance with the Contamination Assessment Plan. Three soil borings were installed around the AST, and soil samples were collected for screening with an organic vapor analyzer (OVA). The results of that investigation indicated that contaminated soil was not present at the site. Because the tank could not be taken out of service at that time, it was agreed that supplemental confirmatory sampling would be conducted when the tank was taken out of service or transferred, to confirm that no releases had occurred subsequent to the original investigation.

Tetra Tech NUS, Inc.
661 Andersen Drive, Pittsburgh, PA 15220-2745
Tel 412.921.7090 Fax 412.921.4040 www.ttnus.com

A field investigation was conducted by Tetra Tech between June 7 and 16, 2000. The Sampling and Analysis Plan (SAP) specified that existing monitoring well CEF-290-2S be sampled as part of the field investigation (Tetra Tech, 1999). However, when Tetra Tech personnel arrived at the site to conduct the investigation, the monitoring well could not be located. Therefore, a replacement monitoring well was installed and sampled in accordance with the SAP. Replacement well CEF-290A-2SR was installed on September 12, 2000, and sampled on September 26, 2000. Laboratory analytical results from the groundwater sample collected from well CEF-290A-2SR indicated that concentrations of contaminants of concern were less than detection limits, and therefore, less than the Groundwater Cleanup Target Levels (GCTLs) specified in Chapter 62-777, Florida Administrative Code (FAC). The soil investigation indicated that the 0- to 1-foot below ground surface (bgs) interval of soil boring B290A-SB-005 (SB-005), located directly under the secondary containment drain, exhibited a response of approximately 100 parts per million (ppm) on an OVA equipped with a flame ionization detector (FID). Soil samples from the 1- to 3-foot and 3- to 5-foot bgs intervals at SB-005 both exhibited responses of 20 ppm. There was no observed OVA-FID response for soil borings B290A-SB-001, B290A-SB-002, B290A-SB-003, or B290A-SB-004. The soil boring locations are provided on Figure 2. Based on the elevated OFA-FID detected at SB-005, the Florida Department of Environmental Protection (FDEP) requested that a soil sample be collected from that location and analyzed for Gasoline Analytical Group (GAG) and Kerosene Analytical Group (KAG) parameters as listed in Chapter 62-770, FAC, to determine if there had been a petroleum release requiring further assessment.

On April 12, 2002, Tetra Tech collected a soil sample from under the secondary containment drain, at the approximate location of SB-005 and at a depth interval of 0 to 1 foot bgs. The sample was analyzed for GAG and KAG constituents as defined by Chapter 62-770, FAC. The laboratory analytical results indicated that the total recoverable petroleum hydrocarbons (TRPH) concentration exceeded the Soil Cleanup Target Level (SCTL) specified in Chapter 62-777, FAC. In addition, concentrations of several polynuclear aromatic hydrocarbons (PAHs) were elevated as a result of matrix interference. Tetra Tech recommended that a source removal be conducted to remove petroleum-impacted soil from the site. Prior to initiating the source removal, additional soil samples were recommended to delineate the extent of contaminated soil and to define the limits of the excavation. An FDEP comment letter, dated March 10, 2004, stated that the Department concurred that additional delineation to determine the extent of contaminated soil should be conducted prior to initiating source removal.

On March 22, 2005, Tetra Tech collected three additional soil samples in the vicinity of Tank G290A to delineate the extent of contaminated soil. Sample CEF-B290A-SB-006-01 was collected approximately 5 feet due north of CEF-B290A-SB-005. Additionally, samples CEF-B290A-SB-001-01 and CEF-B290A-SB-002-01 were collected west and east, respectively, of CEF-B290A-SB-005. The samples were collected at the 0- to 1-foot bgs depth interval. The samples were analyzed for PAHs using United States Environmental Protection Agency (USEPA) Method SW-846 8310, and TRPH using the Florida Petroleum Range Organics (FL-PRO) method. The laboratory analytical results indicated that PAH and TRPH concentrations at all three locations were less than the SCTLs specified in Chapter 62-777, FAC. Tetra Tech recommended that a source removal be conducted to remove petroleum-impacted soil from an approximate 10-foot by 10-foot area delineated by the locations of the three soil samples collected in 2005 (CEF-B290A-SB-001-01, CEF-B290A-SB-002-01, and CEF-B290A-SB-006-01), and by the soil sampling locations previously screened by OVA-FID on June 16, 2000 (CEF-B290A-SB-003 and CEF-B290A-SB-004). The Supplemental Soil Assessment Letter Report submitted by Tetra Tech in November 2006 stated that the area should be excavated to the top of the water table and backfilled with clean fill material (Tetra Tech, 2006).

In 2007, Tank G290A was abandoned and removed from the site. On September 14, 2007, Tetra Tech conducted confirmatory sampling in the vicinity of former Tank G290A to delineate the southern boundary of the proposed soil removal area. Sample CEF-290A-SB-007 was collected from the area adjacent to the northern edge of the concrete secondary containment at 2 feet bgs, and analyzed for PAHs and

TRPH. Naphthalene was detected at a concentration of 0.0021 milligrams per kilogram (mg/kg), significantly less than its residential SCTL of 55 mg/kg. None of the other target analytes were detected in soil sample CEF-290A-SB-007. Additionally, a soil boring was advanced at the location of the previously collected sample SB-005 to confirm the depth of observed contamination. Samples were collected from depths of 2 and 4 feet bgs, and submitted for laboratory analyses of PAHs and TRPH. In the sample collected from the 2-foot depth, naphthalene was detected at a concentration of 0.0019 mg/kg, less than its residential SCTL of 55 mg/kg. In the sample collected from the 4-foot depth, TRPH was detected at a concentration of 8.2 mg/kg, less than its residential SCTL of 460 mg/kg.

Based on the March 2005 and September 2007 sampling results, Tetra Tech prepared a Dig and Haul Package for Building 290A, Tank G290A (Tetra Tech, 2007). This document recommended that the proposed source removal include an approximate 7-foot by 10-foot contaminated area north of the former Tank G290A secondary containment basin. The contaminated area was to be excavated to a depth of 2 feet bgs. Following the procedures outlined in this document, CH2M Hill Constructors, Inc. (CH2M Hill) prepared and submitted a Work Plan for the Excavation of Petroleum-Contaminated Soil at Buildings 502 and 290A (CH2MHill, 2010).

The source removal excavation activities were conducted from June 18 to 21, 2010 using an excavator to remove the contaminated soil within the excavation limits specified by Tetra Tech to a depth of 2 feet bgs. Following excavation, clean soil was placed in 8-inch lifts and machine compacted using an excavator. The area was backfilled with clean soil until the previous grade had been achieved. The Source Removal Report, which details these activities and includes the waste manifests which pertain to the soil excavation, can be found in Attachment A. After source removal activities were completed, a new groundwater monitoring well (CEF-290A-01S) was installed by Tetra Tech near the location of CEF-290A-SB-005. The well completion log and field data sheets can be found in Attachment B.

FIELD OPERATIONS

As agreed upon by the Base Realignment and Closure (BRAC) Cleanup Team (BCT) on August 11, 2010 (Minute No. 2638), post-excavation groundwater samples were collected from monitoring well CEF-290A-01S on September 15, 2010. The monitoring well location is provided on Figure 3. The samples were placed on ice and shipped via FedEx under chain of custody to Empirical Laboratories, Inc., in Nashville, Tennessee. The laboratory analyzed the samples for volatile organic compounds (VOCs) using USEPA Method SW-846 8260B; PAHs using USEPA Method SW-846 8270C; and TRPH using the FL-PRO method.

Prior to obtaining groundwater samples, synoptic water level and total well depth were measured and recorded on a site-specific groundwater measurement sheet for the sampled well (provided in Attachment B). General sampling protocols were in accordance with FDEP Standard Operating Procedures (SOPs) and Tetra Tech SOP SA-1.1.

RESULTS

The analytical results for this event are summarized in Table 1, and the laboratory report is provided as Attachment C. The results indicate that all analytes were either not detected, or detected at concentrations less than their respective GCTLs.

CONCLUSIONS AND RECOMMENDATIONS

Prior to the excavation activities conducted in June 2010, contaminant levels in soil samples from the 0- to 1-foot bgs depth interval at the location of SB-005 were consistently greater than their respective SCTLs; however, no groundwater samples collected from this site were greater than GCTLs. Contaminated soil was removed and post-excavation groundwater sampling was conducted. During the post-excavation groundwater sampling, contaminant levels in groundwater samples from newly installed well CEF-290A-01S were not detected or were less than their respective GCTLs. This sampling event was conducted to confirm that the formerly contaminated soil and associated excavation activities did not negatively impact the groundwater in the vicinity of Building 290 and former Tank G290A.

It is recommended, based on the successful soil removal action and the post-excavation groundwater sampling results being less than GCTLs, that no further action be proposed for this site and that a Site Rehabilitation Completion Order be issued for the site.

If you have any questions regarding this submittal, please feel free to contact me at (412) 921-8163 or via e-mail at Robert.Simcik@tetratech.com.

Sincerely,

Robert Simcik, P.E.
Task Order Manager
P.E. Number 61263

Enclosures (4)

c: A. Sanford, NAVFAC SE (1 copy)
M. Davidson, NAVFAC SE (electronic copy)
M. Halil, CH2M Hill (electronic only)
S. Martin, NAVFAC Atlantic (electronic copy)
CTO 0076 project file (1 copy, unbound)
D. Humbert , Tetra Tech
M. Jonnet, Tetra Tech (electronic copy)
J. Johnson, Tetra Tech (1 copy for Information Repository)

CERTIFICATION

The information contained herein is based on the investigation data and information obtained from previously submitted reports. If conditions are determined to exist that differ from those described, the undersigned engineer should be notified to evaluate the effects of any additional information on the information described in this report. This Site Rehabilitation Completion Letter Report was developed for Building 290, Tank G290A at the Former Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 0003#263

December 15, 2010
Robert Simcik, P.E.
P.E. License Number 61263

REFERENCES

ABB-ES (ABB Environmental Services, Inc.), 1996, Contamination Assessment Plan, Building 290A, Naval Air Station Cecil Field, Jacksonville, Florida.

BCT (Base Realignment and Closure Cleanup Team), 2010. Minutes of Meeting. Minutes Reference No. 2638, Decision No. 788, August 11.

CH2M Hill (CH2M Hill Constructors, Inc.), 2010, Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A Work Plan.

CH2M Hill, 2010, CH2M Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A Source Removal Report, Naval Air Station Cecil Field, Jacksonville, Florida.

FDEP (Florida Department of Environmental Protection), 2004. Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits, prepared by the Division of Resource Assessment and Management for the Division of Waste Management Cleanup Program. October.

Tetra Tech (Tetra Tech NUS, Inc.), 1999, Sampling and Analysis Report, Facility 290, Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech, 2006, Supplemental Soil Assessment Letter Report for Tank G290-A, Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech, 2007, Dig and Haul Package, Building 290A, Tank G290A, Naval Air Station Cecil Field, Jacksonville, Florida.

TABLE

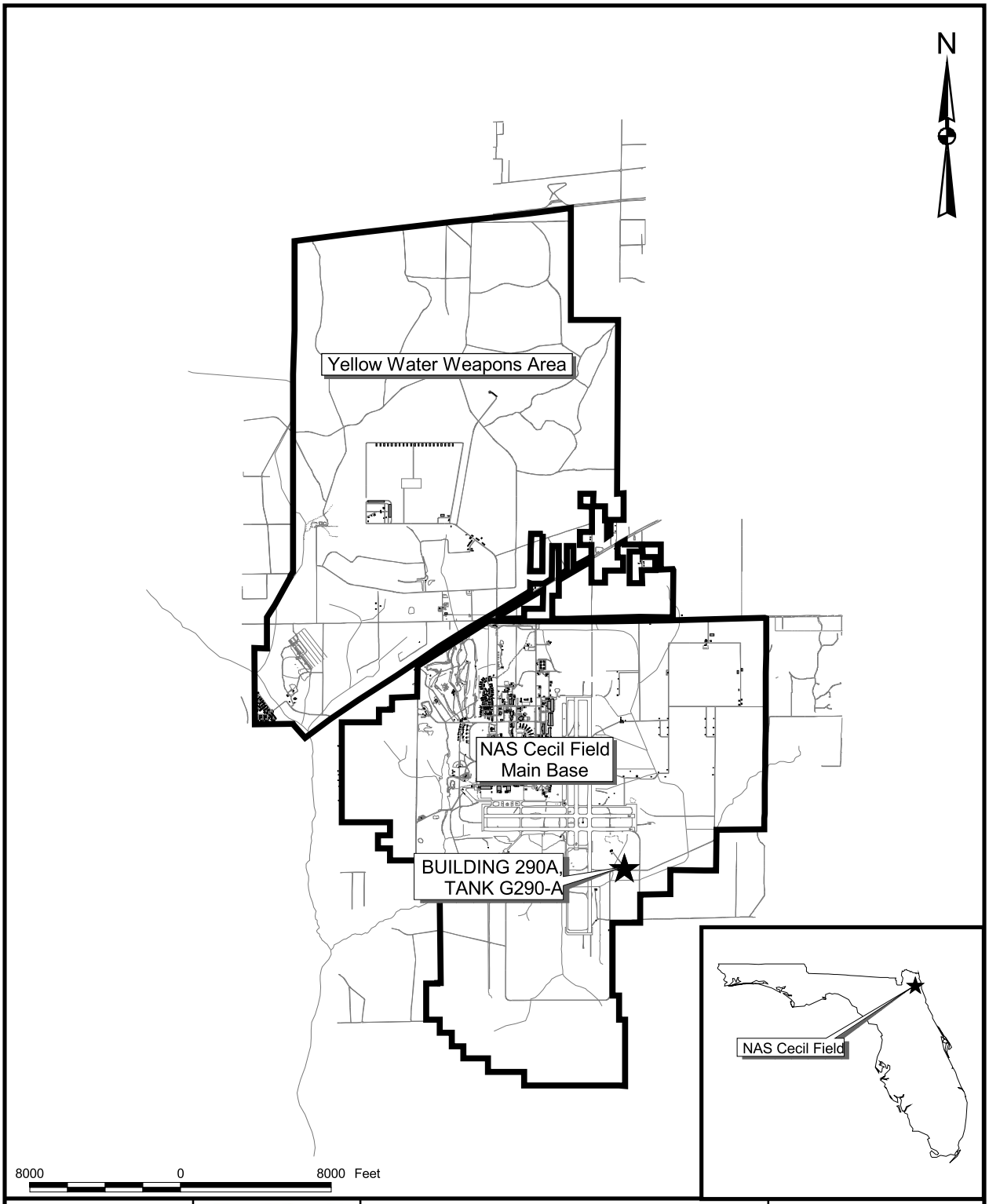
TABLE 1
GROUNDWATER ANALYTICAL DATA
SITE REHABILITATION COMPLETION LETTER REPORT
BUILDING 290A, TANK G290A
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONSTITUENTS	FDEP GCTL	CEF-290A MW-1S Sample 09/15/10	CEF-290A MW-1S Duplicate 09/15/10
VOLATILE ORGANICS (µg/L) - USEPA Method SW-846 8260B			
1,2,4-TRIMETHYLBENZENE	10	0.3 U	0.3 U
1,3,5-TRIMETHYLBENZENE	10	0.3 U	0.3 U
BENZENE	1	0.3 U	0.3 U
ETHYLBENZENE	30	0.3 U	0.3 U
ISOPROPYLBENZENE	0.8	0.3 U	0.3 U
TOTAL XYLENES	20	0.3 U	0.3 U
SEMIVOLATILE ORGANICS (µg/L) - USEPA Method SW-846 8270C			
1-METHYLNAPHTHALENE	28	0.0187 U	0.0189 U
2-METHYLNAPHTHALENE	28	0.0189 J	0.0189 U
ACENAPHTHENE	20	0.0206 I	0.0189 U
ACENAPHYHLENE	210	0.0187 U	0.0189 U
ANTHRACENE	2100	0.0284 J	0.0189 U
BENZO(A)ANTHRACENE	0.05	0.0357 J	0.0189 U
BENZO(A)PYRENE	0.2	0.0316 J	0.0189 U
BENZO(B)FLUORANTHENE	0.05	0.0455 J	0.0189 U
BENZO(G,H,I)PERYLENE	210	0.0465 J	0.0189 U
BENZO(K)FLUORANTHENE	0.5	0.0427 J	0.0189 U
CHRYSENE	4.8	0.0425 J	0.0189 U
DIBENZO(A,H)ANTHRACENE	0.005	0.0440 J*	0.0189 U*
FLUORANTHENE	280	0.0403 J	0.0196 U
FLUORENE	280	0.0268 J	0.0189 U
INDENO(1,2,3-CD)PYRENE	0.05	0.0465 J	0.0189 U
NAPHTHALENE	14	0.0187 U	0.0189 U
PHENANTHRENE	210	0.0454 J	0.0250 J
PYRENE	210	0.0421 J	0.0193 J
TOTAL PETROLEUM HYDROCARBONS (mg/L) - FL-PRO			
TPH (C08-C40)	5	0.0794 U	0.0787 U

* "Guidance for the Selection of Analytical Methods for the Evaluation of Practical Quantitation Limits" (FDEP, 2004) identifies a PQL for Dibenzo(a,h)anthracene of 0.2 mg/L. This alternate CTL is used for comparison of the estimated value.

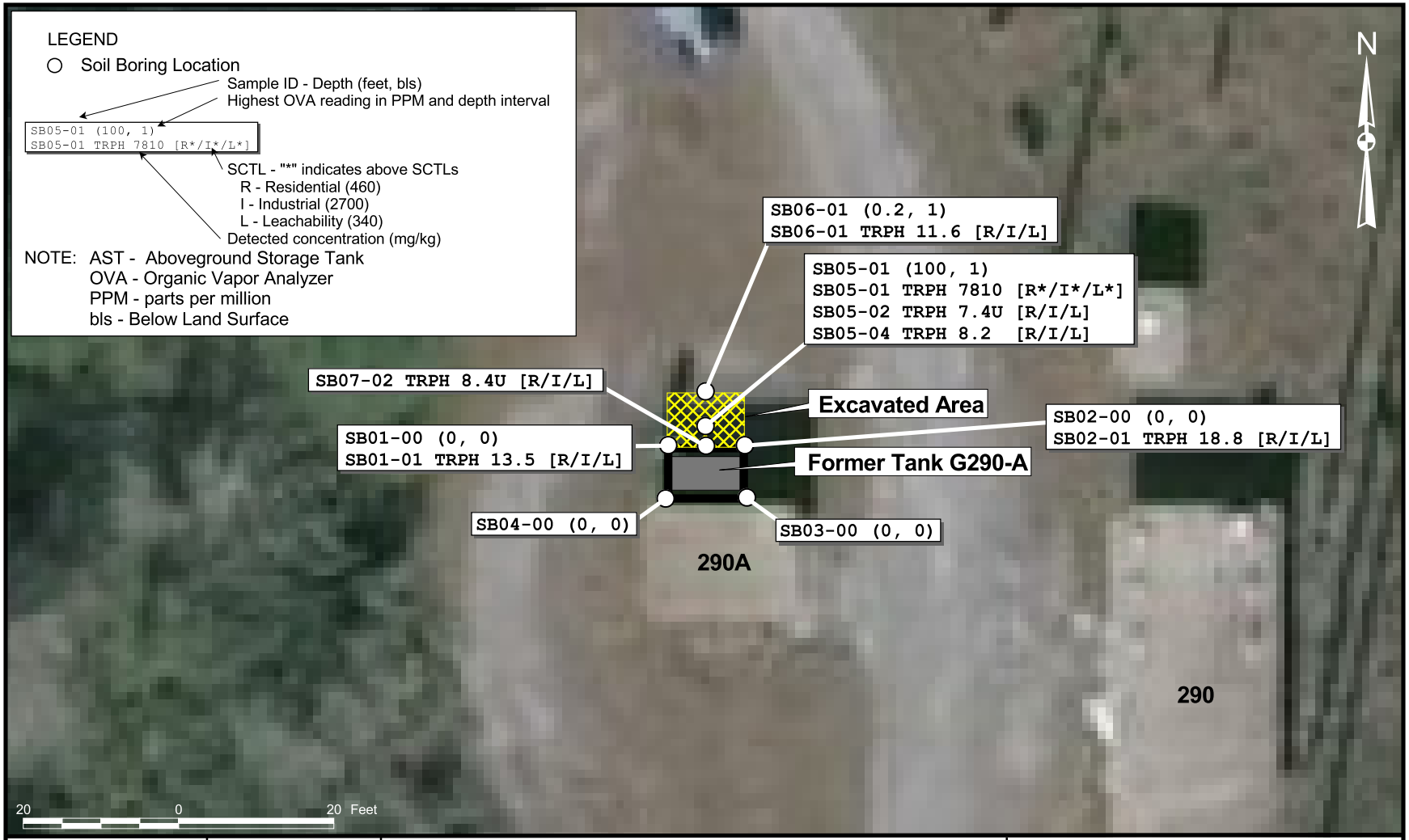
CTL = Cleanup target level.
J = Estimated concentration.
NS = Not sampled.
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.
PQL = Practical Quatitation Limit.
U = Not detected at associated detection limit.

FIGURES



DRAWN BY MJJ	DATE 03Dec10	GENERAL LOCATION MAP BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0076
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV 0

:\GIS\CECIL\tank_g290a-2.apr 03Dec10 MJJ Layout3



DRAWN BY MJJ	DATE 13Dec10	SOIL BORING LOCATION MAP BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0076
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2 / REV 0

:\GIS\CECIL\tank_g290a-2.apr 13Dec10 MJJ Layout6

DRAWN BY MJJ	DATE 03Dec10	MONITORING WELL LOCATION MAP BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0076
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3 / REV 0

:\GIS\CECIL\tank_g290a-2.apr 13Dec10 MJJ Layout5

ATTACHMENT A

SOURCE REMOVAL REPORT (CH2M HILL)

Source Removal Report
Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A

Revision No. 00

Former Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-01-D-0331
Contract Task Order No. 0060

Submitted to

BRAC Program Management Office Southeast
4130 Faber Place Drive, Suite 202
North Charleston, SC 29405

Under contract to

U.S. Naval Facilities Engineering Command
Southeast

Prepared by

CH2MHILL
Constructors, Inc.

1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

November 2010

Source Removal Report
Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A

Revision No. 00

Former Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-01-D-0331
Contract Task Order No. 0060

Submitted to
BRAC Program Management Office Southeast

Under contract to

U.S. Naval Facilities Engineering Command Southeast

Prepared by:

CH2MHILL Constructors, Inc.
1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

November 2010

Prepared/Approved By:

Jeffery Marks, Project Manager — November 2, 2010 Date

Approved By:

Michael D. Halil, P.E., Senior Project Manager — November 2, 2010 Date

Client Acceptance:

U.S. Navy Responsible Authority — Date

CH2MHILL

Certificate of Completion

CH2M HILL Constructors, Inc., attests that, to the best of its knowledge and belief, the excavation of petroleum contaminated soil at Buildings 502 and 290A, delivered under Contract No. N62467-01-D-0331, Contract Task Order No. 0060, Former Naval Air Station Cecil Field, Jacksonville, Florida, has been completed, inspected, and tested, and is in compliance with the contract.

Project Quality Control Manager

November 2, 2010

Date

Contents

1.0 Introduction 1-1
1.1 Site Background 1-1
1.2 Project Objectives and Summary 1-2
2.0 Excavation Activities 2-1
2.1 Site Preparation 2-1
2.1.1 Geotechnical Investigation 2-1
2.1.2 Excavation Limits 2-2
2.1.3 Excavation Permit 2-2
2.1.4 Helical Pin Pile Installation at Building 502 2-2
2.2 Soil Excavation, Transportation, and Disposal 2-2
2.2.1 Waste Characterization 2-2
2.2.2 Soil Excavation, Transportation, and Disposal 2-3
2.3 Backfill and Site Restoration 2-3
2.3.1 Fill Material Characterization 2-3
2.3.2 Backfill 2-3
2.3.3 Site Restoration 2-4
2.4 Problems Encountered 2-4
3.0 Conclusions 3-1
4.0 References 4-1

Tables

2-1 General Soil Profile 2-1

Figures

1-1 Regional Map of Former NAS Cecil Field 1-3
1-2 Site Map 1-4
1-3 Soil Removal Area, Building 502 1-5
1-4 Schematic of Excavation Limits, Building 502 1-6
1-5 Soil Removal Area, Building 290A and Tank G290A 1-7

Appendices

A Site Photographs
B Building 502 Support Plan
C Requests for Information
D Waste Characterization Laboratory Analytical Reports
E Waste Profiles
F Non-Hazardous Waste Manifests and Weight Tickets
G Certificates of Disposal
H Transportation and Disposal Log
I Clean Fill Laboratory Analytical Reports and Certifications
J Excavation Permit
K Final Dig and Haul Package, Building 502, Tank 502 (Tetra Tech NUS, Inc., September 2007)
L Final Site Assessment Report Addendum, Building 502, Tank 502 (Tetra Tech NUS, Inc., December 2007)
M Dig and Haul Package, Building 290A, Tank G290A (Tetra Tech NUS, Inc., November 2007)
N Supplemental Soil Assessment Letter Report for Tank G290-A (Tetra Tech NUS, Inc., November 2006)

Acronyms and Abbreviations

ASTM	American Society for Testing and Materials
bgs	below ground surface
CH2M HILL	CH2M HILL Constructors, Inc.
CTO	Contract Task Order
EPA	U.S. Environmental Protection Agency
FDOT	Florida Department of Transportation
JAA	Jacksonville Aviation Authority
MOP	Monitoring Only Plan
NAS	Naval Air Station
NAVFAC SE	U.S. Naval Facilities Engineering Command Southeast
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
QC	quality control
SPT	Standard Proctor Test
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TtNUS	Tetra Tech NUS, Inc.
VOC	volatile organic compound

1.0 Introduction

CH2M HILL Constructors, Inc. (CH2M HILL) has been contracted by the U.S. Naval Facilities Engineering Command, Southeast (NAVFAC SE), to conduct remedial activities under Contract No. N62467-01-D-0331, Contract Task Order (CTO) No. 0060. As part of the remedial activities to be performed under CTO No. 0060, CH2M HILL has been tasked with conducting excavation of petroleum contaminated soils at Building 502 and Building 290A at the former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida. The source removal was conducted in accordance with the *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field* (Tetra Tech NUS, Inc. [TtNUS], 2007a) provided in Appendix K and the *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field* (TtNUS, 2007b) provided in Appendix M.

The scope of services for the excavation of petroleum contaminated soils at Building 502 and Building 290A is described in detail in the *NAS Cecil Field Basewide Work Plan*, Revision 01 (CH2M HILL, 1998); *Work Plan, Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A, Naval Air Station Cecil Field* (CH2M HILL, 2010); and *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field* (TtNUS, 2007a) provided in Appendix K; and the *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field* (TtNUS, 2007b) provided in Appendix M.

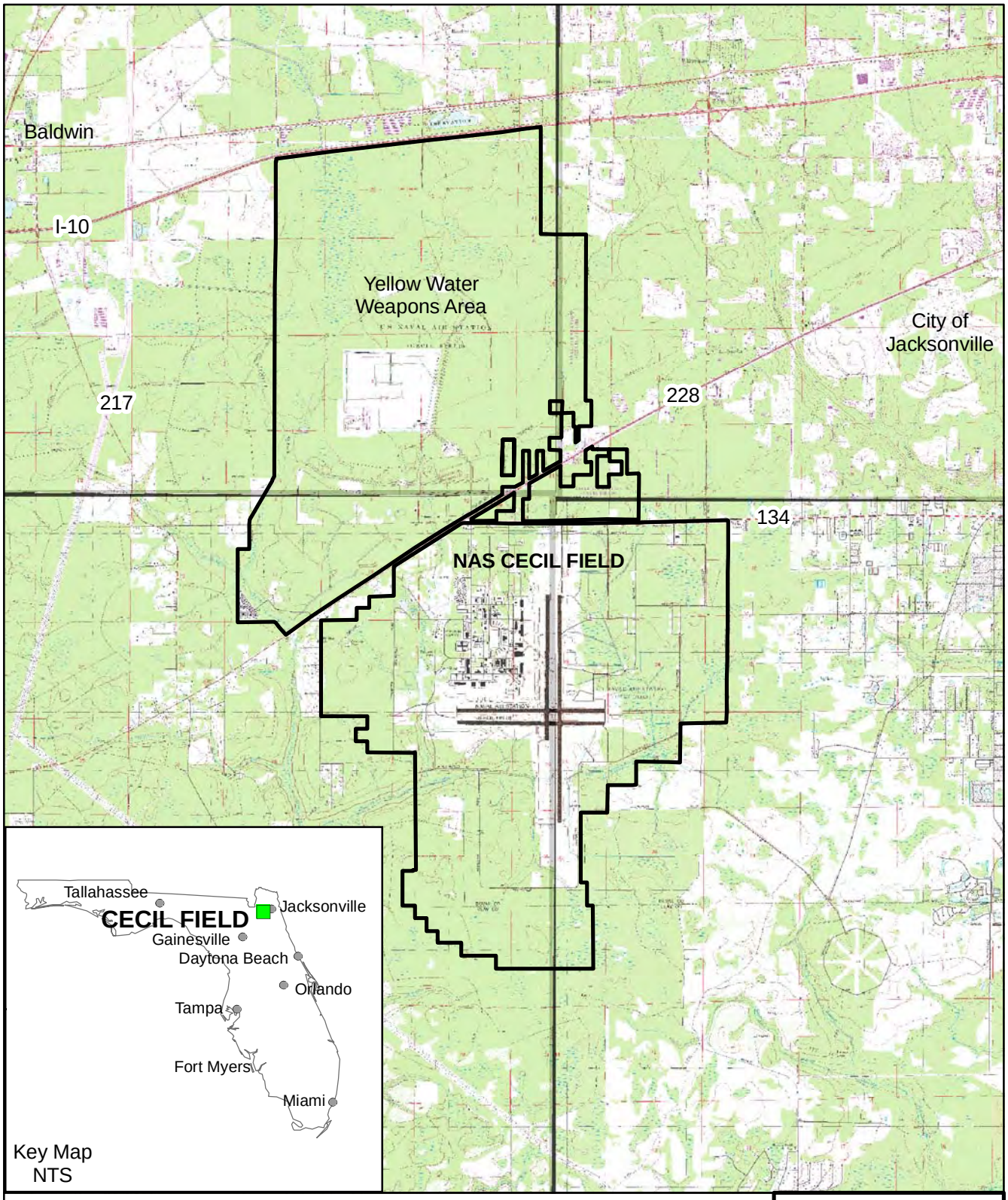
1.1 Site Background

Buildings 502 and 290A are located at the former NAS Cecil Field in Jacksonville, Florida. Figure 1-1 shows the location of NAS Cecil Field. Both building locations, shown on Figure 1-2, had fuel storage tanks associated with them, which have been removed. Building 502 had an underground fuel oil storage tank (Tank 502) immediately to its west, while Building 290A housed a backup power generator for Building 290 with an underground diesel storage tank (G290-U) immediately north of Building 290A. Pre and post tank-removal site assessments were performed, and groundwater compliance monitoring plans were initiated. In July 1995, Building 290A received a Clean Closure from the Florida Department of Environmental Protection (FDEP), and in 1999, the FDEP approved a Monitoring Only Plan (MOP) for Building 502. However, subsequent groundwater monitoring and well installation activities during the years that followed revealed persistent soil contamination at both sites. TtNUS has characterized the extent of soil contamination and recommended additional soil excavation to remove the impacted soil.

Additional site history and background along with the contaminants of concern for each site are presented in the *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field* (TtNUS, 2007a); *Final Site Assessment Report Addendum, Building 502, Tank 502, NAS Cecil Field* (TtNUS, 2007c); *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field* (TtNUS, 2007b); and *Supplemental Soil Assessment Letter Report for Tank G290-A* (TtNUS, 2006), provided in Appendices K, L, M, and N, respectively.

1.2 Project Objectives and Summary

The project objectives at Building 502 and Building 290A were to excavate the petroleum contaminated soil to the horizontal and vertical limits shown on Figures 1-3 through 1-5; transport and dispose of the contaminated soil at a facility(ies) permitted to accept the waste; and restore the site in accordance with the *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field* (TtNUS, 2007a) and the *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field* (TtNUS, 2007b).

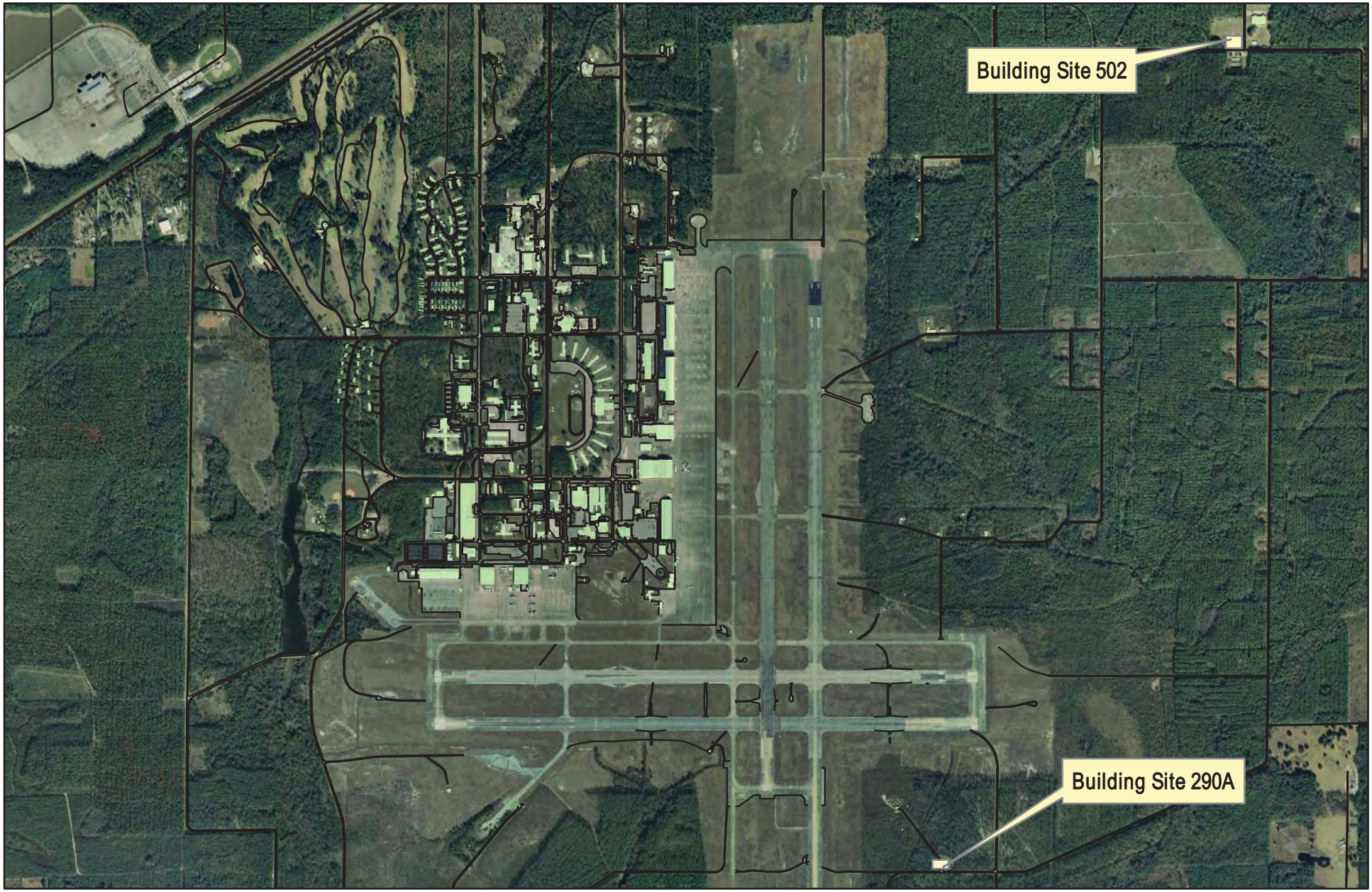


N
W E
S

0 0.5 1 2
Miles

FIGURE 1-1
Regional Map of
Former NAS
Cecil Field

\\bigorange\groups\GIS\Cecil_Field\mxd\August09\Bldg365\Fig1-1_Regional_Map.mxd BHodges/KNV



Legend

- Soil Borings
- Proposed Excavation Area
- Permanent Building
- Tank
- Excavation Extent
- Roads

N

0 500 1,000 2,000

Feet

1 inch equals 2,000 feet

FIGURE 1-2

Site Map

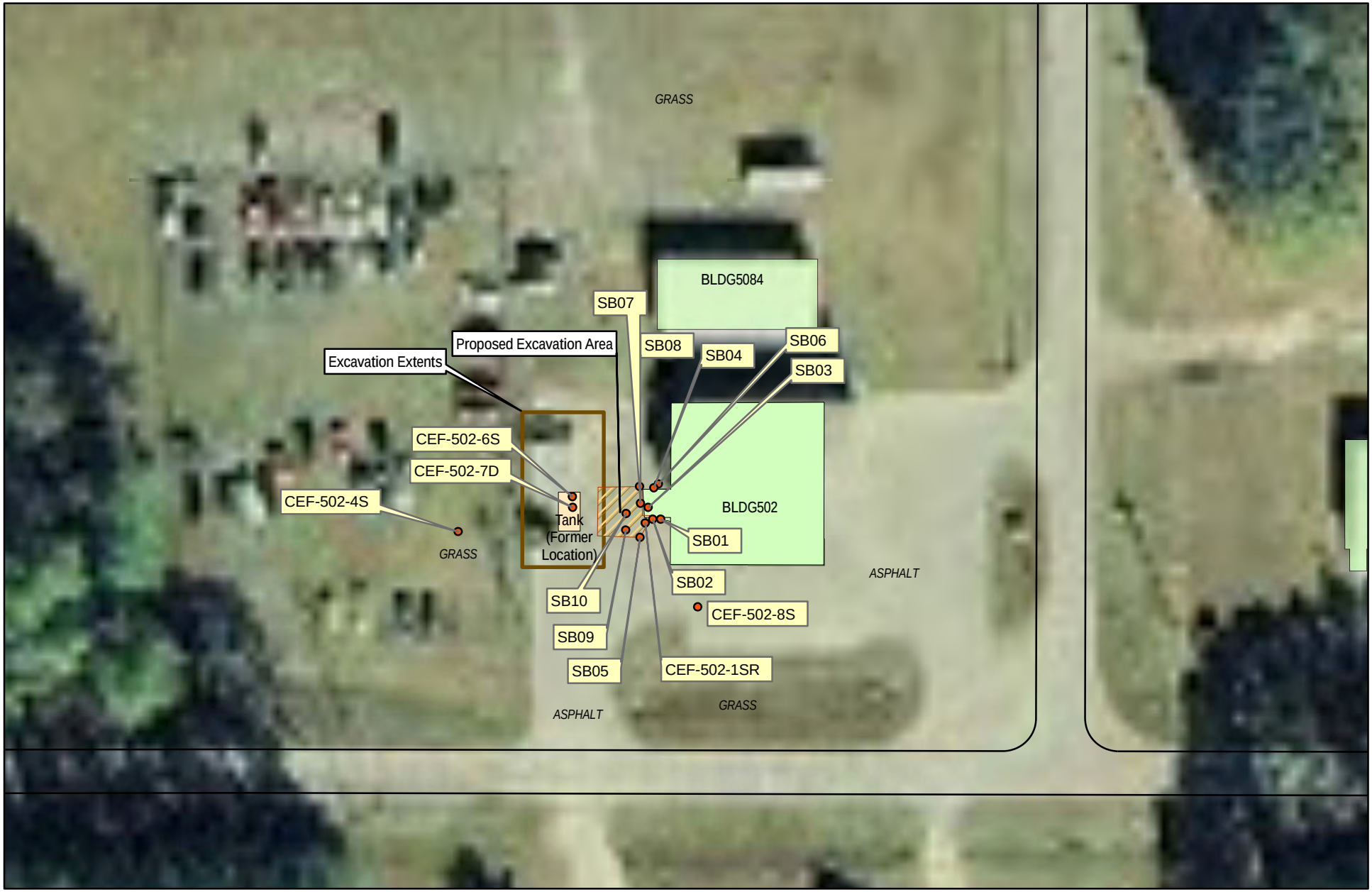
Proposed Soil Removal Areas

Buildings 290A and 502

Naval Air Station Cecil Field

Jacksonville, FL

CH2MHILL



Legend

- Soil Borings
- Proposed Excavation Area
- Permanent Building
- Tank
- Excavation Extent
- Roads

N

0 25 50 100

Feet

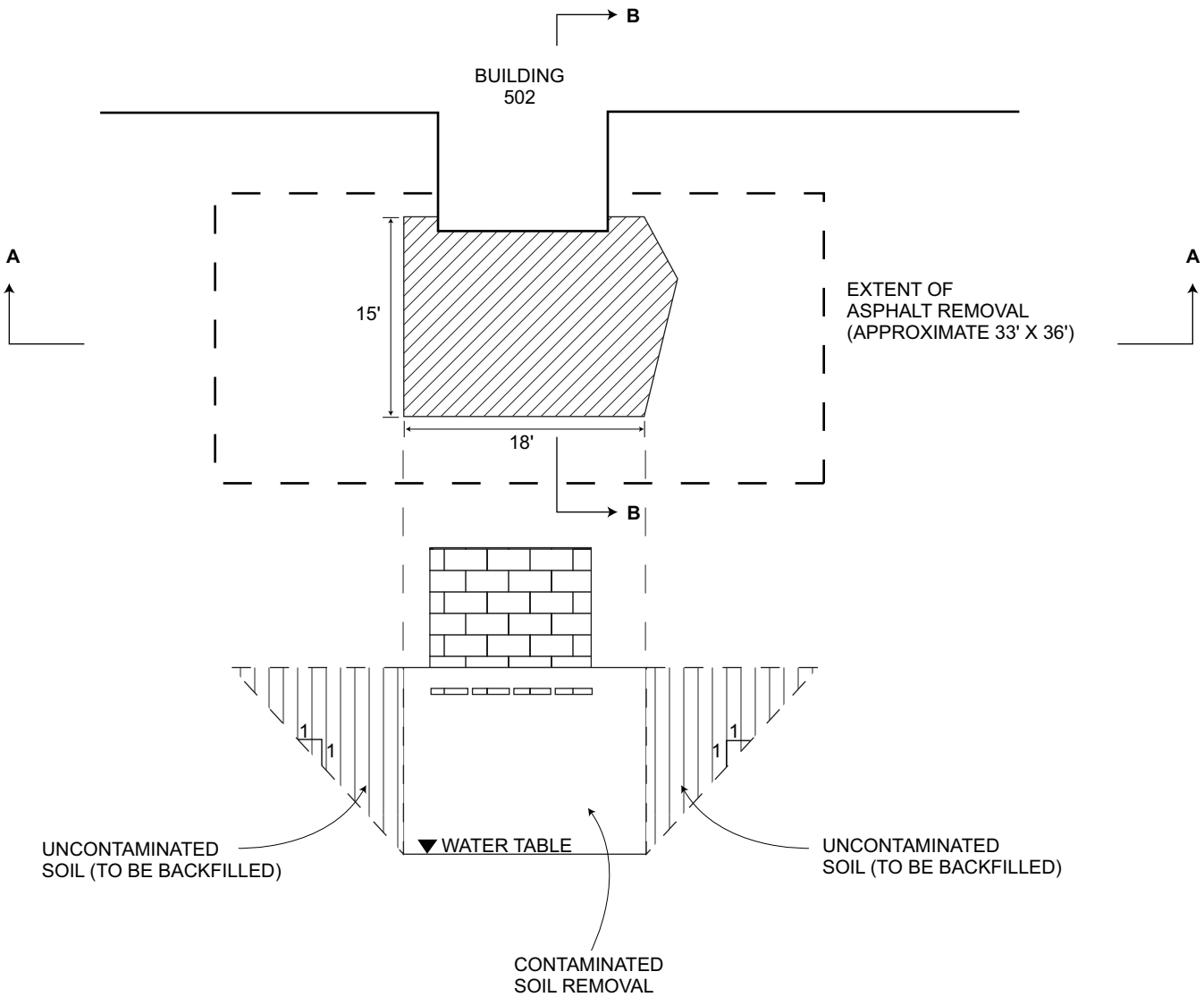
1 inch equals 50 feet

FIGURE 1-3

Proposed Soil Removal Area
Building 502
Naval Air Station Cecil Field
Jacksonville, FL

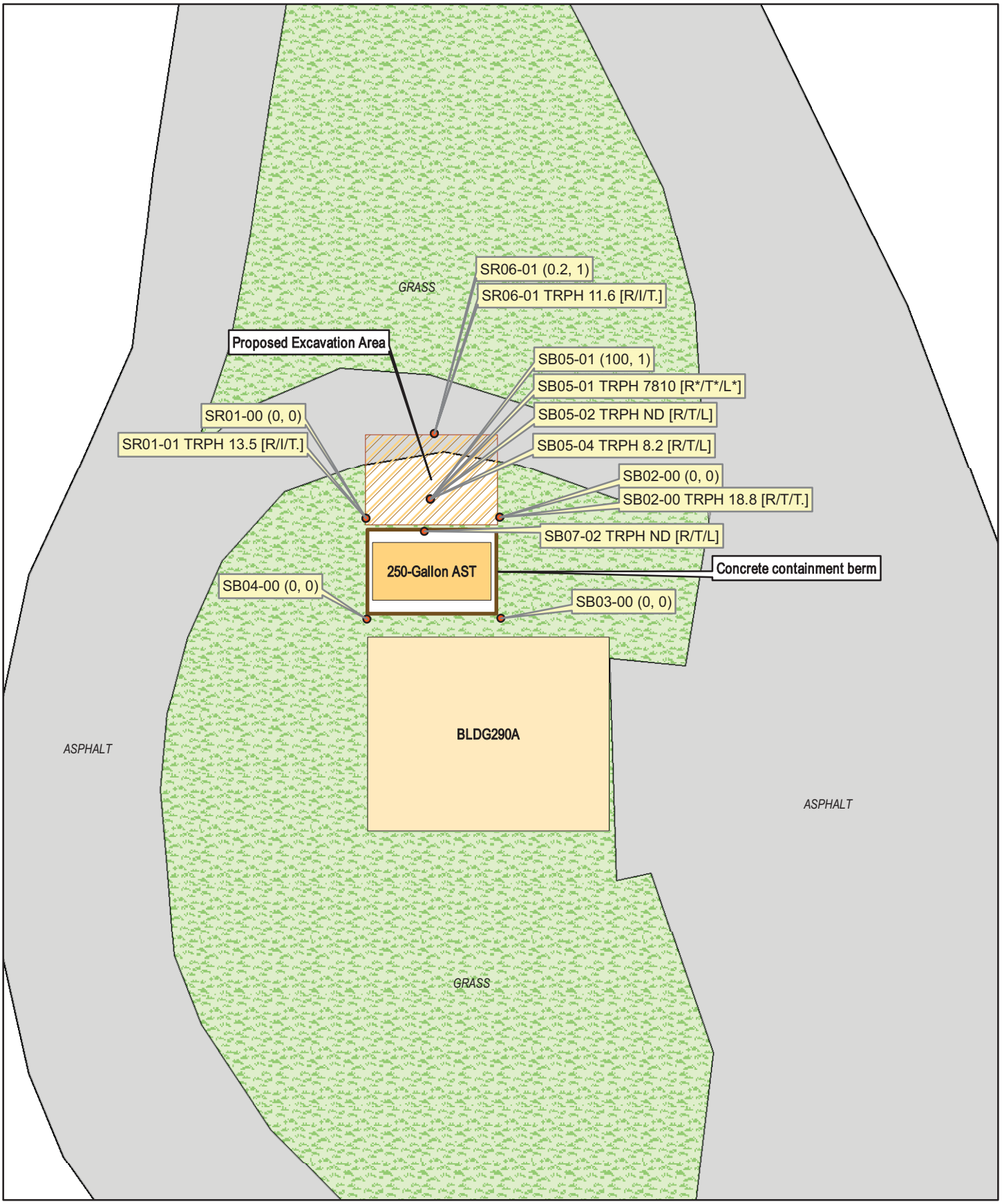
CH2MHILL

File Path: \\boomer\f\Projects5\NASCecilField\MapFiles\NASCecilField_Bldg502.mxd, Date: September 18, 2008 10:41:02 AM, User: JKELLY3



SECTION A-A

FIGURE 1-4
Schematic of Excavation Limits
Building 502 Area
NAS Cecil Field, Jacksonville, FL



Legend

- Soil Boring
- Proposed Excavation Area
- Permanent Building
- Tank
- Containment Berm
- Asphalt
- Grass
- Roads

N

0 2.5 5 10

Feet

1 inch equals 10 feet

FIGURE 1-5

Proposed Soil Removal Area
Building 290A and Tank G290A
Naval Air Station Cecil Field
Jacksonville, FL

CH2MHILL

2.0 Excavation Activities

Excavation activities were conducted at Building 502 and Building 290A on April 1, 2010, and June 14 through June 24, 2010. Site photographs of the field activities are presented in Appendix A.

2.1 Site Preparation

2.1.1 Geotechnical Investigation

On April 1, 2010, Universal Engineering Sciences, Inc. (subcontractor to CH2M HILL) completed a subsurface investigation at Building 502. The purpose of this investigation was to explore the general subsurface conditions at the site and provide soil data for the design and implementation of the support plan for the west side of Building 502 during excavation activities.

To explore the subsurface conditions at the site, two Standard Penetration Test (SPT) borings were drilled to depths of 40 feet below ground surface (bgs) in general accordance with the methodology outlined in American Society for Testing and Materials (ASTM) D 1586. Soil samples recovered during the performance of the borings were visually classified in the field and representative portions of the samples were transported to the Universal Engineering Sciences, Inc. Laboratory for further evaluation. The laboratory investigation consisted of the following tests to help quantify and correlate the soil engineering properties:

- Visual classification by a geotechnical engineer in accordance with ASTM D 2488
- Fines tests (11)
- Moisture content tests (11)
- Attenberg limits tests (2)

The results of these tests and the general test procedures are presented in the Universal Engineering Sciences, Inc. Report of Exploratory Borings (Appendix B). The general soil profile is shown in Table 2-1.

TABLE 2-1
General Soil Profile

Typical Depth			
From	**To**	**Soil Description**	**USC[1]**
0	0.6 – 0.8	Asphalt (2 to 2-1/4”) and Limerock (5 to 7”)	---
0.6 - 0.8	6	Loose sand, sand with silt	SP, SP-SM
6	12.5 – 17.5	Dense to very dense weakly cemented silty sand (hardpan)	SM
12.5-17.5	22 – 22.5	Dense to medium dense sand	SP
22 – 22.5	32.5	Very loose to loose sand with clay, clayey sand	SP-SC, SC
32.5	40	Loose to medium dense sand with clay	SP-SC

[1] Unified Soil Classification

2.1.2 Excavation Limits

On June 8, 2010, prior to excavation activities, TtNUS located and marked the horizontal excavation limits (see Figures 1-3 through 1-5) using survey stakes and marking paint. TtNUS representatives remained onsite for the duration of excavation activities to verify the horizontal and vertical excavation limits.

2.1.3 Excavation Permit

In preparation for excavation at Building 502 and Building 290A, excavation permits (Appendix J) were completed in accordance with facility procedures. Sunshine State One-call of Florida and Jacksonville Aviation Authority (JAA) conducted the facility utility locates for the completion of the excavation permit. In addition to the facility locates, CH2M HILL subcontracted Bowyer Singleton and Associates, Inc. to perform a third party utility locate March 15, 2010. No utilities were located in the excavation areas.

2.1.4 Helical Pin Pile Installation at Building 502

In order to preserve the integrity of the western portion of Building 502 (which lies adjacent to the excavation area), five helical pin piles were installed along the western edge of Building 502 on June 15 through June 17, 2010 to provide temporary support of the western wall during soil excavation and backfilling. Each helical pin pile was installed to a minimum depth of 11 feet below existing ground surface with a minimum installation torque of 5,000 foot-pounds. The helical pin pile support plan and design drawings are provided in Appendix B.

2.2 Soil Excavation, Transportation, and Disposal

2.2.1 Waste Characterization

The procedures utilized for waste characterization sampling and analysis are outlined in the *Work Plan, Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A* (CH2M HILL, 2010). Each excavation area was sampled independently for waste characterization following delineation by TtNUS.

Waste characterization sampling was performed on June 10, 2010 with one 5-point composite sample collected per site, and the samples analyzed by Gulf Coast Laboratories for toxicity characteristic leaching procedure (TCLP) volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method SW-846 1311/8260B, TCLP semivolatile organic compounds (SVOCs) by EPA Method SW-846 1311/8270C, TCLP pesticides by SW-846 1311/8081A, polychlorinated biphenyls (PCBs) by EPA Method SW-846 8082, TCLP herbicides by EPA Method SW-846 1311/8151A, TCLP metals by EPA Method SW-846 1311/6010A/7470A, corrosivity by EPA Method 9045D, and ignitability by EPA Method 1010.

The soil from each site was characterized as non-hazardous petroleum impacted soil and debris. The disposal characterization laboratory analytical reports are provided in Appendix D, and the Non-Hazardous Waste Profile is provided in Appendix E.

2.2.2 Soil Excavation, Transportation, and Disposal

Soil from Building 502 and Building 290A was excavated using an excavator from June 18 to 21, 2010 to the specified excavation limits marked by TtNUS and shown on Figures 1-3 through 1-5. During excavation activities, the depth of each excavation area was verified by the Project Quality Control (QC) Manager and TtNUS field personnel at regular intervals using a standard tape measure. Following excavation of each area and prior to backfilling, the specified excavation limits were verified by the Project Manager, Project QC Manager, and TtNUS field personnel. The non-hazardous soil from both sites was stockpiled in a containment area lined with 20-mil polyethylene sheeting located near Building 502. The stockpiled soil was either loaded directly into tandem trailer trucks for transportation by Beaver Bulk Trucking and disposal at Chesser Island Landfill, Inc., or relocated in one roll-off container and transported by Environmental Remediation Services for disposal at Chesser Island Landfill, Inc. Based on the weight tickets, 201.1 tons of non-hazardous petroleum impacted soil was excavated and transported for disposal. The waste disposal profile, waste manifests, weight tickets, and certificates of disposal, and Transportation and Disposal Log are provided in Appendices E, F, G, and H, respectively.

2.3 Backfill and Site Restoration

2.3.1 Fill Material Characterization

The procedures utilized for fill material characterization sampling and analysis are outlined in the Work Plan, Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A (CH2M HILL, 2010). Each fill material source was sampled independently for fill material characterization and verified free of contamination with the exception of the FDOT #57 stone. A letter from the source of the stone was obtained stating that all FDOT #57 material was from below surface mining operations and that no material is accepted from outside mining operations (see Appendix I).

Fill material characterization sampling was performed on June 9, 2010, and analyzed by Enco Laboratories for target compound list (TCL) VOCs by EPA Method 8260B, TCL SVOCs by EPA Method 8270C, 16-listed polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310, TCL pesticides by EPA Method 8081A, PCBs by EPA Method 8082, TCL herbicides by EPA Method 8151A, Target Analyte List (TAL) metals by EPA Method 6010A/7470A, and pH by EPA Method 9045B.

The fill material characterization laboratory analytical reports are provided in Appendix I.

2.3.2 Backfill

Building 502

Following excavation at Building 502, FDOT #57 stone was placed in 8-inch lifts to 12 inches above the groundwater table (approximately 4 feet bgs) without compaction. Following the placement of FDOT #57 stone, clean soil was placed in 8-inch lifts with each lift proof rolled with overlapping passes using a plate vibratory compactor. Each lift was compacted to 98 percent of the Standard Proctor Maximum Density (ASTM D698) and field verified by one compaction test per lift performed by Universal Engineer Services prior to placing the next lift. This procedure was repeated until the excavation area was backfilled to

approximately 6 inches below the previous grade. Crushed limestone was used to complete the excavation area and to act as a suitable road base for asphalt placement. The crushed limestone was compacted in the same manner as the clean soil and a compaction test was performed to verify that 98 percent of the Standard Proctor Maximum Density (ASTM D698) had been achieved.

Building 290A

Following excavation at Building 290A, clean soil was placed in 8-inch lifts and machine compacted using an excavator. No compaction testing was required. The excavation area was backfilled with clean soil until the previous grade had been achieved.

2.3.3 Site Restoration

Building 502

Following backfill of the excavation area, all existing edges designated for new pavement were trimmed to straight and neat lines to the required depth and all loose material was removed. A tack coat made of bituminous, emulsified asphalt material was then applied uniformly. Following the application of the tack coat, a Class 2 asphalt concrete was then placed in two layers, approximately 3 inches per layer, with each layer rolled using a vibratory machine roller.

Building 290A

Following backfill of the excavation area, the area was graded and smoothed to match surrounding conditions. Straw was placed over the backfill material to deter soil erosion.

2.4 Problems Encountered

On June 17, 2010, CH2M HILL submitted a Request for Information (Appendix C), and requested the excavation depth at Building 502 be changed to a depth of at least 1 foot below the water table (approximately 8 feet bgs). This request was a change from the *Final Dig and Haul Package, Building 502, Tank 502 Naval Air Station Cecil Field* (TtNUS, 2007a), which specified an excavation depth to the depth of the water table (approximately 9 feet bgs). This modification was requested due to depth of water measurements collected on June 15, 2010 from two onsite piezometers that showed the water table to be 6.91 feet bgs and 7.11 feet bgs.

In addition, CH2M HILL also requested that the excavation method specified in the above referenced Dig and Haul Package be modified from excavating in 4-foot trenches running 15 feet east to west to provide support for the western wall of Building 502 to completing the entire excavation at once. This modification was requested because the five helical pin piles installed on the western wall of Building 502 provided adequate support.

3.0 Conclusions

The source removal at Building 502 and Building 290A was completed from April 1, 2010 to June 24, 2010, in accordance with the *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field* (TtNUS, 2007a) and the *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field* (TtNUS, 2007b). The source removal included the following:

- Site preparation activities, to include a geotechnical investigation to explore the general subsurface conditions at the Building 502 site, and provide soil data for the design and implementation of the support plan for the west side of Building 502 during excavation activities
- Completing the excavation permits and conducting a third party utility locate for each site
- Installation of five helical pin piles in accordance with the support plan and design drawings along the western edge of Building 502 to provide temporary support of the western wall during soil excavation and backfilling
- Excavation, transportation, and disposal of 201.1 tons of non-hazardous petroleum contaminated soil from the specified excavation limits shown on Figures 1-3 through Figure 1-5
- Backfilling each of the excavated areas with backfill verified free of contamination and restoring each site to match pre-excavation conditions

Based on the source removal activities documented in this report, the specified project objectives were achieved.

4.0 References

CH2M HILL Constructors, Inc. 1998. *Basewide Work Plan, Naval Air Station Cecil Field, Jacksonville, Florida*. March.

CH2M HILL Constructors, Inc. 2010. *CTO No. 0060 Work Plan, Excavation of Petroleum Contaminated Soil, Building 502 and 290A, Former Naval Air Station Cecil Field, Jacksonville, Florida*. March.

Tetra Tech NUS, Inc. (TtNUS). 2006. *Supplemental Soil Assessment Letter Report for Tank G290-A*. November.

Tetra Tech NUS, Inc. (TtNUS). 2007a. *Final Dig and Haul Package, Building 502, Tank 502, NAS Cecil Field*. September.

Tetra Tech NUS, Inc. (TtNUS). 2007b. *Dig and Haul Package, Building 290A, Tank G290A, NAS Cecil Field.* November.

Tetra Tech NUS, Inc. (TtNUS). 2007c. *Final Site Assessment Report Addendum, Building 502, Tank 502, NAS Cecil Field*. December.

Appendix A
Site Photographs

Appendix A

Site Photographs

Photograph 1: Excavation of trench at Building 502 to facilitate the installation of helical pin piles.

Photograph 2: Phone utilities at Building 502.

Photograph 3: Installation of helical pin piles at Building 502.

Photograph 4: Torque tests of helical pin piles Building 502.

Photograph 5: Pressure test of helical pin piles at Building 502.

Photograph 6: Two installed helical pin piles at Building 502.

Photograph 7: Excavation activities at Building 502.

Photograph 8: Contaminated soil containment area at Building 502.

Photograph 9: Backfilling with FDOT #57 stone at Building 502.

Photograph 10: Backfilling activities at Building 502.

Photograph 11: Mechanical compacting of backfill soil at Building 502.

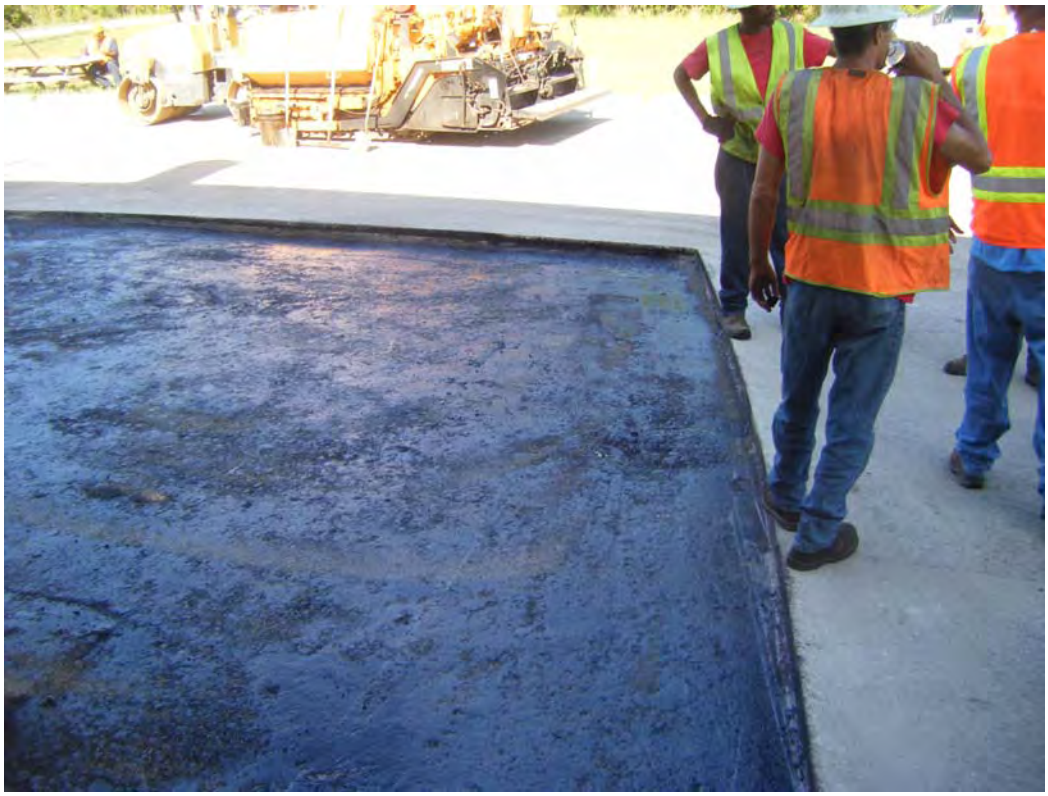
Photograph 12: Soil density test at Building 502.

Photograph 13: Final soil compaction at Building 502.

Photograph 14: Placing crushed limestone for road base at Building 502.

Photograph 15: Transportation and disposal activities at Building 502.

Photograph 16: Backfill and compaction complete at Building 502.



Photograph 17: Asphalt tack coat completed at Building 502.

Photograph 18: Placing 1st asphalt layer at Building 502.

Photograph 19: Rolling 1st asphalt layer at Building 502.

Photograph 20: Placing final asphalt layer at Building 502.

Photograph 21: Site restoration complete at Building 502.

Photograph 22: Excavation activities at Building 290A.

Photograph 23: Excavation activities at Building 290A.

Photograph 24: Excavation activities at Building 290A.

Photograph 25: Placement of plastic barrier at Building 290A.

Photograph 26: Backfill activities at Building 290A.

Photograph 27: Completed excavation at Building 290A.

Appendix B
Building 502 Support Plan

UNIVERSAL
ENGINEERING SCIENCES
Consultants In: Geotechnical Engineering • Environmental Engineering • Construction Materials Testing • Threshold Inspection • Private Provider Inspection • Geophysical Studies

Offices In:
• Daytona Beach, FL
• Fort Myers, FL
• Fort Pierce, FL
• Gainesville, FL
• Jacksonville, FL
• Leesburg, FL
• Miami, FL
• Norcross, GA
• Ocala, FL
• Orlando, FL
• Palm Coast, FL
• Panama City, FL
• Pensacola, FL
• Rockledge, FL
• Sarasota, FL
• St. Augustine, FL
• Tampa, FL
• West Palm Beach, FL

April 19, 2010

CH2M Hill
9311 San Pedro Avenue – Suite 800
San Antonio, Texas 78216

Attention: Ms. Colleen Kurtz

Reference: **REPORT OF EXPLORATORY BORINGS**
Building 502 Cecil Field Naval Air Station
Prime Contract No. N62467-01-D-0331-CTO 60
Jacksonville, Florida
UES Project No. 0930.1000055.0000 and Report No. 833290

Dear Ms. Kurtz:

Universal Engineering Sciences, Inc. has completed the subsurface investigation of the subject site located along 10th Street at Cecil Field Naval Air Station in Jacksonville, Florida. This report presents a summary of the field exploration and laboratory testing procedures and contains the results of our exploration.

PROJECT INFORMATION

The purposes of this investigation were to explore the general subsurface conditions at the site. It was not the purpose of this investigation to interpret and review the subsurface conditions with respect to the proposed construction. We will be pleased to provide these services if requested.

This report presents the soil conditions encountered on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services if you desire.

Our investigation was confined to the zone of soil within the upper 40 feet below the ground surface. Our work did not address the potential for surface expression of deep geological conditions. This evaluation requires a more extensive range of field services than performed in this study. We will be pleased to conduct an investigation to evaluate the probable effect of the regional geology upon the proposed construction if you desire.

FIELD EXPLORATION

To explore the subsurface conditions at the site, we located and performed two Standard Penetration Test (SPT) borings, drilled to depths of 40 feet below the existing ground surface in

general accordance with the methodology outlined in ASTM D 1586. A summary of these field procedures is included in Appendix A. Soil samples recovered during performance of the borings were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

LABORATORY INVESTIGATION

Representative soil samples obtained during our field exploration were returned to our office and reviewed by a geotechnical engineer. The samples were visually classified in general accordance with ASTM D 2488 (Unified Soil Classification System).

Eleven (11) fines content tests, eleven (11) moisture content tests, and two (2) Atterberg limits tests were conducted in the laboratory on representative soil samples obtained from the borings. These tests were performed to aid in classifying the soils and to help quantify and correlate engineering properties. The results of these tests are presented on the Boring Logs in Appendix A. A brief description of the laboratory procedures used is also provided in Appendix A.

GENERAL SUBSURFACE CONDITIONS

General Soil Profile

The boring locations and detailed subsurface conditions are included in Appendix A on the Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. When reviewing these logs, it should be understood that the soil conditions will vary away from and between the boring locations. The following table summarizes the soil conditions encountered.

TABLE 1
GENERAL SOIL PROFILE

Typical Depth		Soil Description	USC[1]
From	To		
0	0.6-0.8	Asphalt (2 – 2-1/4") and Limerock (5 to 7")	---
06.-0.8	6	Loose sand, sand with silt	SP, SP-SM
6	12.5-17.5	Dense to very dense weakly cemented silty sand (hardpan)	SM
12.5-17.5	22-22.5	Dense to medium dense sand	SP
22-22.5	32.5	Very loose to loosw sand with clay, clayey sand	SP-SC, SC
32.5	40	Loose to medium dense sand with clay	SP-SC

[1] **Unified Soil Classification**

Groundwater Level

The groundwater level was encountered at the boring locations and recorded at the time of drilling at depths ranging from 4.9 to 5.0 feet below the existing ground surface. The groundwater should be anticipated to fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations and other interrelated factors. Based upon our review of the Duval County Soils Survey and regional hydrogeology, it is our opinion the seasonal high water level will occur at a depth range of 0.0 to 0.5 feet below the existing ground surface.

LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An Association of Engineering Firms Practicing in the Geosciences (ASFE) publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix B, and will help explain the nature of geotechnical issues.

We trust this report meets your needs and addresses the geotechnical issues associated with the proposed construction. We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.

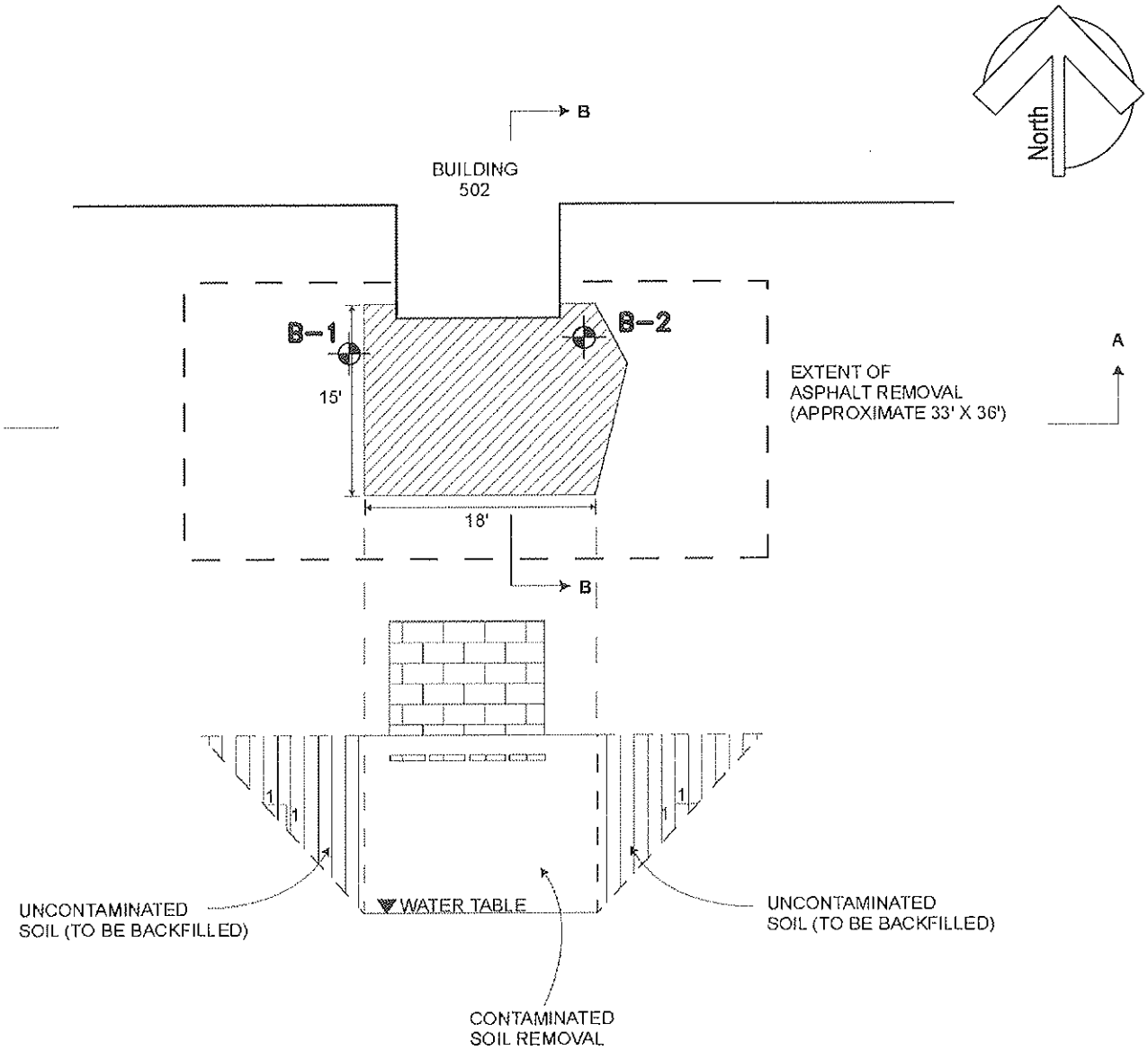
Stephen R. Weaver, P.E.
Geotechnical Services Manager
Florida P.E. Number 37389

SRW/srw

Cc: Mr. Jeff Marks
CH2M Hill

APPENDIX A

BORING LOCATION PLAN
BORING LOGS
KEY TO BORING LOGS
FIELD EXPLORATION PROCEDURES
LABORATORY TESTING PROCEDURES



SECTION A-A

LEGEND

SPT BORING LOCATIONS

0 20' 40'

GRAPHIC SCALE

UNIVERSAL
ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION
BUILDING 502-CECIL FIELD NAS
JACKSONVILLE, FLORIDA

BORING LOCATION PLAN

REVISED BY: TW	DATE: 4/9/10	CHECKED BY: MM	DATE: 4/9/10
SCALE: N.T.S.	PROJECT NO: 0940.1000055.0000	REPORT NO:	PAGE NO: A-1

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0930.1000055.0000
REPORT NO.:	
PAGE:	A-2

PROJECT: GEOTECHNICAL EXPLORATION
BUILDING 502 - CECIL FIELD NAS
JACKSONVILLE, FL

CLIENT: CH2M HILL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B- 1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 4.9
DATE OF READING: 4/1/2010
EST. W.S.W.T. (ft):

DATE STARTED: 4/1/10
DATE FINISHED: 4/1/10
DRILLED BY: PB/DB
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						2 1/4" Asphalt						
						7" Limerock						
		2-3-3	6			Loose grayish brown fine SAND with Silt (SP-SM)						
		2-2-3	5	▼		Loose light brown fine SAND with Silt (SP-SM)	7.8	17.4				
5		4-4-4	8			Loose gray fine SAND with Silt (SP-SM)	11.9	21.0				
		3-12-13	25			Medium dense brown fine SAND with Silt (SP-SM)						
		13-26-40	66			Very dense to dense dark brown Silty fine SAND with weakly cemented hardpan layers (SM)						
10		19-38-52	90				15.1	24.3				
15		16-26-38	64									
						Medium dense brown fine SAND (SP)						
20		11-13-14	27									
						Very loose to medium dense light brown fine SAND with Clay (SP-SC)						
25		2-1-2	3				11.3	30.3		NP		
30		4-5-6	11									
						Medium dense brown fine SAND with Clay (SP-SC)						
35		4-6-9	15				9.1	25.9				
40		6-7-7	14									

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0930.1000055.0000
REPORT NO.:	
PAGE:	A-3

PROJECT: GEOTECHNICAL EXPLORATION
BUILDING 502 - CECIL FIELD NAS
JACKSONVILLE, FL

CLIENT: CH2M HILL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B- 2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 5.0
DATE OF READING: 4/1/2010
EST. W.S.W.T. (ft):

DATE STARTED: 4/1/10
DATE FINISHED: 4/1/10
DRILLED BY: PB/DB
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						2" Asphalt 5" Limerock						
		3-3-3	6			Loose gray fine SAND with Silt (SP-SM)	6.7	9.6				
		2-3-3	6			Loose grayish brown fine SAND with Silt (SP-SM)						
5		2-2-3	5									
		4-13-20	33			Dense to very dense dark brown weakly cemented Silty fine SAND (SM) (hardpan)						
		13-36-48	84				14.3	23.1				
10		18-43-50/4"	100+									
						Dense light brown fine SAND with Silt (SP-SM)						
15		10-17-22	39									
20		7-11-14	25				6.9	26.9				
						Very loose brown fine SAND with Clay (SP-SC)						
25		1-1-2	3				11.9	35.7				
						Loose gray Clayey fine SAND (SC)						
30		3-4-5	9									
						Loose to medium dense light brown fine SAND with Clay (SP-SC)						
35		2-2-4	6				7.6	26.3				
40		2-3-12	15				10.2	23.8		NP		

UNIVERSAL ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive Standard Spoon 1Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample From Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level
NE	Not Encountered
BT	Boring Terminated
-200	Fines Content or % Passing No. 200 Sieve
MC	Moisture Content
LL	Liquid Limit
PI	Plasticity Index
K	Coefficient of Permeability
Org. Cont.	Organic Content

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve *	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve *	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity. gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts
			CH	Inorganic clays or clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3-inch (75 mm) sieve
** Use dual symbol (such as, SP-SM and SP-SC) for soil with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)

Very Loose -Less than 4 Blows / Foot
Loose - 4 to 10 Blows / Foot
Medium Dense - 11 to 30 Blows / Foot
Dense - 31 to 50 Blows / Foot
Very Dense - More than 50 Blows / Foot

CONSISTENCY
(Silts and Clays)

Very Soft - Less than 2 Blows / Foot
Soft - 2 to 4 Blows / Foot
Firm - 5 to 8 Blows / Foot
Stiff - 9 to 15 Blows / Foot
Very Stiff - 16 to 30 Blows / Foot
Hard - More than 30 Blows / Foot

RELATIVE HARDNESS
(Limestone)

Soft - 100 Blows for more than 2"
Hard - 100 Blows for less than 2"

MODIFIERS

These Modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample
Trace - 5% or Less
With Silt or With Clay - 6% to 11%
Silty or Clayey - 12% to 30%
Very Silty or Very Clayey - 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components in the Soil Sample
Trace - Less than 3%
Few - 3% to 4%
Some - 5% to 8%
Many - Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) in the Soil Sample
Trace - 5% or Less
Few - 6% to 12%
Some - 13% to 30%
Many - 31% to 50%

FIELD EXPLORATION PROCEDURES

Standard Penetration Test Boring

The penetration boring was made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The boring was advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At 2 ½ to 5 foot intervals, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140 pound hammer falling on the average 30 inches per hammer blow. The number of blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less if in hard rock-like material), the sampler was retrieved from the borehole and representative samples of the material within the split-barrel were placed in glass jars and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classification.

LABORATORY TESTING PROCEDURES

Natural Moisture Content

The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Atterberg Limits

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D 4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by as the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

APPENDIX B

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

CONSTRAINTS AND RESTRICTIONS

Important Information About Your Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one–not even you*–should apply the report for any purpose or project except the one originally contemplated.

Read the full report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions *only* at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an *opinion* about subsurface conditions throughout the site. Actual subsurface conditions may differ–sometimes significantly–from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject To Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce such risks, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations", many of the provisions indicate where geotechnical engineers responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Rely on Your Geotechnical Engineer for Additional Assistance

Membership in ASFE exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE

8811 Colesville Road Suite G106 Silver Spring, MD 20910
Telephone: 301-565-2733 Facsimile: 301-589-2017
email: info@asfe.org www.asfe.org

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data

presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last

reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

FOUNDATION SYSTEMS AND EQUIPMENT COMPANY

CB C059308 Florida Building Contractor License CB C1252700

P.O. BOX 50545 • JACKSONVILLE BEACH, FL 32240

OFC. 904-241-4425 • FAX 904-247-8553

June 2, 2010

Mr. John Anderson
Environmental Remediation Services, Inc
760 Talleyrand Avenue
Jacksonville, FL 32202

RE: Support of Portion of
Building 502
Cecil Field Naval Air Station
Jacksonville, FL

John,

Enclosed you will find the following documents:

1. Engineered Sealed Drawings
2. Engineered Sealed Pile Calculations

I believe you now have everything needed for this project.

Regards,

Bill C McMahan
CBC 059308

Enclosures
Bcm/trm

HeliCAP-v2.0 SUMMARY REPORT

Job Name: cecil field-bldg.502

5/28/2010 9:55:22 AM

Job Number:

C:\Program Files\HeliCAP\Chance-UNTITLED.mdb

Boring Number: b-2

Water Table Depth: None

Application: Compression

Capacity Summary

Pile Number	Helix Depth (ft)	Ult. Helix Bearing Capacity (kips)	Ultimate Recommended Helix Capacity (kips)	Installation Torque (ft-lbs)
Number:1				
Product: RS2875.262	Helix Gr:50	Thk:3/8"		
Helix Strength:	40.0 kips			
Datum Depth:0.0	Length:15.0	Angle:90.0		
12" helix	12.0	7.6t	7.6t	
		17.3c	17.3c	
10" helix	14.5	15.2t	15.2t	
		25.6c	25.6c	
Total Ult. Helix Tension (Qbt\Qht)		22.9t	22.9t	
Total Ult. Helix Compression (Qbc\Qhc)		43.0c	43.0c	3123

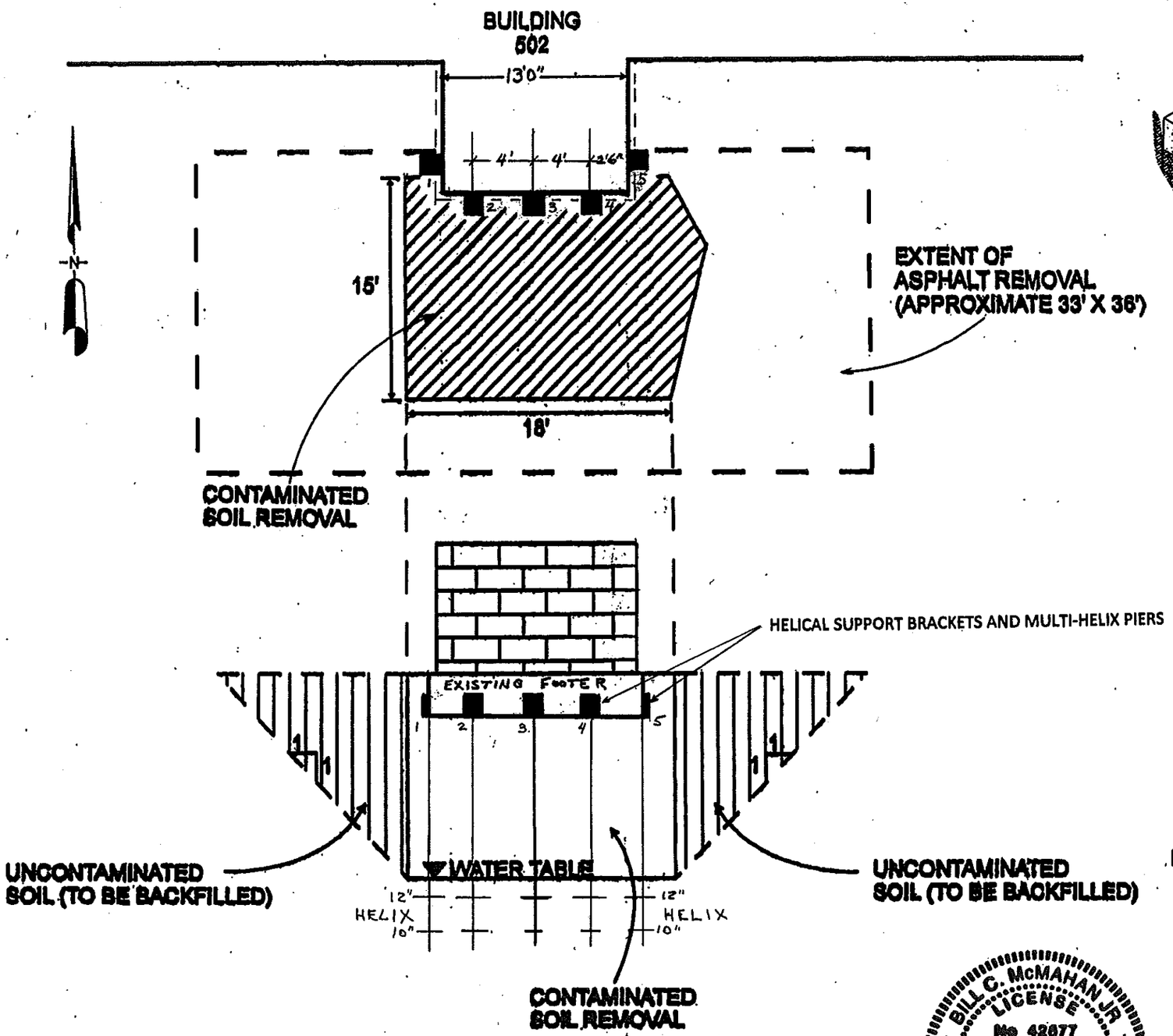
Soil Profile

Top of Layer Depth (ft)	Soil Type	Cohesion (psf)	N	Angle of Internal Friction (Degrees)	Nc \ Nq	In-situ Unit Weight (pcf)	Effect. Unit Weight (pcf)
0.0	Sand	0	0	27.4	0 \ 9	65	65
3.0	Sand	0	6	29.0	0 \ 12	90	90
5.0	Sand	0	5	28.8	0 \ 11	85	85
12.0	Sand	0	27	34.9	0 \ 25	117	117
15.0	Sand	0	40	38.6	0 \ 40	130	130
20.0	Sand	0	25	34.4	0 \ 23	115	115

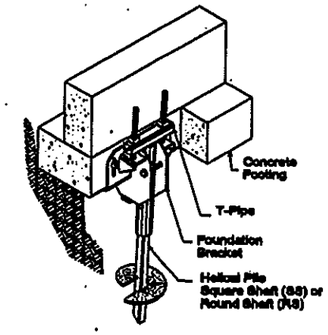
6/1/10

BILL C. McMAHAN JR. - P.E.
REG. FLA 42677

BILL C. McMAHAN JR
LICENSE
No 42677
STATE OF
FLORIDA
PROFESSIONAL ENGINEER



Schematic of Excavation Limits
Building 502 Area
NAS Cecil Field, Jacksonville, FL



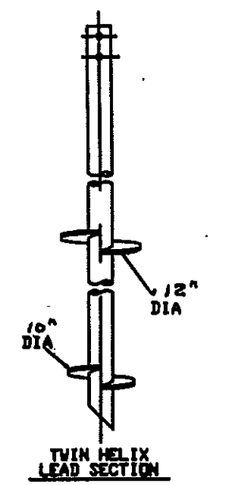
Chance® Helical C150-0121 Standard Bracket and T-Pipe System

- Use for lifts up to 4" (10 cm)
- All C150-0121 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Two 5/8" (16 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of bracket body is 80,000 lbs (358 kN). Working mechanical strength of bracket body is 40,000 lbs (178kN).



CHANCE®
RS2875.276 MULTI-HELIX

SHEET NOTES:

1. — Chance 20 KIP capacity Helical Piers and 40 KIP Support Brackets. #s 1-5
2. NOTE: Chance Helical Piers shall be installed to a minimum depth of 15' below existing grade and to a minimum torque of 3000 Ft Lbs.
3. NOTE: Each Chance Helical Pier shall have a 10"/12" Twin Helix.
4. NOTE: All Chance Helical materials shall be Hot-dipped galvanized for corrosion protection.
5. NOTE: Pre-drilling at each Pier location will be Required to depths of approximately 12 ft below existing grade. Pre-drilling will be accomplished using a 12" diameter rotary drill.
6. NOTE: Pier installation records shall be kept using standard FSEC forms.
7. NOTE: Actual Pier locations may be moved as may be required by actual job conditions to avoid underground utilities, buried obstructions, etc.

BILL C. McMAHAN JR
LICENSE
No 42677
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

6/1/10
Bill C. McMahan Jr., P.E.
Registered Florida #42677

New Foundation Support at Building 502		
Building 502 Cecil Field Naval Air Station, Jacksonville, Florida		
DRAWN BY	SCALE 1/8" = 1 FT	MATERIAL
CHK'D	DATE June 1, 2010	DRAWING NO. S-1
TRACED	APP'D	

NO. 1005-11X17

June 16, 2010

ENVIRONMENTAL REMEDIATION SERVICES, INC.
760 Talleyrand Avenue
Jacksonville, Florida 32202
Attn : Mr. John Anderson

Re: Revised Helical Pin Pile Installation Recommendations
Building 502 Cecil Field Air Station
Jacksonville, Florida

Gentlemen:

I recently prepared and submitted a Foundation Plan for the subject project. The intent of the recommendations presented on the Plan was to temporarily support the southern wall of an existing concrete block building during planned short-term soil remediation related excavation and backfilling operations. The original plan recommended that: (1) the building be supported on five(5) 2-7/8 diameter (0.276 wall thickness) 10"/12" Double Helix Chance Pin Piles, (2) the pin locations be pre-drilled to a depth of 12 feet below the ground surface due to the presence of dense hardpan soil, and (3) that the pin piles be installed to a minimum depth of 15 feet and to a minimum installation torque of 3000 ft-lbs. The pre-drilling and minimum depth recommendations were given to assure that the top helix bears at of below the maximum excavation depth which was presumed to be 12 feet or less. The torque requirement was designed to assure that the pins achieved an allowable axial compression capacity of 20 Kips (40 kip ultimate).

We understand that pin installation operations are currently underway. Two pin piles have been pre-drilled and installed to depths of approximately 12 to 13.5 feet below the ground surface. The installation torque for both pins maxed out at 7,500 ft-kips (64 kip ultimate compression capacity) prior to achieving the originally recommended 15 foot deep minimum pin bearing depth. As such, I have been asked to evaluate the installation data and the revised project information to determine whether the pins, as installed, will meet the intent of the original plans. Based upon a review of the installation records and our understanding that:(1) the maximum excavation depth is 8 feet, (2) minimal soil will be removed from beneath the building, (3) the excavation will be backfilled almost immediately, it is our opinion that the installation criteria may be relaxed slightly without hindering the piles ability to support the building as intended. Therefore, I have revised the minimum pin depth and installation torque requirements to reflect actual field conditions, our understanding that the maximum excavation depth will be limited to 8 feet below the ground surface, and the installation results for two of the planned production pin piles. Specifically, Note 2 on the attached revised Foundation Plan states that "helical pin piles can provide the necessary short term axial compression capacity (20 Kip Allowable, 40kip ultimate)needed to support the building during excavation and backfilling operations, provided the pins are installed to: (1) a revised minimum depth of 11 feet (below the existing ground surface) AND (2) a minimum installation torque of 5,000 ft. lb."

Please contact me at (904) 237-2943 if you have any questions or comments.

Very truly yours,

6/16/10

Bill C. McMahan, Jr., PE.
Registered, Florida No. 42802

BILL C. McMAHAN JR
LICENSE
No 42677
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Attachments

June 16, 2010

ENVIRONMENTAL REMEDIATION SERVICES, INC.
760 Talleyrand Avenue
Jacksonville, Florida 32202
Attn : Mr. John Anderson

Re: Revised Helical Pin Pile Installation Recommendations
Building 502 Cecil Field Air Station
Jacksonville, Florida

Gentlemen:

I recently prepared and submitted a Foundation Plan for the subject project. The intent of the recommendations presented on the Plan was to temporarily support the southern wall of an existing concrete block building during planned short-term soil remediation related excavation and backfilling operations. The original plan recommended that: (1) the building be supported on five(5) 2-7/8 diameter (0.276 wall thickness) 10"/12" Double Helix Chance Pin Piles, (2) the pin locations be pre-drilled to a depth of 12 feet below the ground surface due to the presence of dense hardpan soil, and (3) that the pin piles be installed to a minimum depth of 15 feet and to a minimum installation torque of 3000 ft-lbs. The pre-drilling and minimum depth recommendations were given to assure that the top helix bears at of below the maximum excavation depth which was presumed to be 12 feet or less. The torque requirement was designed to assure that the pins achieved an allowable axial compression capacity of 20 Kips (40 kip ultimate).

We understand that pin installation operations are currently underway. Two pin piles have been pre-drilled and installed to depths of approximately 12 to 13.5 feet below the ground surface. The installation torque for both pins maxed out at 7,500 ft-kips (64 kip ultimate compression capacity) prior to achieving the originally recommended 15 foot deep minimum pin bearing depth. As such, I have been asked to evaluate the installation data and the revised project information to determine whether the pins, as installed, will meet the intent of the original plans. Based upon a review of the installation records and our understanding that:(1) the maximum excavation depth is 8 feet, (2) minimal soil will be removed from beneath the building, (3) the excavation will be backfilled almost immediately, it is our opinion that the installation criteria may be relaxed slightly without hindering the piles ability to support the building as intended. Therefore, I have revised the minimum pin depth and installation torque requirements to reflect actual field conditions, our understanding that the maximum excavation depth will be limited to 8 feet below the ground surface, and the installation results for two of the planned production pin piles. Specifically, Note 2 on the attached revised Foundation Plan states that "helical pin piles can provide the necessary short term axial compression capacity (20 Kip Allowable, 40kip ultimate)needed to support the building during excavation and backfilling operations, provided the pins are installed to: (1) a revised minimum depth of 11 feet (below the existing ground surface) AND (2) a minimum installation torque of 5,000 ft. lb."

Please contact me at (904) 237-2943 if you have any questions or comments.

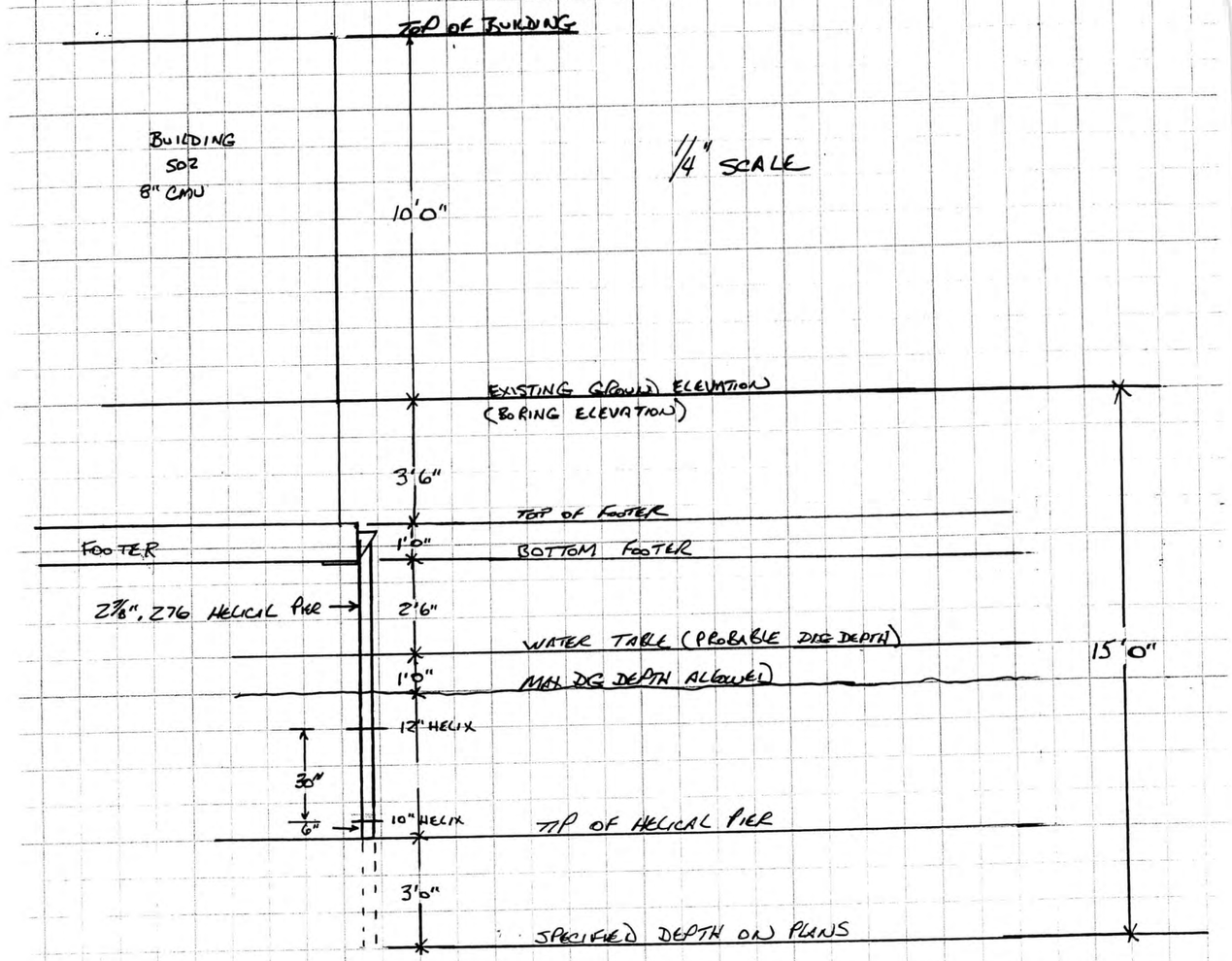
Very truly yours,

6/16/10

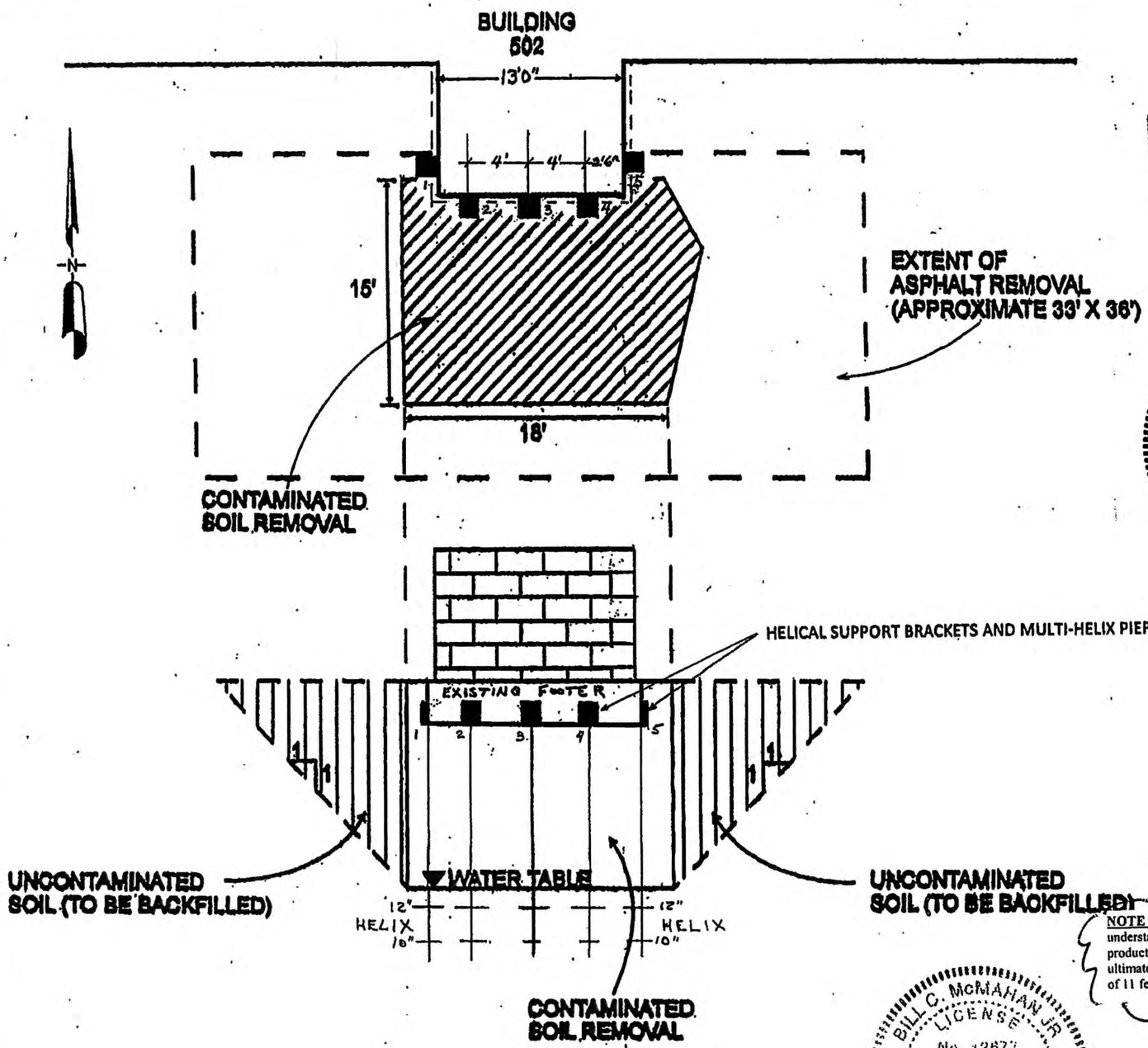
Bill C. McMahan, Jr., PE.
Registered, Florida No. 42802

BILL C. McMAHAN JR
LICENSE
No 42677
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

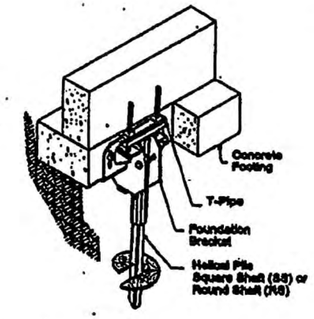
Attachments



TO: MR JOHN ANDERSON
ENVIRONMENTAL REMEDIATION SERVICES, INC.
760 TALLEYRAND AVENUE
JACKSONVILLE, FL. 32202
FAX # 904-791-9833
PH. # 904-791-9992
EMAIL - JANDERSON@ERSFL.COM



Schematic of Excavation Limits
Building 502 Area
NAS Cecil Field, Jacksonville, FL



Chance® Helical C150-0121 Standard Bracket and T-Pipe System

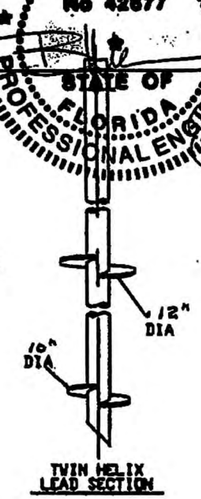
- Use for lifts up to 4" (10 cm)
- All C150-0121 Standard Systems include:
  - Foundation bracket
  - T-pipe
  - Hardware

Order separately: Two 5/8" (16 mm) diameter anchor bolts per pier as required.

Standard finish is galvanized per ASTM A153.

Ultimate mechanical strength of bracket body is 80,000 lbs (356 kN). Working mechanical strength of bracket body is 40,000 lbs (178kN).

BILL C. McMAHAN JR. LICENSE No 42677 STATE OF FLORIDA PROFESSIONAL ENGINEER



CHANCE
RS2875.276 MULTI-HELIX

SHEET NOTES:

1. Chance 20 KIP capacity Helical Piers and 40 KIP Support Brackets. #s 1-5
2. NOTE: ~~Chance Helical Piers shall be installed to a minimum depth of 15' below existing grade and to a minimum torque of 3000 Ft Lbs.~~ SEE REVISION 6/16/10 BCM 6/16/10
3. NOTE: Each Chance Helical Pier shall have a 10"/12" Twin Helix.
4. NOTE: All Chance Helical materials shall be Hot-dipped galvanized for corrosion protection.
5. NOTE: Pre-drilling at each Pier location will be Required to depths of approximately 12 ft below existing grade. Pre-drilling will be accomplished using a 12" diameter rotary drill.
6. NOTE: Pier installation records shall be kept using standard FSEC forms.
7. NOTE: Actual Pier locations may be moved as may be required by actual job conditions to avoid underground utilities, buried obstructions, etc.

NOTE 2 (revised 6/16/2010): I have revised the minimum pin depth and installation torque requirements to reflect actual field conditions, our understanding that the maximum excavation depth will be limited to 8 feet below the ground surface, and the installation results for two of the planned production pin piles. Specifically, the helical pin piles can provide the necessary short term axial compression capacity (20 Kip Allowable, 40kip ultimate)needed to support the building during excavation and backfilling operations, provided the pins are installed to: (1) a revised minimum depth of 11 feet (below the existing ground surface) AND (2) a minimum installation torque of 5,000 ft. lb.

BILL C. McMAHAN JR. LICENSE No 42677 STATE OF FLORIDA PROFESSIONAL ENGINEER

6/1/10
Bill C. McMahan Jr., P.E.
Registered Florida #42677

New Foundation Support at Building 502		
Building 502 Cecil Field Naval Air Station, Jacksonville, Florida		
DRAWN BY	SCALE 1/8" = 1 FT	MATERIAL
CHK'D	DATE June 1, 2010	DRAWING NO. S-1
TRACED	APP'D	

From: Chang, K.R./GNV
Sent: Thursday, June 03, 2010 4:04 PM
To: Marks, Jeffery/JAX
Subject: RE: Cecil Field Project - Support Plan Review

Jeff: I have reviewed the design drawings. The installation depth and spacing of the drilled piers seem appropriate to me.

Kou-Roung Chang, Ph.D., PE
Design Manager and Senior Technologist
CH2M HILL
3011 SW Williston Road
Gainesville, Florida, 32608
Phone No. 352/384-7031
Fax 352/629-4026

From: Marks, Jeffery/JAX
Sent: Thursday, June 03, 2010 12:50 PM
To: Chang, K.R./GNV
Cc: Weinberg, Noah/JAX
Subject: Cecil Field Project - Support Plan Review

K.R.
We received the P.E. sealed drawing and plan for the support of Building 502 on Cecil Field, if you recall you helped me with the scope of work and work plan on the method that will be used to support the building while we excavated the contaminated soil. Can you take a look at the attached and let me know if it looks good to you? Thanks and call me anytime if you have any concerns or comments.

Jeffery Marks, E.I.
Associate Project Manager
CH2M HILL
10142 103rd Street, Suite 105
Jacksonville, FL 32210
Direct 904/777-4812 x. 224
Fax 352/381-3918
Mobile 904/219-6253
www.ch2mhill.com

Appendix C
Requests for Information

CH2MHILL

REQUEST FOR INFORMATION

Project Name/Description:	Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A	RFI No.:	01 (Revision 01)	Date Submitted: 6/17/2010
Contract/TO No:	N62467-01-D-0331 / CTO No. 0060	Project No:	350277	

To:	Art Sanford Name	BRAC PMO SE RPM Title
From:	Jeffery Marks Name	CH2M HILL Associate Project Manager Title

REFERENCES

Document *(Work Plan, Scope of Work, etc.)*:	Work Plan Revision No. 00; Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A
Drawing(s)/Specification *(Drawing No, Specification No., etc.)*:	Figures 1-3 and 2-1
Detail/Section *(Page No., Section No., Paragraph No., etc.)*:	Page No. 2-6, Section No. 2.1.6, Paragraphs 2 and 3
Discipline *(Architecture, Electrical, Mechanical, Chemical, Hydrogeology, etc.)*:	Environmental

POTENTIAL IMPACT: Cost ☒ Schedule ☒ Activity/Task Impacted: Excavation and Backfilling

REQUEST

Based on the Final Dig and Haul Package, Building 502, Tank 502 prepared by Tetra Tech NUS, Inc. (TtNUS) (submitted September 11, 2007), the above referenced Work Plan states that soil will be excavated to a depth of the water table (approximately 9 feet bgs). Depth to water measurements from two onsite piezometers (each approximately 35 to 40 feet from the excavation area) collected on 6/15/2010 were 6.91 feet bgs and 7.11 feet bgs, respectively. CH2M HILL proposes that the excavation depth be changed to a depth of at least one-foot below the water table (approximately 8 feet bgs).

In addition, the above referenced Work Plan states that the soil be removed in 4-foot trenches running 15 feet east to west in order to provide support to Building 502. With the installation of five multi-helix piers to support Building 502 (Support Plan attached), CH2M HILL proposes to excavate the entire area as a whole, rather than in trenches. The five multi-helix piers provide adequate support of the building, making the requirement for trenches no longer necessary. Following excavation, FDOT #57 Stone (specification attached) will be used initially as backfill to bridge the water table. FDOT #57 Stone will be placed to 12 inches above the groundwater table without compaction. After that, the stone will be placed in 8-inch lifts and each lift proof rolled with five overlapping passes using a plate vibratory compactor. Compaction testing is not required on the stone. Soil fill will then be placed in layers not to exceed 8 inches, and machine compacted to 95% of the Standard proctor maximum density (ASTM D698) and field verified by one compaction test per lift prior to placing the next lift.

It is CH2M HILL's understanding based on technical communications conducted on June 17, 2010 between CH2M HILL (Jeff Marks), BRAC PMO SE (Art Sanford), and TtNUS (Rob Simcik), that TtNUS will relocate in the field the excavation limits for Building 502 on June 18, 2010, and that CH2M HILL will excavate within these specified limits in accordance with the Final Dig and Haul Package, Building 502, Tank 502 and this Request for Information.

Requested By: *(Name/Company/Title)*	Jeffery Marks/CH2M HILL	Response Requested by Date:	6/17/2010

REPLY:

Responded By: *(Name/Company/Title)*	~~Robert Simcik, TtNUS, Project Manager~~	Date of Response:	

RESPONSE DISPOSITION/ CONCURRENCE: Based on conversations with Tetra Tech and FDEP on June 18, 2010 BRAC PMO is satisfied with the change in depth to one foot below the water table. Also the distance from building 502 to the west on the work plan states 15 feet but during field measurements this was 19 feet. Rather then overlap the new backfill by one foot as shown on the plans this will now just overlap in new backfill from recent tank pull.

CH2MHILL

REQUEST FOR INFORMATION

Project Name/Description:	Excavation of Petroleum Contaminated Soil at Buildings 502 and 290A	RFI No.:	01 (Revision 01)	Date Submitted: 6/17/2010
Response Dispositioned / Concurred With By: *(Name/Company/Title)*	Art Sanford, BRAC PMO SE, RPM		Date Response Dispositioned Concurred With:	6/18/2010

FURTHER ACTIONS REQUIRED:

REVIEW DISTRIBUTION			**FINAL DISTRIBUTION**		
☒ CH2M HILL PM	☒ Robert Simcik/TtNUS	☐	☒ CH2M HILL PM	☒ Robert Simcik/TtNUS	☐
☒ CH2M HILL CM	☒ Art Sanford/BRAC PMO SE	☐	☒ CH2M HILL CM	☒ Art Sanford/BRAC PMO SE	☐
☒ CH2M HILL QC	☒ Mike Halil/CH2M HILL	☒ Project Files	☒ CH2M HILL QC	☒ Mike Halil/CH2M HILL	☒ Project Files

Appendix D
Waste Characterization Laboratory Analytical Reports

NELAP CERTIFICATE NUMBER 01955

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Rd.

Baton Rouge, LA 70820

Report Date

GCAL Report 210061106

Deliver To	CH2M Hill Constructors, Inc Northpark 400 1000 Abernathy Rd, Suite 1600 Atlanta, GA 30328 770-604-9182 Ext. 54385
Attn	Kama White

Project CTO-60 - Site Remediation

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates an estimated value
U	Indicates the compound was analyzed for but not detected
B	(ORGANICS) Indicates the analyte was detected in the associated Method Blank
B	(INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Robyn Migues
Technical Director
GCAL REPORT 210061106

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	60502WCS061010	Solid	06/10/2010 16:00	06/11/2010 08:00
21006110602	60290AWCS061010	Solid	06/10/2010 16:45	06/11/2010 07:27

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 7470A TCLP

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.00007B	0.0020	0.000055	mg/L

SW-846 6010B TCLP

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	0.38B	5.00	0.0015	mg/L
7440-47-3	Chromium	0.0040B	0.25	0.0016	mg/L
7439-92-1	Lead	0.069B	0.50	0.0073	mg/L

SW-846 9045C pH

CAS#	Parameter	Result	RDL	MDL	Units
pH	pH	7.02	1.00	1.00	pH unit

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 6010B TCLP

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	0.21B	5.00	0.0015	mg/L
7439-92-1	Lead	0.074B	0.50	0.0073	mg/L
7782-49-2	Selenium	0.023B	0.50	0.019	mg/L
7440-22-4	Silver	0.0057B	0.25	0.0029	mg/L

SW-846 9045C pH

CAS#	Parameter	Result	RDL	MDL	Units
pH	pH	6.15	1.00	1.00	pH unit

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 8260B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			40	06/16/2010 10:37	AGC	434580

CAS#	Parameter	Result	RDL	MDL	Units
75-35-4	1,1-Dichloroethene	0.200U	0.200	0.00656	mg/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	0.00344	mg/L
78-93-3	2-Butanone	0.200U	0.200	0.00373	mg/L
71-43-2	Benzene	0.200U	0.200	0.00217	mg/L
56-23-5	Carbon tetrachloride	0.200U	0.200	0.00592	mg/L
108-90-7	Chlorobenzene	0.200U	0.200	0.00110	mg/L
67-66-3	Chloroform	0.200U	0.200	0.00226	mg/L
127-18-4	Tetrachloroethene	0.200U	0.200	0.00484	mg/L
79-01-6	Trichloroethene	0.200U	0.200	0.00247	mg/L
75-01-4	Vinyl chloride	0.200U	0.200	0.00372	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2000	1790	ug/L	90	62 - 130
1868-53-7	Dibromofluoromethane	2000	2000	ug/L	100	65 - 127
2037-26-5	Toluene d8	2000	2130	ug/L	107	71 - 134
17060-07-0	1,2-Dichloroethane-d4	2000	1970	ug/L	99	62 - 127

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 8270C TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/14/2010 11:30	434193	3510C	1	06/15/2010 15:35	RLY	434475

CAS#	Parameter	Result	RDL	MDL	Units
106-46-7	1,4-Dichlorobenzene	0.0500U	0.0500	0.0006	mg/L
95-95-4	2,4,5-Trichlorophenol	0.0500U	0.0500	0.0006	mg/L
88-06-2	2,4,6-Trichlorophenol	0.0500U	0.0500	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	0.0500U	0.0500	0.0012	mg/L
1319-77-3	Cresols	0.1000U	0.1000	0.0024	mg/L
118-74-1	Hexachlorobenzene	0.0500U	0.0500	0.0013	mg/L
87-68-3	Hexachlorobutadiene	0.0500U	0.0500	0.0011	mg/L
67-72-1	Hexachloroethane	0.0500U	0.0500	0.0055	mg/L
98-95-3	Nitrobenzene	0.0500U	0.0500	0.0011	mg/L
87-86-5	Pentachlorophenol	0.2500U	0.2500	0.0076	mg/L
110-86-1	Pyridine	0.0500U	0.0500	0.0077	mg/L
1319-77-3MP	m,p-Cresol	0.0500U	0.0500	0.0017	mg/L
95-48-7	o-Cresol	0.0500U	0.0500	0.0009	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	250	234	ug/L	94	48 - 123
321-60-8	2-Fluorobiphenyl	250	236	ug/L	94	16 - 128
1718-51-0	Terphenyl-d14	250	243	ug/L	97	38 - 167
4165-62-2	Phenol-d5	500	186	ug/L	37	10 - 123
367-12-4	2-Fluorophenol	500	283	ug/L	57	10 - 120
118-79-6	2,4,6-Tribromophenol	500	480	ug/L	96	44 - 121

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 8081B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/14/2010 15:00	434194	3510C	1	06/16/2010 23:29	TLS	434732

CAS#	Parameter	Result	RDL	MDL	Units
57-74-9	Chlordane	0.02500U	0.02500	0.00016	mg/L
72-20-8	Endrin	0.00100U	0.00100	0.00003	mg/L
76-44-8	Heptachlor	0.00050U	0.00050	0.00002	mg/L
1024-57-3	Heptachlor epoxide	0.00050U	0.00050	0.00005	mg/L
72-43-5	Methoxychlor	0.02500U	0.02500	0.00009	mg/L
8001-35-2	Toxaphene	0.25000U	0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	0.00050U	0.00050	0.00003	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
877-09-8	Tetrachloro-m-xylene	5	5.06	ug/L	101	48 - 137
2051-24-3	Decachlorobiphenyl	5	5.43	ug/L	109	30 - 139

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 8151A TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/12/2010 07:30	434258	3510C	1	06/16/2010 16:29	TLS	434709

CAS#	Parameter	Result	RDL	MDL	Units
94-75-7	2,4'-D	0.00500U	0.00500	0.00072	mg/L
93-72-1	2,4,5-TP (Silvex)	0.00500U	0.00500	0.00054	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
19719-28-9	DCAA	20	19.6	ug/L	98	18 - 136

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 6010B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/13/2010 11:20	434276	SW-846 3010A	5	06/16/2010 17:52	TEA	434639

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	1.00U	1.00	0.015	mg/L
7440-39-3	**Barium**	**0.38B**	**5.00**	**0.0015**	**mg/L**
7440-43-9	Cadmium	0.050U	0.050	0.00082	mg/L
7440-47-3	**Chromium**	**0.0040B**	**0.25**	**0.0016**	**mg/L**
7439-92-1	**Lead**	**0.069B**	**0.50**	**0.0073**	**mg/L**
7782-49-2	Selenium	0.50U	0.50	0.019	mg/L
7440-22-4	Silver	0.25U	0.25	0.0029	mg/L

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 7470A TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/13/2010 07:20	434277	SW-846 7470A	1	06/14/2010 12:12	KAW	434363

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	**Mercury**	**0.00007B**	**0.0020**	**0.000055**	**mg/L**

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 9045C pH

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	06/13/2010 06:30	OLT	434287

CAS#	Parameter	Result	RDL	MDL	Units
pH	**pH**	**7.02**	**1.00**	**1.00**	**pH unit**

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110601	**60502WCS061010**	Solid	06/10/2010 16:00	06/11/2010 08:00

SW-846 1030

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	06/16/2010 10:40	DJH	434609

CAS#	Parameter	Result	RDL	MDL	Units
000000-01-7	Ignitable	NO			

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 8260B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			40	06/16/2010 10:59	AGC	434580

CAS#	Parameter	Result	RDL	MDL	Units
75-35-4	1,1-Dichloroethene	0.200U	0.200	0.00656	mg/L
107-06-2	1,2-Dichloroethane	0.200U	0.200	0.00344	mg/L
78-93-3	2-Butanone	0.200U	0.200	0.00373	mg/L
71-43-2	Benzene	0.200U	0.200	0.00217	mg/L
56-23-5	Carbon tetrachloride	0.200U	0.200	0.00592	mg/L
108-90-7	Chlorobenzene	0.200U	0.200	0.00110	mg/L
67-66-3	Chloroform	0.200U	0.200	0.00226	mg/L
127-18-4	Tetrachloroethene	0.200U	0.200	0.00484	mg/L
79-01-6	Trichloroethene	0.200U	0.200	0.00247	mg/L
75-01-4	Vinyl chloride	0.200U	0.200	0.00372	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2000	1820	ug/L	91	62 - 130
1868-53-7	Dibromofluoromethane	2000	2030	ug/L	102	65 - 127
2037-26-5	Toluene d8	2000	2170	ug/L	109	71 - 134
17060-07-0	1,2-Dichloroethane-d4	2000	2000	ug/L	100	62 - 127

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 8270C TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/14/2010 11:30	434193	3510C	1	06/15/2010 15:51	RLY	434475

CAS#	Parameter	Result	RDL	MDL	Units
106-46-7	1,4-Dichlorobenzene	0.0500U	0.0500	0.0006	mg/L
95-95-4	2,4,5-Trichlorophenol	0.0500U	0.0500	0.0006	mg/L
88-06-2	2,4,6-Trichlorophenol	0.0500U	0.0500	0.0008	mg/L
121-14-2	2,4-Dinitrotoluene	0.0500U	0.0500	0.0012	mg/L
1319-77-3	Cresols	0.1000U	0.1000	0.0024	mg/L
118-74-1	Hexachlorobenzene	0.0500U	0.0500	0.0013	mg/L
87-68-3	Hexachlorobutadiene	0.0500U	0.0500	0.0011	mg/L
67-72-1	Hexachloroethane	0.0500U	0.0500	0.0055	mg/L
98-95-3	Nitrobenzene	0.0500U	0.0500	0.0011	mg/L
87-86-5	Pentachlorophenol	0.2500U	0.2500	0.0076	mg/L
110-86-1	Pyridine	0.0500U	0.0500	0.0077	mg/L
1319-77-3MP	m,p-Cresol	0.0500U	0.0500	0.0017	mg/L
95-48-7	o-Cresol	0.0500U	0.0500	0.0009	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	250	225	ug/L	90	48 - 123
321-60-8	2-Fluorobiphenyl	250	221	ug/L	88	16 - 128
1718-51-0	Terphenyl-d14	250	227	ug/L	91	38 - 167
4165-62-2	Phenol-d5	500	175	ug/L	35	10 - 123
367-12-4	2-Fluorophenol	500	284	ug/L	57	10 - 120
118-79-6	2,4,6-Tribromophenol	500	436	ug/L	87	44 - 121

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 8081B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/14/2010 15:00	434194	3510C	1	06/16/2010 23:48	TLS	434732

CAS#	Parameter	Result	RDL	MDL	Units
57-74-9	Chlordane	0.02500U	0.02500	0.00016	mg/L
72-20-8	Endrin	0.00100U	0.00100	0.00003	mg/L
76-44-8	Heptachlor	0.00050U	0.00050	0.00002	mg/L
1024-57-3	Heptachlor epoxide	0.00050U	0.00050	0.00005	mg/L
72-43-5	Methoxychlor	0.02500U	0.02500	0.00009	mg/L
8001-35-2	Toxaphene	0.25000U	0.25000	0.00050	mg/L
58-89-9	gamma-BHC (Lindane)	0.00050U	0.00050	0.00003	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
877-09-8	Tetrachloro-m-xylene	5	5.35	ug/L	107	48 - 137
2051-24-3	Decachlorobiphenyl	5	5.35	ug/L	107	30 - 139

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 8151A TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/12/2010 07:30	434258	3510C	1	06/16/2010 16:44	TLS	434709

CAS#	Parameter	Result	RDL	MDL	Units
94-75-7	2,4'-D	0.00500U	0.00500	0.00072	mg/L
93-72-1	2,4,5-TP (Silvex)	0.00500U	0.00500	0.00054	mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
19719-28-9	DCAA	20	10.1	ug/L	51	18 - 136

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 6010B TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/13/2010 11:20	434276	SW-846 3010A	5	06/16/2010 18:32	TEA	434639

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	1.00U	1.00	0.015	mg/L
7440-39-3	**Barium**	**0.21B**	**5.00**	**0.0015**	**mg/L**
7440-43-9	Cadmium	0.050U	0.050	0.00082	mg/L
7440-47-3	Chromium	0.25U	0.25	0.0016	mg/L
7439-92-1	**Lead**	**0.074B**	**0.50**	**0.0073**	**mg/L**
7782-49-2	**Selenium**	**0.023B**	**0.50**	**0.019**	**mg/L**
7440-22-4	**Silver**	**0.0057B**	**0.25**	**0.0029**	**mg/L**

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 7470A TCLP

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/13/2010 07:20	434277	SW-846 7470A	1	06/14/2010 12:22	KAW	434363

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	0.0020U	0.0020	0.000055	mg/L

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 9045C pH

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	06/13/2010 06:15	OLT	434287

CAS#	Parameter	Result	RDL	MDL	Units
pH	**pH**	**6.15**	**1.00**	**1.00**	**pH unit**

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21006110602	**60290AWCS061010**	Solid	06/10/2010 16:45	06/11/2010 07:27

SW-846 1030

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	06/16/2010 10:53	DJH	434609

CAS#	Parameter	Result	RDL	MDL	Units
000000-01-7	Ignitable	NO			

RESULTS REPORTED ON A WET WEIGHT BASIS

GC/MS Volatiles Quality Control Summary

Analytical Batch 434580		**Client ID**	MB434580			LCS434580			LCSD434580		
Prep Batch N/A		**GCAL ID**	844428			844429			844430		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	06/16/2010 09:51			06/16/2010 08:36			06/16/2010 09:29		
		Matrix	Water			Water			Water		
SW-846 8260B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
56-23-5	Carbon tetrachloride	0.00500U	0.00500	0.050	0.052	104	76 - 128	0.047	94	10	30
67-66-3	Chloroform	0.00500U	0.00500	0.050	0.051	103	75 - 122	0.047	94	8	30
107-06-2	1,2-Dichloroethane	0.00500U	0.00500	0.050	0.050	100	71 - 129	0.045	90	11	30
78-93-3	2-Butanone	0.00500U	0.00500	0.050	0.045	90	58 - 137	0.038	75	17	30
127-18-4	Tetrachloroethene	0.00500U	0.00500	0.050	0.051	103	68 - 128	0.048	97	6	30
75-01-4	Vinyl chloride	0.00500U	0.00500	0.050	0.055	110	68 - 132	0.044	87	22	30
75-35-4	1,1-Dichloroethene	0.00500U	0.00500	0.050	0.054	108	69 - 129	0.044	88	20	20
71-43-2	Benzene	0.00500U	0.00500	0.050	0.054	107	70 - 129	0.049	99	10	20
79-01-6	Trichloroethene	0.00500U	0.00500	0.050	0.052	103	76 - 129	0.048	95	8	20
108-90-7	Chlorobenzene	0.00500U	0.00500	0.050	0.048	97	74 - 123	0.045	90	6	20
Surrogate											
460-00-4	4-Bromofluorobenzene	44.6	89	50	50.7	101	62 - 130	51.4	103		
1868-53-7	Dibromofluoromethane	48.9	98	50	50.4	101	65 - 127	50.4	101		
2037-26-5	Toluene d8	52.6	105	50	48.5	97	71 - 134	48.8	98		
17060-07-0	1,2-Dichloroethane-d4	50	100	50	50.3	101	62 - 127	49.3	99		

Analytical Batch 434580		**Client ID**	60502WCS061010			842365MS			842365MSD		
Prep Batch N/A		**GCAL ID**	21006110601			844545			844546		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	06/16/2010 10:37			06/16/2010 12:30			06/16/2010 12:53		
		Matrix	Solid			Solid			Solid		
SW-846 8260B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
56-23-5	Carbon tetrachloride	0.00	0.200	2.00	1.96	98	76 - 128	1.71	86	14	30
67-66-3	Chloroform	0.00	0.200	2.00	1.91	96	75 - 122	1.81	91	5	30
107-06-2	1,2-Dichloroethane	0.00	0.200	2.00	1.94	97	71 - 129	1.81	91	7	30
78-93-3	2-Butanone	0.00	0.200	2.00	1.77	89	58 - 137	1.67	84	6	30
127-18-4	Tetrachloroethene	0.00	0.200	2.00	1.96	98	68 - 128	1.83	92	7	30
75-01-4	Vinyl chloride	0.00	0.200	2.00	1.68	84	68 - 132	1.56	78	7	30
75-35-4	1,1-Dichloroethene	0.00	0.200	2.00	1.72	86	69 - 129	1.62	81	6	30
71-43-2	Benzene	0.00	0.200	2.00	2.04	102	70 - 129	1.84	92	10	30
79-01-6	Trichloroethene	0.00	0.200	2.00	1.95	98	76 - 129	1.73	87	12	30

GC/MS Volatiles Quality Control Summary

Analytical Batch	434580	**Client ID**	60502WCS061010			842365MS			842365MSD		
Prep Batch	N/A	**GCAL ID**	21006110601			844545			844546		
		Sample Type	SAMPLE			MS			MSD		
		Analytical Date	06/16/2010 10:37			06/16/2010 12:30			06/16/2010 12:53		
		Matrix	Solid			Solid			Solid		
SW-846 8260B TCLP		**Units**	mg/L		**Spike**	**Result**		**Control**	**Result**		**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
108-90-7	Chlorobenzene	0.00	0.200		2.00	1.88	94	74 - 123	1.75	88	7	30
Surrogate												
460-00-4	4-Bromofluorobenzene	1790	90		2000	2060	103	62 - 130	2050	103		
1868-53-7	Dibromofluoromethane	2000	100		2000	2080	104	65 - 127	1990	100		
2037-26-5	Toluene d8	2130	107		2000	1990	100	71 - 134	1980	99		
17060-07-0	1,2-Dichloroethane-d4	1970	99		2000	2100	105	62 - 127	2030	102		

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch	434475	**Client ID**	MB434193	LCS434193	LCSD434193
Prep Batch	434193	**GCAL ID**	842573	842574	842575
Prep Method	3510C	**Sample Type**	Method Blank	LCS	LCSD
		Prep Date	06/14/2010 11:30	06/14/2010 11:30	06/14/2010 11:30
		Analytical Date	06/15/2010 14:34	06/15/2010 16:06	06/15/2010 15:05
		Matrix	Water	Water	Water

SW-846 8270C TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
118-74-1	Hexachlorobenzene	0.0500U	0.0500	0.100	0.089	89	61 - 120	0.091	91	2	30
87-68-3	Hexachlorobutadiene	0.0500U	0.0500	0.100	0.055	55	17 - 120	0.054	54	2	30
67-72-1	Hexachloroethane	0.0500U	0.0500	0.100	0.057	57	21 - 120	0.056	56	2	30
95-48-7	o-Cresol	0.0500U	0.0500	0.100	0.060	60	31 - 120	0.060	60	0	30
98-95-3	Nitrobenzene	0.0500U	0.0500	0.100	0.075	75	53 - 120	0.074	74	1	30
95-95-4	2,4,5-Trichlorophenol	0.0500U	0.0500	0.100	0.074	74	60 - 120	0.077	77	4	30
88-06-2	2,4,6-Trichlorophenol	0.0500U	0.0500	0.100	0.075	75	59 - 120	0.079	79	5	30
110-86-1	Pyridine	0.0500U	0.0500	0.100	0.056	56	2 - 120	0.052	52	7	30
1319-77-3	Cresols	0.1000U	0.1000	0.200	0.168	84	60 - 120	0.171	86	2	30
1319-77-3MP	m,p-Cresol	0.0500U	0.0500	0.100	0.108	108	24 - 120	0.111	111	3	30
106-46-7	1,4-Dichlorobenzene	0.0500U	0.0500	0.100	0.060	60	22 - 120	0.059	59	2	30
121-14-2	2,4-Dinitrotoluene	0.0500U	0.0500	0.100	0.089	89	37 - 138	0.088	88	1	30
87-86-5	Pentachlorophenol	0.2500U	0.2500	0.100	0.072	72	25 - 158	0.070	70	3	30
Surrogate											
4165-60-0	Nitrobenzene-d5	47.8	96	50	47.3	95	48 - 123	45.9	92		
321-60-8	2-Fluorobiphenyl	39.2	78	50	38.6	77	16 - 128	41.3	83		
1718-51-0	Terphenyl-d14	50.3	101	50	49.5	99	38 - 167	50.2	100		
4165-62-2	Phenol-d5	29.8	30	100	33.3	33	10 - 123	32.9	33		
367-12-4	2-Fluorophenol	49.4	49	100	52.7	53	10 - 120	54.4	54		
118-79-6	2,4,6-Tribromophenol	93.8	94	100	99.4	99	44 - 121	94.5	95		

General Chromatography Quality Control Summary

Analytical Batch	434732	**Client ID**	MB434194	LCS434194	LCSD434194
Prep Batch	434194	**GCAL ID**	842578	842579	842580
Prep Method	3510C	**Sample Type**	Method Blank	LCS	LCSD
		Prep Date	06/14/2010 15:00	06/14/2010 15:00	06/14/2010 15:00
		Analytical Date	06/16/2010 14:10	06/16/2010 14:29	06/16/2010 14:47
		Matrix	Water	Water	Water

SW-846 8081B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
1024-57-3	Heptachlor epoxide	0.00050U	0.00050	0.00050	0.00046	91	69 - 130	0.00060	121	26	40
72-43-5	Methoxychlor	0.02500U	0.02500	0.00050	0.00038	76	56 - 135	0.00052	103	31	40
8001-35-2	Toxaphene	0.25000U	0.25000								
57-74-9	Chlordane	0.02500U	0.02500								
58-89-9	gamma-BHC (Lindane)	0.00050U	0.00050	0.00050	0.00041	82	70 - 130	0.00054	108	27	40
76-44-8	Heptachlor	0.00050U	0.00050	0.00050	0.00038	76	65 - 130	0.00051	102	29	40
72-20-8	Endrin	0.00100U	0.00100	0.00050	0.00044	88	67 - 136	0.00061	121	32	40
Surrogate											
877-09-8	Tetrachloro-m-xylene	.439	88	.5	.426	85	48 - 137	.536	107		
2051-24-3	Decachlorobiphenyl	.38	76	.5	.272	54	30 - 139	.291	58		

Analytical Batch	434732	**Client ID**	BLACK BEAUTY	842013MS	842013MSD
Prep Batch	434194	**GCAL ID**	21006101005	842581	842582
Prep Method	3510C	**Sample Type**	SAMPLE	MS	MSD
		Prep Date	06/14/2010 15:00	06/14/2010 15:00	06/14/2010 15:00
		Analytical Date	06/16/2010 19:10	06/16/2010 19:28	06/16/2010 19:47
		Matrix	Solid	Solid	Solid

SW-846 8081B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
1024-57-3	Heptachlor epoxide	0.00000	0.00500	0.00500	0.00566	113	69 - 130	0.00600	120	6	40
72-43-5	Methoxychlor	0.00000	0.25000	0.00500	0.00515	103	56 - 135	0.00546	109	6	40
58-89-9	gamma-BHC (Lindane)	0.00000	0.00500	0.00500	0.00512	102	70 - 130	0.00539	108	5	40
76-44-8	Heptachlor	0.00000	0.00500	0.00500	0.00508	102	65 - 130	0.00524	105	3	40
72-20-8	Endrin	0.00000	0.01000	0.00500	0.00577	115	67 - 136	0.00615	123	6	40
Surrogate											
877-09-8	Tetrachloro-m-xylene			5	5.51	110	48 - 137	5.32	106		
2051-24-3	Decachlorobiphenyl			5	5.25	105	30 - 139	5.27	105		

General Chromatography Quality Control Summary

Analytical Batch	434709	**Client ID**	MB434258			LCS434258			LCSD434258		
Prep Batch	434258	**GCAL ID**	842954			842955			842956		
Prep Method	3510C	**Sample Type**	Method Blank			LCS			LCSD		
		Prep Date	06/12/2010 07:30			06/12/2010 07:30			06/12/2010 07:30		
		Analytical Date	06/16/2010 11:38			06/16/2010 11:53			06/16/2010 12:07		
		Matrix	Water			Water			Water		
SW-846 8151A TCLP		**Units**	**Result**	mg/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
94-75-7	2,4'-D		0.00500U	0.00500	0.00100	0.00096	96	29 - 143	0.00107	107	11	40
93-72-1	2,4,5-TP (Silvex)		0.00500U	0.00500	0.00100	0.00098	98	44 - 130	0.00107	107	9	40
Surrogate												
19719-28-9	DCAA		1.81	91	2	1.75	88	18 - 136	1.85	93		

Analytical Batch	434709	**Client ID**	DLP SPECIALTY CHEMICAL			842011MS			842011MSD		
Prep Batch	434258	**GCAL ID**	21006101003			842957			842958		
Prep Method	3510C	**Sample Type**	SAMPLE			MS			MSD		
		Prep Date	06/12/2010 07:30			06/12/2010 07:30			06/12/2010 07:30		
		Analytical Date	06/16/2010 12:51			06/16/2010 13:06			06/16/2010 13:20		
		Matrix	Solid			Solid			Solid		
SW-846 8151A TCLP		**Units**	**Result**	mg/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
94-75-7	2,4'-D		0.00000	0.05000	0.01000	0.01110	111	30 - 164	0.00970	97	13	40
93-72-1	2,4,5-TP (Silvex)		0.00000	0.05000	0.01000	0.00972	97	42 - 155	0.01050	105	8	40
Surrogate												
19719-28-9	DCAA				20	20.4	102	18 - 136	16.3	82		

Inorganics Quality Control Summary

Analytical Batch	434639	**Client ID**	MB434276		LCS434276		
Prep Batch	434276	**GCAL ID**	843065		843066		
Prep Method	SW-846	**Sample Type**	Method Blank		LCS		
	3010A	**Prep Date**	06/13/2010 11:20		06/13/2010 11:20		
		Analytical Date	06/16/2010 17:39		06/16/2010 17:45		
		Matrix	Water		Water		

SW-846 6010B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-38-2	Arsenic	0.20U	0.20	0.50	0.48	96	80 - 120
7440-39-3	Barium	0.00071B	1.00	0.50	0.48	95	80 - 120
7440-43-9	Cadmium	0.010U	0.010	0.50	0.48	95	80 - 120
7440-47-3	Chromium	0.050U	0.050	0.50	0.46	92	80 - 120
7439-92-1	Lead	0.10U	0.10	0.50	0.47	95	80 - 120
7782-49-2	Selenium	0.016B	0.10	0.50	0.56	111	80 - 120
7440-22-4	Silver	0.050U	0.050	0.50	0.51	102	80 - 120

Analytical Batch	434639	**Client ID**	60502WCS061010	842365MS	842365MSD
Prep Batch	434276	**GCAL ID**	21006110601	843067	843068
Prep Method	SW-846	**Sample Type**	SAMPLE	MS	MSD
	3010A	**Prep Date**	06/13/2010 11:20	06/13/2010 11:20	06/13/2010 11:20
		Analytical Date	06/16/2010 17:52	06/16/2010 17:58	06/16/2010 18:05
		Matrix	Solid	Solid	Solid

SW-846 6010B TCLP		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7440-38-2	Arsenic	0.0	1.00	0.50	0.46	91	75 - 125	0.44	88	4	20
7440-39-3	Barium	0.38	5.00	0.50	0.83	91	75 - 125	0.86	98	4	20
7440-43-9	Cadmium	0.0	0.050	0.50	0.47	94	75 - 125	0.47	94	0	20
7440-47-3	Chromium	0.0040	0.25	0.50	0.47	93	75 - 125	0.48	94	2	20
7439-92-1	Lead	0.069	0.50	0.50	0.53	92	75 - 125	0.54	95	2	20
7782-49-2	Selenium	0.0	0.50	0.50	0.47	95	75 - 125	0.51	101	8	20
7440-22-4	Silver	0.00090	0.25	0.50	0.49	97	75 - 125	0.50	100	2	20

Inorganics Quality Control Summary

Analytical Batch	434363	**Client ID**	MB434277			LCS434277		
Prep Batch	434277	**GCAL ID**	843069			843070		
Prep Method	SW-846	**Sample Type**	Method Blank			LCS		
	7470A	**Prep Date**	06/13/2010 07:20			06/13/2010 07:20		
		Analytical Date	06/14/2010 12:09			06/14/2010 12:11		
		Matrix	Water			Water		
SW-846 7470A TCLP			**Units**	mg/L	**Spike**	**Result**		**Control**
			Result	**RDL**	**Added**		**% R**	**Limits % R**
7439-97-6	Mercury		0.0020U	0.0020	0.00500	0.00483	97	80 - 120

Analytical Batch	434363	**Client ID**	60502WCS061010			842365MS			842365MSD			
Prep Batch	434277	**GCAL ID**	21006110601			843071			843072			
Prep Method	SW-846	**Sample Type**	SAMPLE			MS			MSD			
	7470A	**Prep Date**	06/13/2010 07:20			06/13/2010 07:20			06/13/2010 07:20			
		Analytical Date	06/14/2010 12:12			06/14/2010 12:14			06/14/2010 12:16			
		Matrix	Solid			Solid			Solid			
SW-846 7470A TCLP			**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
			Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
7439-97-6	Mercury		0.00007	0.0020	0.00500	0.00495	98	75 - 125	0.00505	100	2	20

General Chemistry Quality Control Summary

Analytical Batch 434287	**Client ID**	60502WCS061010		842365DUP		
Prep Batch N/A	**GCAL ID**	21006110601		843089		
	Sample Type	SAMPLE		DUP		
	Analytical Date	06/13/2010 06:30		06/13/2010 06:30		
	Matrix	Solid		Solid		
SW-846 9045C pH		**Units**	pH unit	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
pH pH		7.02	1.00	7.05	0.4	6

ch2mhill/4380/20061106/

CH2MHILL Constructors, Inc.
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328
Tel No: (770) 604-9182
Fax No: (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER: 350277-001-061010

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
Excavation of Petroleum Contaminated Soil at Bldg. 502 &	350277	Gulf Coast Analytical Laboratories, INC	Kama White / CH2M HILL kwhite@ch2m.com	Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta, GA 30328 678-530-4060 fax 770-604-9183 phone
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Buildings 502 and 290A Solid Waste Characterization	0060		Bethany Garvey / CH2M HILL bgarvey@ch2m.com	Northpark 400, 1000 Abernathy Road, Suite 1600, Atlanta, GA 30328 678-530-4060 fax 770-604-9183 phone
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Jeff Marks CH2M Hill Constuctors, Inc.	Ph:904-777-4812 ext 226 Fax: 352-381-3918	Ph: 225-769-4900 Fax: 225-767-5717	Jeff Marks / CH2M HILL Jeffery.Marks@CH2M.com	10142 103rd Street, Suite 105. Jacksonville, FL 32210

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	Volatiles - TCLP 8260B	TCLP Semi-volatiles 1311/8270C, TCLP Pesticides 1311/8081A, TCLP Herbicides 1311/8151A, ~~TCBS 8082~~ Draft	TCLP Metals 1311/6010B/ 7470A, Ignitability 1010, Corrosivity 9045D	SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	60502WCS061010	Solid Waste Characterization (Building 502)	S	06/10/10	1600	III/B	3	1	1		N		
2	60290AWCS061010	Solid Waste Characterization (Building 290A)	S	06/10/10	1645	III/B	3	1	1		N		
3													
4													
5													
6													
7													
8													
9													
10													

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	Notes:
N. Weinberg / R. Dumaop CH2M HILL	Federal Express Tracking Number: (1 Cooler) 793625226193.	

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/10/2010	18:00	Federal Express Tracking Number: (1 Cooler) 793625226193.	6/10/2010	18:00
Printed Name and Signature:			Printed Name and Signature:		
	6-11-10	8a	Michelle Robson	6-11-10	8a
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] **Original** - Laboratory (To be returned with Analytical Report); [ ] **Copy 1** - Project File; [ ] **Copy 2** - PMO

Form CCI001, Rev 02/00

Appendix E
Waste Profiles

Generator's Non-hazardous Waste Profile Sheet

Requested Disposal Facility: Chesser Island Landfill Profile Number: 105654GA

☐ Renewal for Profile Number: _____ Waste Approval Expiration Date: _____

☐ Check here if there are multiple generating locations for this waste. Attach additional locations.

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: NAVFAC SE PWD Jacksonville
2. Site Address: BOX 5 CODE PRJX41 NAVAL AIR STATION
3. City/ZIP: JACKSONVILLE 32212-005
4. State: Fl
5. County: Duval
6. Contact Name/Title: KENNY HENDL
7. Email Address: _____
8. Phone: 904-542-5979 9. FAX: _____
10. NAICS Code: _____
11. Generator USEPA ID #: FL5170022474
12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: Environmental Remediation Services, Inc.
2. Billing Address: 760 Talleyrand Avenue
3. City, State and ZIP: Jacksonville, Florida, 32202
4. Contact Name: Louis Renteria
5. Contact Email: l.renteria@ersfl.com
6. Phone: 904-791-9992 FAX: 904-791-9833
7. Transporter Name: _____
8. Transporter ID # (if appl.): _____
9. Transporter Address: _____
10. City, State and ZIP: _____

C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Petroleum Impacted Soil and Debris

State Waste Code(s): _____

b. Describe Process Generating Waste or Source of Contamination:

Impacted soil was generated during the release of Fuel Oil and Diesel from underground storage tanks.

c. Typical Color(s): Brown

d. Strong Odor? ☐ Yes ☑ No Describe: _____

e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____

f. Layers? ☐ Single layer ☐ Multi- layer ☑ NA

g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____

h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)

i. pH Range: _____ to _____ ☑ NA(solid)

j. Liquid Flash Point: ☐ < 140°F ☐ 140°- 199°F ☐ ≥ 200°F ☑ NA(solid)

k. Flammable Solid: ☐ Yes ☑ No

l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents (Total Composition Must be ≥ 100%)	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1. Soil	0	%	99	%
2. Asphalt	0	%	1	%
3.				
4.				
5.				
6.				

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION

a. ☑ One Time Event ☐ Base ☐ Repeat Event

b. Estimated Annual Quantity: 150 ☑ Tons ☐ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____

c. Shipping Frequency: 1 Units per ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other

d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No

e. USDOT Shipping Description (if applicable): _____

3. SAFETY REQUIREMENTS (Handling, PPE, etc.): Level D

©2010 Waste Management, Inc.

D. Regulatory Status (Please check appropriate responses)

1. Waste Identification:
   a. Does the waste meet the definition of a USEPA listed or characteristic hazardous waste as defined by 40 CFR Part 261? ☐ Yes ☑ No
      1. If yes, please complete a hazardous waste profile.
   b. Does the waste meet the definition of a state hazardous waste other than identified in D.1.a? ☐ Yes ☑ No
      1. If yes, please complete a hazardous waste profile.
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   ☐ Delisted Hazardous Waste ☐ Excluded Wastes Under 40CFR 261.4
   ☐ Treated Hazardous Waste Debris ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   (If yes, list in Chemical Composition - C.1.l)
   a. If yes, are the PCBs regulated by 40 CFR 761? ☐ Yes ☐ No
   b. If yes, is it remediation waste from a project being performed under the Self-Implementing option provided in 40 CFR 761.61(a)? ☐ Yes ☐ No
   c. If yes, were the PCBs imported into the US? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No
   a. If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   a. If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certifcation (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the contractor if applicable).
5. Check all that apply:
   ☑ a. Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   ☐ b. Only the analysis identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   ☐ c. Additional information necessary to characterize the profiled waste has been attached (other then analytical, such as MSDS). Indicate the number of attached pages: _____
   ☐ d. I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.

Certification Signature: _____ Title: _____

Company Name: _____ Name (Print): _____

Date: _____

©2010 Waste Management, Inc.

Generator's Non-hazardous Waste Profile Sheet

105654GA

D. Regulatory Status (Please check appropriate responses)

1. Waste Identification:
   a. Does the waste meet the definition of a USEPA listed or characteristic hazardous waste as defined by 40 CFR Part 261? ☐ Yes ☑ No
      1. If yes, please complete a hazardous waste profile.
   b. Does the waste meet the definition of a state hazardous waste other than identified in D.1.a? ☐ Yes ☑ No
      1. If yes, please complete a hazardous waste profile.
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   ☐ Delisted Hazardous Waste ☐ Excluded Wastes Under 40CFR 261.4
   ☐ Treated Hazardous Waste Debris ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   (If yes, list in Chemical Composition - C.1.l)
   a. If yes, are the PCBs regulated by 40 CFR 761? ☐ Yes ☐ No
   b. If yes, is it remediation waste from a project being performed under the Self-Implementing option provided in 40 CFR 761.61(a)? ☐ Yes ☐ No
   c. If yes, were the PCBs imported into the US? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No
   a. If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   a. If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the contractor if applicable).
5. Check all that apply:
   ☑ a. Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   ☐ b. Only the analysis identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   ☐ c. Additional information necessary to characterize the profiled waste has been attached (other then analytical, such as MSDS). Indicate the number of attached pages: _____
   ☐ d. I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.

Certification Signature: [signature] Title: ENV PROT SPEC

Company Name: NAVFAC SE PWD Name (Print): JOHN B RUMMELL

Date: 6-21-10

©2010 Waste Management, Inc.

Appendix F
Non-Hazardous Waste Manifests and Weight Tickets

6252

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: FL6170022474 (~~Not Required~~)
2. Page 1 of 1
3. Emergency Response Phone: 904-791-9992
4. Waste Tracking Number: 62201

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk
U.S. EPA ID Number:

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y
2. NA				
3. NA				
4. NA				

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
CTO-0060 (PO# 350277)
101640.1
In case of emergency call ERS: (904) 791-9992
Copy for File
By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett
Signature:
Month Day Year: 06 22 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: GERALD AYERS
Signature:
Month Day Year: 6 22 10
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name:
Signature: Crystal M
Month Day Year: 6 22 10

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255232

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62201
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L252
Container
Driver DINO
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

Copy for File
1016401
By:

	Time	Scale	Operator	Inbound		
In	06/22/2010 09:35:25	Scale 02	cmosley1		Gross	79000 lb
Out	06/22/2010 09:35:25		cmosley1		Tare	30200 lb
					Net	48800 lb
					Tons	24.40

Comments

SAFETY---SAFETY---SAFETY-----GOT IT!!

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	24.40	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	24.40	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	24.40	Tons				DUVAL
7	HAU-HAUL per ton	100	24.40	Tons				DUVAL

Total Fees
Total Ticket

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~Not Required~~ FL6170022474	2. Page 1 of 1	3. Emergency Response Phone 904-791-9992	4. Waste Tracking Number 62204 L-200

GENERATOR

5. Generator's Name and Mailing Address

NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221

Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chesser Island Landfill, Highway 121 South, Folkston, GA — U.S. EPA ID Number: Not Required

Facility's Phone: 912-496-7918

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y	
2.	NA					
3.	NA					
4.	NA					

13. Special Handling Instructions and Additional Information

ERS Job No. 10164

In case of emergency call ERS: (904) 791-9992

profile # 105654GA

CTO-0060 (PO# 3502 Copy for File

1016401

By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: [signature] — Month Day Year: 06 22 10

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Donald Perry — Signature: Donald Perry — Month Day Year: 6 22 10

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature: Crystal M — Month Day Year: 06 22 10

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255255

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62204
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L200
Container
Driver DONALD
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/22/2010 10:37:11	Scale 02	cmosley1		Gross	84340 lb
Out	06/22/2010 10:37:11		cmosley1		Tare	31500 lb
					Net	52840 lb
					Tons	26.42

Comments

Copy for File

1016401

By:

SAFETY---SAFETY---SAFETY------GOT IT!!

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	26.42	Tons				DUVAL
2	FUEL-Fuel Surchary	100		%				DUVAL
3	EVF-F-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	26.42	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	26.42	Tons				DUVAL
7	HAU-HAUL per ton	100	26.42	Tons				DUVAL

Total Fees
Total Ticket

L 390

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number FL6170022474 ~~Not Required~~	2. Page 1 of 1	3. Emergency Response Phone 904-791-9992	4. Waste Tracking Number 62202

GENERATOR

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y	
2.	NA					
3.	NA					
4.	NA					

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
In case of emergency call ERS: (904) 791-9992
ProFile # 105654 GA
CTO-0060 (PO# 350277)
Copy for File
1016401
By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: [signature] — Month 06 Day 22 Year 10

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jeff McNally — Signature: Jeff McNally — Month 6 Day 22 Year 10
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature: [signature] — Month 6 Day 22 Year 10

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255258

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62202
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L390
Container
Driver JEFF
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/22/2010 10:44:31	Scale 02	cmosley1		Gross	81500 lb
Out	06/22/2010 10:44:31		cmosley1		Tare	23260 lb
					Net	58240 lb
					Tons	29.12

Comments

Copy for File

1 0 1 6 4 0 1

By:_____

SAFETY---SAFETY---SAFETY-----GOT IT!!

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	29.12	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	29.12	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	29.12	Tons				DUVAL
7	HAU-HAUL per ton	100	29.12	Tons				DUVAL

Total Fees
Total Ticket

L392

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~Not Required~~ FL6170022474	2. Page 1 of 1	3. Emergency Response Phone 904-791-9992	4. Waste Tracking Number 62203

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y
2. NA				
3. NA				
4. NA				

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
In case of emergency call ERS: (904) 791-9992
Profile # 105654GA
CTO-0060 (PO# 350277)
Copy for File
1016401
By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: — Month Day Year: 06 22 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: TINA MCNALLY — Signature: Tina McNally — Month Day Year: 6 22 10
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature: Crystal M — Month Day Year: 6 22 10

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255259

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62203
Destination
PO
Profile 105654GA (PETROLEUM INPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# 1392
Container
Driver
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/22/2010 10:46:25	Scale 02	cmosley1		Gross	77500 lb
Out	06/22/2010 10:46:25		cmosley1		Tare	28640 lb
					Net	48860 lb
					Tons	24.43

Comments

Copy for File

1016401

By:

SAFETY---SAFETY---SAFETY---GOT IT!!

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	24.43	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	24.43	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	24.43	Tons				DUVAL
7	HAU-HAUL per ton	100	24.43	Tons				DUVAL

Total Fees
Total Ticket

L 320

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	~~Not Required~~ F-61700224791	1	904-791-9992	62206

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y
2. NA				
3. NA				
4. NA				

Copy for File

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
In case of emergency call ERS: (904) 791-9992
CTO-0060 (PO#350277) 6401
By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: — Month 06 Day 22 Year 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Ricky — Signature: — Month 6 Day 22 Year 10
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month Day Year 10

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255205

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62206
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L320
Container
Driver RICKY :-)
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/22/2010 11:35:52	Scale 02	cmosley1		Gross	92640 lb
Out	06/22/2010 11:35:52		cmosley1		Tare	27900 lb
					Net	64740 lb
					Tons	32.37

Copy for File

Comments

1016401

SAFETY---SAFETY---SAFETY-----GOT IT!!

By:

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	32.37	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	32.37	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	32.37	Tons				DUVAL
7	HAU-HAUL per ton	100	32.37	Tons				DUVAL

Ricky

Total Fees
Total Ticket

L380

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~Not Required~~ FL6170022474	2. Page 1 of 1	3. Emergency Response Phone 904-791-9992	4. Waste Tracking Number 62205

GENERATOR

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1.Petroleum Impacted Soil & Debris (approval # 105654GA)	001	DT	20	Y	
	2.NA					
	3.NA					
	4.NA					

Copy for File

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
CTO-0060 (PO# 350277)
101601
In case of emergency call ERS: (904) 791-9992

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: [signature] — Month 06 Day 22 Year 10

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Ezell — Signature: [signature] — Month 6 Day 22 Year 10
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature: [signature] — Month 6 Day 22 Year 10

169-BLC-O 5 11977 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255286

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62205
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L380
Container
Driver RICHARD
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound
In	06/22/2010 11:30:16	Scale 02	cmosley1	
Out	06/22/2010 11:38:16		cmosley1	

Gross	78700 lb
Tare	31620 lb
Net	47080 lb
Tons	23.54

Comments

Copy for File

1016401

SAFETY---SAFETY---SAFETY------GOT IT!!

By:

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	23.54	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	23.54	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	23.54	Tons				DUVAL
7	HAU-HAUL per ton	100	23.54	Tons				DUVAL

Total Fees
Total Ticket

L 390

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~Not Required~~ FL6170022474	2. Page 1 of	3. Emergency Response Phone 904-791-9992	4. Waste Tracking Number 62207

5. Generator's Name and Mailing Address
NAVFAC SE PWD
Bldg 502, Perimeter Rd
Jacksonville, FL 32221
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Beaver Bulk — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1.Petroleum Impacted Soil & Debris (approval # 1056540A)	001	DT	20	Y	
	2.NA					
	3.NA					
	4.NA					

13. Special Handling Instructions and Additional Information
ERS Job No. 10164
In case of emergency call ERS: (904) 791-9992
CTO-0060 (PO# 350277)
Copy for File
1016401
By:

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: John Brummett — Signature: [signature] — Month Day Year: 06 22 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jeff McNally — Signature: Jeff McNally — Month Day Year: 6 22 10
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature: [signature] — Month Day Year: 6 22 10

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 255363

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 06/22/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 62207
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier BEAVERBULK *
Vehicle# L390
Container
Driver JEFF
Check#
Billing # 0001755
Gen EPA ID NR
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/22/2010 13:55:24	MANUAL WT	cmosley1		Gross	92800 lb*
Out	06/22/2010 13:55:24		cmosley1		Tare	23260 lb*
			* Manual Weight		Net	69540 lb
					Tons	34.77

Comments

Copy for File

1016401

SAFETY---SAFETY--SAFETY----GOT IT!!

By:

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	34.77	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	34.77	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	34.77	Tons				DUVAL
7	HAU-HAUL per ton	100	34.77	Tons				DUVAL

Total Fees
Total Ticket

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: FL5170022474 ~~Not Required~~
2. Page 1 of 1
3. Emergency Response Phone: 904 791 9992
4. Waste Tracking Number: 076710-1

5. Generator's Name and Mailing Address
NAVFAC SE PWD
~~Bldg 502 Perimeter Rd~~ BOX 5, PB3X41
Jacksonville, FL ~~32221~~ 32212
Generator's Phone:

Generator's Site Address (if different than mailing address)
CECIL COMMERCE CTR
502 PERIMETER RD
JAX FL 32221

6. Transporter 1 Company Name: ENVIRONMENTAL REMEDIATION SVCS ~~Beaver Bulk~~
U.S. EPA ID Number:

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Chesser Island Landfill
Highway 121 South
Folkston, GA
Facility's Phone: 912-496-7918
U.S. EPA ID Number: Not Required

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Petroleum Impacted Soil & Debris (approval # 105654GA)	001	~~DT~~ CM	20	Y
2. NA				
3. NA				
4. NA				

13. Special Handling Instructions and Additional Information
ERS Job No. 10164 R/O# R2977RT
CTO-0060 (PO# 3602V7) Carrier File
In case of emergency call ERS: (904) 791-9992
1016401
By:

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: JOHN Brummett
Signature:
Month Day Year: 07 09 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jim Curtis
Signature:
Month Day Year: 7 17 10
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name:
Signature: Crystal M
Month Day Year: 7 17 10

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

Driver's Signature

WASTE MANAGEMENT

Chesser Island Landfill
Hwy 121/Chesser Island Rd
Folkston, GA, 31537
Ph: (912) 496-7918

Original
Ticket# 258139

Customer Name ENVIROREMEDIATION105654GA ENV
Ticket Date 07/07/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 070710-1
Destination
PO
Profile 105654GA (PETROLEUM IMPACTED SOIL)
Generator 157-NAVFAC NAVFAC SW PWD

Carrier ERS ENVIRONMENTAL REMEDIATION SERVICE
Vehicle# 124
Volume
Container
Driver
Check#
Billing # 0001755
Gen EPA ID NR
Grid

	Time	Scale	Operator	Inbound		
In	07/07/2010 14:46:30	Scale 02	CMOSLEY1		Gross	46760 lb
Out	07/07/2010 15:19:45	Scale 02	CMOSLEY1		Tare	34660 lb
					Net	12100 lb
					Tons	6.05

Comments

Copy for File

1016401

SAFETY---SAFETY---SAFETY---GOT IT!!

	Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1	ContSoilPet-Tons-C	100	6.05	Tons				DUVAL
2	FUEL-Fuel Surcharg	100		%				DUVAL
3	EVF-P-Standard Env	100		%				DUVAL
4	CRM-COST REIMBURSE	100	6.05	Tons				DUVAL
5	HSF-HOST FEE	100		%				DUVAL
6	SPF-SUPERFUND	100	6.05	Tons				DUVAL
7	HAU-HAUL per ton	100	6.05	Tons				DUVAL

Total Fees
Total Ticket

Appendix G
Certificates of Disposal

10164

WASTE MANAGEMENT

CERTIFICATE OF DISPOSAL

This is to document the disposition of waste material(s) removed from your facility located at:

NAVFAC SE PWD Cecil Commerce Center – Jacksonville, FL

Charged to: *Environmental Remediation Services 760 Talleyrand Ave., Jacksonville, FL 32202*

The waste material(s) consisted of:
NAVFAC SE PWD Cecil Commerce Center– Profile # 105654GA - Manifest #'s 62207, 62205, 62206, 62203, 62202, 62204, 62201, 070710-1

The waste material(s) were disposed of at:
Facility: *The Chesser Island Road Landfill (solid waste handling permit # 024-006D (SL)*
Address: *PO Box 128, Highway 121 @ Chesser Island Road, Folkston, GA 31537-0128*

Disposal of your material(s) was accomplished by the following method(s):
Subtitle-D Direct landfill, handled in accordance with all permit regulations

Date(s) of Disposal:
June 22 & July 7, 2010

Tons Disposed of: 201.1 tons

Authorized Facility Signature:

Appendix H
Transportation and Disposal Log

WASTE TRANSPORTATION AND DISPOSAL LOG

Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/Notes	File Status (see note)
											Incineration	Recycle	Landfill	Other	Unit			
Beaver Bulk	22-Jun-10	NA	1	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62201			24.4		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	2	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62202			29.12		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	3	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62203			24.43		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	4	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62204			26.42		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	5	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62205			23.54		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	6	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62206			32.37		tons	22-Jun-10		
Beaver Bulk	22-Jun-10	NA	7	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	22-Jun-10	62207			34.77		tons	22-Jun-10		
ERS	7-Jul-10	NA	8	Chesser Island landfill	NA	Soil	Nonhaz	105654GA	7-Jul-10	070710-1			6.05		tons	7-Jul-10		

Appendix I
Clean Fill Laboratory Analytical Reports and Certifications

Environmental Conservation Laboratories, Inc.
4810 Executive Park Court, Suite 211
Jacksonville FL, 32216-6069
Phone: 904.296.3007 FAX: 904.296.6210
www.encolabs.com

Thursday, June 17, 2010

Environmental Remediation Services (EN026)

Attn: John Anderson

760 TALLEYRAND AVE

Jacksonville, FL 32202

RE: Laboratory Results for
Project Number: CCI- Cecil Field, Project Name/Desc: High Springs Quarry (Lime Rock)
ENCO Workorder: B002736

Dear John Anderson,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, June 9, 2010.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Jacksonville. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Lindsay J Crawford For Chris Tompkins

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 30.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: NewBerry Pit 01	Lab ID: B002736-01	Sampled: 06/09/10 14:45	Received: 06/09/10 17:15

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	12/06/10		06/11/10	10:40	6/14/2010 15:30
EPA 7471B	07/07/10		06/10/10	16:30	6/11/2010 07:16
EPA 8081B	06/23/10	07/24/10	06/14/10	12:13	6/15/2010 13:26
EPA 8082A	06/09/11	06/09/11	06/14/10	12:16	6/15/2010 13:26
EPA 8151A	06/23/10	07/21/10	06/11/10	10:58	6/15/2010 17:31
EPA 8260B	06/23/10		06/14/10	10:35	6/14/2010 18:05
EPA 8270D	06/23/10	07/21/10	06/11/10	09:16	6/15/2010 16:53
EPA 8270D	06/23/10	07/21/10	06/11/10	09:31	6/14/2010 20:35
EPA 9045D	06/17/10 10:30		06/17/10	10:16	6/17/2010 11:42
FLPRO	06/23/10	07/21/10	06/11/10	09:21	6/14/2010 21:02

Client ID: NewBerry Pit 01	Lab ID: B002736-01RE1	Sampled: 06/09/10 14:45	Received: 06/09/10 17:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	12/06/10	06/11/10 10:40	6/15/2010 11:46

www.encolabs.com

SAMPLE DETECTION SUMMARY

Client ID: NewBerry Pit 01 **Lab ID: B002736-01**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Acetone	0.0054		0.0009	0.0054	mg/kg dry	EPA 8260B	
Aluminum - Total	670		12.1	37.9	mg/kg dry	EPA 6010C	
Antimony - Total	4.95		2.04	3.79	mg/kg dry	EPA 6010C	
Arsenic - Total	4.27		1.25	1.89	mg/kg dry	EPA 6010C	
Barium - Total	6.62	V	0.0947	1.89	mg/kg dry	EPA 6010C	QB-01
Beryllium - Total	0.0638	I	0.0356	0.189	mg/kg dry	EPA 6010C	
Cadmium - Total	0.110	I	0.0909	0.189	mg/kg dry	EPA 6010C	
Chromium - Total	13.1		0.246	1.89	mg/kg dry	EPA 6010C	
Cobalt - Total	0.965	I	0.129	1.89	mg/kg dry	EPA 6010C	
Iron - Total	1200	V	4.17	9.47	mg/kg dry	EPA 6010C	QB-01
Magnesium - Total	2070		7.95	94.7	mg/kg dry	EPA 6010C	
Manganese - Total	46.0		0.0682	1.89	mg/kg dry	EPA 6010C	
Mercury - Total	0.00456	I	0.00289	0.0107	mg/kg dry	EPA 7471B	
Nickel - Total	1.89	I	0.204	9.47	mg/kg dry	EPA 6010C	
pH	8.8				pH Units	EPA 9045D	
Potassium - Total	56.9	I	18.2	94.7	mg/kg dry	EPA 6010C	
Selenium - Total	12.6		1.51	1.89	mg/kg dry	EPA 6010C	
Silver - Total	2.91		0.329	1.89	mg/kg dry	EPA 6010C	
Sodium - Total	91.1	I	41.7	94.7	mg/kg dry	EPA 6010C	
TPH (C8-C40)	2.6	I	0.89	7.1	mg/kg dry	FLPRO	
Vanadium - Total	14.3		0.231	1.89	mg/kg dry	EPA 6010C	
Zinc - Total	2.24	I	0.322	9.47	mg/kg dry	EPA 6010C	

Client ID: NewBerry Pit 01 **Lab ID: B002736-01RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Calcium - Total	365000		41.7	473	mg/kg dry	EPA 6010C	

www.encolabs.com

ANALYTICAL RESULTS

Description: NewBerry Pit 01 | **Lab Sample ID:** B002736-01 | **Received:** 06/09/10 17:15

Matrix: Soil | **Sampled:** 06/09/10 14:45 | **Work Order:** B002736

Project: High Springs Quarry (Lime Rock) | **Sampled By:** Valtious Morris | **% Solids:** 93.31

Semivolatile Organic Compounds by GCMS

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,2,4-Trichlorobenzene [120-82-1] ^	0.060	U	mg/kg dry	1	0.060	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
1,2-Dichlorobenzene [95-50-1] ^	0.076	U	mg/kg dry	1	0.076	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
1,3-Dichlorobenzene [541-73-1] ^	0.073	U	mg/kg dry	1	0.073	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
1,4-Dichlorobenzene [106-46-7] ^	0.074	U	mg/kg dry	1	0.074	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
1-Methylnaphthalene [90-12-0] ^	0.064	U	mg/kg dry	1	0.064	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4,5-Trichlorophenol [95-95-4] ^	0.079	U	mg/kg dry	1	0.079	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4,6-Trichlorophenol [88-06-2] ^	0.060	U	mg/kg dry	1	0.060	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4-Dichlorophenol [120-83-2] ^	0.074	U	mg/kg dry	1	0.074	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4-Dimethylphenol [105-67-9] ^	0.070	U	mg/kg dry	1	0.070	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4-Dinitrophenol [51-28-5] ^	0.079	U	mg/kg dry	1	0.079	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,4-Dinitrotoluene [121-14-2] ^	0.054	U	mg/kg dry	1	0.054	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2,6-Dinitrotoluene [606-20-2] ^	0.056	U	mg/kg dry	1	0.056	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2-Chloronaphthalene [91-58-7] ^	0.055	U	mg/kg dry	1	0.055	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2-Methyl-4,6-dinitrophenol [534-52-1] ^	0.077	U	mg/kg dry	1	0.077	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2-Methylnaphthalene [91-57-6] ^	0.062	U	mg/kg dry	1	0.062	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
2-Nitrophenol [88-75-5] ^	0.071	U	mg/kg dry	1	0.071	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
4-Bromophenyl-phenylether [101-55-3] ^	0.054	U	mg/kg dry	1	0.054	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
4-Chloro-3-methylphenol [59-50-7] ^	0.063	U	mg/kg dry	1	0.063	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
4-Chlorophenyl-phenylether [7005-72-3] ^	0.050	U	mg/kg dry	1	0.050	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
4-Nitrophenol [100-02-7] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Acenaphthene [83-32-9] ^	0.062	U	mg/kg dry	1	0.062	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Acenaphthylene [208-96-8] ^	0.056	U	mg/kg dry	1	0.056	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Anthracene [120-12-7] ^	0.042	U	mg/kg dry	1	0.042	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzidine [92-87-5] ^	0.20	U	mg/kg dry	1	0.20	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzo(a)anthracene [56-55-3] ^	0.041	U	mg/kg dry	1	0.041	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzo(a)pyrene [50-32-8] ^	0.038	U	mg/kg dry	1	0.038	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzo(b)fluoranthene [205-99-2] ^	0.040	U	mg/kg dry	1	0.040	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzo(g,h,i)perylene [191-24-2] ^	0.040	U	mg/kg dry	1	0.040	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzo(k)fluoranthene [207-08-9] ^	0.038	U	mg/kg dry	1	0.038	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Benzoic acid [65-85-0] ^	0.19	U	mg/kg dry	1	0.19	1.8	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Bis(2-chloroethoxy)methane [111-91-1] ^	0.056	U	mg/kg dry	1	0.056	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Bis(2-chloroethyl)ether [111-44-4] ^	0.060	U	mg/kg dry	1	0.060	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Bis(2-chloroisopropyl)ether [39638-32-9] ^	0.044	U	mg/kg dry	1	0.044	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Bis(2-ethylhexyl)phthalate [117-81-7] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Butylbenzylphthalate [85-68-7] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Chrysene [218-01-9] ^	0.14	U	mg/kg dry	1	0.14	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Dibenzo(a,h)anthracene [53-70-3] ^	0.051	U	mg/kg dry	1	0.051	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Diethylphthalate [84-66-2] ^	0.051	U	mg/kg dry	1	0.051	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Dimethylphthalate [131-11-3] ^	0.049	U	mg/kg dry	1	0.049	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Di-n-butylphthalate [84-74-2] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Di-n-octylphthalate [117-84-0] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Fluoranthene [206-44-0] ^	0.041	U	mg/kg dry	1	0.041	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Fluorene [86-73-7] ^	0.048	U	mg/kg dry	1	0.048	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Hexachlorobenzene [118-74-1] ^	0.044	U	mg/kg dry	1	0.044	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Hexachlorobutadiene [87-68-3] ^	0.069	U	mg/kg dry	1	0.069	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Hexachlorocyclopentadiene [77-47-4] ^	0.16	U	mg/kg dry	1	0.16	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Hexachloroethane [67-72-1] ^	0.075	U	mg/kg dry	1	0.075	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	

www.encolabs.com

Description: NewBerry Pit 01	**Lab Sample ID:** B002736-01	**Received:** 06/09/10 17:15
Matrix: Soil	**Sampled:** 06/09/10 14:45	**Work Order:** B002736
Project: High Springs Quarry (Lime Rock)	**Sampled By:** Valtious Morris	**% Solids:** 93.31

Semivolatile Organic Compounds by GCMS

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Isophorone [78-59-1] ^	0.051	U	mg/kg dry	1	0.051	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Naphthalene [91-20-3] ^	0.058	U	mg/kg dry	1	0.058	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Nitrobenzene [98-95-3] ^	0.051	U	mg/kg dry	1	0.051	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
N-Nitrosodimethylamine [62-75-9] ^	0.073	U	mg/kg dry	1	0.073	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
N-Nitroso-di-n-propylamine [621-64-7] ^	0.060	U	mg/kg dry	1	0.060	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
N-nitrosodiphenylamine/Diphenylamine [86-30-6/122-39-4]	0.087	U	mg/kg dry	1	0.087	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Pentachlorophenol [87-86-5] ^	0.057	U	mg/kg dry	1	0.057	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Phenanthrene [85-01-8] ^	0.046	U	mg/kg dry	1	0.046	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Phenol [108-95-2] ^	0.068	U	mg/kg dry	1	0.068	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	
Pyrene [129-00-0] ^	0.035	U	mg/kg dry	1	0.035	0.35	0F11010	EPA 8270D	06/14/10 20:35	JWJ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,6-Tribromophenol	*1.2*	*1*	*1.77*	*68 %*	*36-146*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	
2-Fluorobiphenyl	*1.6*	*1*	*1.77*	*88 %*	*59-120*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	
2-Fluorophenol	*2.5*	*1*	*1.77*	*140 %*	*40-129*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	*QS-03*
Nitrobenzene-d5	*1.5*	*1*	*1.77*	*82 %*	*42-120*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	
Phenol-d5	*1.6*	*1*	*1.77*	*90 %*	*42-127*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	
Terphenyl-d14	*1.9*	*1*	*1.77*	*110 %*	*61-147*	*0F11010*	*EPA 8270D*	*06/14/10 20:35*	*JWJ*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Semivolatile Organic Compounds by GCMS SIM

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1-Methylnaphthalene [90-12-0] ^	0.0032	U	mg/kg dry	1	0.0032	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
2-Methylnaphthalene [91-57-6] ^	0.0034	U	mg/kg dry	1	0.0034	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Acenaphthene [83-32-9] ^	0.0029	U	mg/kg dry	1	0.0029	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Acenaphthylene [208-96-8] ^	0.0029	U	mg/kg dry	1	0.0029	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Anthracene [120-12-7] ^	0.0029	U	mg/kg dry	1	0.0029	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Benzo(a)anthracene [56-55-3] ^	0.0036	U	mg/kg dry	1	0.0036	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Benzo(a)pyrene [50-32-8] ^	0.0057	U	mg/kg dry	1	0.0057	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Benzo(b)fluoranthene [205-99-2] ^	0.0050	U	mg/kg dry	1	0.0050	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Benzo(g,h,i)perylene [191-24-2] ^	0.0041	U	mg/kg dry	1	0.0041	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Benzo(k)fluoranthene [207-08-9] ^	0.0034	U	mg/kg dry	1	0.0034	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Chrysene [218-01-9] ^	0.0032	U	mg/kg dry	1	0.0032	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Dibenzo(a,h)anthracene [53-70-3] ^	0.0039	U	mg/kg dry	1	0.0039	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Fluoranthene [206-44-0] ^	0.0039	U	mg/kg dry	1	0.0039	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Fluorene [86-73-7] ^	0.0039	U	mg/kg dry	1	0.0039	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Indeno(1,2,3-cd)pyrene [193-39-5] ^	0.0043	U	mg/kg dry	1	0.0043	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Naphthalene [91-20-3] ^	0.0040	U	mg/kg dry	1	0.0040	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Phenanthrene [85-01-8] ^	0.0034	U	mg/kg dry	1	0.0034	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	
Pyrene [129-00-0] ^	0.0035	U	mg/kg dry	1	0.0035	0.035	0F11005	EPA 8270D	06/15/10 16:53	JWJ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
p-Terphenyl	*1.9*	*1*	*1.77*	*108 %*	*58-121*	*0F11005*	*EPA 8270D*	*06/15/10 16:53*	*JWJ*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Organochlorine Pesticides by GC

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
4,4'-DDD [72-54-8] ^	0.00009	U	mg/kg dry	1	0.00009	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	QL-02
4,4'-DDE [72-55-9] ^	0.00005	U	mg/kg dry	1	0.00005	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
4,4'-DDT [50-29-3] ^	0.00007	U	mg/kg dry	1	0.00007	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Aldrin [309-00-2] ^	0.00009	U	mg/kg dry	1	0.00009	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
alpha-BHC [319-84-6] ^	0.00004	U	mg/kg dry	1	0.00004	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
beta-BHC [319-85-7] ^	0.00013	U	mg/kg dry	1	0.00013	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Chlordane (tech) [12789-03-6] ^	0.0035	U	mg/kg dry	1	0.0035	0.035	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Chlordane-alpha [5103-71-9] ^	0.00008	U	mg/kg dry	1	0.00008	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Chlordane-gamma [5566-34-7] ^	0.00004	U	mg/kg dry	1	0.00004	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
delta-BHC [319-86-8] ^	0.00005	U	mg/kg dry	1	0.00005	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Dieldrin [60-57-1] ^	0.00030	U	mg/kg dry	1	0.00030	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endosulfan I [959-98-8] ^	0.00006	U	mg/kg dry	1	0.00006	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endosulfan II [33213-65-9] ^	0.00008	U	mg/kg dry	1	0.00008	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endosulfan sulfate [1031-07-8] ^	0.00004	U	mg/kg dry	1	0.00004	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endrin [72-20-8] ^	0.00016	U	mg/kg dry	1	0.00016	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endrin aldehyde [7421-93-4] ^	0.00012	U	mg/kg dry	1	0.00012	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Endrin ketone [53494-70-5] ^	0.00012	U	mg/kg dry	1	0.00012	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
gamma-BHC [58-89-9] ^	0.00005	U	mg/kg dry	1	0.00005	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Heptachlor [76-44-8] ^	0.00005	U	mg/kg dry	1	0.00005	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Heptachlor epoxide [1024-57-3] ^	0.00006	U	mg/kg dry	1	0.00006	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Methoxychlor [72-43-5] ^	0.00016	U	mg/kg dry	1	0.00016	0.0018	0F14008	EPA 8081B	06/15/10 13:26	JSW	
Toxaphene [8001-35-2] ^	0.0041	U	mg/kg dry	1	0.0041	0.035	0F14008	EPA 8081B	06/15/10 13:26	JSW	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.024*	*1*	*0.0346*	*69 %*	*64-125*	*0F14008*	*EPA 8081B*	*06/15/10 13:26*	*JSW*	
Decachlorobiphenyl	*0.033*	*1*	*0.0346*	*96 %*	*60-117*	*0F14008*	*EPA 8081B*	*06/15/10 13:26*	*JSW*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Polychlorinated Biphenyls by GC

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
PCB-1016/1242 [12674-11-2/53469-21-9] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	
PCB-1221 [11104-28-2] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	
PCB-1232 [11141-16-5] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	
PCB-1248 [12672-29-6] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	
PCB-1254 [11097-69-1] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	
PCB-1260 [11096-82-5] ^	0.0054	U	mg/kg dry	1	0.0054	0.018	0F14009	EPA 8082A	06/15/10 13:26	LJC	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4,5,6-TCMX	*0.024*	*1*	*0.0348*	*69 %*	*73-147*	*0F14009*	*EPA 8082A*	*06/15/10 13:26*	*LJC*	*QM-14*
Decachlorobiphenyl	*0.033*	*1*	*0.0348*	*96 %*	*21-176*	*0F14009*	*EPA 8082A*	*06/15/10 13:26*	*LJC*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

FL Petroleum Range Organics

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
TPH (C8-C40) [ECL-0175] ^	**2.6**	I	mg/kg dry	1	0.89	7.1	0F11008	FLPRO	06/14/10 21:02	JWJ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
n-Nonatriacontane	*3.5*	*1*	*3.55*	*99 %*	*23-189*	*0F11008*	*FLPRO*	*06/14/10 21:02*	*JWJ*	
o-Terphenyl	*1.8*	*1*	*1.77*	*102 %*	*64-118*	*0F11008*	*FLPRO*	*06/14/10 21:02*	*JWJ*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Metals by EPA 6000/7000 Series Methods

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Aluminum [7429-90-5] ^	**670**		mg/kg dry	4	12.1	37.9	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Antimony [7440-36-0] ^	**4.95**		mg/kg dry	4	2.04	3.79	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Arsenic [7440-38-2] ^	**4.27**		mg/kg dry	4	1.25	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Barium [7440-39-3] ^	**6.62**	V	mg/kg dry	4	0.0947	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	QB-01
Beryllium [7440-41-7] ^	**0.0638**	I	mg/kg dry	4	0.0356	0.189	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Cadmium [7440-43-9] ^	**0.110**	I	mg/kg dry	4	0.0909	0.189	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Calcium [7440-70-2] ^	**365000**		mg/kg dry	20	41.7	473	0F11015	EPA 6010C	06/15/10 11:46	ACV	
Chromium [7440-47-3] ^	**13.1**		mg/kg dry	4	0.246	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Cobalt [7440-48-4] ^	**0.965**	I	mg/kg dry	4	0.129	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Iron [7439-89-6] ^	**1200**	V	mg/kg dry	4	4.17	9.47	0F11015	EPA 6010C	06/14/10 15:30	ACV	QB-01
Lead [7439-92-1] ^	0.644	U	mg/kg dry	4	0.644	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Magnesium [7439-95-4] ^	**2070**		mg/kg dry	4	7.95	94.7	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Manganese [7439-96-5] ^	**46.0**		mg/kg dry	4	0.0682	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Nickel [7440-02-0] ^	**1.89**	I	mg/kg dry	4	0.204	9.47	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Potassium [7440-09-7] ^	**56.9**	I	mg/kg dry	4	18.2	94.7	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Selenium [7782-49-2] ^	**12.6**		mg/kg dry	4	1.51	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Silver [7440-22-4] ^	**2.91**		mg/kg dry	4	0.329	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Sodium [7440-23-5] ^	**91.1**	I	mg/kg dry	4	41.7	94.7	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Thallium [7440-28-0] ^	4.92	U	mg/kg dry	20	4.92	9.47	0F11015	EPA 6010C	06/15/10 11:46	ACV	
Vanadium [7440-62-2] ^	**14.3**		mg/kg dry	4	0.231	1.89	0F11015	EPA 6010C	06/14/10 15:30	ACV	
Zinc [7440-66-6] ^	**2.24**	I	mg/kg dry	4	0.322	9.47	0F11015	EPA 6010C	06/14/10 15:30	ACV	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Classical Chemistry Parameters

^ - ENCO Jacksonville certified analyte [NELAC E82277]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
pH [ECL-0062] ^	**8.8**		pH Units	1			0F17009	EPA 9045D	06/17/10 11:42	SMA	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1-Trichloroethane [71-55-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,1,2-Trichloroethane [79-00-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,1-Dichloroethane [75-34-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,1-Dichloroethene [75-35-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,2-Dichloroethane [107-06-2] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
1,2-Dichloropropane [78-87-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
2-Butanone [78-93-3] ^	0.0015	U	mg/kg dry	1	0.0015	0.0054	0F14009	EPA 8260B	06/14/10 18:05	kat	
2-Hexanone [591-78-6] ^	0.0008	U	mg/kg dry	1	0.0008	0.0054	0F14009	EPA 8260B	06/14/10 18:05	kat	
4-Methyl-2-pentanone [108-10-1] ^	0.0014	U	mg/kg dry	1	0.0014	0.0054	0F14009	EPA 8260B	06/14/10 18:05	kat	
Acetone [67-64-1] ^	**0.0054**		mg/kg dry	1	0.0009	0.0054	0F14009	EPA 8260B	06/14/10 18:05	kat	
Benzene [71-43-2] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Bromodichloromethane [75-27-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Bromoform [75-25-2] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Bromomethane [74-83-9] ^	0.0005	U	mg/kg dry	1	0.0005	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Carbon disulfide [75-15-0] ^	0.0005	U	mg/kg dry	1	0.0005	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Carbon tetrachloride [56-23-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Chlorobenzene [108-90-7] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Chloroethane [75-00-3] ^	0.0007	U	mg/kg dry	1	0.0007	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Chloroform [67-66-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Chloromethane [74-87-3] ^	0.0006	U	mg/kg dry	1	0.0006	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
cis-1,2-Dichloroethene [156-59-2] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Dibromochloromethane [124-48-1] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Ethylbenzene [100-41-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
m,p-Xylenes [108-38-3/106-42-3] ^	0.0006	U	mg/kg dry	1	0.0006	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Methylene chloride [75-09-2] ^	0.0004	U	mg/kg dry	1	0.0004	0.0054	0F14009	EPA 8260B	06/14/10 18:05	kat	
o-Xylene [95-47-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Styrene [100-42-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Tetrachloroethene [127-18-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Toluene [108-88-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
trans-1,2-Dichloroethene [156-60-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Trichloroethene [79-01-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Vinyl chloride [75-01-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	
Xylenes (Total) [1330-20-7] ^	0.0006	U	mg/kg dry	1	0.0006	0.0011	0F14009	EPA 8260B	06/14/10 18:05	kat	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*103 %*	*71-126*	*0F14009*	*EPA 8260B*	*06/14/10 18:05*	*kat*	
Dibromofluoromethane	*36*	*1*	*50.0*	*71 %*	*72-133*	*0F14009*	*EPA 8260B*	*06/14/10 18:05*	*kat*	
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*80-123*	*0F14009*	*EPA 8260B*	*06/14/10 18:05*	*kat*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.0020	U	mg/kg dry	1	0.0020	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
2,4,5-TP (Silvex) [93-72-1] ^	0.0014	U	mg/kg dry	1	0.0014	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
2,4-D [94-75-7] ^	0.0038	U	mg/kg dry	1	0.0038	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
2,4-DB [94-82-6] ^	0.0062	U	mg/kg dry	1	0.0062	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
3,5-DCBA [51-365-5] ^	0.0056	U	mg/kg dry	1	0.0056	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
4-Nitrophenol [100-02-7] ^	0.0065	U	mg/kg dry	1	0.0065	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Acifluorfen [50594-66-6] ^	0.0051	U	mg/kg dry	1	0.0051	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	QV-01
Bentazon [25057-89-0] ^	0.0013	U	mg/kg dry	1	0.0013	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Chloramben [133-90-4] ^	0.0011	U	mg/kg dry	1	0.0011	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Dacthal [1861-32-1] ^	0.0017	U	mg/kg dry	1	0.0017	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Dalapon [75-99-0] ^	0.0060	U	mg/kg dry	1	0.0060	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Dicamba [1918-00-9] ^	0.0018	U	mg/kg dry	1	0.0018	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Dichlorprop [120-36-5] ^	0.0031	U	mg/kg dry	1	0.0031	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Dinoseb [88-85-7] ^	0.0039	U	mg/kg dry	1	0.0039	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
MCPA [94-74-6] ^	0.17	U	mg/kg dry	1	0.17	1.1	0F11026	EPA 8151A	06/15/10 17:31	RGG	
MCPP [93-65-2] ^	0.57	U	mg/kg dry	1	0.57	1.1	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Pentachlorophenol [87-86-5] ^	0.0014	U	mg/kg dry	1	0.0014	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	
Picloram [1918-02-1] ^	0.0019	U	mg/kg dry	1	0.0019	0.011	0F11026	EPA 8151A	06/15/10 17:31	RGG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
2,4-DCAA	*0.035*	*1*	*0.0427*	*82 %*	*39-174*	*0F11026*	*EPA 8151A*	*06/15/10 17:31*	*RGG*	

www.encolabs.com

Description:	NewBerry Pit 01	**Lab Sample ID:**	B002736-01	**Received:**	06/09/10 17:15
Matrix:	Soil	**Sampled:**	06/09/10 14:45	**Work Order:**	B002736
Project:	High Springs Quarry (Lime Rock)	**Sampled By:**	Valtious Morris	**% Solids:**	93.31

Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	**0.00456**	I	mg/kg dry	1	0.00289	0.0107	0F10027	EPA 7471B	06/11/10 07:16	JAY	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 0F11010 - EPA 3545_MS

Blank (0F11010-BLK1) Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 18:39

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4-Trichlorobenzene	0.056	U	0.33	mg/kg wet							
1,2-Dichlorobenzene	0.071	U	0.33	mg/kg wet							
1,3-Dichlorobenzene	0.068	U	0.33	mg/kg wet							
1,4-Dichlorobenzene	0.069	U	0.33	mg/kg wet							
1-Methylnaphthalene	0.060	U	0.33	mg/kg wet							
2,4,5-Trichlorophenol	0.074	U	0.33	mg/kg wet							
2,4,6-Trichlorophenol	0.056	U	0.33	mg/kg wet							
2,4-Dichlorophenol	0.069	U	0.33	mg/kg wet							
2,4-Dimethylphenol	0.065	U	0.33	mg/kg wet							
2,4-Dinitrophenol	0.074	U	0.33	mg/kg wet							
2,4-Dinitrotoluene	0.050	U	0.33	mg/kg wet							
2,6-Dinitrotoluene	0.052	U	0.33	mg/kg wet							
2-Chloronaphthalene	0.051	U	0.33	mg/kg wet							
2-Methyl-4,6-dinitrophenol	0.072	U	0.33	mg/kg wet							
2-Methylnaphthalene	0.058	U	0.33	mg/kg wet							
2-Nitrophenol	0.066	U	0.33	mg/kg wet							
4-Bromophenyl-phenylether	0.050	U	0.33	mg/kg wet							
4-Chloro-3-methylphenol	0.059	U	0.33	mg/kg wet							
4-Chlorophenyl-phenylether	0.047	U	0.33	mg/kg wet							
4-Nitrophenol	0.033	U	0.33	mg/kg wet							
Acenaphthene	0.058	U	0.33	mg/kg wet							
Acenaphthylene	0.052	U	0.33	mg/kg wet							
Anthracene	0.039	U	0.33	mg/kg wet							
Benzidine	0.19	U	0.33	mg/kg wet							
Benzo(a)anthracene	0.038	U	0.33	mg/kg wet							
Benzo(a)pyrene	0.035	U	0.33	mg/kg wet							
Benzo(b)fluoranthene	0.037	U	0.33	mg/kg wet							
Benzo(g,h,i)perylene	0.037	U	0.33	mg/kg wet							
Benzo(k)fluoranthene	0.035	U	0.33	mg/kg wet							
Benzoic acid	0.18	U	1.7	mg/kg wet							
Bis(2-chloroethoxy)methane	0.052	U	0.33	mg/kg wet							
Bis(2-chloroethyl)ether	0.056	U	0.33	mg/kg wet							
Bis(2-chloroisopropyl)ether	0.041	U	0.33	mg/kg wet							
Bis(2-ethylhexyl)phthalate	0.033	U	0.33	mg/kg wet							
Butylbenzylphthalate	0.033	U	0.33	mg/kg wet							
Chrysene	0.14	U	0.33	mg/kg wet							
Dibenzo(a,h)anthracene	0.048	U	0.33	mg/kg wet							
Diethylphthalate	0.048	U	0.33	mg/kg wet							
Dimethylphthalate	0.046	U	0.33	mg/kg wet							
Di-n-butylphthalate	0.033	U	0.33	mg/kg wet							
Di-n-octylphthalate	0.033	U	0.33	mg/kg wet							
Fluoranthene	0.038	U	0.33	mg/kg wet							
Fluorene	0.045	U	0.33	mg/kg wet							
Hexachlorobenzene	0.041	U	0.33	mg/kg wet							
Hexachlorobutadiene	0.064	U	0.33	mg/kg wet							
Hexachlorocyclopentadiene	0.15	U	0.33	mg/kg wet							
Hexachloroethane	0.070	U	0.33	mg/kg wet							
Indeno(1,2,3-cd)pyrene	0.033	U	0.33	mg/kg wet							
Isophorone	0.048	U	0.33	mg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 0F11010 - EPA 3545_MS

Blank (0F11010-BLK1) Continued Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 18:39

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Naphthalene	0.054	U	0.33	mg/kg wet							
Nitrobenzene	0.048	U	0.33	mg/kg wet							
N-Nitrosodimethylamine	0.068	U	0.33	mg/kg wet							
N-Nitroso-di-n-propylamine	0.056	U	0.33	mg/kg wet							
N-nitrosodiphenylamine/Diphenylamine	0.081	U	0.33	mg/kg wet							
Pentachlorophenol	0.053	U	0.33	mg/kg wet							
Phenanthrene	0.043	U	0.33	mg/kg wet							
Phenol	0.063	U	0.33	mg/kg wet							
Pyrene	0.033	U	0.33	mg/kg wet							
Surrogate: 2,4,6-Tribromophenol	*1.8*			*mg/kg wet*	*1.67*		*111*	*36-146*			
Surrogate: 2-Fluorobiphenyl	*1.6*			*mg/kg wet*	*1.67*		*97*	*59-120*			
Surrogate: 2-Fluorophenol	*2.2*			*mg/kg wet*	*1.67*		*129*	*40-129*			
Surrogate: Nitrobenzene-d5	*1.5*			*mg/kg wet*	*1.67*		*90*	*42-120*			
Surrogate: Phenol-d5	*1.6*			*mg/kg wet*	*1.67*		*98*	*42-127*			
Surrogate: Terphenyl-d14	*2.0*			*mg/kg wet*	*1.67*		*120*	*61-147*			

LCS (0F11010-BS1) Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 19:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4-Trichlorobenzene	1.6		0.33	mg/kg wet	1.67		97	63-120			
1,4-Dichlorobenzene	1.4		0.33	mg/kg wet	1.67		86	60-120			
2,4-Dinitrotoluene	1.7		0.33	mg/kg wet	1.67		101	71-120			
4-Chloro-3-methylphenol	1.3		0.33	mg/kg wet	1.67		77	64-120			
4-Nitrophenol	1.7		0.33	mg/kg wet	1.67		100	35-132			
Acenaphthene	1.6		0.33	mg/kg wet	1.67		97	67-120			
N-Nitroso-di-n-propylamine	1.0		0.33	mg/kg wet	1.67		63	55-120			
Pentachlorophenol	1.1		0.33	mg/kg wet	1.67		65	34-120			
Phenol	1.4		0.33	mg/kg wet	1.67		87	51-120			
Pyrene	1.7		0.33	mg/kg wet	1.67		105	75-131			
Surrogate: 2,4,6-Tribromophenol	*2.0*			*mg/kg wet*	*1.67*		*118*	*36-146*			
Surrogate: 2-Fluorobiphenyl	*1.5*			*mg/kg wet*	*1.67*		*87*	*59-120*			
Surrogate: 2-Fluorophenol	*1.8*			*mg/kg wet*	*1.67*		*106*	*40-129*			
Surrogate: Nitrobenzene-d5	*1.4*			*mg/kg wet*	*1.67*		*82*	*42-120*			
Surrogate: Phenol-d5	*1.6*			*mg/kg wet*	*1.67*		*95*	*42-127*			
Surrogate: Terphenyl-d14	*1.9*			*mg/kg wet*	*1.67*		*114*	*61-147*			

Matrix Spike (0F11010-MS1) Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 19:37

Source: B002736-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4-Trichlorobenzene	1.8		0.35	mg/kg dry	1.78	0.060 U	103	63-120			
1,4-Dichlorobenzene	1.6		0.35	mg/kg dry	1.78	0.074 U	89	60-120			
2,4-Dinitrotoluene	1.8		0.35	mg/kg dry	1.78	0.054 U	101	71-120			
4-Chloro-3-methylphenol	1.4		0.35	mg/kg dry	1.78	0.063 U	81	64-120			
4-Nitrophenol	1.4		0.35	mg/kg dry	1.78	0.035 U	77	35-132			
Acenaphthene	1.7		0.35	mg/kg dry	1.78	0.062 U	93	67-120			
N-Nitroso-di-n-propylamine	1.1		0.35	mg/kg dry	1.78	0.060 U	65	55-120			

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 0F11010 - EPA 3545_MS

Matrix Spike (0F11010-MS1) Continued Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 19:37

Source: B002736-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Pentachlorophenol	0.35		0.35	mg/kg dry	1.78	0.057 U	20	34-120			QM-07
Phenol	1.7		0.35	mg/kg dry	1.78	0.068 U	94	51-120			
Pyrene	1.9		0.35	mg/kg dry	1.78	0.035 U	107	75-131			
Surrogate: 2,4,6-Tribromophenol	*1.7*			*mg/kg dry*	*1.78*		*97*	*36-146*			
Surrogate: 2-Fluorobiphenyl	*1.6*			*mg/kg dry*	*1.78*		*92*	*59-120*			
Surrogate: 2-Fluorophenol	*1.9*			*mg/kg dry*	*1.78*		*104*	*40-129*			
Surrogate: Nitrobenzene-d5	*1.5*			*mg/kg dry*	*1.78*		*82*	*42-120*			
Surrogate: Phenol-d5	*1.9*			*mg/kg dry*	*1.78*		*106*	*42-127*			
Surrogate: Terphenyl-d14	*2.0*			*mg/kg dry*	*1.78*		*114*	*61-147*			

Matrix Spike Dup (0F11010-MSD1) Prepared: 06/11/2010 09:31 Analyzed: 06/14/2010 20:06

Source: B002736-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4-Trichlorobenzene	1.8		0.35	mg/kg dry	1.78	0.060 U	100	63-120	3	22	
1,4-Dichlorobenzene	1.5		0.35	mg/kg dry	1.78	0.074 U	87	60-120	3	25	
2,4-Dinitrotoluene	1.7		0.35	mg/kg dry	1.78	0.054 U	97	71-120	4	19	
4-Chloro-3-methylphenol	1.4		0.35	mg/kg dry	1.78	0.063 U	78	64-120	4	21	
4-Nitrophenol	1.4		0.35	mg/kg dry	1.78	0.035 U	76	35-132	2	20	
Acenaphthene	1.5		0.35	mg/kg dry	1.78	0.062 U	87	67-120	7	21	
N-Nitroso-di-n-propylamine	1.4		0.35	mg/kg dry	1.78	0.060 U	81	55-120	22	28	
Pentachlorophenol	0.19	I	0.35	mg/kg dry	1.78	0.057 U	11	34-120	57	24	QM-07, QM-11
Phenol	1.3		0.35	mg/kg dry	1.78	0.068 U	71	51-120	28	18	QM-11
Pyrene	1.9		0.35	mg/kg dry	1.78	0.035 U	106	75-131	2	50	
Surrogate: 2,4,6-Tribromophenol	*1.6*			*mg/kg dry*	*1.78*		*87*	*36-146*			
Surrogate: 2-Fluorobiphenyl	*1.6*			*mg/kg dry*	*1.78*		*88*	*59-120*			
Surrogate: 2-Fluorophenol	*2.3*			*mg/kg dry*	*1.78*		*128*	*40-129*			
Surrogate: Nitrobenzene-d5	*1.5*			*mg/kg dry*	*1.78*		*82*	*42-120*			
Surrogate: Phenol-d5	*1.5*			*mg/kg dry*	*1.78*		*83*	*42-127*			
Surrogate: Terphenyl-d14	*2.0*			*mg/kg dry*	*1.78*		*112*	*61-147*			

Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 0F11005 - EPA 3545_MS

Blank (0F11005-BLK1) Prepared: 06/11/2010 09:16 Analyzed: 06/15/2010 13:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1-Methylnaphthalene	0.0030	U	0.033	mg/kg wet							
2-Methylnaphthalene	0.0032	U	0.033	mg/kg wet							
Acenaphthene	0.0027	U	0.033	mg/kg wet							
Acenaphthylene	0.0027	U	0.033	mg/kg wet							
Anthracene	0.0027	U	0.033	mg/kg wet							
Benzo(a)anthracene	0.0034	U	0.033	mg/kg wet							
Benzo(a)pyrene	0.0053	U	0.033	mg/kg wet							
Benzo(b)fluoranthene	0.0047	U	0.033	mg/kg wet							
Benzo(g,h,i)perylene	0.0038	U	0.033	mg/kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 0F11005 - EPA 3545_MS

Blank (0F11005-BLK1) Continued Prepared: 06/11/2010 09:16 Analyzed: 06/15/2010 13:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzo(k)fluoranthene	0.0032	U	0.033	mg/kg wet							
Chrysene	0.0030	U	0.033	mg/kg wet							
Dibenzo(a,h)anthracene	0.0036	U	0.033	mg/kg wet							
Fluoranthene	0.0036	U	0.033	mg/kg wet							
Fluorene	0.0036	U	0.033	mg/kg wet							
Indeno(1,2,3-cd)pyrene	0.0040	U	0.033	mg/kg wet							
Naphthalene	0.0037	U	0.033	mg/kg wet							
Phenanthrene	0.0032	U	0.033	mg/kg wet							
Pyrene	0.0033	U	0.033	mg/kg wet							
Surrogate: p-Terphenyl	*1.9*			*mg/kg wet*	*1.67*		*111*	*58-121*			

LCS (0F11005-BS1) Prepared: 06/11/2010 09:16 Analyzed: 06/15/2010 14:15

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acenaphthene	0.68		0.033	mg/kg wet	0.667		102	63-120			
Benzo(a)pyrene	0.65		0.033	mg/kg wet	0.667		97	38-124			
Benzo(g,h,i)perylene	0.54		0.033	mg/kg wet	0.667		80	42-130			
Naphthalene	0.70		0.033	mg/kg wet	0.667		105	63-120			
Surrogate: p-Terphenyl	*1.8*			*mg/kg wet*	*1.67*		*110*	*58-121*			

Matrix Spike (0F11005-MS1) Prepared: 06/11/2010 09:16 Analyzed: 06/15/2010 14:37

Source: B002398-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acenaphthene	0.70		0.036	mg/kg dry	0.702	0.0029 U	100	63-120			
Benzo(a)pyrene	0.69		0.036	mg/kg dry	0.702	0.0057 U	99	38-124			
Benzo(g,h,i)perylene	0.65		0.036	mg/kg dry	0.702	0.0041 U	93	42-130			
Naphthalene	0.72		0.036	mg/kg dry	0.702	0.0040 U	102	63-120			
Surrogate: p-Terphenyl	*1.9*			*mg/kg dry*	*1.76*		*108*	*58-121*			

Matrix Spike Dup (0F11005-MSD1) Prepared: 06/11/2010 09:16 Analyzed: 06/15/2010 15:00

Source: B002398-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acenaphthene	0.70		0.036	mg/kg dry	0.702	0.0029 U	100	63-120	0.2	12	
Benzo(a)pyrene	0.71		0.036	mg/kg dry	0.702	0.0057 U	101	38-124	2	15	
Benzo(g,h,i)perylene	0.65		0.036	mg/kg dry	0.702	0.0041 U	93	42-130	0.6	24	
Naphthalene	0.73		0.036	mg/kg dry	0.702	0.0040 U	104	63-120	2	19	
Surrogate: p-Terphenyl	*1.9*			*mg/kg dry*	*1.76*		*106*	*58-121*			

Organochlorine Pesticides by GC - Quality Control

Batch 0F14008 - EPA 3545A

Blank (0F14008-BLK1) Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 12:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Organochlorine Pesticides by GC - Quality Control

Batch 0F14008 - EPA 3545A

Blank (0F14008-BLK1) Continued Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 12:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4,4'-DDD	0.00008	U	0.0017	mg/kg wet							
4,4'-DDE	0.00005	U	0.0017	mg/kg wet							
4,4'-DDT	0.00007	U	0.0017	mg/kg wet							
Aldrin	0.00009	U	0.0017	mg/kg wet							
alpha-BHC	0.00004	U	0.0017	mg/kg wet							
beta-BHC	0.00012	U	0.0017	mg/kg wet							
Chlordane (tech)	0.0033	U	0.033	mg/kg wet							
Chlordane-alpha	0.00007	U	0.0017	mg/kg wet							
Chlordane-gamma	0.00004	U	0.0017	mg/kg wet							
delta-BHC	0.00005	U	0.0017	mg/kg wet							
Dieldrin	0.00028	U	0.0017	mg/kg wet							
Endosulfan I	0.00006	U	0.0017	mg/kg wet							
Endosulfan II	0.00007	U	0.0017	mg/kg wet							
Endosulfan sulfate	0.00004	U	0.0017	mg/kg wet							
Endrin	0.00015	U	0.0017	mg/kg wet							
Endrin aldehyde	0.00011	U	0.0017	mg/kg wet							
Endrin ketone	0.00011	U	0.0017	mg/kg wet							
gamma-BHC	0.00004	U	0.0017	mg/kg wet							
Heptachlor	0.00004	U	0.0017	mg/kg wet							
Heptachlor epoxide	0.00006	U	0.0017	mg/kg wet							
Methoxychlor	0.00015	U	0.0017	mg/kg wet							
Toxaphene	0.0038	U	0.033	mg/kg wet							
Surrogate: 2,4,5,6-TCMX	*0.027*			*mg/kg wet*	*0.0333*		*82*	*64-125*			
Surrogate: Decachlorobiphenyl	*0.033*			*mg/kg wet*	*0.0333*		*98*	*60-117*			

LCS (0F14008-BS1) Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 12:49

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4,4'-DDT	0.039		0.0017	mg/kg wet	0.0333		117	63-123			
Dieldrin	0.036		0.0017	mg/kg wet	0.0333		109	68-115			
Endrin	0.035		0.0017	mg/kg wet	0.0333		105	59-123			
Surrogate: 2,4,5,6-TCMX	*0.030*			*mg/kg wet*	*0.0333*		*91*	*64-125*			
Surrogate: Decachlorobiphenyl	*0.033*			*mg/kg wet*	*0.0333*		*98*	*60-117*			

Matrix Spike (0F14008-MS1) Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 13:01

Source: B002736-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4,4'-DDT	0.041		0.0018	mg/kg dry	0.0357	0.00007 U	116	63-123			
Dieldrin	0.038		0.0018	mg/kg dry	0.0357	0.00030 U	107	68-115			
Endrin	0.038		0.0018	mg/kg dry	0.0357	0.00016 U	107	59-123			
Surrogate: 2,4,5,6-TCMX	*0.030*			*mg/kg dry*	*0.0357*		*85*	*64-125*			
Surrogate: Decachlorobiphenyl	*0.035*			*mg/kg dry*	*0.0357*		*99*	*60-117*			

Matrix Spike Dup (0F14008-MSD1) Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 13:14

Source: B002736-01

QUALITY CONTROL

Organochlorine Pesticides by GC - Quality Control

Batch 0F14008 - EPA 3545A

Matrix Spike Dup (0F14008-MSD1) Continued Prepared: 06/14/2010 12:13 Analyzed: 06/15/2010 13:14

Source: B002736-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4,4'-DDT	0.041		0.0018	mg/kg dry	0.0355	0.00007 U	116	63-123	0.7	24	
Dieldrin	0.036		0.0018	mg/kg dry	0.0355	0.00030 U	102	68-115	5	21	
Endrin	0.041		0.0018	mg/kg dry	0.0355	0.00016 U	115	59-123	7	19	
Surrogate: 2,4,5,6-TCMX	*0.028*			*mg/kg dry*	*0.0355*		*79*	*64-125*			
Surrogate: Decachlorobiphenyl	*0.035*			*mg/kg dry*	*0.0355*		*100*	*60-117*			

Polychlorinated Biphenyls by GC - Quality Control

Batch 0F14009 - EPA 3545A

Blank (0F14009-BLK1) Prepared: 06/14/2010 12:16 Analyzed: 06/15/2010 14:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	0.0050	U	0.017	mg/kg wet							
PCB-1221	0.0050	U	0.017	mg/kg wet							
PCB-1232	0.0050	U	0.017	mg/kg wet							
PCB-1248	0.0050	U	0.017	mg/kg wet							
PCB-1254	0.0050	U	0.017	mg/kg wet							
PCB-1260	0.0050	U	0.017	mg/kg wet							
Surrogate: 2,4,5,6-TCMX	*0.027*			*mg/kg wet*	*0.0333*		*81*	*73-147*			
Surrogate: Decachlorobiphenyl	*0.036*			*mg/kg wet*	*0.0333*		*107*	*21-176*			

LCS (0F14009-BS1) Prepared: 06/14/2010 12:16 Analyzed: 06/15/2010 14:16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	0.36		0.017	mg/kg wet	0.333		108	63-146			
PCB-1260	0.39		0.017	mg/kg wet	0.333		116	63-168			
Surrogate: 2,4,5,6-TCMX	*0.026*			*mg/kg wet*	*0.0333*		*78*	*73-147*			
Surrogate: Decachlorobiphenyl	*0.033*			*mg/kg wet*	*0.0333*		*99*	*21-176*			

Matrix Spike (0F14009-MS1) Prepared: 06/14/2010 12:16 Analyzed: 06/15/2010 14:29

Source: B002740-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	0.40		0.017	mg/kg dry	0.335	0.0051 U	120	63-146			
PCB-1260	0.41		0.017	mg/kg dry	0.335	0.0051 U	123	63-168			
Surrogate: 2,4,5,6-TCMX	*0.028*			*mg/kg dry*	*0.0335*		*83*	*73-147*			
Surrogate: Decachlorobiphenyl	*0.036*			*mg/kg dry*	*0.0335*		*108*	*21-176*			

Matrix Spike Dup (0F14009-MSD1) Prepared: 06/14/2010 12:16 Analyzed: 06/15/2010 14:41

Source: B002740-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
PCB-1016/1242	0.38		0.017	mg/kg dry	0.337	0.0051 U	114	63-146	5	31	
PCB-1260	0.40		0.017	mg/kg dry	0.337	0.0051 U	118	63-168	3	50	

QUALITY CONTROL

Polychlorinated Biphenyls by GC - Quality Control

Batch 0F14009 - EPA 3545A

Matrix Spike Dup (0F14009-MSD1) Continued Prepared: 06/14/2010 12:16 Analyzed: 06/15/2010 14:41

Source: B002740-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 2,4,5,6-TCMX	*0.026*			*mg/kg dry*	*0.0337*		*78*	*73-147*			
Surrogate: Decachlorobiphenyl	*0.036*			*mg/kg dry*	*0.0337*		*106*	*21-176*			

FL Petroleum Range Organics - Quality Control

Batch 0F11008 - EPA 3545A

Blank (0F11008-BLK1) Prepared: 06/11/2010 09:21 Analyzed: 06/14/2010 18:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
TPH (C8-C40)	0.83	U	6.6	mg/kg wet							
Surrogate: n-Nonatriacontane	*3.0*			*mg/kg wet*	*3.33*		*89*	*23-189*			
Surrogate: o-Terphenyl	*1.7*			*mg/kg wet*	*1.67*		*99*	*64-118*			

LCS (0F11008-BS1) Prepared: 06/11/2010 09:21 Analyzed: 06/14/2010 18:41

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
TPH (C8-C40)	57		6.6	mg/kg wet	56.7		100	63-153			
Surrogate: n-Nonatriacontane	*2.8*			*mg/kg wet*	*3.33*		*83*	*60-118*			
Surrogate: o-Terphenyl	*1.7*			*mg/kg wet*	*1.67*		*102*	*62-109*			

Matrix Spike (0F11008-MS1) Prepared: 06/11/2010 09:21 Analyzed: 06/15/2010 10:32

Source: B002398-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
TPH (C8-C40)	48	U	380	mg/kg dry	65.7	9800	NR	63-122			QM-17
Surrogate: n-Nonatriacontane	*0.0*			*mg/kg dry*	*3.86*			*23-189*			*QS-04*
Surrogate: o-Terphenyl	*0.0*			*mg/kg dry*	*1.93*			*64-118*			*QS-04*

Matrix Spike Dup (0F11008-MSD1) Prepared: 06/11/2010 09:21 Analyzed: 06/15/2010 10:56

Source: B002398-03

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
TPH (C8-C40)	48	U	380	mg/kg dry	65.4	9800	NR	63-122		30	QM-17
Surrogate: n-Nonatriacontane	*0.0*			*mg/kg dry*	*3.85*			*23-189*			*QS-04*
Surrogate: o-Terphenyl	*0.0*			*mg/kg dry*	*1.92*			*64-118*			*QS-04*

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F11015 - EPA 3050B

Blank (0F11015-BLK1) Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Aluminum	3.20	U	10.0	mg/kg wet							
Antimony	0.540	U	1.00	mg/kg wet							

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F11015 - EPA 3050B

Blank (0F11015-BLK1) Continued Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:11

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.330	U	0.500	mg/kg wet							
Barium	**0.0583**	**I**	0.500	mg/kg wet							
Beryllium	0.00940	U	0.0500	mg/kg wet							
Cadmium	0.0240	U	0.0500	mg/kg wet							
Calcium	2.20	U	25.0	mg/kg wet							
Chromium	0.0650	U	0.500	mg/kg wet							
Cobalt	0.0340	U	0.500	mg/kg wet							
Iron	**1.49**	**I**	2.50	mg/kg wet							O-01
Lead	0.170	U	0.500	mg/kg wet							
Magnesium	2.10	U	25.0	mg/kg wet							
Manganese	0.0180	U	0.500	mg/kg wet							
Nickel	0.0540	U	2.50	mg/kg wet							
Potassium	4.80	U	25.0	mg/kg wet							
Selenium	0.400	U	0.500	mg/kg wet							
Silver	0.0870	U	0.500	mg/kg wet							
Sodium	11.0	U	25.0	mg/kg wet							
Thallium	0.260	U	0.500	mg/kg wet							
Vanadium	0.0610	U	0.500	mg/kg wet							
Zinc	0.0850	U	2.50	mg/kg wet							

LCS (0F11015-BS1) Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Aluminum	263		10.0	mg/kg wet	261		101	85-115			
Antimony	26.8		1.00	mg/kg wet	26.1		103	85-115			
Arsenic	26.1		0.500	mg/kg wet	26.1		100	85-115			
Barium	25.8		0.500	mg/kg wet	26.1		99	85-115			
Beryllium	2.59		0.0500	mg/kg wet	2.61		99	85-115			
Cadmium	2.57		0.0500	mg/kg wet	2.61		99	85-115			
Calcium	264		25.0	mg/kg wet	261		101	85-115			
Chromium	26.1		0.500	mg/kg wet	26.1		100	85-115			
Cobalt	26.0		0.500	mg/kg wet	26.1		100	85-115			
Iron	134		2.50	mg/kg wet	130		103	85-115			
Lead	26.6		0.500	mg/kg wet	26.1		102	85-115			
Magnesium	266		25.0	mg/kg wet	261		102	85-115			
Manganese	25.9		0.500	mg/kg wet	26.1		99	85-115			
Nickel	26.0		2.50	mg/kg wet	26.1		100	85-115			
Potassium	1300		25.0	mg/kg wet	1300		100	85-115			
Selenium	25.8		0.500	mg/kg wet	26.1		99	85-115			
Silver	5.24		0.500	mg/kg wet	5.21		100	85-115			
Sodium	1320		25.0	mg/kg wet	1300		101	85-115			
Thallium	26.0		0.500	mg/kg wet	26.1		100	85-115			
Vanadium	25.7		0.500	mg/kg wet	26.1		99	85-115			
Zinc	25.9		2.50	mg/kg wet	26.1		99	85-115			

Matrix Spike (0F11015-MS1) Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:16

Source: B002730-01

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F11015 - EPA 3050B

Matrix Spike (0F11015-MS1) Continued Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:16

Source: B002730-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Aluminum	34700		1320	mg/kg dry	33100	1020	102	80-120			
Antimony	3340		132	mg/kg dry	3310	71.5 U	101	80-120			
Arsenic	3290		66.2	mg/kg dry	3310	43.7 U	100	80-120			
Barium	3290		66.2	mg/kg dry	3310	47.7	98	80-120			
Beryllium	332		6.62	mg/kg dry	331	1.24 U	100	80-120			
Cadmium	318		6.62	mg/kg dry	331	3.18 U	96	80-120			
Calcium	174000		3310	mg/kg dry	33100	138000	107	80-120			
Chromium	3300		66.2	mg/kg dry	3310	8.60 U	100	80-120			
Cobalt	3250		66.2	mg/kg dry	3310	4.50 U	98	80-120			
Iron	17200		331	mg/kg dry	16500	693	100	80-120			
Lead	3310		66.2	mg/kg dry	3310	22.5 U	100	80-120			
Magnesium	34700		3310	mg/kg dry	33100	1120	102	80-120			
Manganese	3290		66.2	mg/kg dry	3310	7.62	99	80-120			
Nickel	3240		331	mg/kg dry	3310	7.86	98	80-120			
Potassium	170000		3310	mg/kg dry	165000	4560	100	80-120			
Selenium	3220		66.2	mg/kg dry	3310	52.9 U	97	80-120			
Silver	665		66.2	mg/kg dry	662	11.5 U	100	80-120			
Sodium	187000		3310	mg/kg dry	165000	20000	101	80-120			
Thallium	3290		66.2	mg/kg dry	3310	24.4	99	80-120			
Vanadium	3270		66.2	mg/kg dry	3310	8.07 U	99	80-120			
Zinc	3360		331	mg/kg dry	3310	149	97	80-120			

Matrix Spike Dup (0F11015-MSD1) Prepared: 06/11/2010 10:40 Analyzed: 06/14/2010 15:18

Source: B002730-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Aluminum	33700		1310	mg/kg dry	32600	1020	100	80-120	3	30	
Antimony	3300		131	mg/kg dry	3260	70.5 U	101	80-120	1	30	
Arsenic	3250		65.3	mg/kg dry	3260	43.1 U	100	80-120	1	30	
Barium	3230		65.3	mg/kg dry	3260	47.7	97	80-120	2	30	
Beryllium	325		6.53	mg/kg dry	326	1.23 U	100	80-120	2	30	
Cadmium	314		6.53	mg/kg dry	326	3.13 U	96	80-120	1	30	
Calcium	172000		3260	mg/kg dry	32600	138000	104	80-120	0.9	30	
Chromium	3230		65.3	mg/kg dry	3260	8.48 U	99	80-120	2	30	
Cobalt	3200		65.3	mg/kg dry	3260	4.44 U	98	80-120	2	30	
Iron	16900		326	mg/kg dry	16300	693	99	80-120	2	30	
Lead	3270		65.3	mg/kg dry	3260	22.2 U	100	80-120	1	30	
Magnesium	34000		3260	mg/kg dry	32600	1120	101	80-120	2	30	
Manganese	3230		65.3	mg/kg dry	3260	7.62	99	80-120	2	30	
Nickel	3190		326	mg/kg dry	3260	7.86	97	80-120	1	30	
Potassium	165000		3260	mg/kg dry	163000	4560	98	80-120	3	30	
Selenium	3190		65.3	mg/kg dry	3260	52.2 U	98	80-120	1	30	
Silver	656		65.3	mg/kg dry	653	11.4 U	100	80-120	1	30	
Sodium	184000		3260	mg/kg dry	163000	20000	100	80-120	1	30	
Thallium	3230		65.3	mg/kg dry	3260	24.4	98	80-120	2	30	
Vanadium	3210		65.3	mg/kg dry	3260	7.96 U	98	80-120	2	30	
Zinc	3320		326	mg/kg dry	3260	149	97	80-120	1	30	

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F11015 - EPA 3050B

Classical Chemistry Parameters - Quality Control

Batch 0F17009 - Same

LCS (0F17009-BS1) Prepared: 06/17/2010 10:16 Analyzed: 06/17/2010 11:42

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
pH	7.0			pH Units	7.00		100	90-110			

LCS Dup (0F17009-BSD1) Prepared: 06/17/2010 10:16 Analyzed: 06/17/2010 11:42

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
pH	7.0			pH Units	7.00		100	90-110	0	200	

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0F14009 - EPA 5030B_MS

Blank (0F14009-BLK1) Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 13:38

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	0.0003	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.0002	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.0002	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.0002	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.0004	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.0002	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.0003	U	0.0010	mg/kg wet							
2-Butanone	0.0014	U	0.0050	mg/kg wet							
2-Hexanone	0.0007	U	0.0050	mg/kg wet							
4-Methyl-2-pentanone	0.0013	U	0.0050	mg/kg wet							
Acetone	0.0008	U	0.0050	mg/kg wet							
Benzene	0.0002	U	0.0010	mg/kg wet							
Bromodichloromethane	0.0002	U	0.0010	mg/kg wet							
Bromoform	0.0003	U	0.0010	mg/kg wet							
Bromomethane	0.0005	U	0.0010	mg/kg wet							
Carbon disulfide	0.0004	U	0.0010	mg/kg wet							
Carbon tetrachloride	0.0002	U	0.0010	mg/kg wet							
Chlorobenzene	0.0003	U	0.0010	mg/kg wet							
Chloroethane	0.0006	U	0.0010	mg/kg wet							
Chloroform	0.0002	U	0.0010	mg/kg wet							
Chloromethane	0.0006	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.0003	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.0002	U	0.0010	mg/kg wet							
Dibromochloromethane	0.0002	U	0.0010	mg/kg wet							
Ethylbenzene	0.0003	U	0.0010	mg/kg wet							
m,p-Xylenes	0.0006	U	0.0010	mg/kg wet							
Methylene chloride	0.0004	U	0.0050	mg/kg wet							
o-Xylene	0.0003	U	0.0010	mg/kg wet							
Styrene	0.0002	U	0.0010	mg/kg wet							
Tetrachloroethene	0.0005	U	0.0010	mg/kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0F14009 - EPA 5030B_MS

Blank (0F14009-BLK1) Continued Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 13:38

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene	0.0003	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.0002	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.0003	U	0.0010	mg/kg wet							
Trichloroethene	0.0003	U	0.0010	mg/kg wet							
Vinyl chloride	0.0002	U	0.0010	mg/kg wet							
Xylenes (Total)	0.0006	U	0.0010	mg/kg wet							
Surrogate: 4-Bromofluorobenzene	*42*			*ug/L*	*50.0*		*84*	*71-126*			
Surrogate: Dibromofluoromethane	*40*			*ug/L*	*50.0*		*79*	*72-133*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*80-123*			

LCS (0F14009-BS1) Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 13:05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	15		1.0	ug/L	20.0		75	61-124			
Benzene	18		1.0	ug/L	20.0		92	59-133			
Chlorobenzene	17		1.0	ug/L	20.0		86	69-121			
Toluene	18		1.0	ug/L	20.0		92	66-119			
Trichloroethene	19		1.0	ug/L	20.0		95	71-122			
Surrogate: 4-Bromofluorobenzene	*40*			*ug/L*	*50.0*		*80*	*71-126*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*89*	*72-133*			
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*88*	*80-123*			

Matrix Spike (0F14009-MS1) Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 14:11

Source: A003018-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	13		1.0	ug/L	20.0	0.44 U	64	61-124			
Benzene	18		1.0	ug/L	20.0	0.21 U	91	59-133			
Chlorobenzene	15		1.0	ug/L	20.0	0.28 U	74	69-121			
Toluene	20		1.0	ug/L	20.0	0.31 U	98	66-119			
Trichloroethene	20		1.0	ug/L	20.0	1.8	89	71-122			
Surrogate: 4-Bromofluorobenzene	*42*			*ug/L*	*50.0*		*84*	*71-126*			
Surrogate: Dibromofluoromethane	*37*			*ug/L*	*50.0*		*74*	*72-133*			
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*86*	*80-123*			

Matrix Spike Dup (0F14009-MSD1) Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 14:45

Source: A003018-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	12		1.0	ug/L	20.0	0.44 U	58	61-124	9	23	QM-07
Benzene	18		1.0	ug/L	20.0	0.21 U	91	59-133	0.05	19	
Chlorobenzene	15		1.0	ug/L	20.0	0.28 U	74	69-121	0.4	18	
Toluene	20		1.0	ug/L	20.0	0.31 U	98	66-119	0.3	21	
Trichloroethene	19		1.0	ug/L	20.0	1.8	87	71-122	2	26	
Surrogate: 4-Bromofluorobenzene	*43*			*ug/L*	*50.0*		*86*	*71-126*			
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*72-133*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 0F14009 - EPA 5030B_MS

Matrix Spike Dup (0F14009-MSD1) Continued Prepared: 06/14/2010 10:35 Analyzed: 06/14/2010 14:45

Source: A003018-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	*43*			*ug/L*	*50.0*		*87*	*80-123*			

Chlorinated Herbicides by GC - Quality Control

Batch 0F11026 - EPA 3550B

Blank (0F11026-BLK1) Prepared: 06/11/2010 10:58 Analyzed: 06/15/2010 15:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-T	0.0019	U	0.010	mg/kg wet							
2,4,5-TP (Silvex)	0.0013	U	0.010	mg/kg wet							
2,4-D	0.0035	U	0.010	mg/kg wet							
2,4-DB	0.0058	U	0.010	mg/kg wet							
3,5-DCBA	0.0052	U	0.010	mg/kg wet							
4-Nitrophenol	0.0061	U	0.010	mg/kg wet							
Acifluorfen	0.0048	U	0.010	mg/kg wet							
Bentazon	0.0012	U	0.010	mg/kg wet							
Chloramben	0.0010	U	0.010	mg/kg wet							
Dacthal	0.0016	U	0.010	mg/kg wet							
Dalapon	0.0056	U	0.010	mg/kg wet							
Dicamba	0.0017	U	0.010	mg/kg wet							
Dichlorprop	0.0029	U	0.010	mg/kg wet							
Dinoseb	0.0036	U	0.010	mg/kg wet							
MCPA	0.16	U	1.0	mg/kg wet							
MCPP	0.53	U	1.0	mg/kg wet							
Pentachlorophenol	0.0013	U	0.010	mg/kg wet							
Picloram	0.0018	U	0.010	mg/kg wet							
Surrogate: 2,4-DCAA	*0.037*			*mg/kg wet*	*0.0400*		*93*	*39-174*			

LCS (0F11026-BS1) Prepared: 06/11/2010 10:58 Analyzed: 06/15/2010 15:54

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	0.039		0.010	mg/kg wet	0.0400		98	58-160			
2,4-D	0.041		0.010	mg/kg wet	0.0400		103	38-169			
2,4-DB	0.046		0.010	mg/kg wet	0.0400		114	53-187			
Bentazon	0.039		0.010	mg/kg wet	0.0400		98	22-156			
Dalapon	0.049		0.010	mg/kg wet	0.0400		123	10-192			
Dicamba	0.039		0.010	mg/kg wet	0.0400		99	64-135			
Picloram	0.034		0.010	mg/kg wet	0.0400		85	10-185			
Surrogate: 2,4-DCAA	*0.039*			*mg/kg wet*	*0.0400*		*98*	*39-174*			

Matrix Spike (0F11026-MS1) Prepared: 06/11/2010 10:58 Analyzed: 06/15/2010 16:19

Source: A003129-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	0.075		0.020	mg/kg dry	0.0805	0.0026 U	93	58-160			
2,4-D	0.073		0.020	mg/kg dry	0.0805	0.0070 U	90	38-169			

QUALITY CONTROL

Chlorinated Herbicides by GC - Quality Control

Batch 0F11026 - EPA 3550B

Matrix Spike (0F11026-MS1) Continued Prepared: 06/11/2010 10:58 Analyzed: 06/15/2010 16:19

Source: A003129-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4-DB	0.087		0.020	mg/kg dry	0.0805	0.012 U	108	53-187			
Bentazon	0.068		0.020	mg/kg dry	0.0805	0.0024 U	85	22-156			
Dalapon	0.11		0.020	mg/kg dry	0.0805	0.011 U	131	10-192			
Dicamba	0.073		0.020	mg/kg dry	0.0805	0.0034 U	91	64-135			
Picloram	0.049		0.020	mg/kg dry	0.0805	0.0036 U	61	10-185			
Surrogate: 2,4-DCAA	*0.072*			*mg/kg dry*	*0.0805*		*90*	*39-174*			

Matrix Spike Dup (0F11026-MSD1) Prepared: 06/11/2010 10:58 Analyzed: 06/15/2010 16:43

Source: A003129-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	0.078		0.020	mg/kg dry	0.0808	0.0026 U	97	58-160	4	23	
2,4-D	0.085		0.020	mg/kg dry	0.0808	0.0071 U	105	38-169	15	43	
2,4-DB	0.098		0.020	mg/kg dry	0.0808	0.012 U	122	53-187	12	47	
Bentazon	0.071		0.020	mg/kg dry	0.0808	0.0024 U	88	22-156	5	50	
Dalapon	0.092		0.020	mg/kg dry	0.0808	0.011 U	114	10-192	13	50	
Dicamba	0.077		0.020	mg/kg dry	0.0808	0.0034 U	95	64-135	4	50	
Picloram	0.051		0.020	mg/kg dry	0.0808	0.0036 U	63	10-185	3	37	
Surrogate: 2,4-DCAA	*0.080*			*mg/kg dry*	*0.0808*		*99*	*39-174*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F10027 - EPA 7471B

Blank (0F10027-BLK1) Prepared: 06/10/2010 16:30 Analyzed: 06/11/2010 06:56

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.00270	U	0.0100	mg/kg wet							

LCS (0F10027-BS1) Prepared: 06/10/2010 16:30 Analyzed: 06/11/2010 06:59

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.615		0.0100	mg/kg wet	0.600		102	85-115			

Matrix Spike (0F10027-MS1) Prepared: 06/10/2010 16:30 Analyzed: 06/11/2010 07:05

Source: A002980-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.62		0.0944	mg/kg dry	5.31	0.0255 U	87	85-115			

Matrix Spike Dup (0F10027-MSD1) Prepared: 06/10/2010 16:30 Analyzed: 06/11/2010 07:09

Source: A002980-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.73		0.0944	mg/kg dry	5.48	0.0255 U	86	85-115	2	10	

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 0F10027 - EPA 7471B

FLAGS/NOTES AND DEFINITIONS

PQL	PQL: Practical Quantitation Limit.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value. The associated sample note or project narrative indicate the causative reason.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
O-01	This compound is a common laboratory contaminant.
QB-01	The method blank had a positive result for the analyte; however, the concentration in the method blank is less than 10% of the sample result, which minimizes the impact of the deviation.
QL-02	The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-14	Confirmed matrix effects
QM-17	Matrix spike recovery was outside acceptance limits due to high concentrations of analyte in source sample.
QS-03	Surrogate recovery outside acceptance limits.
QS-04	Surrogate recovery not calculated. Surrogate diluted out of the calibration range.
QV-01	The associated continuing calibration verification standard exhibited high bias; since the result is ND, the impact on data quality is minimal.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name	ENVIRONMENTAL REMEDIATION SVCS
Address	760 TALLEYRAND AVE
City/ST/Zip	JACKSONVILLE, FL. 32202
Tel	(904) 791-9992
Fax	
Sampler(s) Name, Affiliation (Print)	Valtrious Morris
Sampler(s) Signature	Valtrious Morris
Project Number	CCI - CECIL FIELD
Project Name/Desc	High Springs Quarry (Lime Rock)
PO # / Billing Info	
Reporting Contact	
Billing Contact	
Facility # (if required)	

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

✓ Expedited

Due 6/16/10

Lab Workorder B002736

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	TCL 8270	TCL 8260	8270 PAH (SIM)	FIPRO	8081 TCL	8151 TCL	8082	pH	TAL Metals		Sample Comments
1	NEWBERY PIT01		1445	G	Soil	7	X	X	X	X	X	X	X	X	X		
2	" "		1446	G													
3	" "		1447	G													
4	" "		1450	G													
5	" "		1452	G													
6	" "		1454	G													
7	" "		1455	G													

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Comments		Relinquished By: Valtrious Morris	Date/Time: 6-9-10/1715	Received By: C. Tomp	Date/Time: 6/9/10 17:15
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: JX017 @ 1.8		Condition Upon Receipt: ___ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

www.encolabs.com

TITAN AMERICA

Titan Florida
11000 NW 121 Way
Medley, FL 33178
Phone (305) 827-7441
Fax (305) 827-7443

June 17, 2010

Dear Customer:

Titan America Pennsuco Quarry, FDOT Mine 87-145 is authorized under the Florida Administrative Chapter 14-103, Aggregate Source Approval, to supply aggregate materials to FDOT projects. All material comes from below surface mining operation on site and no material is accepted outside the mining operation.
Our product ASTM #57 FDOT Code 10 is an approved FDOT material.

Should you require further information on our products, please feel free to contact me.

Sincerely,

Robert Melendez
Quality Control Supervisor
Titan America, LLC-Pennsuco Aggregate
Office: (305) 827-7441
Cell: (305) 986-0923
Fax: (305) 827-7443
rmelendez@titanamerica.com

Appendix J
Excavation Permit

JACKSONVILLE AVIATION AUTHORITY CECIL FIELD
DIG PERMIT/REQUEST

1. Costs associated with utility locates will be the responsibility of the requestor.

2. The requestor is responsible for the repair of any utilities damaged during the digging operation. Hand digging to locate lines is recommended.

3. The JAA Cecil Field Aviation does not accept any financial responsibility associated with repairs due to any other damage associated with this request.

4. Contact "Sunshine State One Call Center" to coordinate all your utility locates. The service is free of charge.

REQUESTOR (NAME): Craig Haas PHONE NUMBER: 863-286-8320

COMPANY: CH2M HILL REQUEST DATE: Jan 6, 2010

LOCATION(S): (Attach Map) See Attached Bldg 502 & Bldg 290A

PURPOSE: Environmental Restoration

UTILITY LOCATED AND/OR AREA SCREENED (Sunshine State One Call Center: 1-800-432-4770)

	YES	NO
GAS:		
ELECTRICAL:		
WATER:		
SEWAGE:		
CABLE:		
TELEPHONE:		
STORMWATER:		

COMMENTS: Sunshine State One Ticket # 005005827 (see attached)

(Maintenance) Aviation Facilities Coordinator — Approval/Disapproval Date: 6/14/10

(Env/Planning/Eng) Facilities Manager — Approval/Disapproval Date: 6/15/10

6/14/10 Approved

Cecil Field Manager: Rusty Chandler 573-1613
Aviation Facilities Coordinator: Roy Craigue 573-1607 Facilities Tech: Chris West 573-1605
Senior Resident Inspector: Cecil Poston 741-2227

Weinberg, Noah/JAX

From: irth_host@callsunshine.com
Sent: Wednesday, June 09, 2010 8:57 AM
To: Weinberg, Noah/JAX
Subject: SSOCOF CONFRM 2010/06/09 #00001 160001277-000 NORM RPLC

CONFRM 00001 CALL SUNSHINE 06/09/10 08:57:21ET 160001277-000 GRID Ticket : 160001277 Rev:000
Taken: 06/09/10 08:54ET Old Tkt: 090005199 Taken: 03/31/10 13:33ET Oper: KIM

State: FL Cnty: DUVAL GeoPlace: JACKSONVILLE
CallerPlace: JACKSONVILLE
Subdivision: CECIL FIELD AIRPORT

Address :
Street : AVIATION AVE
Cross 1 : 1ST ST
Within 1/4 mile: Y

Locat: FROM THE INTER OF AVIATION AVE AND 1ST ST TRAVEL E 160FT THEN SE APPROX
1.26 MILES ALONG THE AIRPORT TERMINAL TO THE BLDG 290A AND LOCATE THE ENTIRE N SIDE OF THE
BLDG WHICH IS APPROX 10FT X 10FT
:
Remarks : GRID PER LOCATE ***TO ALL LOCATORS PLEASE CONTACT KELLY PETTYCOURT FROM JAA AT
904-573-1604 PRIOR TO LOCATE TO OBTAIN ACCESS TO AIRPORT PREMISES THIS TICKET REPLACES TICKET
#090005199 DOROTHY B 42 2010/06/09 08:54:19
*** LOOKUP BY MANUAL ***
:
Grids : 3012B8152D

Work date: 06/14/10 Time: 08:00ET Hrs notc: 071 Category: 3 Duration: 02 DAYS Due Date :
06/11/10 Time: 23:59ET Exp Date : 07/09/10 Time: 23:59ET Work type: ENVIRONMENTAL CLEAN UP
Boring: N White-lined: Y
Ug/Oh/Both: U Machinery: Y Depth: 2FT Permits: Y PENDING Done for : US NAVY

Company : CH2M HILL CONSTRUCTORS, INC. Type: CONT Co addr : 10142 103RD ST Co addr2: SUITE
105
City : JACKSONVILLE State: FL Zip: 32210
Caller : NOAH WEINBERG Phone: 904-777-4812 Ext: 222 Contact : NOAH WEINBERG Phone: 623-521-
4503
BestTime: 9-5
Mobile : 623-521-4503
Fax : 352-381-3915
Email : NOAH.WEINBERG@CH2M.COM

Submitted: 06/09/10 08:54ET Oper: DOR Chan: 42
Mbrs : CCTV03 JE1359 JEA JEA773 SBF17

FORM 429-42-001
MATERIALS
6/95

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
AGGREGATE SYSTEM
COARSE AGGREGATE CODE FORM

SOURCE IDENTIFICATION

PROJECT NO. _____ PAY ITEM NO. _____ MATERIAL NO. _____

SAMPLE NO. 101803 LAB NO. _____ TESTED BY AJ DATE SAMPLED 05/04/10 (MMDDYY)

SAMPLED BY AJ DATE TESTED 05/04/10 (MMDDYY) SOURCE NO. TM - 439 MINE NO. 87-146

MATERIAL IDENTIFICATION

MATERIAL CODE 10 MATERIAL TYPE 06 SAMPLE TYPE 3 SAMPLED FROM 02 PROCESS 01

ADDITIONAL INFORMATION ASTM # 57 STONE

TEST RESULTS

FM _____ PASS 200 1.20 DRWT _____ SPGR _____ TYPE GV _____ SOUND _____

LA ABRA _____ GRADE _____ ABSORPTION _____ SILICA _____ CL _____

SULP _____ PHOSPHATE _____ DESIGN MIX _____ ASPH/CONCRETE PLANT NO. _____

REMARKS _____

SAMPLE WEIGHT 3666.9 gms/lbs-DRY WT. 3627.9 - LOSS 39.0 + PAN WT. 5.0

$$\%\text{-}200 = \frac{[(\text{Original Dry Wt} - \text{Dry Wt After Washing}) + \text{Minus 200 Material from Dry Sieving}] \times 100}{\text{Original Dry Wt}}$$

GRADATION 10291.4

SIEVE NO.	SIEVE SIZE	ACCUM. WT.	% WEIGHT	% RETAINED	% PASSING	REMARKS
1	1 1/2"	0.0			100.0	
2	1"	0.0			100.0	
3	1/2"	5873.6			42.9	
4	#4	9924.4			3.6	
5	#8	10061.5			2.2	
6	Pan	10274.2			0.17	
7						
TOTAL WEIGHT						

Appendix K
Final Dig and Haul Package, Building 502, Tank 502
(Tetra Tech NUS, Inc., September 2007)

Document Tracking Number 07JAX0052

September 11, 2007

Project Number 112G00378

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN IV Contract Number N62467-04-D-0055
Contract Task Order 0025

Subject: Final Dig and Haul Package, Building 502, Tank 502
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Dig and Haul Package for the subject site. This package has been prepared for the United States Navy (Navy), Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) 0025 for the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055.

SITE BACKGROUND

Tank 502, a 1,000-gallon fuel oil tank, was removed in 1997, and a subsequent site assessment was performed by Harding Lawson Associates (HLA) in 1998 that recommended a soil source removal. The source removal was conducted in January 1999, and the following items were noted in the report:

- The contaminated soil associated with Tank 502 was removed.
- No free product was encountered during the excavation.
- Three monitoring wells (CEF-502-1S, CEF-502-2S, and CEF-502-5D) were abandoned because they were within the limits of the excavation.

In April 1999, a follow-up Site Assessment Report (SAR) recommended that No Further Action be conducted with regard to soils at the site. The SAR recommended that groundwater monitoring only for natural attenuation take place because benzene, ethylbenzene, xylenes, naphthalene, and total recoverable petroleum hydrocarbons (TRPH) were previously detected in excess of Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs). The SAR noted that wells CEF-502-2S and CEF-502-5D had been abandoned, and it recommended that those wells be replaced and monitored along with CEF-502-4S. The FDEP responded in July 1999 with a Monitoring Only Plan (MOP) approval letter that required semi-annual sampling of CEF-502-1S, CEF-502-4S, CEF-502-2S, and CEF-502-5D. HLA replaced abandoned wells CEF-502-2S and CEF-502-5D with CEF-502-6S and CEF-502-7D, respectively, before the first semi-annual event in August 1999. Following the second semi-annual sampling event in March 2000, the FDEP agreed to continue groundwater monitoring. However, the FDEP required a monitoring well in the former location of CEF-502-1S and stipulated that the well should be sampled for benzene, toluene, ethylbenzene, and total xylenes using

United States Environmental Protection Agency (USEPA) Method 602; Polynuclear Aromatic Hydrocarbons (PAHs) using USEPA Method 8310; and TRPH using the Florida Petroleum Range Organics (FL-PRO) method.

During March and April 2001, TtNUS conducted a supplemental site assessment in response to the FDEP recommendations in response to the 1999 SAR. TtNUS personnel supervised the installation of a replacement well for CEF-502-1S (designated CEF-502-1SR), and sampled this well and CEF-502-4S, CEF-502-6S, and CEF-502-7D for volatile organic compounds, PAHs, and TRPH as required in the MOP. The Supplemental SAR recommended several modifications to the monitoring program including the installation and sampling of an additional well (CEF-502-8S) and sampling of an additional existing well (CEF-502-3S). The recommendations were approved by the FDEP on August 3, 2001, and were implemented during the next semi-annual sampling event in December 2001.

Four semi-annual groundwater monitoring events were conducted from June 6, 2002 through January 28, 2004. The Second Semi-Annual, Fourth Year Groundwater Monitoring Report indicated that concentrations of benzene, ethylbenzene, and total xylenes were less than their respective milestone objectives for Year 4. However, the concentrations of naphthalene and TRPH in well CEF-502-1SR were greater than the milestone objectives in Year 4.

Because the concentrations of contaminants of concern at CEF-502-1SR continued to exceed GCTLs (milestones), TtNUS recommended that semi-annual monitoring of existing wells be continued and also recommended additional characterization of the source of contamination contributing to CEF-502-1SR. This recommendation was discussed and approved at the December 2005 Naval Air Station (NAS) Cecil Field Base Realignment and Closure Cleanup Team (BCT) meeting. In November, 2006, TtNUS advanced 10 soil borings in the vicinity of CEF-502-1SR (see Figure 1). Based on field screening results and visual observations, one soil sample was collected from each location for fixed-base laboratory analysis. The samples were analyzed for PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310 and for TRPH using FL-PRO. Concentrations of TRPH exceeded its FDEP Soil Cleanup Target Level (SCTL) for the samples CEF-502-SB06, CEF-502-SB07, CEF-502-SB09, and CEF-502-SB10. The soil analytical results for the remaining soil samples indicated that all target analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs. The SAR Addendum detailed the results of the additional soil sampling and recommended a source removal to address contaminated soil in the vicinity of Building 502.

Based on the direction at the October 2006 BCT meeting, CH2M Hill conducted a site visit in January 2007 to evaluate the Building 502 footer as preparation for the proposed source removal. The Building 502 footer was observed to extend from 3.5 to 4.5 feet below ground surface (bgs). While excavating an access hole at historical sample point SB07 during the site visit, a pipe was observed that appeared to lead from Building 502 to the former Tank 502 location. Building 502 is currently used for police training activities.

GUIDANCE NOTES

This information is provided for general guidance associated with the soil removal action. The area of excavation is shown on Figure 1. The extent of excavation will be defined in the field by TtNUS with white spraydown paint (or equivalent) prior to the execution of the removal action. The monitoring well CEF-502-1SR, with a depth of 12.48 feet bgs, will be destroyed during the excavation activities. This well will be reinstalled and sampled by TtNUS upon completion of the excavation and site restoration.

Prior to the removal action a utility clearance will be conducted to field locate and mark all utilities in the area of and near the proposed soil removal action. The contractor shall coordinate with TtNUS regarding the utility clearance and notification of Sunshine State One Call of Florida and the Jacksonville Aviation Authority. The abandoned fuel line can be removed during the soil removal action.

The area of soil removal is a 15-foot by 18-foot area as shown in Figure 1. The soil will be excavated to a depth of approximately 3.5 feet bgs to the top of the building footer. The remaining soil will be removed in 4-foot wide trenches running 15 feet west to east to the depth of the water table (approximately 9 feet bgs). The contractor will place a polyethylene or other appropriate material liner along the wall of each trench preceding backfill to serve as a visual barrier between clean fill material and contaminated soil to be removed. Each trench will be immediately backfilled with certified clean fill material consisting of fine gravel or sands free of debris, foreign objects, organics, unsuitable soil, and other deleterious material. The backfill will be placed in layers not to exceed 8 inches and compacted to 95 percent of the Standard Proctor maximum density (ASTM D698) and field verified prior to digging the next trench. Density testing will be conducted on every compacted lift and at grade prior to asphalt replacement. The contractor will continue to remove and replace soil in 4-foot trench intervals until the proposed excavation area has been removed. Clean fill material will be added in 8-inch intervals and compacted to 95 percent of the Standard Proctor maximum density for the remaining excavated volume, and the surface will be restored to its original grade and resurfaced. The asphalt replacement will be equal to or better than the existing pavement. It is assumed that 6 to 8 inches of processed gravel and 2 layers of 2½ -inch Class 2 asphalt compacted to final thickness of 2 inches each layer for total of 4 inches will be required.

The building footer will be inspected regularly during excavation activities. If the building footer is observed to be of poor quality or if undermining is observed in the vicinity of the footer during the excavation, shoring of the foundation will be conducted to facilitate the removal of soil without damage to the structure.

The contractor will be responsible for the following:

- The schedule and methods of excavation. Excavation and backfilling activities shall be conducted in accordance with OSHA 1926, Subpart P.

- All aspects of work site health and safety and compliance with OSHA 1910.120 requirements.

- Identification and avoidance of all aboveground and underground utilities or other manmade structures.

- Waste characterization, transport (both on and off site), and disposal of all excavated soil.

- Notification of TtNUS and the Navy if observations indicate that contaminants may extend beyond the planned lateral or vertical limits of the excavation.

- Saw cutting of pavement to the limits of the proposed excavation area prior to excavation. Where bituminous flexible pavement adjoins the limits of excavation, the edges adjacent to the excavation will be trimmed to neat straight lines before resurfacing.

- Depth of excavation is to the water table (approximately 9 feet bgs). Except where necessary for avoidance of structures or utilities or where otherwise specified by TtNUS, the excavation should extend to the depths presented in this Dig and Haul Package.

- Excavated soil will be stockpiled on and covered with heavy-duty polyethylene sheeting at the site. This will be done in a manner to avoid the potential for contaminating surrounding soil or surface water. Alternately, soils may be stockpiled in properly covered roll-off containers or direct loaded for off site disposal.

- Materials used to backfill the excavation will be from an uncontaminated source and be free of organic or other unsuitable material. A Proctor compaction test, ASTM D698, will be performed on fill material preceding delivery to the site and certification of clean material is required.

- Upon completion, the area of excavation will be resurfaced using Florida Department of Transportation approved materials matching existing conditions or better at the site.

If you have any questions regarding the information presented in this document, please contact me by phone at (412) 921-8163, or via e-mail at Robert.Simcik@ttnus.com.

Sincerely,

Robert F. Simcik, P.E.
Task Order Manager

c: B. Nwokike, NAVFAC SE
M. Halil, CH2M Hill
K. Wimble, TtNUS
J. Johnson, TtNUS, Information Repository
M. Jonnet, TtNUS, DMS upload.
CTO 0025 Project File

CERTIFICATION

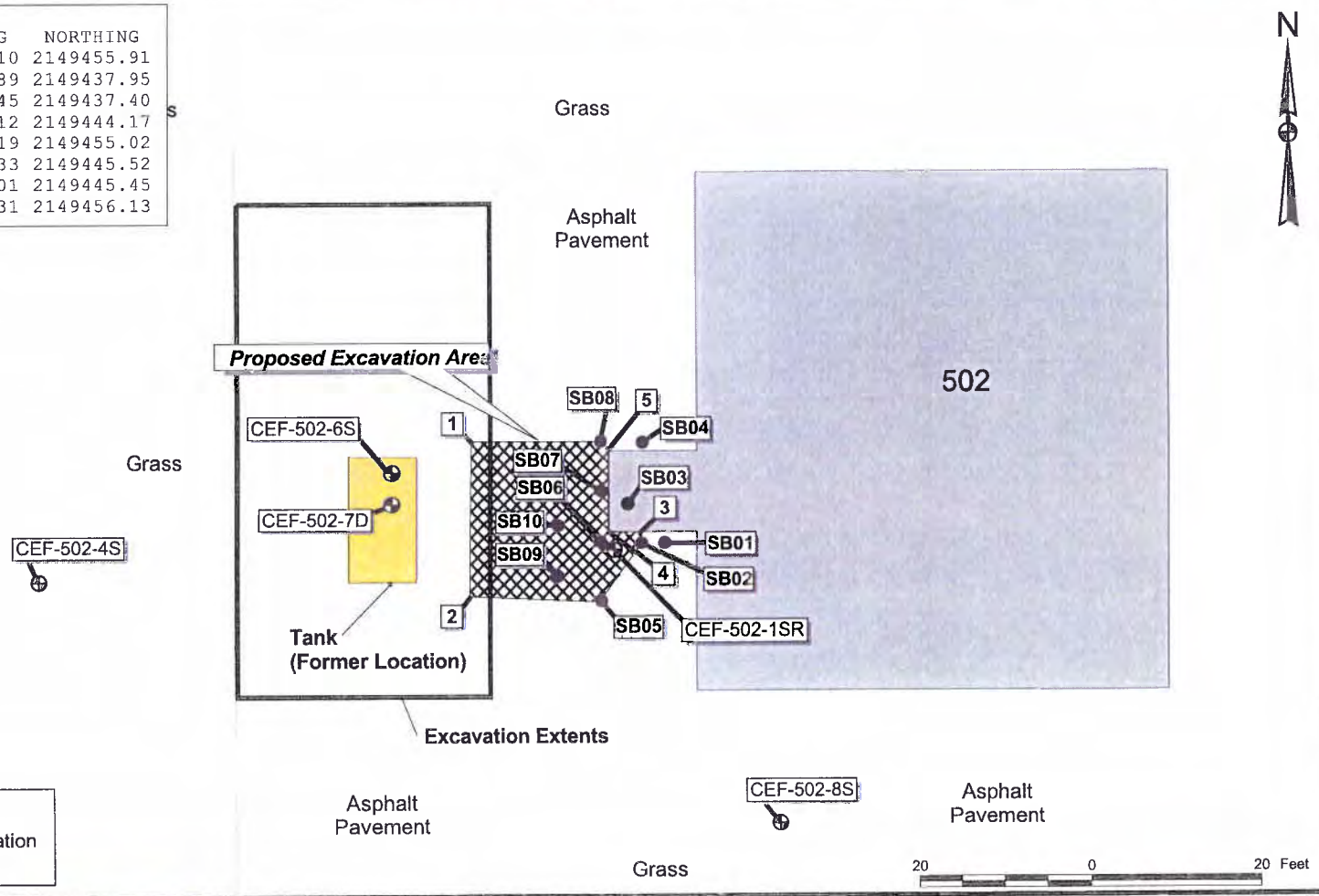
The information herein contained is based on the information provided and associated information detailed in previous reports regarding this Site. If conditions are determined to exist that differ from those described, the undersigned Profession Engineer should be notified to evaluate the affects of any additional information on the information described in this report. This Dig and Haul Package was developed for Building 502, Tank 502 at the Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

September 7, 2007
Robert F. Simcik, P.E.
PE Number 61263
Florida PE License Number 61263

ROBERT FRANK SIMCIK
LICENSE
No. 00061263
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

FIGURE

CORNER	EASTING	NORTHING
1	386260.10	2149455.91
2	386259.89	2149437.95
SB05	386275.45	2149437.40
SB02	386280.12	2149444.17
3	386276.19	2149455.02
4	386276.33	2149445.52
5	386280.01	2149445.45
SB08	386275.31	2149456.13



LEGEND
- Soil Boring Location
- Monitoring Well

DRAWN BY	DATE
MJJ	25Aug05
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

PROPOSED SOIL REMOVAL AREA
BUILDING 502
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 248	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV 0

P:\GIS\CECIL\B\dg0502.apr 15May07 MJJ Layout02

Appendix L
Final Site Assessment Report Addendum, Building 502, Tank 502 (Tetra Tech NUS, Inc., December 2007)

TETRA TECH NUS, INC.
8640 Philips Highway, Suite 16 • Jacksonville, FL 32256
Tel 904.636.6125 • Fax 904.636.6165 • www.tetratech.com

Document Tracking Number 07JAX0012

December 10, 2007

Project Number 112G00378

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 IV Contract Number N62467-04-D-0055
Contract Task Order 0025

Subject: Final Site Assessment Report Addendum
Building 502, Tank 502
Former Naval Air Station (NAS) Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Final Site Assessment Report (SAR) Addendum (SARA) for the subject site (as shown on Figure 1) under the referenced Contract Task Order (CTO). This report was prepared by TtNUS for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055. This SARA is TtNUS' response to the Florida Department of Environmental Protection's (FDEP's) technical review (see Attachment A) of the Building 502, Tank 502 Groundwater Monitoring Report, (1st Semi-Annual, 4th Year) dated June 23, 2004. This report was prepared in accordance with Chapter 62-770, Florida Administrative Code (F.A.C.).

As stated in the letter included in Attachment A, the FDEP suggested additional soil investigation at Building 502 based on the continued elevated levels of naphthalene, 1-methylnaphthalene, 2-methlynaphthalene, and total recoverable petroleum hydrocarbons (TRPH) in monitoring well CEF-502-1SR. In response to the letter, a total of 10 step-out soil borings in the vicinity of CEF-502-1SR were installed and sampled for polynuclear aromatic hydrocarbons (PAHs) including 1-methylnaphthalene and 2-methylnaphthalene using United States Environmental Protection Agency (USEPA) Method SW-846 8310 and for TRPH using the Florida Petroleum Range Organics (FL-PRO) method. In addition, one round of annual sampling of the six existing wells (CEF-502-1SR, CEF-502-3S, CEF-502-4S, CEF-502-6S, CEF-502-7D, and CEF-502-8S) was conducted at the time of soil sampling. The samples were analyzed for TRPH using FL-PRO, PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310, and volatile organic compounds (VOCs) using USEPA Method SW-846 8260B.

BACKGROUND

Tank 502, a 1,000-gallon fuel oil tank, was removed in 1997, and a subsequent site assessment was performed by Harding Lawson Associates (HLA) in 1998 that recommended a soil source removal. The

source removal was conducted in January 1999, and the following items were noted in the report (CH2M Hill Constructors, Inc.):

- The contaminated soil associated with Tank 502 was removed.
- No free product was encountered in the excavation.
- Three monitoring wells (CEF-502-1S, CEF-502-2S, and CEF-502-5D) were abandoned because they were within the limits of the excavation.

In April 1999, a follow-up SAR (HLA, 1999) recommended that no further action be conducted with regard to soils at the site. The SAR recommended that groundwater monitoring only for natural attenuation (MONA) take place as benzene, ethylbenzene, xylenes, naphthalene, and TRPH were previously detected in excess of FDEP Groundwater Cleanup Target Levels (GCTLs). The SAR noted that wells CEF-502-2S and CEF-502-5D had been abandoned, and it recommended that those wells be replaced and monitored along with CEF-502-4S. The FDEP responded in July 1999 with a Monitoring Only Plan (MOP) approval letter that required the semi-annual sampling of CEF-502-1S, CEF-502-4S, CEF-502-2S, and CEF-502-5D. A copy of the MOP approval letter is provided as Attachment B. HLA replaced the abandoned wells CEF-502-2S and CEF-502-5D with CEF-502-6S and CEF-502-7D, respectively, before the commencement of the first semi-annual event in August 1999. Following the second semi-annual sampling event, the FDEP agreed with the SAR recommendation (HLA, 1999) to continue groundwater monitoring. However, the FDEP required a monitoring well in the former location of CEF-502-1S and stipulated that the well should be sampled for benzene, toluene, ethylbenzene, and total xylenes using the USEPA Method 602; PAHs using USEPA Method 8310; and TRPH using FL-PRO.

During March and April 2001, TtNUS conducted a supplemental site assessment in response to FDEP's recommendations and comments to the 1999 SAR. TtNUS personnel supervised the installation of a replacement well for CEF-502-1S (designated CEF-502-1SR) and sampled the four wells for VOCs, PAHs, and TRPH as required in the MOP. The Supplemental SAR (TtNUS, 2001) recommended several modifications to the monitoring program including the installation and sampling of an additional well (CEF-502-8S) and sampling of an additional existing well (CEF-502-3S). The recommendations were approved by the FDEP on August 3, 2001, and were implemented during the next semi-annual sampling event in December 2001.

Four semi-annual groundwater monitoring events were conducted from June 6, 2002 through January 28, 2004. The Second Semi-Annual, Fourth Year Groundwater Monitoring Report indicated that concentrations of benzene, ethylbenzene, and total xylenes were less than their respective milestone objectives for Year 4. However, the concentrations of naphthalene and TRPH in well CEF-502-1SR were greater than the Year 4 milestone objectives. (TtNUS, 2004)

Because the concentrations of contaminants of concern (COCs) at CEF-502-1SR continued to exceed the GCTLs specified in Chapter 62-770, F.A.C., TtNUS recommended that semi-annual monitoring of existing wells be continued and also recommended additional characterization of the source of contamination contributing to CEF-502-1SR (TtNUS, 2004). This recommendation was discussed and approved at the December 2005 NAS Cecil Field Base Realignment and Closure Cleanup Team (BCT) meeting.

FIELD OPERATIONS

On November 20 and 21, 2006, a total of 10 step-out soil borings were installed via hand auger in the vicinity of CEF-502-1SR. The soil boring locations are shown on Figure 1. Soil samples were collected from the hand auger bucket in the unsaturated zone at 1-foot vertical intervals beginning at 1 foot below ground surface (bgs) to 5 feet bgs. Samples were retained for field screening with an organic vapor analyzer equipped with a flame ionization detector at each of the soil boring locations. Soil vapor analyses were performed in accordance with the headspace screening method described in Chapter 62-770.200(2), F.A.C.

Based on field screening results and visual observations, one soil sample was collected from each location (soil borings SB01 through SB10) for fixed-base laboratory analysis. When no instrumental or visual indications of contamination were indicated, soil samples were collected from 5 feet bgs. Most of the samples were collected at 5 feet bgs; however, SB02 and SB09 were collected at 3 feet bgs. The samples were placed on ice and hand-delivered to ENCO Laboratories in Jacksonville, Florida for analysis. The samples were analyzed for PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310 and for TRPH using FL-PRO. Excess soil was placed in 55-gallon drums for off-site disposal. The excess soil was analyzed for PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310 and for TRPH using FL-PRO.

In addition, Year 5 annual sampling was conducted at the six existing wells (CEF-502-1SR, CEF-502-3S, CEF-502-4S, CEF-502-6S, CEF-502-7D, and CEF-502-8S) at the time of soil sampling. Locations of the six permanent monitoring wells at Building 502 are shown on Figure 2. The samples were placed on ice and hand delivered to ENCO Laboratories in Jacksonville, Florida for analysis. The samples were analyzed for TRPH using FL-PRO, PAHs including 1-methylnaphthalene and 2-methylnaphthalene using USEPA Method SW-846 8310, and VOCs using USEPA Method SW-846 8260B. The reported detection limits for these methods met the requirements for the similar methods stipulated in the MOP approval letter. The purge water was placed in 55-gallon drums for off-site disposal.

Prior to obtaining groundwater samples, synoptic water levels and total well depths were measured and recorded on a site-specific groundwater level measurement sheet (see Attachment C). General sampling protocols were in accordance with FDEP Standard Operating Procedures (SOPs) and TtNUS SOP SA-1.1. The data were recorded on groundwater sample log sheets and low flow purge data sheets (see Attachment C).

Water level measurements were recorded on November 20, 2006 from each of the monitoring wells shown in Table 1 prior to sample collection. The depth to water ranged from 8.46 feet bgs (CEF-502-3S) to 9.59 feet bgs (CEF-502-7D). Depth-to-water measurements, top of casing elevations, and groundwater elevations are presented in Table 1.

RESULTS

The soil analytical results (see Attachment D) in the vicinity of CEF-502-1SR indicate the following:

- The sample from CEF-502-SB06 had a TRPH concentration of 378 milligrams per kilogram (mg/kg), which exceeds the leachability to groundwater Soil Cleanup Target Level (SCTL) of 340 mg/kg. All other analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs.

- The sample from CEF-502-SB07 had a TRPH concentration of 804 mg/kg, which exceeds the residential direct exposure SCTL of 460 mg/kg and the leachability to groundwater SCTL of 340 mg/kg. All other analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs.

- The sample from CEF-502-SB09 had a TRPH concentration of 3,580 mg/kg, which exceeds the industrial direct exposure SCTL of 2,700 mg/kg, the residential direct exposure SCTL of 460 mg/kg, and the leachability to groundwater SCTL of 340 mg/kg. All other analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs.

- The sample from CEF-502-SB10 had a TRPH concentration of 434 mg/kg, which exceeds the leachability to groundwater SCTL of 340 mg/kg. All other analytes were either not detected or were detected at estimated concentrations less than their respective SCTLs.

The soil analytical results for the remaining soil samples (CEF-502-SB01, CEF-502-SB02, CEF-502-SB03, CEF-502-SB04, CEF-502-SB05, and CEF-502-SB08) indicate that all target analytes

were either not detected or were detected at estimated concentrations less than their respective SCTLs. Figure 3 presents exceedances in the soil samples collected as part of the SARA, and Table 2 summarizes the detected COCs.

The groundwater analytical results (see Attachment E) for CEF-502-1SR indicate the following:

- Well CEF-502-1SR had a 1-methylnaphthalene concentration of 52.8 micrograms per liter (µg/L), which exceeds the GCTL of 28 µg/L.
- CEF-502-1SR had a 2-methylnaphthalene concentration of 110 µg/L, which exceeds the GCTL of 28 µg/L.
- All other analytes were either not detected or were detected at estimated concentrations less than their respective GCTLs.

The analytical results (see Attachment E) for the remaining wells (CEF-502-3S, CEF-502-4S, CEF-502-6S, CEF-502-7D, and CEF-502-8S) indicate that all analytes were either not detected or were detected at estimated concentrations less than their respective GCTLs.

Figure 4 presents COC analytical data for groundwater, and Table 3 summarizes the detected COCs in groundwater.

The groundwater elevation data indicates that flow is to the east-southeast (see Figure 5), which is generally consistent with data from HLA's semi-annual monitoring reports. Historical and recent groundwater elevation data for the site are included in Table 1.

CONCLUSIONS AND RECOMMENDATIONS

Because TRPH exceedances were detected in samples from four soil borings (CEF-502-SB06, CEF-502-SB07, CEF-502-SB09, and CEF-502-SB10) located west of Building 502, a source removal is recommended. Monitoring well 502-1SR would have to be destroyed during the excavation, but would be reinstalled after the completion of excavation activities.

TtNUS recommends continuation of the MONA program with the following modifications:

- Following the excavation, monitor the following monitoring wells semi-annually:
  - CEF-502-1SR replacement well (source well)
  - CEF-502-4S (perimeter well)
  - CEF-502-6S (perimeter well)

- Wells CEF-502-3S and CEF-502-7D should be eliminated from the MONA program.

- The recommended analytical list is as follows: PAHs, including 1-methylnaphthalene and 2-methylnaphthalene, using USEPA Method SW846 8310, and TRPH using FL-PRO.

Based on Cecil Field BCT review and input in response to these findings presented in a meeting conducted in March 2007, a draft scope of work detailing the extent of the proposed excavation was developed and submitted to the BCT for review and was subsequently approved by FDEP on August 31, 2007. It is anticipated excavation work shall commence in accordance with the approved plan in February 2008.

If you have any questions with regard to this submittal, please contact Kara Wimble at (904) 730-4669, extension 214, or via email at kara.wimble@ttnus.com.

Sincerely,

Mark A. Peterson, P.G.
PG Number 1852

Kara F. Wimble
Project Scientist

MP/kfw

Attachments (7)

c: B. Nwokike, NAVFAC SE (CD only)
M. Perry, TtNUS (unbound and CD)
D. Humbert, TtNUS (cover letter only)
M. Speranza, TtNUS (letter only)
M. Jonnet, TtNUS (Cecil DMS) (CD)
S. Naik, CH2M Hill (CD)
J. Logan, TtNUS
R. Simcik, TtNUS (Bookcase File)
J. Johnson, TtNUS (Information Repository)
CTO 0025 Project File

CERTIFICATION

The information herein contained is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the affects of any additional information on the information described in this report. This Final Site Assessment Report Addendum was developed for Building 502, Tank 502 at the Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

December 10, 2007
Mark A. Peterson, P.G.
Florida License Number PG-0001852

TABLE 2
SOIL ANALYTICAL DATA
SITE ASSESSMENT REPORT ADDENDUM
BUILDING 502, TANK 502
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONSTITUENT	FDEP SCTLs			CEF-502-					
	Residential	Industrial	Leachability	SB01 5 ft bgs 11/20/06	SB02 3 ft bgs 11/21/06	SB03 5 ft bgs 11/21/06	SB04 5 ft bgs 11/21/06	SB05 5 ft bgs 11/20/06	SB06 5 ft bgs 11/21/06
SEMIVOLATILE ORGANICS (MG/KG)									
1-METHYLNAPHTHALENE	200	1800	3.1	0.0126 U	0.0115 U	0.0133 U	0.0118 U	0.0121 U	0.0113 U
2-METHYLNAPHTHALENE	210	2100	8.5	0.0117 U	0.0107 U	0.0125 U	0.011 U	0.0113 U	0.0106 U
ACENAPHTHENE	2400	20000	2.1	0.00861 U	0.00788 U	0.00914 U	0.00805 U	0.00828 U	0.00777 U
ACENAPHTHYLENE	1800	20000	27	0.0126 U	0.0115 U	0.0133 U	0.0118 U	0.0121 U	0.0113 U
ANTHRACENE	21000	300000	2500	0.00818 U	0.00749 U	0.00868 U	0.00765 U	0.00787 U	0.00739 U
BENZO(A)ANTHRACENE	NC	NC	0.8	0.00818 U	0.00749 U	0.00868 U	0.00765 U	0.00787 U	0.00739 U
BENZO(A)PYRENE	0.1	0.7	8	0.00818 U	0.00749 U	0.00868 U	0.00765 U	0.00787 U	0.00739 U
BENZO(B)FLUORANTHENE	NC	NC	2.4	0.00632 U	0.00578 U	0.00671 U	0.00591 U	0.00608 U	0.0057 U
BENZO(G,H,I)PERYLENE	2500	52000	32000	0.0121 U	0.0111 U	0.0128 U	0.0113 U	0.0116 U	0.0109 U
BENZO(K)FLUORANTHENE	NC	NC	24	0.00818 U	0.00749 U	0.00868 U	0.00765 U	0.00787 U	0.00739 U
CHRYSENE	NC	NC	77	0.00866 U	0.00792 U	0.00919 U	0.0081 U	0.00832 U	0.00782 U
DIBENZO(A,H)ANTHRACENE	NC	NC	0.7	0.0133 U	0.0122 U	0.0141 U	0.0124 U	0.0128 U	0.012 U
FLUORANTHENE	3200	59000	1200	0.0106 U	0.00966 U	0.0112 U	0.00987 U	0.0101 U	0.00953 U
FLUORENE	2600	33000	160	0.00747 U	0.00684 U	0.00793 U	0.00699 U	0.00718 U	0.00674 U
INDENO(1,2,3-CD)PYRENE	NC	NC	6.6	0.0138 U	0.0126 U	0.0146 U	0.0129 U	0.0132 U	0.0124 U
NAPHTHALENE	55	300	1.2	0.0145 U	0.0132 U	0.0154 U	0.0135 U	0.0139 U	0.0131 U
PHENANTHRENE	2200	36000	250	0.00818 U	0.00749 U	0.00868 U	0.00765 U	0.00787 U	0.00739 U
PYRENE	2400	45000	880	0.0106 U	0.00966 U	0.0112 U	0.00987 U	0.0101 U	0.00953 U
TOTAL PETROLEUM HYDROCARBONS (MG/KG)									
TPH (C08-C40)	460	2700	360	6.64 U	15.3	70.6	161 E	63.4	**378 E**

See notes at end of table.

TABLE 2
SOIL ANALYTICAL DATA
SITE ASSESSMENT REPORT ADDENDUM
BUILDING 502, TANK 502
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONSTITUENT	FDEP SCTLs			CEF-502-				
	Residential	Industrial	Leachability	SB07 5 FEET 11/21/06	SB08 5 FEET 11/21/06	SB08-DU-01 1 FOOT 11/21/06	SB09 3 FEET 11/21/06	SB10 5 FEET 11/21/06
SEMIVOLATILE ORGANICS (MG/KG)								
1-METHYLNAPHTHALENE	200	1800	3.1	0.0117 U	0.0128 U	0.0113 U	0.0116 U	0.0127 U
2-METHYLNAPHTHALENE	210	2100	8.5	0.0109 U	0.0119 U	0.0106 U	0.0109 U	0.0118 U
ACENAPHTHENE	2400	20000	2.1	0.00801 U	0.00875 U	0.00777 U	0.00797 U	0.00867 U
ACENAPHTHYLENE	1800	20000	27	0.0117 U	0.0128 U	0.0113 U	0.0116 U	0.0127 U
ANTHRACENE	21000	300000	2500	0.00762 U	0.00832 U	0.00738 U	0.00758 U	0.00824 U
BENZO(A)ANTHRACENE	NC	NC	0.8	0.00762 U	0.00832 U	0.00738 U	0.00758 U	0.00824 U
BENZO(A)PYRENE	0.1	0.7	8	0.00762 U	0.00832 U	0.00738 U	0.00758 U	0.00824 U
BENZO(B)FLUORANTHENE	NC	NC	2.4	0.00588 U	0.00642 U	0.0057 U	0.00585 U	0.00636 U
BENZO(G,H,I)PERYLENE	2500	52000	32000	0.0113 U	0.0123 U	0.0109 U	0.0112 U	0.0122 U
BENZO(K)FLUORANTHENE	NC	NC	24	0.00762 U	0.00832 U	0.00738 U	0.00758 U	0.00824 U
CHRYSENE	NC	NC	77	0.00806 U	0.0088 U	0.00781 U	0.022 J	0.00872 U
DIBENZO(A,H)ANTHRACENE	NC	NC	0.7	0.0124 U	0.0135 U	0.012 U	0.0123 U	0.0134 U
FLUORANTHENE	3200	59000	1200	0.00982 U	0.0107 U	0.00952 U	0.00977 U	0.0106 U
FLUORENE	2600	33000	160	0.00695 U	0.00759 U	0.00674 U	0.00692 U	0.00753 U
INDENO(1,2,3-CD)PYRENE	NC	NC	6.6	0.0128 U	0.014 U	0.0124 U	0.0127 U	0.0139 U
NAPHTHALENE	55	300	1.2	0.0135 U	0.0147 U	0.0131 U	0.0134 U	0.0146 U
PHENANTHRENE	2200	36000	250	0.00762 U	0.00832 U	0.00738 U	0.00758 U	0.00824 U
PYRENE	2400	45000	880	0.00982 U	0.0107 U	0.00952 U	0.00977 U	0.0106 U
TOTAL PETROLEUM HYDROCARBONS (MG/KG)								
TPH (C08-C40)	460	2700	360	**804 DE**	185 E	299 E	**3580 DE**	**434 E**

FDEP SCTL = Florida Department of Environmental Protection Soil Cleanup Target Level, Chapter 62-777, F.A.C.
MG/KG = Milligrams per kilogram.
U = Not detected at associated detection limit.
NC = No criterion.
J = Estimated concentration.
D = Data reported from a dilution.
E = Result exceeded calibration limit.
bgs = Below ground surface.

Concentration exceeds criterion.

TABLE 1
GROUNDWATER ELEVATION AND MONITORING WELL CONSTRUCTION DATA
SITE ASSESSMENT REPORT ADDENDUM
BUILDING 502, TANK 502
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Number	Total Depth (ft bgs)	Top of Casing Elevation (ft NAVD)	April 9, 2001		December 11, 2001		March 4, 2002		June 6, 2002	
			Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)
CEF-502-1SR	12.48	82.16	6.31	75.85	5.27	76.89	4.65	77.51	8.38	73.78
CEF-502-3S	12.22	80.68	5.03	75.65	3.77	76.91	3.03	77.65	7.14	73.54
CEF-502-4S	12.36	80.68	5.07	75.61	3.73	76.95	3.02	77.66	7.18	73.50
CEF-502-6S	14.80	81.70	5.72	75.98	5.20	76.50	4.64	77.06	7.90	73.80
CEF-502-7D	29.95	81.65	6.00	75.65	4.87	76.78	4.21	77.44	7.84	73.81
CEF-502-8S	13.57	81.75	NA	NM	4.83	76.92	4.14	77.61	8.00	73.75

Well Number	Total Depth (ft bgs)	Top of Casing Elevation (ft NAVD)	December 20, 2002		June 24, 2003		January 28, 2004		November 20, 2006	
			Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)	Depth to Water (ft btoc)	Water Elevation (ft above msl)
CEF-502-1SR	12.48	82.16	4.77	77.39	5.62	76.54	8.36	73.80	9.40	72.76
CEF-502-3S	12.22	80.68	3.52	77.16	4.44	76.24	7.07	73.61	8.46	72.22
CEF-502-4S	12.36	80.68	3.54	77.14	5.45	75.23	7.17	73.51	8.6	72.08
CEF-502-6S	14.80	81.70	4.29	77.41	5.00	76.70	7.96	73.74	9.44	72.26
CEF-502-7D	29.95	81.65	4.62	77.03	5.41	76.24	7.98	73.67	9.59	72.06
CEF-502-8S	13.57	81.75	4.47	77.28	5.30	76.45	8.02	73.73	9.33	72.42

bgs = Below ground surface.
btoc = Below top of casing.
ft = Feet.
msl = Mean sea level.
NAVD = North American Vertical Datum, 1988.
NA = Not applicable.
NM = Not measured.

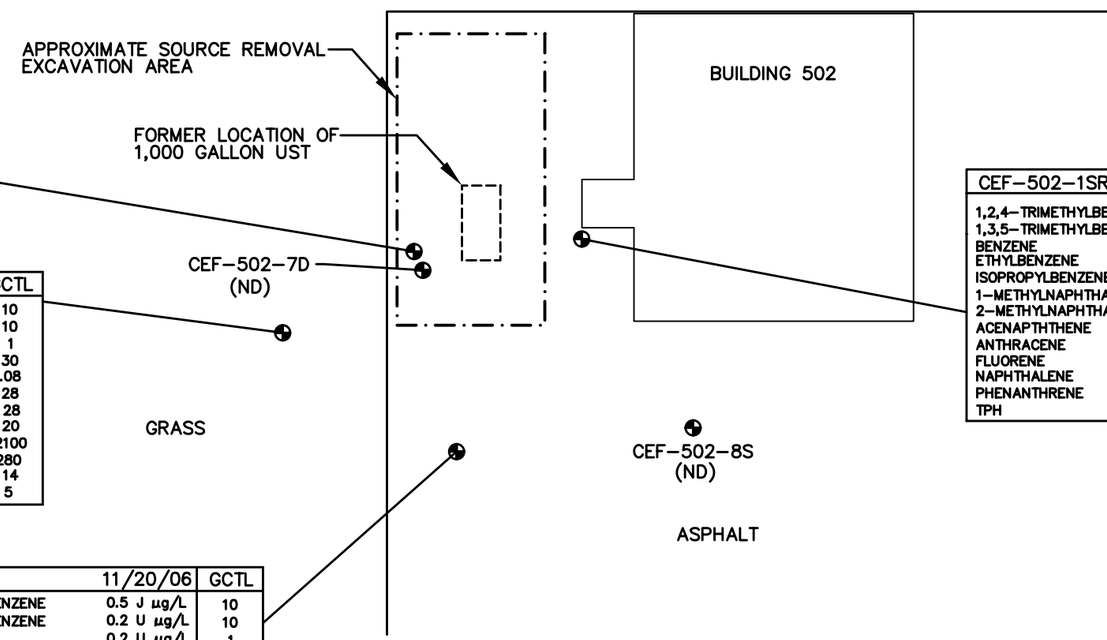
TABLE 3
GROUNDWATER ANALYTICAL DATA
SITE ASSESSMENT REPORT ADDENDUM
BUILDING 502, TANK 502
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONSTITUENTS	FDEP GCTL (µg/L)	CEF-502-						
		MW-1SR	MW-3S	MW-4S	MW-6S	MW-7D	MW-8S	MW-8S-DU-01
		11/21/06	11/20/06	11/21/06	11/20/06	11/20/06	11/21/06	11/21/06
VOLATILE ORGANICS (µg/L)								
1,2,4-TRIMETHYLBENZENE	10	6.9	0.5 J	0.6 J	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-TRIMETHYLBENZENE	10	2.8	0.2 U	0.6 J	0.2 U	0.2 U	0.2 U	0.2 U
BENZENE	1	0.2 U	0.2 U	0.3 J	0.2 U	0.2 U	0.2 U	0.2 U
ETHYLBENZENE	30	2.5	0.3 U	2.2	0.3 J	0.3 U	0.3 U	0.3 U
ISOPROPYLBENZENE	0.8	2.7	0.1 U	1.2	0.4 J	0.1 U	0.1 U	0.1 U
TOTAL XYLENES	20	0.3 U	0.3 U	0.9 J	0.3 U	0.3 U	0.3 U	0.3 U
SEMIVOLATILE ORGANICS (µg/L)								
1-METHYLNAPHTHALENE	28	**52.8 D**	6.46	1.48	1.95	0.02 U	0.02 U	0.02 U
2-METHYLNAPHTHALENE	28	**110 D**	4.92	8.37	3.75	0.02 U	0.02 U	0.02 U
ACENAPHTHENE	20	1.72	0.39	0.29	1.11	0.02 U	0.02 U	0.02 U
ANTHRACENE	2100	0.07 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
FLUORENE	280	2.78	0.58	0.22	2.16	0.02 U	0.02 U	0.02 U
NAPHTHALENE	14	11.2	0.92	2.69	0.43	0.02 U	0.02 U	0.02 U
PHENANTHRENE	210	2.4	0.13	0.02 U	0.08 J	0.02 U	0.02 U	0.02 U
TOTAL PETROLEUM HYDROCARBONS (MG/L)								
TPH (C08-C40)	5	2.11	0.166 J	0.496	0.33	0.094 U	0.094 U	0.094 U

Concentration exceeds criterion.
D = Data reported from a dilution.
J = Estimated concentration.
U = Not detected at associated detection limit.
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.

ACAD: 4248CM02.dwg 04/04/07 DT PIT

CEF-502-6S	11/20/06	GCTL
1,2,4-TRIMETHYLBENZENE	0.02 U µg/L	10
1,3,5-TRIMETHYLBENZENE	0.02 U µg/L	10
BENZENE	0.02 U µg/L	1
ETHYLBENZENE	0.3 J µg/L	30
ISOPROPYLBENZENE	0.4 J µg/L	0.8
1-METHYLNAPHTHALENE	1.95 µg/L	28
2-METHYLNAPHTHALENE	3.75 µg/L	28
ACENAPTHTHENE	1.11 µg/L	20
ANTHRACENE	0.02 U µg/L	2100
FLUORENE	2.16 µg/L	280
NAPHTHALENE	0.43 µg/L	14
PHENANTHRENE	0.08 J µg/L	210
TPH	0.33 mg/L	5



CEF-502-4S	11/21/06	GCTL
1,2,4-TRIMETHYLBENZENE	0.06 J µg/L	10
1,3,5-TRIMETHYLBENZENE	0.06 J µg/L	10
BENZENE	0.06 J µg/L	1
ETHYLBENZENE	2.2 µg/L	30
ISOPROPYLBENZENE	1.2 µg/L *	.08
1-METHYLNAPHTHALENE	1.48 µg/L	28
2-METHYLNAPHTHALENE	8.37 µg/L	28
ACENAPTHTHENE	0.29 µg/L	20
ANTHRACENE	0.02 U µg/L	2100
FLUORENE	0.22 µg/L	280
NAPHTHALENE	2.69 µg/L	14
TPH	0.496 mg/L	5

CEF-502-3S	11/20/06	GCTL
1,2,4-TRIMETHYLBENZENE	0.5 J µg/L	10
1,3,5-TRIMETHYLBENZENE	0.2 U µg/L	10
BENZENE	0.2 U µg/L	1
ISOPROPYLBENZENE	0.1 U µg/L	0.8
1-METHYLNAPHTHALENE	6.46 µg/L	28
2-METHYLNAPHTHALENE	4.92 µg/L	28
ACENAPTHTHENE	0.39 µg/L	20
ANTHRACENE	0.02 U µg/L	2100
FLUORENE	0.58 µg/L	280
NAPHTHALENE	0.92 µg/L	14
PHENANTHRENE	0.13 µg/L	210
TPH	0.166 J mg/L	5

CEF-502-1SR	11/21/06	GCTL
1,2,4-TRIMETHYLBENZENE	6.9 µg/L	10
1,3,5-TRIMETHYLBENZENE	2.8 µg/L	10
BENZENE	0.2 U µg/L	1
ETHYLBENZENE	2.5 µg/L	30
ISOPROPYLBENZENE	2.7 µg/L *	0.8
1-METHYLNAPHTHALENE	52.8 D µg/L *	28
2-METHYLNAPHTHALENE	110 D µg/L *	28
ACENAPTHTHENE	1.72 µg/L	20
ANTHRACENE	0.07 J µg/L	2100
FLUORENE	2.78 µg/L	280
NAPHTHALENE	11.2 µg/L	14
PHENANTHRENE	2.4 µg/L	210
TPH	2.11 mg/L	5

LEGEND:

- ⊕ MONITORING WELL
- mg/L MILLIGRAMS PER LITER
- µg/L MICROGRAMS PER LITER
- J ESTIMATED CONCENTRATION
- U NONE DETECTED
- D DATA REPORTED FROM A DILUTION
- ND NON DETECT
- * EXCEEDS GCTL
- GCTL GROUNDWATER CLEANUP TARGET LEVEL

0 30 60
GRAPHIC SCALE IN FEET

DRAWN BY	DATE
MF	1/3/07
CHECKED BY	DATE
REVISED BY	DATE
SCALE AS NOTED	

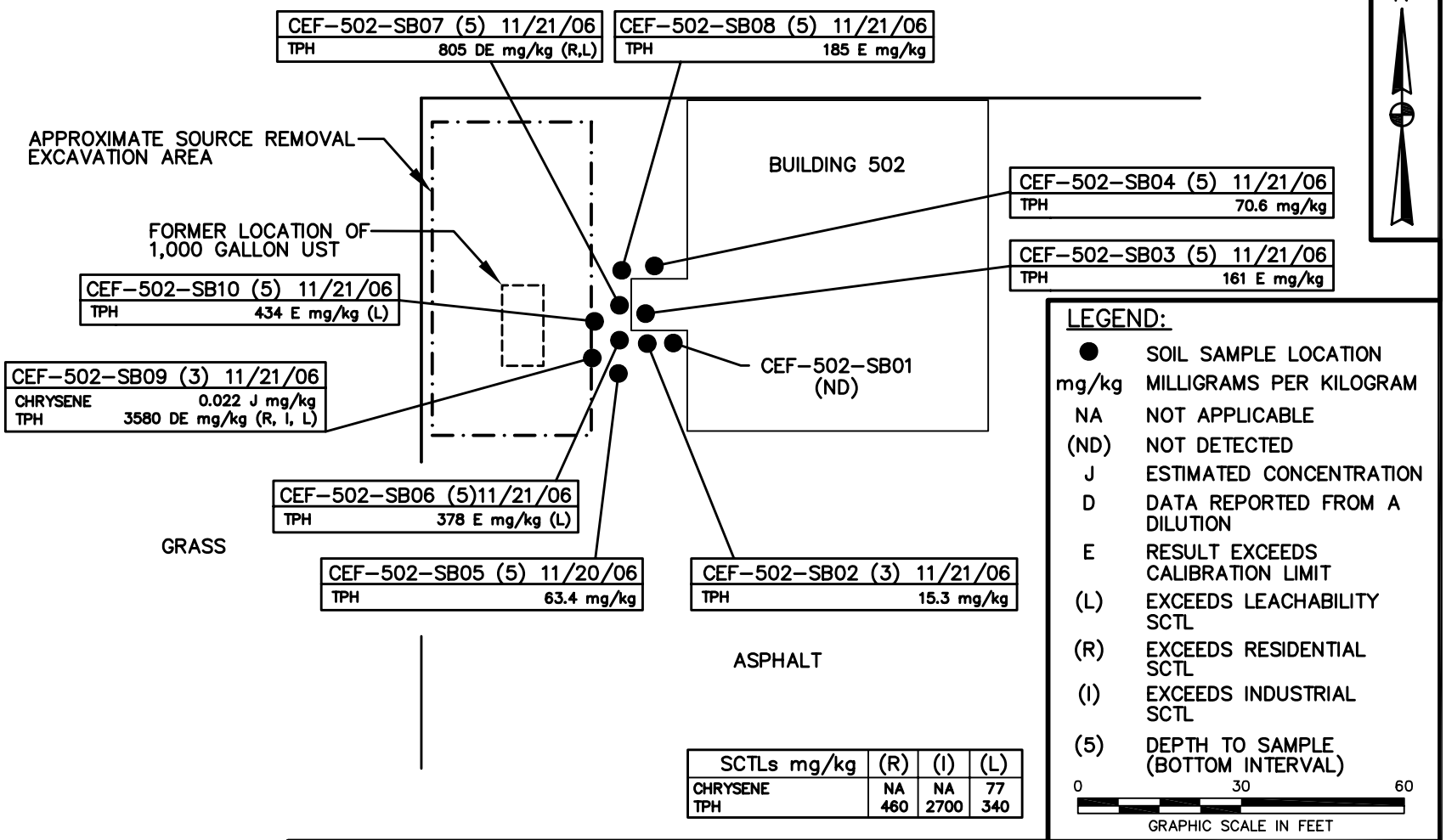
NAVFAC

MONITORING WELL RESULTS
NOVEMBER 2006
BUILDING 502, TANK 502
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO. 4248
OWNER NO.
APPROVED BY DATE
DRAWING NO. FIGURE 4
REV. 0

FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

ACAD: 4248CM01.dwg 04/04/07 DT PIT



SCTLs mg/kg	(R)	(I)	(L)
CHRYSENE	NA	NA	77
TPH	460	2700	340

LEGEND:

●	SOIL SAMPLE LOCATION
mg/kg	MILLIGRAMS PER KILOGRAM
NA	NOT APPLICABLE
(ND)	NOT DETECTED
J	ESTIMATED CONCENTRATION
D	DATA REPORTED FROM A DILUTION
E	RESULT EXCEEDS CALIBRATION LIMIT
(L)	EXCEEDS LEACHABILITY SCTL
(R)	EXCEEDS RESIDENTIAL SCTL
(I)	EXCEEDS INDUSTRIAL SCTL
(5)	DEPTH TO SAMPLE (BOTTOM INTERVAL)

0 30 60

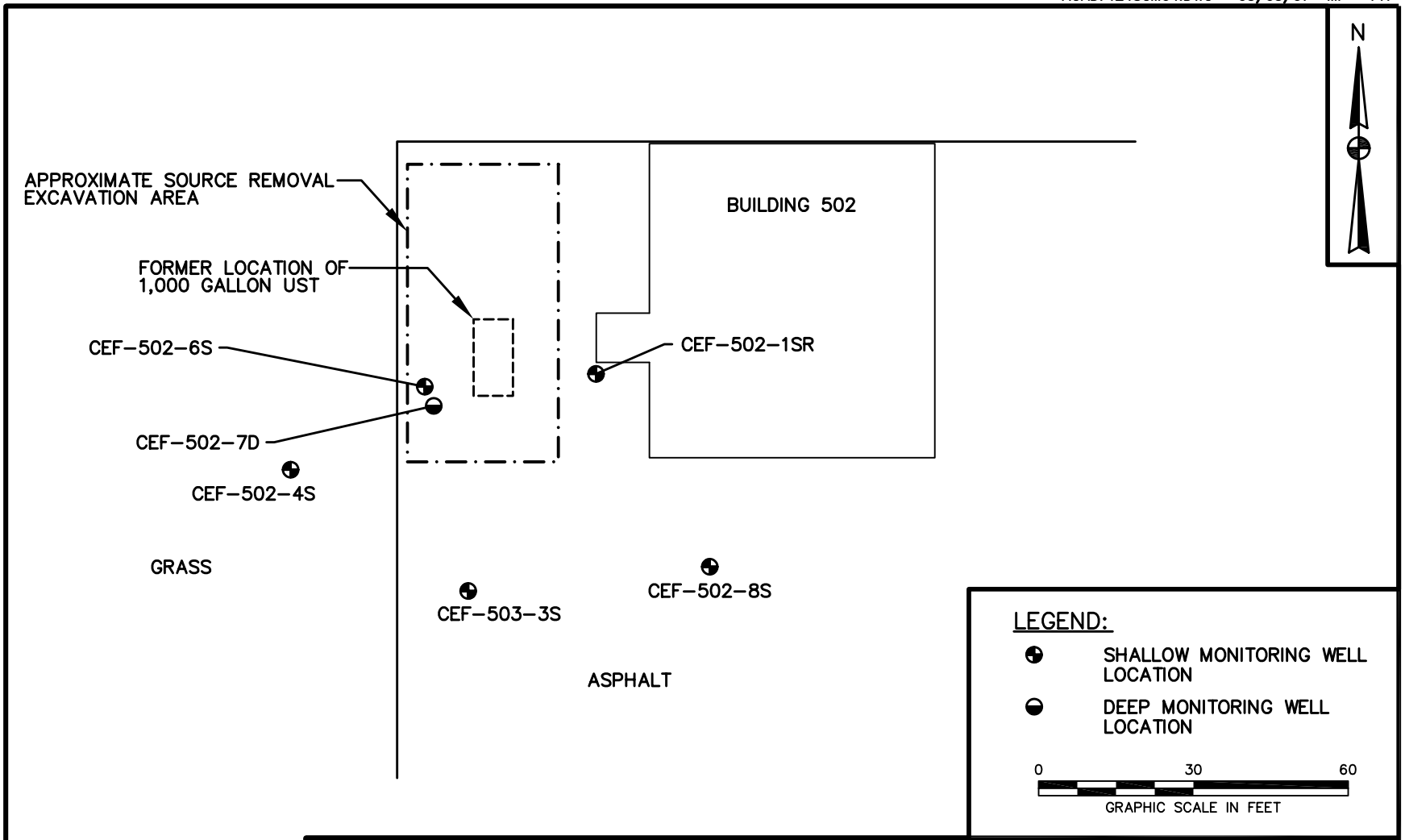
GRAPHIC SCALE IN FEET

DRAWN BY MF	DATE 12/29/06	SOIL BORING RESULTS NOVEMBER 2006 BUILDING 502, TANK 502 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 4248
CHECKED BY	DATE		OWNER NO.
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3 / REV. 0

NAVFAC

FORM CADD NO. SDIV-AH.DWG – REV 1 – 9/10/98

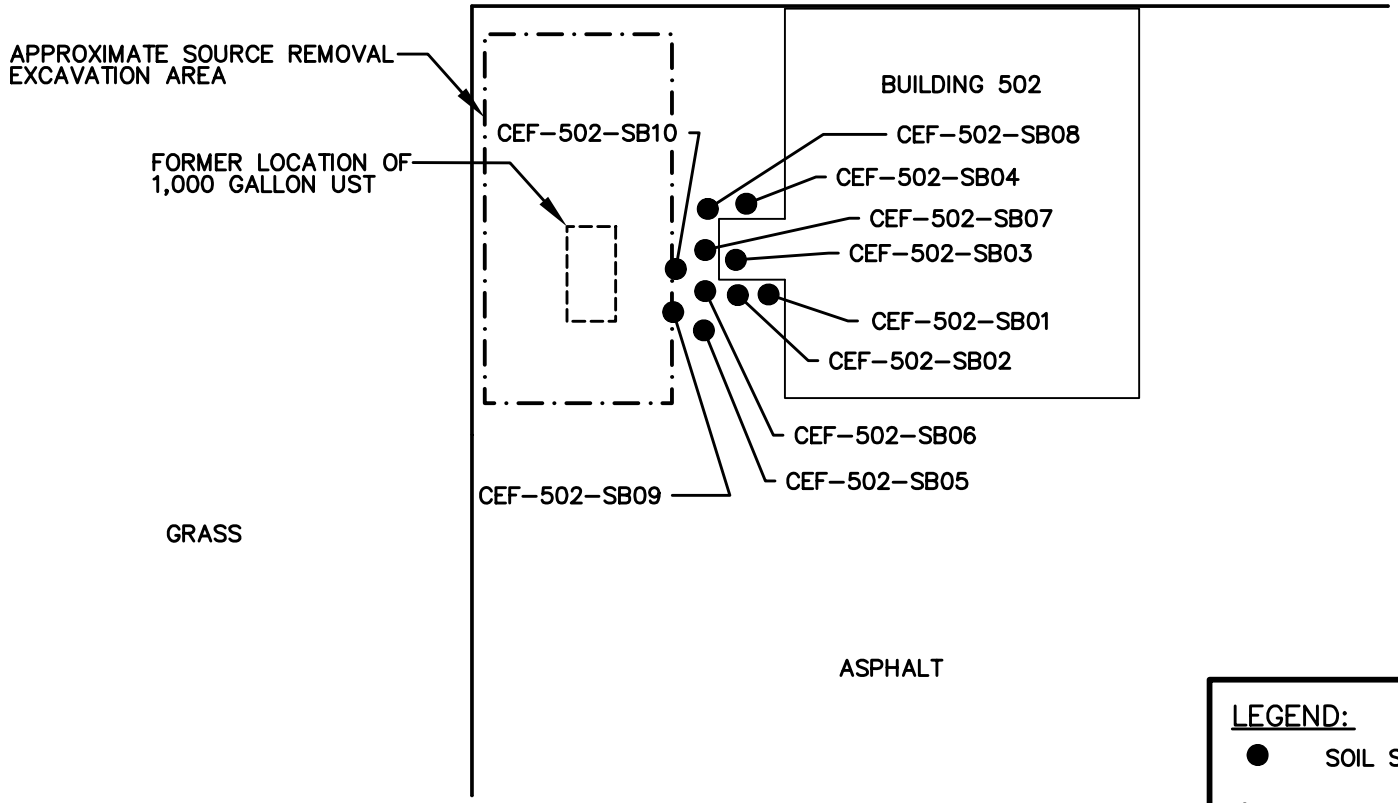
ACAD: 4248CM04.DWG 03/05/07 MF PIT



DRAWN BY MF	DATE 1/31/07	GROUNDWATER MONITORING WELL LOCATIONS BUILDING 502 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 4248
CHECKED BY	DATE		OWNER NO.
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2 / REV. 0

FORM CADD NO. SDIV-AH.DWG – REV 1 – 9/10/98

ACAD: 4248CM05.DWG 04/04/07 DT PIT



LEGEND:

● SOIL SAMPLE LOCATION

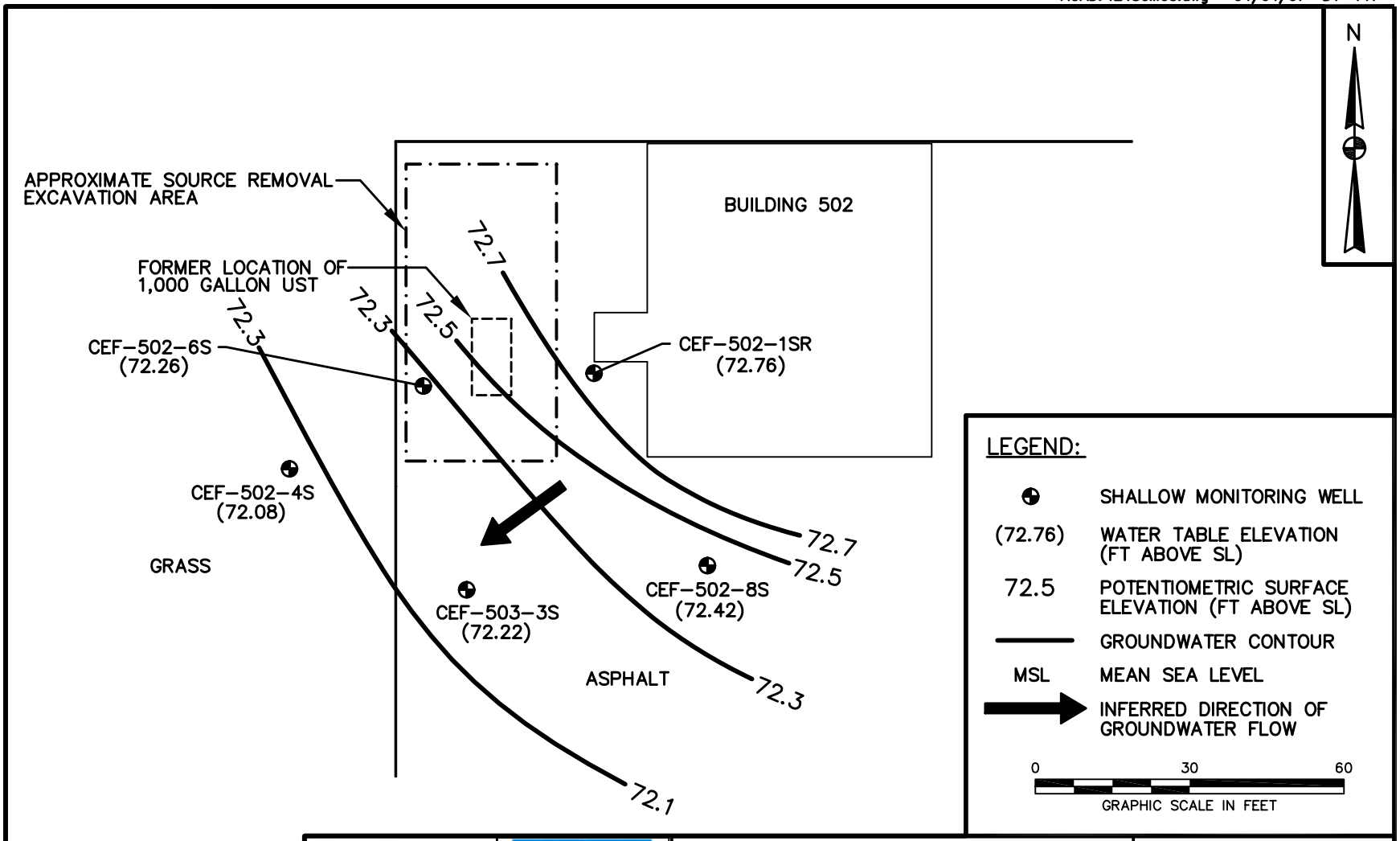
0 30 60

GRAPHIC SCALE IN FEET

DRAWN BY MF	DATE 1/31/07	SOIL BORING LOCATIONS BUILDING 502, TANK 502 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 4248
CHECKED BY	DATE		OWNER NO.
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO. SDIV-AH.DWG – REV 1 – 9/10/98

ACAD: 4248CM03.dwg 04/04/07 DT PIT



DRAWN BY MF	DATE 1/5/07	POTENTIOMETRIC SURFACE ELEVATION MAP NOVEMBER 2006 BUILDING 502, TANK 502 NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 4248
CHECKED BY	DATE		OWNER NO.
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 5 / REV. 0

FORM CADD NO. SDIV-AH.DWG – REV 1 – 9/10/98

ATTACHMENT A

FDEP 2004 COMMENTS

TS

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

June 23, 2004

Mr. Gabe Magwood
Code ES24 (UST RPM)
Southern Division
Naval Facilities Engineering Command
Post Office Box 190010
North Charleston, South Carolina 29419-9010

RE: Groundwater Monitoring Report, 1st Semi-Annual, 4th Year (June 2003), Building 502, Tank 502, Naval Air Station Cecil Field, Jacksonville, Florida

Dear Mr. Magwood:

I have completed the review of the Groundwater Monitoring Report, 1st Semi-Annual, 4th Year (June 2003), Building 502, Tank 502, Naval Air Station Cecil Field, dated January 30, 2004 (received February 2, 2004), prepared and submitted by Tetra Tech NUS, Inc. The report adequately reports the groundwater contaminant levels in monitoring wells approved in the Natural Attenuation Monitoring Plan Approval Order (NAMP Order) issued by the Department on July 13, 1999 and as modified by subsequent reports. Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene and TRPH continue to remain elevated in monitoring well CEF-502-1SR. I would like to point out that the monitoring period approved in the NAMP Order expires in July 2004. Because of this, the data collected up to the point the NAMP Order expires should be evaluated to determine whether the milestones specified in the NAMP Order have been met and the site can be considered rehabilitated or whether further assessment, further monitoring or more active remediation is required at the site. A report should be prepared and submitted with conclusions on the effectiveness of monitored natural attenuation and recommendations for further work.

I have done some speculating on why contaminant concentrations in groundwater have not been reduced more than they have. Based on a limited review of past reports, it seems possible there may be contaminated soil still present that is impacting groundwater in the vicinity of monitoring well CEF-502-1SR. This contamination may not have been previously identified because of its location beneath Building 502. As this building has apparently been demolished, further investigation of soil contamination in this area may be possible at this time.

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

Sincerely,

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

cc: Paul Calligan, Tetra Tech NUS, Tampa
Doyle Brittain, USEPA Region 4
Mike Fitzsimmons, FDEP Northeast District

JJC JJC for ESN JJC

ATTACHMENT B

FDEP MONITORING ONLY PLAN ORDER

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

July 13, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Bryan Kizer, Code 1842
SOUTHNAVFACENGCOM
Post Office Box 190010
North Charleston, SC 29419-9010

RE: Site Assessment Report and Monitoring Only Proposal for Facility 502, Tank 502, Naval Air Station Cecil Field, Florida.

Dear Mr. Kizer:

I have reviewed the Site Assessment Report Revision and Monitoring Only Proposal for Natural Attenuation dated April 1999 (received April 23, 1999), submitted for this site. Based upon my review and comments, the enclosed Monitoring Only Plan for Natural Attenuation was signed by Mr. John M. Ruddell, Director of the Division of Waste Management.

If I can be of any further assistance with this matter, please contact me at (850) 921-9991.

Sincerely,

Michael J. Deliz

Michael J. Deliz, P.G.
Remedial Project Manager

13-JULY-99
Date

CC: Debbie Vaughn-Wright, USEPA
John Flowe, City of Jacksonville
Scott Glass, SOUTHNAVFACENGCOM
Dave Kruzicki, NAS Cecil Field
Eric Blomberg, HLA - Tallahassee

TJB B JJC BJC ESN BJC Env

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

July 13, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Bryan Kizer, Code 1842
SOUTHNAVFACENGCOM
Post Office Box 190010
North Charleston, South Carolina 29419-0068

Subject: Monitoring Only Plan Approval
Order Facility 502, Tank 502,
Naval Air Station, Cecil Field

Dear Mr. Kizer:

The Bureau of Waste Cleanup has completed the review of the Site Assessment Report and Monitoring Only Proposal for Natural Attenuation dated April 1999 (received April 23, 1999), submitted for this site. Pursuant to Rule 62-770.690, Florida Administrative Code (F.A.C.), the Department approves the monitoring only proposal. Pursuant to Rule 62-770.690(7), F.A.C., you are required to complete the monitoring program outlined below. The first sampling event should be performed within 60 days of receipt of this Monitoring Only Plan Approval Order (Order). Water-level measurements should be made immediately prior to each sampling event. The analytical results (laboratory report), chain of custody, cumulative summary table of the analytical results, site map(s) illustrating the most recent analytical results, and the water-level elevation information (cumulative summary table and most recent flow interpretation map), should be submitted to the Department within 60 days of sample collection.

Monitoring Wells	Parameters	Frequency
CEF-502-1S, CEF-502-2S, CEF-502-4S, and CEF-502 5D	602, 8310, and FL-PRo	Semi-annual

If concentrations of chemicals of concern in any of the designated wells increase above the action levels listed below, the well or wells must be resampled no later than 30 days after the initial positive results are known. If the results of the resampling confirm the initial sampling results, then a proposal must be submitted, as described in Rule 62-70.690(7)(f),F.A.C.

Contaminated wells:

CEF-502-1S and CEF-502-2S: 100 µg/l Benzene; 200 µg/l Xylene; 300 µg/l Ethylbenzene; 400 µg/l Toluene; 200 µg/l Naphthalene; and 50 mg/l TRPH.

Perimeter wells:

CEF-502-4S and CEF-502-5D: 1 µg/l Benzene; 20 µg/l Xylene; 30 µg/l Ethylbenzene; 40 µg/l Toluene; 20 µg/l Naphthalene; and 5 mg/l TRPH

The approved Remedial Action by Natural Attenuation monitoring period is 5 years. Milestone objectives should be established if monitoring is projected to take greater than one year. The following are the milestone objectives that will be used for annual evaluation of remediation progress by natural attenuation. An explanation of the progress relative to these milestone objectives, and the need for corrective action (if applicable), should be provided in the annual evaluation:

Benzene	MW-CEF-502-2S
End of year 1	26
End of year 2	13
End of year 3	6
End of year 4	3
End of year 5	<1

Ethylbenzene	MW-CEF-502-2S
End of year 1	60
End of year 2	50
End of year 3	40
End of year 4	30
End of year 5	<30

Xylene	MW-CEF-502-2S
End of year 1	150
End of year 2	100
End of year 3	50
End of year 4	20
End of year 5	<20

Naphthalene	MW-CEF-502-2S
End of year 1	150
End of year 2	100
End of year 3	50
End of year 4	20
End of year 5	<20

TRPH	MW-CEF-502-2S
End of year 1	10
End of year 2	8
End of year 3	6
End of year 4	5
End of year 5	<5

If the applicable No Further Action criteria in Rule 62-70.680, F.A.C., are achieved at the end of the monitoring period, a Site Rehabilitation Completion Report, summarizing the monitoring program and containing documentation supporting the opinion that the cleanup objectives have been achieved, should be submitted as required in Rule 62-770.690(8), F.A.C. If the applicable No Further Action criteria in Rule 62-770.680, F.A.C., are not achieved following one year of monitoring, then a report summarizing the monitoring program should be submitted, including a proposal as described in Rule 62-770.690(7)(g).

Persons affected by this Order have the following options:

If you choose to accept the above decision by the Department you do not have to do anything. This Order is final and effective as of the date on the top of the first page of this Order.

If you disagree with the decision, you may do one of the following:

1. File a petition for administrative hearing with the Office of the General Counsel of the Department within 21 days after receipt of this Order;

OR

2. File a request for an extension of time to file a petition for hearing with the Office of the General Counsel of the Department within 21 days after receipt of this Order. Such a request should be made if you wish to meet with the Department in an attempt to informally resolve any disputes without first filing a petition for hearing.

Please be advised that mediation of this decision, pursuant to Section 120.573, Florida Statutes (F.S.), is not available.

How to Request an Extension of Time to File a Petition for Hearing

A request for an extension of time to file a petition for hearing must be filed (received) in the Office of the General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000, within 21 days after receipt of this Order. Pursuant to Rule 28-106.111(3), F.A.C., a request for extension of time shall contain a certificate that the moving party has consulted with all other parties, if any, concerning the extension and that the Department and any other parties agree to said extension. Petitioner, if different from Commanding Officer, Naval Air Station Cecil Field, shall mail a copy of the petition to from Commanding Officer, Naval Air Station Cecil Field at the time of filing. Timely filing a request for an extension of time tolls the time period within which a petition for administrative hearing must be filed until the request is acted upon.

How to File a Petition for Administrative Hearing

A person whose substantial interests are affected by this Order may petition for administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of the General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, within 21 days after receipt of this Order. Petitioner, if different from Commanding Officer, Naval Air Station Cecil Field, shall mail a copy of the petition to from

Commanding Officer, Naval Air Station Cecil Field at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under Sections 120.569 and 120.57, F.S.

Pursuant to Rules 62-103.155 and 28-06.201, F.A.C., a petition for administrative hearing shall contain the following information:

a) The name, address, and telephone number of each petitioner, the name, address, and telephone number of the petitioner's representative, if any, the site owner's name and address, if different from the petitioner, the FDEP facility number, and the name and address of the facility;
b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
d) A statement of the material facts disputed by the petitioner, if any;

e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
f) A statement of which rules or statutes petitioner contends requires reversal or modification of the Department's action or proposed action; and
g) A statement of the relief petitioner seeks, stating precisely what petitioner wants the Department to do regarding the Department's action or proposed action.

This Order is final and effective as of the date on the top of the first page of this Order. Timely filing a petition for administrative hearing postpones the date this Order takes effect until the Department issues either a Final Order pursuant to an administrative hearing or an Order Responding to Supplemental Information provided pursuant to meetings with the Department.

Judicial Review

Any party to this Order has the right to seek judicial review of this Order pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Department clerk in the Office of

the General Counsel, 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000. Simultaneously with filing a Notice of Appeal with the Department, petitioner must file a copy of the Notice of Appeal with the applicable filing fees, with the appropriate District Court of Appeal. The Notice of Appeal must be received by the Department clerk within 30 days from the date this Order was signed by the Department clerk (see below).

Questions

Should you have any questions regarding the legal processes, please contact the Office of the General Counsel at (850) 488-9730. Any questions you may have on the technical aspects of this Order should be directed to Michael J. Deliz, P.G. at (850) 921-9991. Contact with any of the above does not constitute a petition for administrative hearing.

Sincerely,

John M. Ruddell, Director
Division of Waste Management

JMR/mjd

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Minnie L. R Munson 7/15/99
Clerk (or Deputy Clerk Date

ATTACHMENT C

FIELD FORMS

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Cecil Field - CTO 25
Project No.: 112G00378
Location: Building 502
Personnel: KW, WH
Weather Conditions: 65°, sunny, breezy
Measuring Device: H_2O level indicator
Tidally Influenced: Yes ___ No X
Remarks:

CEF-

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
502-6S	11/20/06	1149		9.44	14.90			
502-7D	11/20/06	1155		9.59	30.11			
502-4S	11/20/06	1200		8.60	12.30			
502-3S	11/20/06	1205		8.46	13.18			
502-8S	11/20/06	1210		9.33	13.49			
502-15R	11/20/06	1217		9.46	12.40			had H_2O above the TOC

* All measurements to the nearest 0.01 foot

Page ____ of ____

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : Cecil Field - CTO 25

SITE NAME: Building 502

PROJECT No.: 112G00378

INSTRUMENT NAME/MODEL: Lamotte Turbimeter

MANUFACTURER: Lamotte

SERIAL NUMBER: 3332-2402

Lamotte Turbidity Meter serial# 3332-2402

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings Pre-calibration	Instrument Settings Post-calibration	Instrument Readings Pre-calibration	Instrument Readings Post-calibration	Calibration Standard (Lot No.)	Remarks and Comments
11/20/06		KW			0.75	0.00	0 NTU	
					9.8	10.0	10 NTU	
YSI								
11/20/06		KW			6.98		PH 7.00 AS1600	06C2658 AJ exp 6/07
					240.7		ORP 240mV	G364 exp 2/2010
					699 out of range		1413 150/544	conductivity exp 12/06

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : NAS Cecil - CTO 025

INSTRUMENT NAME/MODEL: Lamotte Turbidimeter

SITE NAME: Bldg 502

MANUFACTURER: Lamotte

PROJECT No.: 112G00378

SERIAL NUMBER: ~~332~~ 3332-2402

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
11/21/06	3332-1402	KW	—	—	0.00	0.00	0 NTU	
					10.00	10.00	10 NTU	

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME: NAS Cecil - CT025

SITE NAME: Bldg 502

PROJECT No.: 112G00378

INSTRUMENT NAME/MODEL: YSI 556 MPS

MANUFACTURER:

SERIAL NUMBER: 06C2658AJ

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
11/21/06	—	KW	—	—	640	out of range	1501544	conductivity 1413 exp date: 12/06
					248	240.8	6361	ORP 240mV exp date: 2/2010
					7.01	7.00	5160	pH 7.00 exp date 6/07
					4.11	4.00	2505079	pH 4.00 exp date: 4-4-07

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G00338
DRILLING COMPANY: T+NUS
DRILLING RIG: Hand Auger

BORING No.: SB01
DATE: 11-20-06
GEOLOGIST: Wes Harden
DRILLER: Wes Harden

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			0			
	2					brn	fine sand, silty			0			
	3					brn	fine sand, silty			0			
	4					lt brn	fine sand			0			
	5					brn	fine sand, silty			0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks: Sample CEF-502-SB01-05 collected @ 1550

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G02378
DRILLING COMPANY: TtNUS
DRILLING RIG: Hand Auger

BORING No.: SB02
DATE: 11-22-06
GEOLOGIST: WH
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand silty			2.1			
	2					brn	fine sand silty			1.8			
	3					brn	fine sand silty			2.1			
WH4					refusal @ 3.5'								
WH5													

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Soil sample CEF-502-SB02-03 collected @ 0840

Drilling Area Background (ppm):

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 562
PROJECT NUMBER: 112G00358
DRILLING COMPANY: TtNUS
DRILLING RIG: Hand Auger

BORING No.: SB03
DATE: 11-21-06
GEOLOGIST: WH
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			2.2			
	2					brn	fine sand, silty			2.3			
	3					brn	fine sand, silty			2.2			
	4					ltbrn	fine sand			2.1			
	5					ltbrn	fine sand			2.3			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Soil sample GEP-502-SB03-05 collected @ 0855

Drilling Area Background (ppm): ____

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G08378
DRILLING COMPANY: TTNUS
DRILLING RIG: Hand auger

BORING No.: SB04
DATE: 11-21-06
GEOLOGIST: WH
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					dkbr	fine sand, silty			2.5			
	2					dkbr	fine sand, silty			2.8			
	3					dkbr	fine sand, silty			2.7			
	4					ltbr	sand, fine			2.6			
	5					brn	fine sand, silty			2.8			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: Sample CEF-502-SB04-05 collected @ 1045

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112F00378
DRILLING COMPANY: TtNUS
DRILLING RIG: Hand auger

BORING No.: SB05
DATE: 11-20-06
GEOLOGIST: WH
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			0			
	2					brn	fine sand, silty			0			
	3					brn	fine sand, silty			0			
	4					ltbrn	fine sand			0			
	5					brn	fine sand, silty			0			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: sample CFF-502-SB05-05 collected @ 1600

Converted to Well: Yes ____ No ✓ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G05378
DRILLING COMPANY: TtNUS
DRILLING RIG: Hand Auger

BORING No.: SB06
DATE: 11-21-06
GEOLOGIST: WH
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			1.8			
	2					brn	fine sand, silty			2.1			
	3					brn	fine sand, silty			2.0			
	4					brn	fine sand, silty			2.4			
	5					brn	fine sand, silty		12.4				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): ____

Remarks: sample CEF-502-SB06-05 collected @ 1055 ~~Dup~~ Duplicate ~~CEF-03~~ CEF-502-D401 collected

Converted to Well: Yes ____ No ~~to~~ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 500
PROJECT NUMBER: 112G0378
DRILLING COMPANY: TtNUS
DRILLING RIG: hand auger

BORING No.: SB07
DATE: 11-21-06
GEOLOGIST: Wesley Harden
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			2.0			
	2					brn	fine sand, silty			2.0			
	3					brn	fine sand, silty			2.0			
	4					brn	fine sand, silty			1.9			
	5					dkbrn	fine sand, silty		no odor	32.5			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: take sample SB07-05 @ 1255

Drilling Area Background (ppm): ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 0112G0378
DRILLING COMPANY: TtNUS
DRILLING RIG: hand augur

BORING No.: ~~SB05~~ SB08 KW
DATE: 11-21-0
GEOLOGIST: KW
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					dk brn	fine sand, silty			2.2			
	2					brn	fine sand, silty			2.0			
	3					brn	fine sand, silty			2.0			
	4					brn	fine sand, silty			2.0			
	5					dk brn	fine sand, silty			11.8			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G0378
DRILLING COMPANY: TtNUS
DRILLING RIG: hand auger

BORING No.: SB09
DATE: 11/21/06
GEOLOGIST: KW
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1					brn	fine sand, silty			1.6			
	2					brn	fine sand, silty			1.4			
	3					dk brn	fine sand, silty			24.1			
	4					lt. brn	fine sand			13.4			
	5					Cmxd brn	fine sand, silty			3.5			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Collect SB09-03 @ 1344

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: Bldg 502
PROJECT NUMBER: 112G00378
DRILLING COMPANY: TtNUS
DRILLING RIG: hand auger

BORING No.: SB10
DATE: 11/21/06
GEOLOGIST: RW
DRILLER: WH

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	1				lt	brn	fine sand, silty			2.1			
	2				lt	brn	fine sand, silty			1.7			
	3				lt	brn	fine sand, silty			1.4			
	4				lt	brn	fine sand, silty			1.1			
	5				dk	brn	fine sand, silty			15.7			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: Collect SB10-05 @ 1403

Drilling Area Background (ppm): ____

Converted to Well: Yes _____ No _____ Well I.D. #: _____

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bldg 502 - CTO 025
Project No.: 112G00378

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CEF-502-BS-01
Sample Location: MW-BS
Sampled By: KW
C.O.C. No.: 8426
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11/21/06								
Time: 0933								
Method: peristaltic	clear	5.16	350	26.09	9.1	0.61		

PURGE DATA:

Date: 11/21/06
Method: peristaltic
Monitor Reading (ppm): NA
Well Casing Diameter & Material Type: 2 in - PVC
Total Well Depth (TD): 13.49
Static Water Level (WL): 9.56
One Casing Volume(gal/L): 0.6288 gal
Start Purge (hrs): 0848
End Purge (hrs): 0933
Total Purge Time (min): 45
Total Vol. Purged (gal/L): ~~7.13~~ 13.50 L

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
	~~H_2SO_4~~		
FI Pro	~~None~~	(2) 1 L amber	KW
SW 8426 8310	~~HCl~~, None	(1) 1 L amber	
SW 8426 8260B	HCl	+ 3-40 ml	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.: ~~GW-~~ CEF-502-BW-Dup-01

Signature(s): Kara J Wendel

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Cecil Field - CTO 25

PROJECT NUMBER: Building 502

WELL ID.: CEF-502-BS-01

DATE: 11/21/06

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ % or ppt	Comments
0927	8.56	300	5.16	358	5.8	0.69	26.00	245.8		
0930	8.56	300	5.15	352	7.6	0.62	26.00	249.7		
0933	8.56	300	5.14	350	9.1	0.61	26.09	248.4		

SIGNATURE(S): Kara J. Wensel

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bldg 502 - CTO 025
Project No.: 112G00378

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CEF-502-MW7D-01
Sample Location: MW7D
Sampled By: KW
C.O.C. No.: 2486
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~	Other
Date: 11/20/06								
Time: 1544								
Method: grab	clear	5.71	229	24.15	5.4	0.15		

PURGE DATA:

Date: 11/20/06	
Method: peristaltic	
Monitor Reading (ppm): N/A	
Well Casing Diameter & Material Type: 2 in PVC	
Total Well Depth (TD): 30.11	
Static Water Level (WL): 9.59	
One Casing Volume(gal/L): 3.1	
Start Purge (hrs): 1335	
End Purge (hrs): 1541	
Total Purge Time (min): 67	
Total Vol. Purged (gal/L): 23.4 gal	

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
	None		
SW846-8310	H_2SO_4 KW	1L Amber (1)	KW
SW846-8260B	HCl	3-40ml	KW
FL-PRO	~~NaOH~~ KW	1L Amber (2)	KW
	H_2SO_4		

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Kara J. Wunderlich

9.59

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Cecil Field - CTO 25

PROJECT NUMBER: Building 502

WELL ID.: CEF-~~7D~~-502-7D

DATE: 11/20/06

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity % or ppt~~	Comments
1533	10.58	~~25~~ 350	5.72	228	9.1	0.16	24.26	-129.3		
1537	10.59	350	5.72	230	4.1	0.17	24.21	+33.7		
1541	10.58	350	5.71	229	5.4	0.15	24.15	-137.9		

SIGNATURE(S): Kara J. Wrinkle

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bldg 502 - CTO 025
Project No.: 112G00378

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CEF-502-35-01
Sample Location: MW-35
Sampled By: KW
C.O.C. No.: 2486
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11/20/06								
Time: 1640								
Method: grab	clear	5.63	186	26.36	12	0.41	X	

PURGE DATA:

Date: 11/20/06
Method: peristaltic
Monitor Reading (ppm): NA
Well Casing Diameter & Material Type: 2in PVC
Total Well Depth (TD): 13.18
Static Water Level (WL): 8.46
One Casing Volume(gal/L): 0.7552 gal
Start Purge (hrs): 1540
End Purge (hrs): 1640 KW
Total Purge Time (min):
Total Vol. Purged (gal/L): 5 gal

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
	None		
SW 846 8310	~~H_2SO_4~~	2 1L-Amber (1)	KW
SW 846 8260B	HCl	3-40ml	KW
HL-PKO	~~None~~	1L-Amber (2)	KW
	H_2SO_4		

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Kara J. Wendel

8.46 - 13.18 4.72

.7552 gal
2.656 gal
8.56 L

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Cecil Field - CTO 25
PROJECT NUMBER: Building 502

WELL ID.: CEF-502-BS-01
DATE: 11/20

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity % or ppt~~	Comments
1627	8.87	750	5.62	183	14	0.63	26.59	-55.5		
1637	8.87	600	5.63	188	13	0.41	26.42	-63.1		
1640	8.87	600	5.63	186	12	0.41	26.36	-63.2		going to sample b/c I have purged over 5 well volumes (≈ 4.5 gal)

SIGNATURE(S): Kara J Wunsch

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bldg 502 - CTO 025
Project No.: ~~4200~~ 112G00378

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CEF-502-GS-01
Sample Location:
Sampled By: KW
C.O.C. No.: 1286
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~	Other
Date: 11/20/06								
Time: 1500								
Method: peristaltic	clear	6.24	318	25.77	3.4	0.38		

PURGE DATA:

Date: 11/20/06
Method: peristaltic
Monitor Reading (ppm): NA
Well Casing Diameter & Material Type: 2-inch PVC
Total Well Depth (TD): 15
Static Water Level (WL): 9.44
One Casing Volume(gal/L):
Start Purge (hrs): 1335
End Purge (hrs): 1500
Total Purge Time (min): 95
Total Vol. Purged (gal/L): 5gal

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SW 8260 8310	H_2SO_4	1 L amber	KW
SW 8260 8260B	HCl	3-40 vial	
F-1 P60	None	1 L amber	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Kara J Wendt

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Cecil Field - CTO 25

PROJECT NUMBER: Building 502

WELL ID.: 502-65-01

DATE: 11/20/06

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ ~~% or ppt~~	Comments
			0.2	10%		<200	0.2			
1453	9.80	500	6.21	322	4.2	~~4.2~~ 4.20	25.63	-153.6		
		TW	~~6.24~~	~~328~~		0.34	~~25.78~~ TW	~~-167.4~~	TW	
1457	9.90	500	6.24	328	3.7	0.41	25.78	-168.2		
1500	9.95	500	6.24	318	3.4	0.38	25.77	-172.9		

SIGNATURE(S): Karen J Wimbl

PAGE 1 **OF** 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: CTU 025 - Bldg 502
Project No.: 112G00378J

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: CEF-502-1SR01
Sample Location: MW-1SR
Sampled By: KW
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ (%)	Other
Date: 11/21/06								
Time: 1042								
Method: peristaltic	clear	5.71	3.74	24.24	17	0.24	X	

PURGE DATA:

Date: 11/21/06	
Method: peristaltic	
Monitor Reading (ppm): NA	
Well Casing Diameter & Material Type: 2 in PVC	
Total Well Depth (TD): 12.40	
Static Water Level (WL): 9.46	
One Casing Volume(gal/L): 0.47 04 gal	
Start Purge (hrs): 0848	
End Purge (hrs): 1050	
Total Purge Time (min): 120	
Total Vol. Purged (gal/L): 5 gal	

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
	H_2SO_4		
FI 310	~~None~~	1 L amber (2)	KW
SW846-8310	~~None~~ None	1 L amber (1)	↓
SW846-8260B	HCl	3-40 ml	↓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Kevin J Wenzel

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Cecil Field - CTO 25
PROJECT NUMBER: Building 502

WELL ID.: CEF-502-1SR-01
DATE: 11/21/06

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ % or ppt	Comments
10:35	9.96	100	5.72	370	17	3.7	23.98	-55.7		
IW ~~10:34~~	~~9.96~~	~~100~~	~~5.71~~	~~361~~		0.32				
1039	9.96	100	5.71	361	40	0.27	24.21	-66.9		
1042	9.96	100	5.71	374	17	0.24	24.24	-72.6		

SIGNATURE(S): Kevin J Wimble

PAGE 1 OF 1

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2487 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00378	Bldg 502	Dave Siefken	904-626-6125	CNC
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Kara Fawnville		Troy Cottenoir	904-636-6125	
		CARRIER/WAYBILL NUMBER		CITY, STATE
		hand-delivered		Jacksonville, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: SW8260-8210	FL-PRO	FL-PRO	SW8260-8260B						COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G						
PRESERVATIVE USED									None	None	HCl	HCl						
11/21	0955	CEF-502-SB02-05				SO	G	1	1	1								
11/21	1045	CEF-502-SB04-05				SO	G	1	1	1								
11/21	1055	CEF-502-SB06-05				SO	G	1	1	1								
11/21	0840	CEF-502-SB02-03				SO	G	1	1	1								
11/21	1513	CEF-502-FR01				GW	G	6	1		2	3						
11/21	1145	CEF-502-MS-01				GW	G	4	1		1	2						low recharge

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	11-21-06	1620		11/21/06	1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2486 | PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00378	Building 502	Dave Sietken	904-636-6125	ANCO
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Kara J Wimble		Terry Cottenoir	904-636-6125	
		CARRIER/WAYBILL NUMBER		CITY, STATE
		hand-delivered		Jacksonville, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G G
PRESERVATIVE USED: None HCL H_2SO_4 None

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	SW8240-8310	SW8240 8260B	FL-PRO	FL-PRO					COMMENTS
11/20	1500	CEF-502-6S-01				GW	G	6	1	3	2						
11/20	1544	CEF-502-6TD-01				GW	G	6	1	3	2						
11/20	1640	CEF-502-3S-01				GW	G	6	1	3	2						
11/20	1600	CEF-502-SB05-05				SO	G	1	1			1					
11/20	1550	CEF-502-SB01-05				SO	G	1	1			1					
11/21	0935	CEF-502-8S-01				GW	G	6	1	3	2						
11/21	0955	CEF-502-(GW)-DUP-01				GW	G	6	1	3	2						
11/21	1045	CEF-502-15R-01				GW	G	6	1	3	2						
11/21	1255	CEF-502-SB07-05				SO	G	1	1			1					
11/21	1305	CEF-502-SB08-05				SO	G	1	1			1					
11/21	1244	CEF-502-SB07-02				SO	G	1	1			1					
11/21	1400	CEF-502-SB10-05				SO	G	1	1			1					
11/21	[illegible]	CEF-502-SB-DUP-01				SO	G	1	1			1					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11-21-06	1620	1. RECEIVED BY	11/21/06	1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

ATTACHMENT D

SOIL LABORATORY ANALYTICAL DATA

Environmental Conservation Laboratories, Inc.
4810 Executive Park Court, Suite 211
Jacksonville FL, 32216-6069
Phone: 904.296.3007 FAX: 904.296.6210
www.encolabs.com

Thursday, December 7, 2006

Tetra Tech NUS (BR006)

Attn: Mr. Dave Siefken

8640 Philips Highway Suite 16

Jacksonville, FL 32256

RE: Project Number: 112G00378 Building 502, Project Name/Desc: NAS Cecil Field CTO #0025
ENCO Workorder: B610165

Dear Mr. Dave Siefken,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, November 21, 2006.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

This data has been produced in accordance with NELAC standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chris Tompkins

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 31.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: CEF-502-SB05-05 **Lab ID:** B610165-01

Sampled: 11/20/06 16:00 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/04/06	01/07/07	11/28/06 08:59	12/4/2006 17:52
FLPRO	12/04/06	01/07/07	11/28/06 09:01	11/29/2006 14:47

Client ID: CEF-502-SB01-05 **Lab ID:** B610165-02

Sampled: 11/20/06 15:50 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/04/06	01/07/07	11/28/06 08:59	12/4/2006 18:10
FLPRO	12/04/06	01/07/07	11/28/06 09:01	11/29/2006 15:09

Client ID: CEF-502-SB07-05 **Lab ID:** B610165-03

Sampled: 11/21/06 12:55 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 18:28
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/29/2006 16:39

Client ID: CEF-502-SB08-05 **Lab ID:** B610165-04

Sampled: 11/21/06 13:05 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 18:45
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/29/2006 15:32

Client ID: CEF-502-SB09-03 **Lab ID:** B610165-05

Sampled: 11/21/06 13:44 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 19:03
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/29/2006 18:07

www.encolabs.com

Client ID: CEF-502-SB10-05 **Lab ID:** B610165-06

Sampled: 11/21/06 14:03 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 19:20
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/29/2006 15:54

Client ID: CEF-502-SB-DU-01 **Lab ID:** B610165-07

Sampled: 11/21/06 00:00 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 19:38
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/30/2006 11:16

Client ID: CEF-502-SB03-05 **Lab ID:** B610165-08

Sampled: 11/21/06 08:55 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 19:55
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/30/2006 11:39

Client ID: CEF-502-SB04-05 **Lab ID:** B610165-09

Sampled: 11/21/06 10:45 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 20:13
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/30/2006 13:31

Client ID: CEF-502-SB06-05 **Lab ID:** B610165-10

Sampled: 11/21/06 10:55 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 20:30
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/30/2006 10:32

www.encolabs.com

Client ID: CEF-502-SB02-03 **Lab ID:** B610165-11

Sampled: 11/21/06 08:40 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	12/05/06	01/07/07	11/28/06 08:59	12/4/2006 20:48
FLPRO	12/05/06	01/07/07	11/28/06 09:01	11/30/2006 10:10

www.encolabs.com

SAMPLE DETECTION SUMMARY

Client ID: **CEF-502-SB05-05** **Lab ID:** **B610165-01**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	63.4	7.53	mg/kg dry	FLPRO

Client ID: **CEF-502-SB07-05** **Lab ID:** **B610165-03**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	804 D	36.4	mg/kg dry	FLPRO

Client ID: **CEF-502-SB08-05** **Lab ID:** **B610165-04**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	185	7.95	mg/kg dry	FLPRO

Client ID: **CEF-502-SB09-03** **Lab ID:** **B610165-05**

Analyte	Results/Qual	MRL	Units	Method
Chrysene	0.0220 J	0.0362	mg/kg dry	EPA 8270C
TPH (C8-C40)	3580 D	145	mg/kg dry	FLPRO

Client ID: **CEF-502-SB10-05** **Lab ID:** **B610165-06**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	434	7.88	mg/kg dry	FLPRO

Client ID: **CEF-502-SB-DU-01** **Lab ID:** **B610165-07**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	299	7.06	mg/kg dry	FLPRO

Client ID: **CEF-502-SB03-05** **Lab ID:** **B610165-08**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	70.6	8.31	mg/kg dry	FLPRO

Client ID: **CEF-502-SB04-05** **Lab ID:** **B610165-09**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	161	7.32	mg/kg dry	FLPRO

Client ID: **CEF-502-SB06-05** **Lab ID:** **B610165-10**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	378	7.07	mg/kg dry	FLPRO

Client ID: **CEF-502-SB02-03** **Lab ID:** **B610165-11**

Analyte	Results/Qual	MRL	Units	Method
TPH (C8-C40)	15.3	7.16	mg/kg dry	FLPRO

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB05-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-01	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	87.69
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0121 U	0.0121	0.0376	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0113 U	0.0113	0.0376	mg/kg dry
Acenaphthene	83-32-9	0.00828 U	0.00828	0.0376	mg/kg dry
Acenaphthylene	208-96-8	0.0121 U	0.0121	0.0376	mg/kg dry
Anthracene	120-12-7	0.00787 U	0.00787	0.0376	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00787 U	0.00787	0.0376	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00787 U	0.00787	0.0376	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00608 U	0.00608	0.0376	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0116 U	0.0116	0.0376	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00787 U	0.00787	0.0376	mg/kg dry
Chrysene	218-01-9	0.00832 U	0.00832	0.0376	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0128 U	0.0128	0.0376	mg/kg dry
Fluoranthene	206-44-0	0.0101 U	0.0101	0.0376	mg/kg dry
Fluorene	86-73-7	0.00718 U	0.00718	0.0376	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0132 U	0.0132	0.0376	mg/kg dry
Naphthalene	91-20-3	0.0139 U	0.0139	0.0376	mg/kg dry
Phenanthrene	85-01-8	0.00787 U	0.00787	0.0376	mg/kg dry
Pyrene	129-00-0	0.0101 U	0.0101	0.0376	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.27	1.90	67 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB05-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-01	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	87.69
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**63.4**	6.39	7.53	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.83	3.80	127 %	29-145
o-Terphenyl	84-15-1	2.12	1.90	112 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB01-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-02	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	84.33
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0126 U	0.0126	0.0391	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0117 U	0.0117	0.0391	mg/kg dry
Acenaphthene	83-32-9	0.00861 U	0.00861	0.0391	mg/kg dry
Acenaphthylene	208-96-8	0.0126 U	0.0126	0.0391	mg/kg dry
Anthracene	120-12-7	0.00818 U	0.00818	0.0391	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00818 U	0.00818	0.0391	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00818 U	0.00818	0.0391	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00632 U	0.00632	0.0391	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0121 U	0.0121	0.0391	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00818 U	0.00818	0.0391	mg/kg dry
Chrysene	218-01-9	0.00866 U	0.00866	0.0391	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0133 U	0.0133	0.0391	mg/kg dry
Fluoranthene	206-44-0	0.0106 U	0.0106	0.0391	mg/kg dry
Fluorene	86-73-7	0.00747 U	0.00747	0.0391	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0138 U	0.0138	0.0391	mg/kg dry
Naphthalene	91-20-3	0.0145 U	0.0145	0.0391	mg/kg dry
Phenanthrene	85-01-8	0.00818 U	0.00818	0.0391	mg/kg dry
Pyrene	129-00-0	0.0106 U	0.0106	0.0391	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.12	1.98	57 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB01-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-02	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	84.33
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	6.64 U	6.64	7.83	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.35	3.95	110 %	29-145
o-Terphenyl	84-15-1	1.94	1.98	98 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB07-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-03	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	90.61
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0117 U	0.0117	0.0364	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0109 U	0.0109	0.0364	mg/kg dry
Acenaphthene	83-32-9	0.00801 U	0.00801	0.0364	mg/kg dry
Acenaphthylene	208-96-8	0.0117 U	0.0117	0.0364	mg/kg dry
Anthracene	120-12-7	0.00762 U	0.00762	0.0364	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00762 U	0.00762	0.0364	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00762 U	0.00762	0.0364	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00588 U	0.00588	0.0364	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0113 U	0.0113	0.0364	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00762 U	0.00762	0.0364	mg/kg dry
Chrysene	218-01-9	0.00806 U	0.00806	0.0364	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0124 U	0.0124	0.0364	mg/kg dry
Fluoranthene	206-44-0	0.00982 U	0.00982	0.0364	mg/kg dry
Fluorene	86-73-7	0.00695 U	0.00695	0.0364	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0128 U	0.0128	0.0364	mg/kg dry
Naphthalene	91-20-3	0.0135 U	0.0135	0.0364	mg/kg dry
Phenanthrene	85-01-8	0.00762 U	0.00762	0.0364	mg/kg dry
Pyrene	129-00-0	0.00982 U	0.00982	0.0364	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.94	1.84	105 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB07-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-03	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	5
Anal. Batch:		Percent Solids:	90.61
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**804** D	30.9	36.4	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	3.88	3.68	106 %	29-145
o-Terphenyl	84-15-1	2.12	1.84	115 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB08-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-04	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	82.97
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0128 U	0.0128	0.0398	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0119 U	0.0119	0.0398	mg/kg dry
Acenaphthene	83-32-9	0.00875 U	0.00875	0.0398	mg/kg dry
Acenaphthylene	208-96-8	0.0128 U	0.0128	0.0398	mg/kg dry
Anthracene	120-12-7	0.00832 U	0.00832	0.0398	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00832 U	0.00832	0.0398	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00832 U	0.00832	0.0398	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00642 U	0.00642	0.0398	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0123 U	0.0123	0.0398	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00832 U	0.00832	0.0398	mg/kg dry
Chrysene	218-01-9	0.00880 U	0.00880	0.0398	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0135 U	0.0135	0.0398	mg/kg dry
Fluoranthene	206-44-0	0.0107 U	0.0107	0.0398	mg/kg dry
Fluorene	86-73-7	0.00759 U	0.00759	0.0398	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0140 U	0.0140	0.0398	mg/kg dry
Naphthalene	91-20-3	0.0147 U	0.0147	0.0398	mg/kg dry
Phenanthrene	85-01-8	0.00832 U	0.00832	0.0398	mg/kg dry
Pyrene	129-00-0	0.0107 U	0.0107	0.0398	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.11	2.01	55 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB08-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-04	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	82.97
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**185**	6.75	7.95	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.11	4.02	102 %	29-145
o-Terphenyl	84-15-1	1.95	2.01	97 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB09-03	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-05	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	91.05
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0116 U	0.0116	0.0362	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0109 U	0.0109	0.0362	mg/kg dry
Acenaphthene	83-32-9	0.00797 U	0.00797	0.0362	mg/kg dry
Acenaphthylene	208-96-8	0.0116 U	0.0116	0.0362	mg/kg dry
Anthracene	120-12-7	0.00758 U	0.00758	0.0362	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00758 U	0.00758	0.0362	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00758 U	0.00758	0.0362	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00585 U	0.00585	0.0362	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0112 U	0.0112	0.0362	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00758 U	0.00758	0.0362	mg/kg dry
Chrysene	218-01-9	**0.0220** J	0.00802	0.0362	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0123 U	0.0123	0.0362	mg/kg dry
Fluoranthene	206-44-0	0.00977 U	0.00977	0.0362	mg/kg dry
Fluorene	86-73-7	0.00692 U	0.00692	0.0362	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0127 U	0.0127	0.0362	mg/kg dry
Naphthalene	91-20-3	0.0134 U	0.0134	0.0362	mg/kg dry
Phenanthrene	85-01-8	0.00758 U	0.00758	0.0362	mg/kg dry
Pyrene	129-00-0	0.00977 U	0.00977	0.0362	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.73	1.83	94 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB09-03	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-05	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	20
Anal. Batch:		Percent Solids:	91.05
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**3580** D	123	145	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.03	3.66	110 %	29-145
o-Terphenyl	84-15-1	2.64 S-GC	1.83	144 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB10-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-06	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	83.71
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0127 U	0.0127	0.0394	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0118 U	0.0118	0.0394	mg/kg dry
Acenaphthene	83-32-9	0.00867 U	0.00867	0.0394	mg/kg dry
Acenaphthylene	208-96-8	0.0127 U	0.0127	0.0394	mg/kg dry
Anthracene	120-12-7	0.00824 U	0.00824	0.0394	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00824 U	0.00824	0.0394	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00824 U	0.00824	0.0394	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00636 U	0.00636	0.0394	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0122 U	0.0122	0.0394	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00824 U	0.00824	0.0394	mg/kg dry
Chrysene	218-01-9	0.00872 U	0.00872	0.0394	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0134 U	0.0134	0.0394	mg/kg dry
Fluoranthene	206-44-0	0.0106 U	0.0106	0.0394	mg/kg dry
Fluorene	86-73-7	0.00753 U	0.00753	0.0394	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0139 U	0.0139	0.0394	mg/kg dry
Naphthalene	91-20-3	0.0146 U	0.0146	0.0394	mg/kg dry
Phenanthrene	85-01-8	0.00824 U	0.00824	0.0394	mg/kg dry
Pyrene	129-00-0	0.0106 U	0.0106	0.0394	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.46	1.99	73 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB10-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-06	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/29/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	83.71
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**434**	6.69	7.88	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.33	3.98	109 %	29-145
o-Terphenyl	84-15-1	1.92	1.99	96 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB-DU-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-07	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	93.47
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0113 U	0.0113	0.0353	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0106 U	0.0106	0.0353	mg/kg dry
Acenaphthene	83-32-9	0.00777 U	0.00777	0.0353	mg/kg dry
Acenaphthylene	208-96-8	0.0113 U	0.0113	0.0353	mg/kg dry
Anthracene	120-12-7	0.00738 U	0.00738	0.0353	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00738 U	0.00738	0.0353	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00738 U	0.00738	0.0353	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00570 U	0.00570	0.0353	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0109 U	0.0109	0.0353	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00738 U	0.00738	0.0353	mg/kg dry
Chrysene	218-01-9	0.00781 U	0.00781	0.0353	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0120 U	0.0120	0.0353	mg/kg dry
Fluoranthene	206-44-0	0.00952 U	0.00952	0.0353	mg/kg dry
Fluorene	86-73-7	0.00674 U	0.00674	0.0353	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0124 U	0.0124	0.0353	mg/kg dry
Naphthalene	91-20-3	0.0131 U	0.0131	0.0353	mg/kg dry
Phenanthrene	85-01-8	0.00738 U	0.00738	0.0353	mg/kg dry
Pyrene	129-00-0	0.00952 U	0.00952	0.0353	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.09	1.78	117 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB-DU-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-07	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/30/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	93.47
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**299**	5.99	7.06	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.06	3.57	114 %	29-145
o-Terphenyl	84-15-1	1.95	1.78	110 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB03-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-08	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	79.46
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0133 U	0.0133	0.0415	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0125 U	0.0125	0.0415	mg/kg dry
Acenaphthene	83-32-9	0.00914 U	0.00914	0.0415	mg/kg dry
Acenaphthylene	208-96-8	0.0133 U	0.0133	0.0415	mg/kg dry
Anthracene	120-12-7	0.00868 U	0.00868	0.0415	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00868 U	0.00868	0.0415	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00868 U	0.00868	0.0415	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00671 U	0.00671	0.0415	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0128 U	0.0128	0.0415	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00868 U	0.00868	0.0415	mg/kg dry
Chrysene	218-01-9	0.00919 U	0.00919	0.0415	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0141 U	0.0141	0.0415	mg/kg dry
Fluoranthene	206-44-0	0.0112 U	0.0112	0.0415	mg/kg dry
Fluorene	86-73-7	0.00793 U	0.00793	0.0415	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0146 U	0.0146	0.0415	mg/kg dry
Naphthalene	91-20-3	0.0154 U	0.0154	0.0415	mg/kg dry
Phenanthrene	85-01-8	0.00868 U	0.00868	0.0415	mg/kg dry
Pyrene	129-00-0	0.0112 U	0.0112	0.0415	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.31	2.10	63 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB03-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-08	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/30/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	79.46
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**70.6**	7.05	8.31	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.80	4.20	114 %	29-145
o-Terphenyl	84-15-1	2.19	2.10	105 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB04-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-09	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	90.14
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0118 U	0.0118	0.0366	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0110 U	0.0110	0.0366	mg/kg dry
Acenaphthene	83-32-9	0.00805 U	0.00805	0.0366	mg/kg dry
Acenaphthylene	208-96-8	0.0118 U	0.0118	0.0366	mg/kg dry
Anthracene	120-12-7	0.00765 U	0.00765	0.0366	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00765 U	0.00765	0.0366	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00765 U	0.00765	0.0366	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00591 U	0.00591	0.0366	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0113 U	0.0113	0.0366	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00765 U	0.00765	0.0366	mg/kg dry
Chrysene	218-01-9	0.00810 U	0.00810	0.0366	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0124 U	0.0124	0.0366	mg/kg dry
Fluoranthene	206-44-0	0.00987 U	0.00987	0.0366	mg/kg dry
Fluorene	86-73-7	0.00699 U	0.00699	0.0366	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0129 U	0.0129	0.0366	mg/kg dry
Naphthalene	91-20-3	0.0135 U	0.0135	0.0366	mg/kg dry
Phenanthrene	85-01-8	0.00765 U	0.00765	0.0366	mg/kg dry
Pyrene	129-00-0	0.00987 U	0.00987	0.0366	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.01	1.85	109 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB04-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-09	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/30/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	90.14
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**161**	6.21	7.32	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.19	3.70	113 %	29-145
o-Terphenyl	84-15-1	1.96	1.85	106 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB06-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-10	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	93.41
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0113 U	0.0113	0.0353	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0106 U	0.0106	0.0353	mg/kg dry
Acenaphthene	83-32-9	0.00777 U	0.00777	0.0353	mg/kg dry
Acenaphthylene	208-96-8	0.0113 U	0.0113	0.0353	mg/kg dry
Anthracene	120-12-7	0.00739 U	0.00739	0.0353	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00739 U	0.00739	0.0353	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00739 U	0.00739	0.0353	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00570 U	0.00570	0.0353	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0109 U	0.0109	0.0353	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00739 U	0.00739	0.0353	mg/kg dry
Chrysene	218-01-9	0.00782 U	0.00782	0.0353	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0120 U	0.0120	0.0353	mg/kg dry
Fluoranthene	206-44-0	0.00953 U	0.00953	0.0353	mg/kg dry
Fluorene	86-73-7	0.00674 U	0.00674	0.0353	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0124 U	0.0124	0.0353	mg/kg dry
Naphthalene	91-20-3	0.0131 U	0.0131	0.0353	mg/kg dry
Phenanthrene	85-01-8	0.00739 U	0.00739	0.0353	mg/kg dry
Pyrene	129-00-0	0.00953 U	0.00953	0.0353	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.26	1.78	126 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB06-05	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-10	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/30/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	93.41
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**378**	6.00	7.07	mg/kg dry

Surrogate Recovery		Result		Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.06		3.57	114 %	29-145
o-Terphenyl	84-15-1	2.93	S-GC	1.78	164 %	36-140

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB02-03	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-11	Work Order #:	B610165
Prep. Method:	EPA 3545_MS	Matrix:	Soil
Analyzed:	12/04/06 By: jj	Unit:	mg/kg dry
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00073	Percent Solids:	92.12
QC Batch:	6K28006		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0115 U	0.0115	0.0358	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0107 U	0.0107	0.0358	mg/kg dry
Acenaphthene	83-32-9	0.00788 U	0.00788	0.0358	mg/kg dry
Acenaphthylene	208-96-8	0.0115 U	0.0115	0.0358	mg/kg dry
Anthracene	120-12-7	0.00749 U	0.00749	0.0358	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00749 U	0.00749	0.0358	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00749 U	0.00749	0.0358	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00578 U	0.00578	0.0358	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0111 U	0.0111	0.0358	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00749 U	0.00749	0.0358	mg/kg dry
Chrysene	218-01-9	0.00792 U	0.00792	0.0358	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0122 U	0.0122	0.0358	mg/kg dry
Fluoranthene	206-44-0	0.00966 U	0.00966	0.0358	mg/kg dry
Fluorene	86-73-7	0.00684 U	0.00684	0.0358	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0126 U	0.0126	0.0358	mg/kg dry
Naphthalene	91-20-3	0.0132 U	0.0132	0.0358	mg/kg dry
Phenanthrene	85-01-8	0.00749 U	0.00749	0.0358	mg/kg dry
Pyrene	129-00-0	0.00966 U	0.00966	0.0358	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.88	1.81	104 %	34-180

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-SB02-03	Project:	NAS Cecil Field CTO #0025
Lab #:	B610165-11	Work Order #:	B610165
Prep. Method:	EPA 3545	Matrix:	Soil
Analyzed:	11/30/06 By: PL	Unit:	mg/kg dry
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:		Percent Solids:	92.12
QC Batch:	6K28007		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**15.3**	6.08	7.16	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	3.00	3.62	83 %	29-145
o-Terphenyl	84-15-1	1.57	1.81	87 %	36-140

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K28006 - EPA 3545_MS										
Blank (6K28006-BLK1)				Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 16:42						
Benzo(a)anthracene	0.00690 U	0.0330	mg/kg wet							
Benzo(b)fluoranthene	0.00533 U	0.0330	mg/kg wet							
Benzo(k)fluoranthene	0.00690 U	0.0330	mg/kg wet							
Benzo(g,h,i)perylene	0.0102 U	0.0330	mg/kg wet							
Benzo(a)pyrene	0.00690 U	0.0330	mg/kg wet							
Dibenzo(a,h)anthracene	0.0112 U	0.0330	mg/kg wet							
Indeno(1,2,3-cd)pyrene	0.0116 U	0.0330	mg/kg wet							
Naphthalene	0.0122 U	0.0330	mg/kg wet							
2-Methylnaphthalene	0.00990 U	0.0330	mg/kg wet							
1-Methylnaphthalene	0.0106 U	0.0330	mg/kg wet							
Acenaphthylene	0.0106 U	0.0330	mg/kg wet							
Acenaphthene	0.00726 U	0.0330	mg/kg wet							
Fluorene	0.00630 U	0.0330	mg/kg wet							
Phenanthrene	0.00690 U	0.0330	mg/kg wet							
Anthracene	0.00690 U	0.0330	mg/kg wet							
Fluoranthene	0.00890 U	0.0330	mg/kg wet							
Pyrene	0.00890 U	0.0330	mg/kg wet							
Chrysene	0.00730 U	0.0330	mg/kg wet							
Surrogate: p-Terphenyl	*1.13*		*mg/kg wet*	*1.67*		*68*	*34-180*			
LCS (6K28006-BS1)				Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 17:00						
Benzo(a)anthracene	0.533	0.0330	mg/kg wet	0.667		80	50-105			
Benzo(b)fluoranthene	0.500	0.0330	mg/kg wet	0.667		75	55-120			
Benzo(k)fluoranthene	0.553	0.0330	mg/kg wet	0.667		83	50-120			
Benzo(g,h,i)perylene	0.473	0.0330	mg/kg wet	0.667		71	55-115			
Benzo(a)pyrene	0.527	0.0330	mg/kg wet	0.667		79	40-125			
Dibenzo(a,h)anthracene	0.593	0.0330	mg/kg wet	0.667		89	45-115			
Indeno(1,2,3-cd)pyrene	0.537	0.0330	mg/kg wet	0.667		80	55-135			
Naphthalene	0.480	0.0330	mg/kg wet	0.667		72	50-104			
2-Methylnaphthalene	0.510	0.0330	mg/kg wet	0.667		76	48-117			
1-Methylnaphthalene	0.503	0.0330	mg/kg wet	0.667		75	43-114			
Acenaphthylene	0.520	0.0330	mg/kg wet	0.667		78	35-115			
Acenaphthene	0.507	0.0330	mg/kg wet	0.667		76	35-110			
Fluorene	0.527	0.0330	mg/kg wet	0.667		79	45-105			
Phenanthrene	0.503	0.0330	mg/kg wet	0.667		75	55-125			
Anthracene	0.523	0.0330	mg/kg wet	0.667		78	40-125			
Fluoranthene	0.587	0.0330	mg/kg wet	0.667		88	40-135			
Pyrene	0.573	0.0330	mg/kg wet	0.667		86	50-115			
Chrysene	0.507	0.0330	mg/kg wet	0.667		76	55-120			
Surrogate: p-Terphenyl	*1.92*		*mg/kg wet*	*1.67*		*115*	*34-180*			
Matrix Spike (6K28006-MS1)		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 17:17						
Benzo(a)anthracene	0.342	0.0376	mg/kg dry	0.760	0.00787 U	45	52-114			
Benzo(b)fluoranthene	0.312	0.0376	mg/kg dry	0.760	0.00608 U	41	49-116			
Benzo(k)fluoranthene	0.312	0.0376	mg/kg dry	0.760	0.00787 U	41	43-133			
Benzo(g,h,i)perylene	0.247	0.0376	mg/kg dry	0.760	0.0116 U	32	36-115			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K28006 - EPA 3545_MS										
Matrix Spike (6K28006-MS1) Continued		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 17:17						
Benzo(a)pyrene	0.293	0.0376	mg/kg dry	0.760	0.00787 U	38	50-113			
Dibenzo(a,h)anthracene	0.422	0.0376	mg/kg dry	0.760	0.0128 U	55	41-118			
Indeno(1,2,3-cd)pyrene	0.319	0.0376	mg/kg dry	0.760	0.0132 U	42	43-115			
Naphthalene	0.418	0.0376	mg/kg dry	0.760	0.0139 U	55	50-114			
2-Methylnaphthalene	0.418	0.0376	mg/kg dry	0.760	0.0113 U	55	48-117			
1-Methylnaphthalene	0.411	0.0376	mg/kg dry	0.760	0.0121 U	54	43-114			
Acenaphthylene	0.407	0.0376	mg/kg dry	0.760	0.0121 U	53	47-118			
Acenaphthene	0.388	0.0376	mg/kg dry	0.760	0.00828 U	51	49-117			
Fluorene	0.395	0.0376	mg/kg dry	0.760	0.00718 U	52	47-119			
Phenanthrene	0.376	0.0376	mg/kg dry	0.760	0.00787 U	50	51-113			
Anthracene	0.369	0.0376	mg/kg dry	0.760	0.00787 U	48	49-125			
Fluoranthene	0.403	0.0376	mg/kg dry	0.760	0.0101 U	53	52-132			
Pyrene	0.392	0.0376	mg/kg dry	0.760	0.0101 U	52	52-126			
Chrysene	0.346	0.0376	mg/kg dry	0.760	0.00832 U	46	47-128			
Surrogate: p-Terphenyl	*1.55*		*mg/kg dry*	*1.90*		*82*	*34-180*			
Matrix Spike (6K28006-MS2)		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/05/2006 10:54						
Benzo(a)anthracene	0.407	0.0376	mg/kg dry	0.760	0.00787 U	53	52-114			
Benzo(b)fluoranthene	0.373	0.0376	mg/kg dry	0.760	0.00608 U	49	49-116			
Benzo(k)fluoranthene	0.384	0.0376	mg/kg dry	0.760	0.00787 U	50	43-133			
Benzo(g,h,i)perylene	0.308	0.0376	mg/kg dry	0.760	0.0116 U	40	36-115			
Benzo(a)pyrene	0.357	0.0376	mg/kg dry	0.760	0.00787 U	47	50-113			
Dibenzo(a,h)anthracene	0.509	0.0376	mg/kg dry	0.760	0.0128 U	67	41-118			
Indeno(1,2,3-cd)pyrene	0.388	0.0376	mg/kg dry	0.760	0.0132 U	51	43-115			
Naphthalene	0.502	0.0376	mg/kg dry	0.760	0.0139 U	66	50-114			
2-Methylnaphthalene	0.506	0.0376	mg/kg dry	0.760	0.0113 U	66	48-117			
1-Methylnaphthalene	0.494	0.0376	mg/kg dry	0.760	0.0121 U	65	43-114			
Acenaphthylene	0.479	0.0376	mg/kg dry	0.760	0.0121 U	63	47-118			
Acenaphthene	0.460	0.0376	mg/kg dry	0.760	0.00828 U	60	49-117			
Fluorene	0.475	0.0376	mg/kg dry	0.760	0.00718 U	62	47-119			
Phenanthrene	0.449	0.0376	mg/kg dry	0.760	0.00787 U	59	51-113			
Anthracene	0.441	0.0376	mg/kg dry	0.760	0.00787 U	58	49-125			
Fluoranthene	0.487	0.0376	mg/kg dry	0.760	0.0101 U	64	52-132			
Pyrene	0.471	0.0376	mg/kg dry	0.760	0.0101 U	62	52-126			
Chrysene	0.414	0.0376	mg/kg dry	0.760	0.00832 U	54	47-128			
Surrogate: p-Terphenyl	*1.90*		*mg/kg dry*	*1.90*		*100*	*34-180*			
Matrix Spike Dup (6K28006-MSD1)		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 17:35						
Benzo(a)anthracene	0.258	0.0376	mg/kg dry	0.760	0.00787 U	34	52-114	28	20	
Benzo(b)fluoranthene	0.209	0.0376	mg/kg dry	0.760	0.00608 U	28	49-116	39	23	
Benzo(k)fluoranthene	0.255	0.0376	mg/kg dry	0.760	0.00787 U	34	43-133	20	22	
Benzo(g,h,i)perylene	0.201	0.0376	mg/kg dry	0.760	0.0116 U	26	36-115	20	24	
Benzo(a)pyrene	0.217	0.0376	mg/kg dry	0.760	0.00787 U	28	50-113	30	21	
Dibenzo(a,h)anthracene	0.361	0.0376	mg/kg dry	0.760	0.0128 U	48	41-118	16	21	
Indeno(1,2,3-cd)pyrene	0.258	0.0376	mg/kg dry	0.760	0.0132 U	34	43-115	21	23	
Naphthalene	0.365	0.0376	mg/kg dry	0.760	0.0139 U	48	50-114	14	23	

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K28006 - EPA 3545_MS										
Matrix Spike Dup (6K28006-MSD1) Continued		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/04/2006 17:35						
2-Methylnaphthalene	0.365	0.0376	mg/kg dry	0.760	0.0113 U	48	48-117	14	20	
1-Methylnaphthalene	0.354	0.0376	mg/kg dry	0.760	0.0121 U	46	43-114	15	23	
Acenaphthylene	0.331	0.0376	mg/kg dry	0.760	0.0121 U	44	47-118	21	23	
Acenaphthene	0.319	0.0376	mg/kg dry	0.760	0.00828 U	42	49-117	19	19	
Fluorene	0.319	0.0376	mg/kg dry	0.760	0.00718 U	42	47-119	21	22	
Phenanthrene	0.293	0.0376	mg/kg dry	0.760	0.00787 U	38	51-113	25	22	
Anthracene	0.281	0.0376	mg/kg dry	0.760	0.00787 U	37	49-125	27	24	
Fluoranthene	0.304	0.0376	mg/kg dry	0.760	0.0101 U	40	52-132	28	20	
Pyrene	0.296	0.0376	mg/kg dry	0.760	0.0101 U	39	52-126	28	25	
Chrysene	0.266	0.0376	mg/kg dry	0.760	0.00832 U	35	47-128	26	23	
Surrogate: p-Terphenyl	*1.33*		*mg/kg dry*	*1.90*		*70*	*34-180*			
Matrix Spike Dup (6K28006-MSD2)		**Source: B610165-01**		Prepared: 11/28/2006 08:59 Analyzed: 12/05/2006 11:11						
Benzo(a)anthracene	0.285	0.0376	mg/kg dry	0.760	0.00787 U	38	52-114	35	20	
Benzo(b)fluoranthene	0.236	0.0376	mg/kg dry	0.760	0.00608 U	31	49-116	45	23	
Benzo(k)fluoranthene	0.289	0.0376	mg/kg dry	0.760	0.00787 U	38	43-133	28	22	
Benzo(g,h,i)perylene	0.228	0.0376	mg/kg dry	0.760	0.0116 U	30	36-115	30	24	
Benzo(a)pyrene	0.247	0.0376	mg/kg dry	0.760	0.00787 U	32	50-113	36	21	
Dibenzo(a,h)anthracene	0.414	0.0376	mg/kg dry	0.760	0.0128 U	54	41-118	21	21	
Indeno(1,2,3-cd)pyrene	0.293	0.0376	mg/kg dry	0.760	0.0132 U	38	43-115	28	23	
Naphthalene	0.411	0.0376	mg/kg dry	0.760	0.0139 U	54	50-114	20	23	
2-Methylnaphthalene	0.407	0.0376	mg/kg dry	0.760	0.0113 U	53	48-117	22	20	
1-Methylnaphthalene	0.388	0.0376	mg/kg dry	0.760	0.0121 U	51	43-114	24	23	
Acenaphthylene	0.365	0.0376	mg/kg dry	0.760	0.0121 U	48	47-118	27	23	
Acenaphthene	0.350	0.0376	mg/kg dry	0.760	0.00828 U	46	49-117	27	19	
Fluorene	0.357	0.0376	mg/kg dry	0.760	0.00718 U	47	47-119	28	22	
Phenanthrene	0.327	0.0376	mg/kg dry	0.760	0.00787 U	43	51-113	31	22	
Anthracene	0.315	0.0376	mg/kg dry	0.760	0.00787 U	42	49-125	33	24	
Fluoranthene	0.346	0.0376	mg/kg dry	0.760	0.0101 U	46	52-132	34	20	
Pyrene	0.338	0.0376	mg/kg dry	0.760	0.0101 U	44	52-126	33	25	
Chrysene	0.300	0.0376	mg/kg dry	0.760	0.00832 U	40	47-128	32	23	
Surrogate: p-Terphenyl	*1.55*		*mg/kg dry*	*1.90*		*81*	*34-180*			
FL Petroleum Range Organics - Quality Control										
Batch 6K28007 - EPA 3545										
Blank (6K28007-BLK1)				Prepared: 11/28/2006 09:01 Analyzed: 11/29/2006 12:35						
TPH (C8-C40)	5.60 U	6.60	mg/kg wet							
LCS (6K28007-BS1)				Prepared: 11/28/2006 09:01 Analyzed: 11/29/2006 12:57						
TPH (C8-C40)	35.9	6.60	mg/kg wet	56.7		63	48-118			
Matrix Spike (6K28007-MS1)		**Source: B610165-01**		Prepared: 11/28/2006 09:01 Analyzed: 11/29/2006 13:20						
TPH (C8-C40)	105	7.53	mg/kg dry	64.6	63.4	65	40-136			
Matrix Spike Dup (6K28007-MSD1)		**Source: B610165-01**		Prepared: 11/28/2006 09:01 Analyzed: 11/29/2006 13:41						
TPH (C8-C40)	116	7.53	mg/kg dry	64.6	63.4	82	40-136	10	25	

NOTES AND DEFINITIONS

D	Data reported from a dilution
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Analyte included in the analysis, but not detected

LABORATORY CERTIFICATION SUMMARY

Analysis	Matrix	Cert ID	Cert Number
8270C PAH SIM	Soil	NELAC	E82277
FLPRO	Soil	NELAC	E82277

B610164 + B610165

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2486 PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00378	Building 502	Dave Siefken	904-636-6125	ENCO
SAMPLERS (SIGNATURE) Kara J. Wimble		FIELD OPERATIONS LEADER Terry Cottenoir	PHONE NUMBER 904-636-6125	ADDRESS
		CARRIER/WAYBILL NUMBER hand-delivered		CITY, STATE Jacksonville, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	SW 8260B	SW 8260B	FL-PRO	FL-PRO					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G					
PRESERVATIVE USED									None	HCL	H_2SO_4	None					
TYPE OF ANALYSIS									SW 8260-8310	SW 8260B	FL-PRO	FL-PRO					
11/20	1500	CEF-502-6S-01				GW	G	6	1	3	2						
11/20	1544	CEF-502-6TD-01				GW	G	6	1	3	2						
11/20	1640	CEF-502-3S-01				GW	G	6	1	3	2						
11/20	1600	CEF-502-SB05-05				SO	G	1	1			1					
11/20	1550	CEF-502-SB01-05				SO	G	1	1			1					
11/21	0935	CEF-502-8S-01				GW	G	6	1	3	2						
11/21	0955	CEF-502-GW-DUP-01				GW	G	6	1	3	2						
11/21	1045	CEF-502-15R-01				GW	G	6	1	3	2						
11/21	1254	CEF-502-SB07-05				SO	G	1	1			1					
11/21	1305	CEF-502-SB08-05				SO	G	1	1			1					
11/21	1344	CEF-502-SB09-03				SO	G	1	1			1					
11/21	1403	CEF-502-SB10-05				SO	G	1	1			1					
11/21	0000	CEF-502-SB-DU-01				SO	G	1	1			1					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	11/21/06	1620	1. RECEIVED BY	11/21/06	1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

The total number of pages in this report, including this page is 2.

B610164 + B610165

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2487 PAGE 2 OF 2

PROJECT NO: 112G00378	FACILITY: Bldg 502	PROJECT MANAGER: Dave Siefken	PHONE NUMBER: 904-636-6125
LABORATORY NAME AND CONTACT: ENCO			
SAMPLERS (SIGNATURE): Kara Fahlenkamp		FIELD OPERATIONS LEADER: Terry Cottenoir	PHONE NUMBER: 904-636-6125
ADDRESS			
CARRIER/WAYBILL NUMBER: hand-delivered		CITY, STATE: Jacksonville, FL	

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	SW 846-8310	FL-PRO	FL-PRO	SW 846-8260B					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G					
PRESERVATIVE USED									None	None	H_2SO_4	HCl					
11/21	0855	CEF-502-SB03-05				SO	G	1	1	1							
11/21	1045	CEF-502-SB04-05				SO	G	1	1	1							
11/21	1055	CEF-502-SB06-05				SO	G	1	1	1							
11/21	0840	CEF-502-SB02-03				SO	G	1	1	1							
11/21	1513	CEF-502-FB01				GW	G	6	1		2	3					
11/21	1145	CEF-502-MS-01				GW	G	4	1		1	2					low recl range

1. RELINQUISHED BY	DATE 11-21-06	TIME 1620	1. RECEIVED BY	DATE 11/21/06	TIME 1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

www.encolabs.com

ATTACHMENT E

GROUNDWATER LABORATORY ANALYTICAL DATA

Environmental Conservation Laboratories, Inc.
4810 Executive Park Court, Suite 211
Jacksonville FL, 32216-6069
Phone: 904.296.3007 FAX: 904.296.6210
www.encolabs.com

Wednesday, December 6, 2006

Tetra Tech NUS (BR006)

Attn: Mr. Dave Siefken

8640 Philips Highway Suite 16

Jacksonville, FL 32256

RE: Project Number: 112G00378 Building 502, Project Name/Desc: NAS Cecil Field CTO #0025
ENCO Workorder: B610164

Dear Mr. Dave Siefken,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, November 21, 2006.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

This data has been produced in accordance with NELAC standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chris Tompkins

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 35.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: CEF-502-6S-01 **Lab ID:** B610164-01

Sampled: 11/20/06 15:00 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/04/06		12/04/06 09:00	12/4/2006 14:36
EPA 8270C	11/27/06	01/06/07	11/27/06 13:47	11/30/2006 15:25
FLPRO	11/27/06	01/06/07	11/27/06 13:40	11/28/2006 03:45

Client ID: CEF-502-7D-01 **Lab ID:** B610164-02

Sampled: 11/20/06 15:44 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/04/06		12/04/06 09:00	12/4/2006 15:07
EPA 8270C	11/27/06	01/06/07	11/27/06 13:47	11/30/2006 15:42
FLPRO	11/27/06	01/06/07	11/27/06 13:40	11/28/2006 04:07

Client ID: CEF-502-3S-01 **Lab ID:** B610164-03

Sampled: 11/20/06 16:40 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/04/06		12/04/06 09:00	12/4/2006 15:37
EPA 8270C	11/27/06	01/06/07	11/27/06 13:47	11/30/2006 16:00
FLPRO	11/27/06	01/06/07	11/27/06 13:40	11/28/2006 04:29

Client ID: CEF-502-85-01 **Lab ID:** B610164-04

Sampled: 11/21/06 09:35 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/05/06		12/04/06 09:00	12/4/2006 16:08
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 16:17
FLPRO	11/28/06	01/06/07	11/27/06 13:40	11/28/2006 04:52

www.encolabs.com

Client ID: CEF-502-GW-DUP-01 **Lab ID:** B610164-05

Sampled: 11/21/06 09:55 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/05/06		12/04/06 09:00	12/4/2006 16:39
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 16:35
FLPRO	11/28/06	01/06/07	11/27/06 13:40	11/28/2006 05:14

Client ID: CEF-502-15R-01 **Lab ID:** B610164-06

Sampled: 11/21/06 09:45 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/05/06		12/04/06 09:00	12/4/2006 17:10
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 16:52
FLPRO	11/28/06	01/06/07	11/27/06 13:40	11/28/2006 05:37

Client ID: CEF-502-15R-01 **Lab ID:** B610164-06RE1

Sampled: 11/21/06 09:45 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 19:48

Client ID: CEF-502-FB-01 **Lab ID:** B610164-07

Sampled: 11/21/06 15:13 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/05/06		12/04/06 09:00	12/4/2006 17:40
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 17:10
FLPRO	11/28/06	01/06/07	11/27/06 13:40	11/28/2006 05:59

Client ID: CEF-502-4S-01 **Lab ID:** B610164-08

Sampled: 11/21/06 11:45 **Received:** 11/21/06 16:20

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/05/06		12/04/06 09:00	12/4/2006 18:11
EPA 8270C	11/28/06	01/06/07	11/27/06 13:47	11/30/2006 17:28
FLPRO	11/28/06	01/06/07	11/27/06 13:40	11/28/2006 06:22

SAMPLE DETECTION SUMMARY

Client ID: CEF-502-6S-01 **Lab ID:** B610164-01

Analyte	Results/Qual	MRL	Units	Method
1-Methylnaphthalene	1.95	0.10	ug/L	EPA 8270C
2-Methylnaphthalene	3.75	0.10	ug/L	EPA 8270C
Acenaphthene	1.11	0.10	ug/L	EPA 8270C
Ethylbenzene	0.3 J	1.0	ug/L	EPA 8260B
Fluorene	2.16	0.10	ug/L	EPA 8270C
Isopropylbenzene	0.4 J	1.0	ug/L	EPA 8260B
Naphthalene	0.43	0.10	ug/L	EPA 8270C
Phenanthrene	0.08 J	0.10	ug/L	EPA 8270C
TPH (C8-C40)	0.330	0.170	mg/L	FLPRO

Client ID: CEF-502-3S-01 **Lab ID:** B610164-03

Analyte	Results/Qual	MRL	Units	Method
1,2,4-Trimethylbenzene	0.5 J	1.0	ug/L	EPA 8260B
1-Methylnaphthalene	6.46	0.10	ug/L	EPA 8270C
2-Methylnaphthalene	4.92	0.10	ug/L	EPA 8270C
Acenaphthene	0.39	0.10	ug/L	EPA 8270C
Fluorene	0.58	0.10	ug/L	EPA 8270C
Naphthalene	0.92	0.10	ug/L	EPA 8270C
Phenanthrene	0.13	0.10	ug/L	EPA 8270C
TPH (C8-C40)	0.166 J	0.170	mg/L	FLPRO

Client ID: CEF-502-15R-01 **Lab ID:** B610164-06

Analyte	Results/Qual	MRL	Units	Method
1,2,4-Trimethylbenzene	6.9	1.0	ug/L	EPA 8260B
1,3,5-Trimethylbenzene	2.8	1.0	ug/L	EPA 8260B
Acenaphthene	1.72	0.10	ug/L	EPA 8270C
Anthracene	0.07 J	0.10	ug/L	EPA 8270C
Ethylbenzene	2.5	1.0	ug/L	EPA 8260B
Fluorene	2.78	0.10	ug/L	EPA 8270C
Isopropylbenzene	2.7	1.0	ug/L	EPA 8260B
Naphthalene	11.2	0.10	ug/L	EPA 8270C
Phenanthrene	2.40	0.10	ug/L	EPA 8270C
TPH (C8-C40)	2.11	0.170	mg/L	FLPRO

Client ID: CEF-502-15R-01 **Lab ID:** B610164-06RE1

Analyte	Results/Qual	MRL	Units	Method
1-Methylnaphthalene	52.8 D	1.00	ug/L	EPA 8270C
2-Methylnaphthalene	110 D	1.00	ug/L	EPA 8270C

Client ID: CEF-502-4S-01 **Lab ID:** B610164-08

Analyte	Results/Qual	MRL	Units	Method
1,2,4-Trimethylbenzene	0.6 J	1.0	ug/L	EPA 8260B
1,3,5-Trimethylbenzene	0.6 J	1.0	ug/L	EPA 8260B
1-Methylnaphthalene	1.48	0.10	ug/L	EPA 8270C

2-Methylnaphthalene	8.37		0.10	ug/L	EPA 8270C
Acenaphthene	0.29		0.10	ug/L	EPA 8270C
Benzene	0.3	J	1.0	ug/L	EPA 8260B
Ethylbenzene	2.2		1.0	ug/L	EPA 8260B
Fluorene	0.22		0.10	ug/L	EPA 8270C
Isopropylbenzene	1.2		1.0	ug/L	EPA 8260B
Naphthalene	2.69		0.10	ug/L	EPA 8270C
TPH (C8-C40)	0.496		0.170	mg/L	FLPRO
Xylenes (Total)	0.9	J	1.0	ug/L	EPA 8260B

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-6S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-01	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	0.2 U	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	**0.3 J**	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	**0.4 J**	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.8	50.0	98 %	75-120
Dibromofluoromethane	1868-53-7	52.3	50.0	105 %	85-115
Toluene-d8	2037-26-5	50.3	50.0	101 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-6S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-01	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	**1.95**	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	**3.75**	0.02	0.10	ug/L
Acenaphthene	83-32-9	**1.11**	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	**2.16**	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	**0.43**	0.02	0.10	ug/L
Phenanthrene	85-01-8	**0.08** J	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.25	5.00	65 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-6S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-01	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**0.330**	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0916	0.100	92 %	22-137
o-Terphenyl	84-15-1	0.0461	0.0500	92 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-7D-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-02	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	0.2 U	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	0.3 U	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	0.1 U	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.2	50.0	96 %	75-120
Dibromofluoromethane	1868-53-7	51.6	50.0	103 %	85-115
Toluene-d8	2037-26-5	50.5	50.0	101 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-7D-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-02	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.02 U	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.02 U	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.39	5.00	68 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-7D-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-02	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	0.094 U	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.101	0.100	101 %	22-137
o-Terphenyl	84-15-1	0.0446	0.0500	89 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-3S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-03	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	**0.5 J**	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	0.3 U	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	0.1 U	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.0	50.0	98 %	75-120
Dibromofluoromethane	1868-53-7	51.0	50.0	102 %	85-115
Toluene-d8	2037-26-5	50.1	50.0	100 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-3S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-03	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	**6.46**	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	**4.92**	0.02	0.10	ug/L
Acenaphthene	83-32-9	**0.39**	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	**0.58**	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	**0.92**	0.02	0.10	ug/L
Phenanthrene	85-01-8	**0.13**	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.52	5.00	70 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-3S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-03	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**0.166** J	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0724	0.100	72 %	22-137
o-Terphenyl	84-15-1	0.0349	0.0500	70 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-85-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-04	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	0.2 U	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	0.3 U	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	0.1 U	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.9	50.0	100 %	75-120
Dibromofluoromethane	1868-53-7	49.1	50.0	98 %	85-115
Toluene-d8	2037-26-5	50.6	50.0	101 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-85-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-04	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.02 U	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.02 U	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.77	5.00	75 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-85-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-04	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	0.094 U	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0906	0.100	91 %	22-137
o-Terphenyl	84-15-1	0.0435	0.0500	87 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-GW-DUP-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-05	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	0.2 U	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	0.3 U	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	0.1 U	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.6	50.0	99 %	75-120
Dibromofluoromethane	1868-53-7	52.0	50.0	104 %	85-115
Toluene-d8	2037-26-5	50.3	50.0	101 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-GW-DUP-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-05	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.02 U	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.02 U	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.73	5.00	75 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-GW-DUP-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-05	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	0.094 U	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0812	0.100	81 %	22-137
o-Terphenyl	84-15-1	0.0422	0.0500	84 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-15R-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-06	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	**6.9**	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	**2.8**	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	**2.5**	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	**2.7**	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.6	50.0	99 %	75-120
Dibromofluoromethane	1868-53-7	49.3	50.0	99 %	85-115
Toluene-d8	2037-26-5	50.7	50.0	101 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-15R-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-06	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Acenaphthene	83-32-9	**1.72**	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	**0.07 J**	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	**2.78**	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	**11.2**	0.02	0.10	ug/L
Phenanthrene	85-01-8	**2.40**	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.92	5.00	58 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-15R-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-06	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**2.11**	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0837	0.100	84 %	22-137
o-Terphenyl	84-15-1	0.0471	0.0500	94 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-15R-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-06RE1	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	10
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	**52.8** D	0.21	1.00	ug/L
2-Methylnaphthalene	91-57-6	**110** D	0.21	1.00	ug/L

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-FB-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-07	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	0.2 U	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	0.2 U	0.2	1.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Ethylbenzene	100-41-4	0.3 U	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	0.1 U	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	0.3 U	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.5	50.0	97 %	75-120
Dibromofluoromethane	1868-53-7	49.0	50.0	98 %	85-115
Toluene-d8	2037-26-5	48.7	50.0	97 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-FB-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-07	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.02 U	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.02 U	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.42	5.00	68 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-FB-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-07	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	0.094 U	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0971	0.100	97 %	22-137
o-Terphenyl	84-15-1	0.0465	0.0500	93 %	33-133

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-4S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-08	Work Order #:	B610164
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	12/04/06 By: jdb	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:	BA00076		
QC Batch:	6L04023		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2,4-Trimethylbenzene	95-63-6	**0.6** J	0.2	1.0	ug/L
1,3,5-Trimethylbenzene	108-67-8	**0.6** J	0.2	1.0	ug/L
Benzene	71-43-2	**0.3** J	0.2	1.0	ug/L
Ethylbenzene	100-41-4	**2.2**	0.3	1.0	ug/L
Isopropylbenzene	98-82-8	**1.2**	0.1	1.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
Xylenes (Total)	NA	**0.9** J	0.3	1.0	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.5	50.0	97 %	75-120
Dibromofluoromethane	1868-53-7	48.3	50.0	97 %	85-115
Toluene-d8	2037-26-5	49.6	50.0	99 %	85-120

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-4S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-08	Work Order #:	B610164
Prep. Method:	EPA 3510C_MS	Matrix:	Water
Analyzed:	11/30/06 By: jj	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	BA00071		
QC Batch:	6K27016		

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	**1.48**	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	**8.37**	0.02	0.10	ug/L
Acenaphthene	83-32-9	**0.29**	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	**0.22**	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	**2.69**	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.65	5.00	53 %	10-167

www.encolabs.com

ANALYTICAL REPORT

Sample ID:	CEF-502-4S-01	Project:	NAS Cecil Field CTO #0025
Lab #:	B610164-08	Work Order #:	B610164
Prep. Method:	EPA 3510C	Matrix:	Water
Analyzed:	11/28/06 By: jbh	Unit:	mg/L
Anal. Method:	FLPRO	Dilution Factor:	1
Anal. Batch:	BA00072		
QC Batch:	6K27003		

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	**0.496**	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0964	0.100	96 %	22-137
o-Terphenyl	84-15-1	0.0476	0.0500	95 %	33-133

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Volatile Organic Compounds by GCMS - Quality Control										
Batch 6L04023 - EPA 5030B_MS										
Blank (6L04023-BLK1)				Prepared: 12/04/2006 09:00 Analyzed: 12/04/2006 11:31						
Methyl-tert-Butyl Ether	0.2 U	1.0	ug/L							
Benzene	0.2 U	1.0	ug/L							
Toluene	0.2 U	1.0	ug/L							
Ethylbenzene	0.3 U	1.0	ug/L							
Isopropylbenzene	0.1 U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.2 U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.2 U	1.0	ug/L							
Xylenes (Total)	0.3 U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*52.9*		*ug/L*	*50.0*		*106*	*85-115*			
Surrogate: Toluene-d8	*50.2*		*ug/L*	*50.0*		*100*	*85-120*			
Surrogate: 4-Bromofluorobenzene	*49.1*		*ug/L*	*50.0*		*98*	*75-120*			
Blank (6L04023-BLK2)				Prepared: 12/04/2006 09:00 Analyzed: 12/05/2006 00:50						
Methyl-tert-Butyl Ether	0.2 U	1.0	ug/L							
Benzene	0.2 U	1.0	ug/L							
Toluene	0.2 U	1.0	ug/L							
Ethylbenzene	0.3 U	1.0	ug/L							
Isopropylbenzene	0.1 U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.2 U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.2 U	1.0	ug/L							
Xylenes (Total)	0.3 U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*48.0*		*ug/L*	*50.0*		*96*	*85-115*			
Surrogate: Toluene-d8	*49.9*		*ug/L*	*50.0*		*100*	*85-120*			
Surrogate: 4-Bromofluorobenzene	*49.2*		*ug/L*	*50.0*		*98*	*75-120*			
LCS (6L04023-BS1)				Prepared: 12/04/2006 09:00 Analyzed: 12/04/2006 12:02						
Methyl-tert-Butyl Ether	19.7	1.0	ug/L	20.0		99	39-98			
Benzene	19.3	1.0	ug/L	20.0		96	80-120			
Toluene	17.0	1.0	ug/L	20.0		85	75-120			
Ethylbenzene	16.5	1.0	ug/L	20.0		82	75-112			
Isopropylbenzene	19.3	1.0	ug/L	20.0		96	75-125			
1,3,5-Trimethylbenzene	16.9	1.0	ug/L	20.0		85	75-122			
1,2,4-Trimethylbenzene	17.5	1.0	ug/L	20.0		88	75-124			
Xylenes (Total)	52.1	1.0	ug/L				0-200			
Matrix Spike (6L04023-MS1)		**Source: B610107-08**		Prepared: 12/04/2006 09:00 Analyzed: 12/04/2006 12:33						
Methyl-tert-Butyl Ether	19.7	1.0	ug/L	20.0	0.2 U	99	0-200			
Benzene	19.6	1.0	ug/L	20.0	0.2 U	98	64-138			
Toluene	17.6	1.0	ug/L	20.0	0.2 U	88	72-124			
Ethylbenzene	18.0	1.0	ug/L	20.0	0.3 U	90	0-200			
Isopropylbenzene	20.0	1.0	ug/L	20.0	0.1 U	100	0-200			
1,3,5-Trimethylbenzene	17.8	1.0	ug/L	20.0	0.2 U	89	0-200			
1,2,4-Trimethylbenzene	18.3	1.0	ug/L	20.0	0.2 U	92	0-200			
Xylenes (Total)	53.7	1.0	ug/L		0.810		0-200			
Matrix Spike Dup (6L04023-MSD1)		**Source: B610107-08**		Prepared: 12/04/2006 09:00 Analyzed: 12/04/2006 13:04						
Methyl-tert-Butyl Ether	20.9	1.0	ug/L	20.0	0.2 U	105	0-200	6	23	

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Volatile Organic Compounds by GCMS - Quality Control										
Batch 6L04023 - EPA 5030B_MS										
Matrix Spike Dup (6L04023-MSD1) Continued		**Source: B610107-08**		Prepared: 12/04/2006 09:00 Analyzed: 12/04/2006 13:04						
Benzene	19.0	1.0	ug/L	20.0	0.2 U	95	64-138	3	22	
Toluene	17.6	1.0	ug/L	20.0	0.2 U	88	72-124	0.2	24	
Ethylbenzene	18.0	1.0	ug/L	20.0	0.3 U	90	0-200	0.1	25	
Isopropylbenzene	20.5	1.0	ug/L	20.0	0.1 U	102	0-200	3	25	
1,3,5-Trimethylbenzene	18.5	1.0	ug/L	20.0	0.2 U	93	0-200	4	26	
1,2,4-Trimethylbenzene	18.7	1.0	ug/L	20.0	0.2 U	94	0-200	2	26	
Xylenes (Total)	55.0	1.0	ug/L		0.810		0-200	2	200	
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K27016 - EPA 3510C_MS										
Blank (6K27016-BLK1)				Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 10:35						
Naphthalene	0.02 U	0.10	ug/L							
2-Methylnaphthalene	0.02 U	0.10	ug/L							
1-Methylnaphthalene	0.02 U	0.10	ug/L							
Acenaphthylene	0.01 U	0.10	ug/L							
Acenaphthene	0.02 U	0.10	ug/L							
Benzo(a)anthracene	0.01 U	0.10	ug/L							
Benzo(b)fluoranthene	0.03 U	0.10	ug/L							
Benzo(k)fluoranthene	0.02 U	0.10	ug/L							
Fluorene	0.02 U	0.10	ug/L							
Benzo(g,h,i)perylene	0.03 U	0.10	ug/L							
Benzo(a)pyrene	0.01 U	0.10	ug/L							
Phenanthrene	0.02 U	0.10	ug/L							
Anthracene	0.02 U	0.10	ug/L							
Fluoranthene	0.01 U	0.10	ug/L							
Pyrene	0.02 U	0.10	ug/L							
Chrysene	0.02 U	0.10	ug/L							
Dibenzo(a,h)anthracene	0.02 U	0.10	ug/L							
Indeno(1,2,3-cd)pyrene	0.02 U	0.10	ug/L							
Surrogate: p-Terphenyl	*4.19*		*ug/L*	*5.00*		*84*	*10-167*			
LCS (6K27016-BS1)				Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 10:53						
Naphthalene	1.21	0.10	ug/L	2.00		60	33-100			
2-Methylnaphthalene	1.23	0.10	ug/L	2.00		62	36-98			
1-Methylnaphthalene	1.20	0.10	ug/L	2.00		60	34-95			
Acenaphthylene	1.23	0.10	ug/L	2.00		62	37-103			
Acenaphthene	1.23	0.10	ug/L	2.00		62	36-100			
Benzo(a)anthracene	1.38	0.10	ug/L	2.00		69	40-108			
Benzo(b)fluoranthene	1.33	0.10	ug/L	2.00		66	0-200			
Benzo(k)fluoranthene	1.41	0.10	ug/L	2.00		70	0-200			
Fluorene	1.27	0.10	ug/L	2.00		64	39-104			
Benzo(g,h,i)perylene	1.43	0.10	ug/L	2.00		72	19-118			
Benzo(a)pyrene	1.34	0.10	ug/L	2.00		67	33-108			
Phenanthrene	1.28	0.10	ug/L	2.00		64	38-104			
Anthracene	1.31	0.10	ug/L	2.00		66	36-109			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K27016 - EPA 3510C_MS										
LCS (6K27016-BS1) Continued				Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 10:53						
Fluoranthene	1.55	0.10	ug/L	2.00		78	40-119			
Pyrene	1.53	0.10	ug/L	2.00		76	38-116			
Chrysene	1.35	0.10	ug/L	2.00		68	39-112			
Dibenzo(a,h)anthracene	1.72	0.10	ug/L	2.00		86	30-109			
Indeno(1,2,3-cd)pyrene	1.58	0.10	ug/L	2.00		79	33-112			
Surrogate: p-Terphenyl	*4.09*		*ug/L*	*5.00*		*82*	*10-167*			
Matrix Spike (6K27016-MS1)		**Source: B610161-02**		Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 11:10						
Naphthalene	1.31	0.10	ug/L	2.00	0.02 U	66	33-100			
2-Methylnaphthalene	1.32	0.10	ug/L	2.00	0.02 U	66	36-98			
1-Methylnaphthalene	1.28	0.10	ug/L	2.00	0.02 U	64	34-95			
Acenaphthylene	1.29	0.10	ug/L	2.00	0.01 U	64	37-103			
Acenaphthene	1.29	0.10	ug/L	2.00	0.02 U	64	36-100			
Benzo(a)anthracene	1.37	0.10	ug/L	2.00	0.01 U	68	40-108			
Benzo(b)fluoranthene	1.39	0.10	ug/L	2.00	0.03 U	70	0-200			
Benzo(k)fluoranthene	1.43	0.10	ug/L	2.00	0.02 U	72	0-200			
Fluorene	1.31	0.10	ug/L	2.00	0.02 U	66	39-104			
Benzo(g,h,i)perylene	1.44	0.10	ug/L	2.00	0.03 U	72	19-118			
Benzo(a)pyrene	1.37	0.10	ug/L	2.00	0.01 U	68	33-108			
Phenanthrene	1.32	0.10	ug/L	2.00	0.02 U	66	38-104			
Anthracene	1.34	0.10	ug/L	2.00	0.02 U	67	36-109			
Fluoranthene	1.60	0.10	ug/L	2.00	0.01 U	80	40-119			
Pyrene	1.57	0.10	ug/L	2.00	0.02 U	78	38-116			
Chrysene	1.39	0.10	ug/L	2.00	0.02 U	70	39-112			
Dibenzo(a,h)anthracene	1.74	0.10	ug/L	2.00	0.02 U	87	30-109			
Indeno(1,2,3-cd)pyrene	1.60	0.10	ug/L	2.00	0.02 U	80	33-112			
Surrogate: p-Terphenyl	*4.01*		*ug/L*	*5.00*		*80*	*10-167*			
Matrix Spike Dup (6K27016-MSD1)		**Source: B610161-02**		Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 11:28						
Naphthalene	1.26	0.10	ug/L	2.00	0.02 U	63	33-100	4	27	
2-Methylnaphthalene	1.27	0.10	ug/L	2.00	0.02 U	64	36-98	4	33	
1-Methylnaphthalene	1.24	0.10	ug/L	2.00	0.02 U	62	34-95	3	29	
Acenaphthylene	1.24	0.10	ug/L	2.00	0.01 U	62	37-103	4	24	
Acenaphthene	1.25	0.10	ug/L	2.00	0.02 U	62	36-100	3	23	
Benzo(a)anthracene	1.33	0.10	ug/L	2.00	0.01 U	66	40-108	3	22	
Benzo(b)fluoranthene	1.33	0.10	ug/L	2.00	0.03 U	66	0-200	4	200	
Benzo(k)fluoranthene	1.34	0.10	ug/L	2.00	0.02 U	67	0-200	6	200	
Fluorene	1.27	0.10	ug/L	2.00	0.02 U	64	39-104	3	22	
Benzo(g,h,i)perylene	1.38	0.10	ug/L	2.00	0.03 U	69	19-118	4	27	
Benzo(a)pyrene	1.30	0.10	ug/L	2.00	0.01 U	65	33-108	5	23	
Phenanthrene	1.27	0.10	ug/L	2.00	0.02 U	64	38-104	4	22	
Anthracene	1.29	0.10	ug/L	2.00	0.02 U	64	36-109	4	20	
Fluoranthene	1.51	0.10	ug/L	2.00	0.01 U	76	40-119	6	20	
Pyrene	1.48	0.10	ug/L	2.00	0.02 U	74	38-116	6	22	
Chrysene	1.32	0.10	ug/L	2.00	0.02 U	66	39-112	5	21	
Dibenzo(a,h)anthracene	1.68	0.10	ug/L	2.00	0.02 U	84	30-109	4	32	

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS SIM - Quality Control										
Batch 6K27016 - EPA 3510C_MS										
Matrix Spike Dup (6K27016-MSD1) Continued		**Source: B610161-02**		Prepared: 11/27/2006 13:47 Analyzed: 11/30/2006 11:28						
Indeno(1,2,3-cd)pyrene	1.54	0.10	ug/L	2.00	0.02 U	77	33-112	4	22	
Surrogate: p-Terphenyl	*4.03*		*ug/L*	*5.00*		*81*	*10-167*			
FL Petroleum Range Organics - Quality Control										
Batch 6K27003 - EPA 3510C										
Blank (6K27003-BLK1)				Prepared: 11/27/2006 07:11 Analyzed: 11/27/2006 14:43						
TPH (C8-C40)	0.094 U	0.170	mg/L							
LCS (6K27003-BS1)				Prepared: 11/27/2006 07:11 Analyzed: 11/27/2006 15:06						
TPH (C8-C40)	1.36	0.170	mg/L	1.70		80	46-126			
Matrix Spike (6K27003-MS1)		**Source: B610184-01**		Prepared: 11/27/2006 07:11 Analyzed: 11/27/2006 15:28						
TPH (C8-C40)	1.37	0.170	mg/L	1.70	0.094 U	80	48-118			
Matrix Spike Dup (6K27003-MSD1)		**Source: B610184-01**		Prepared: 11/27/2006 07:11 Analyzed: 11/27/2006 15:50						
TPH (C8-C40)	1.44	0.170	mg/L	1.70	0.094 U	85	48-118	5	30	

NOTES AND DEFINITIONS

D	Data reported from a dilution
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
U	Analyte included in the analysis, but not detected

LABORATORY CERTIFICATION SUMMARY

Analysis	Matrix	Cert ID	Cert Number
8260B Extended	Water	NELAC	E82277
8270C PAH SIM	Water	NELAC	E82277
FLPRO	Water	NELAC	E82277

B610164 + B610165

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2486 PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00378	Building 502	Dave Siefken	904-636-6125	ENCO

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Kara J. Wimble	Terry Cottenoir	904-636-6125	

CARRIER/WAYBILL NUMBER	CITY, STATE
hand-delivered	Jacksonville, FL

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: SW 846-8310	SW 846 8260B	FL-PRO	FL-PRO					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G					
PRESERVATIVE USED									None	HCL	H_2SO_4	None					
11/20	1500	CEF-502-6S-01				GW	G	6	1	3	2						
11/20	1544	CEF-502-6TD-01				GW	G	6	1	3	2						
11/20	1640	CEF-502-3S-01				GW	G	6	1	3	2						
11/20	1600	CEF-502-SB05-05				SO	G	1	1			1					
11/20	1550	CEF-502-SB01-05				SO	G	1	1			1					
11/21	0935	CEF-502-8S-01				GW	G	6	1	3	2						
11/21	0955	CEF-502-GW-DUP-01				GW	G	6	1	3	2						
11/21	1045	CEF-502-15R-01				GW	G	6	1	3	2						
11/21	1254	CEF-502-SB07-05				SO	G	1	1			1					
11/21	1305	CEF-502-SB08-05				SO	G	1	1			1					
11/21	1344	CEF-502-SB09-03				SO	G	1	1			1					
11/21	1403	CEF-502-SB10-05				SO	G	1	1			1					
11/21	0000	CEF-502-SB-DU-01				SO	G	1	1			1					

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
[signature]	11/21/06	1620	[signature]	11/21/06	1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

The total number of pages in this report, including this page is 2.

B610164 + B610165

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2487 PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00378	Bldg 502	Dave Siefken	904-636-6125	ENCO

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Kara Fahlenkamp	Terry Cottenoir	904-636-6125	

CARRIER/WAYBILL NUMBER	CITY, STATE
hand-delivered	Jacksonville, FL

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2006	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	SW 846-8310	FL-PRO	FL-PRO	SW 846-8260B					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G					
PRESERVATIVE USED									None	None	H_2SO_4	HCl					
TYPE OF ANALYSIS																	
11/21	0855	CEF-502-SB03-05				SO	G	1	1	1							
11/21	1045	CEF-502-SB04-05				SO	G	1	1	1							
11/21	1055	CEF-502-SB06-05				SO	G	1	1	1							
11/21	0840	CEF-502-SB02-03				SO	G	1	1	1							
11/21	1513	CEF-502-FB01				GW	G	6	1		2	3					
11/21	1145	CEF-502-MS-01				GW	G	4	1		1	2					low recl range

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	11-21-06	1620	J Hellyman	11/21/06	1620
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

www.encolabs.com

Appendix M
Dig and Haul Package, Building 290A, Tank G290A
(Tetra Tech NUS, Inc., November 2007)

TETRA TECH NUS, INC.
8640 Philips Highway, Suite 16 • Jacksonville, FL 32256
Tel 904.636.6125 • Fax 904.636.6165 • www.tetratech.com

Document Tracking Number 07JAX0052

November 16, 2007

Project Number 112GN4248

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN III Contract Number N62467-94-D-0888
Contract Task Order 0248

Subject: Dig and Haul Package, Building 290A, Tank G290A
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Dig and Haul Package for the subject site. This package has been prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order 0248 for the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888.

SITE BACKGROUND

Tank G290-A was an aboveground storage tank (AST) located immediately north of Building 290A and southeast of the intersection of the north-south and east-west runways at Naval Air Station (NAS) Cecil Field. Building 290A houses a standby generator for Building 290. Tank G290-A, with a capacity of 250 gallons, was installed in 1995 and was in compliance with State of Florida tank regulations. Tank G290-A replaced Tank G290-U, which was an underground storage tank located west of Building 290A. Tank G290-U was removed in November 1995 by Innovative Services International and received a clean closure. According to Mr. Roy Craigue of Jacksonville Aviation Authority (JAA), Tank G290-A was removed in June 2007 by the JAA Maintenance Department. The concrete secondary containment pad remained in place.

A Contamination Assessment Plan was prepared by ABB Environmental Services, Inc. (ABB-ES) in November 1996 for the assessment of soil and groundwater at Tank G290-A. Confirmatory soil screening was conducted by ABB-ES in 1998. Three soil borings were installed around the AST, and soil samples were collected for screening with an organic vapor analyzer (OVA). The results of that investigation indicated that contaminated soil was not present at the site. Because the tanks could not be taken out of service at that time, it was agreed that supplemental confirmatory sampling would be conducted when the tanks were taken out of service or transferred to confirm that no releases had occurred subsequent to the original investigation.

A field investigation was conducted by TtNUS between June 7 and 16, 2000. The Sampling and Analysis Plan (SAP) specified that existing monitoring well CEF-290-2S be sampled as part of the field investigation. However, when TtNUS personnel arrived at the site to conduct the investigation, the

monitoring well could not be located. Therefore, a replacement monitoring well was installed and sampled in accordance with the SAP. Replacement well CEF-290A-2SR was installed on September 12, 2000, and sampled on September 26, 2000. The soil investigation indicated that soil boring B290-A-SB-005 (SB-005), located directly under the secondary containment drain, exhibited an OVA equipped with a flame ionization detector (FID) response of approximately 100 parts per million (ppm) at the 0- to 1-foot interval. The 1- to 3- and 3- to 5-foot sample intervals both exhibited responses of 20 ppm. There was no observed OVA-FID response for soil borings B290-A-SB-001, B290-A-SB-002, B290-A-SB-003, and B290-A-SB-004. Laboratory analytical results from the groundwater sample collected from this well indicated that concentrations of contaminants of concern were less than detection limits, and the detection limits were less than the Groundwater Cleanup Target Levels specified in Chapter 62-777, Florida Administrative Code (FAC). Based on the findings of this investigation and of the previous investigation conducted by ABB-ES, TtNUS recommended No Further Action for Tank Site G290-A.

A comment letter from the Florida Department of Environmental Protection (FDEP) dated April 5, 2002, stated that the Department could not concur with the recommendation for No Further Action because an elevated OVA-FID response was detected in a surface soil sample collected from under the secondary containment drain, possibly indicating petroleum-impacted soil. The letter requested that a soil sample be collected from that location and analyzed for Gasoline Analytical Group (GAG) and Kerosene Analytical Group (KAG) parameters as listed in Chapter 62-770, FAC, to determine if there has been a petroleum release requiring further assessment.

On April 12, 2002, TtNUS collected a soil sample from under the secondary containment drain, at the approximate location and depth interval of the elevated OVA-FID response [SB-005 at 0 to 1 foot below ground surface (bgs)]. The sample was analyzed for GAG and KAG constituents as defined by Chapter 62-770, FAC. The laboratory analytical results indicated that the total recoverable petroleum hydrocarbon (TRPH) concentration exceeded the Soil Cleanup Target Level (SCTL) specified in Chapter 62-777, FAC. In addition, detection limits for several polynuclear aromatic hydrocarbons (PAHs) were elevated due to matrix interference. TtNUS recommended that a source removal be conducted to remove petroleum-impacted soil from the site. Prior to initiating the source removal, additional soil samples were recommended to delineate the extent of contaminated soil and to define the limits of the excavation. An FDEP comment letter, dated March 10, 2004, stated that the Department concurred that additional delineation to determine the extent of contaminated soil should be conducted prior to initiating source removal.

On March 22, 2005, TtNUS collected three additional soil samples in the vicinity of Tank G290-A to delineate the extent of contaminated soil. Sample CEF-B290A-SB-006-01 was collected approximately 5 feet due north of CEF-B290A-SB-005. Additionally, samples CEF-B290A-SB-001-01 and CEF-B290A-SB-002-01 were collected west and east, respectively, of CEF-B290A-SB-005. The samples were collected at the 0- to 1-foot depth interval. The samples were analyzed for PAHs using United States Environmental Protection Agency Method SW-846 8310 and TRPH using the Florida Petroleum Range Organics method. The laboratory analytical results indicated that PAH and TRPH concentrations for all three locations were less than the SCTLs specified in Chapter 62-777, FAC. TtNUS recommended that a source removal be conducted to remove petroleum-impacted soil from an approximate 10-foot by 10-foot area as delineated by the locations of the three soil samples collected in 2005 (CEF-B290A-SB-001-01, CEF-B290A-SB-002-01, and CEF-B290A-SB-006-01) as well as soil sampling locations previously screened by OVA-FID on June 16, 2000 (CEF-B290A-SB-003 and CEF-B290A-SB-004). The Supplemental Soil Assessment Letter Report stated that the area should be excavated to the top of the water table and replaced with clean fill material.

On September 14, 2007, TtNUS conducted confirmatory soil sampling in the vicinity of former Tank G290-A to delineate the southern boundary of the proposed soil removal area. Sample CEF-290A-SB007 was collected from the area adjacent to the northern edge of the concrete secondary containment at 2 feet bgs and analyzed for PAHs and TRPHs. Naphthalene was detected with a concentration of 0.0021 milligram per kilogram (mg/kg), less than its residential SCTL of 55 mg/kg. All of

the other target analytes were not detected in soil sample CEF-290A-SB-007. Additionally, a soil boring was advanced at the location of the previously collected sample SB-005 to confirm the depth of observed contamination. Samples were collected from depths of 2 and 4 feet bgs and submitted for laboratory analyses of PAHs and TRPHs. In the sample collected from the 2-foot depth, naphthalene was detected at a concentration of 0.0019 mg/kg, less than its residential SCTL of 55 mg/kg. In the sample collected from the 4-foot depth, TRPH was detected at a concentration of 8.2 mg/kg less than its residential SCTL of 460 mg/kg. Based on the September 2007 sampling results, TtNUS recommends that the proposed excavation area include the area north of the secondary containment basin as shown on Figure 1 to a depth of 2 feet bgs.

To obtain site closure, post-excavation groundwater monitoring will be necessary in accordance with Chapter 62-770.750, FAC. TtNUS will supervise the installation of a shallow monitoring well at soil boring location SB005 and subsequently collect a groundwater sample for fixed base laboratory analysis after the dig and haul to confirm that naphthalene and TRPH have not leached into the groundwater.

GUIDANCE NOTES

This information is provided for general guidance purposes only. The approximate area of excavation is shown on Figure 1. The actual extent of excavation will be defined in the field by TtNUS with white spraydown paint (or equivalent) prior to the execution of the removal action.

The Remedial Action Contractor shall be responsible for the following:

- The schedule and methods of excavation.
- All aspects of work site health and safety.
- Identification and avoidance of all aboveground and underground utilities or other manmade structures.
- Waste characterization, transport (both on and off site), and disposal of all excavated soil.
- Notification of TtNUS and the Navy if observations indicate that contaminants may extend beyond the planned lateral or vertical limits of the excavation.
- Depth of excavation is 2 feet bgs. Except where necessary for avoidance of structures or utilities or where otherwise specified by TtNUS, the excavations should extend to the depths presented in this Dig and Haul Package.
- Excavated soil shall be stockpiled on and covered with heavy-duty polyethylene sheeting at the site. This shall be done in a manner to avoid the potential for contaminating surrounding soil or surface water. Alternately, soils may be stockpiled in properly covered roll-off containers.
- Stockpiling and combining of materials from different sites is permitted with prior approval of the NAS Cecil Field Base Realignment and Closure Cleanup Team, if similar types and concentrations of contaminants are involved and contaminants were generated by similar processes.
- Materials used to backfill the excavation shall be from an uncontaminated source and be capable of supporting the same type of vegetation as the soil removed. The ground surface shall be restored to a similar or better condition than existed prior to excavation.

If you have any questions regarding the information presented in this document, please contact me by phone at (904) 730-4669, extension 213, or via e-mail at Mark.Peterson@TetraTech.com.

Sincerely,

Mark A. Peterson, P.G.
Florida License Number PG-0001852

Enclosures (1)

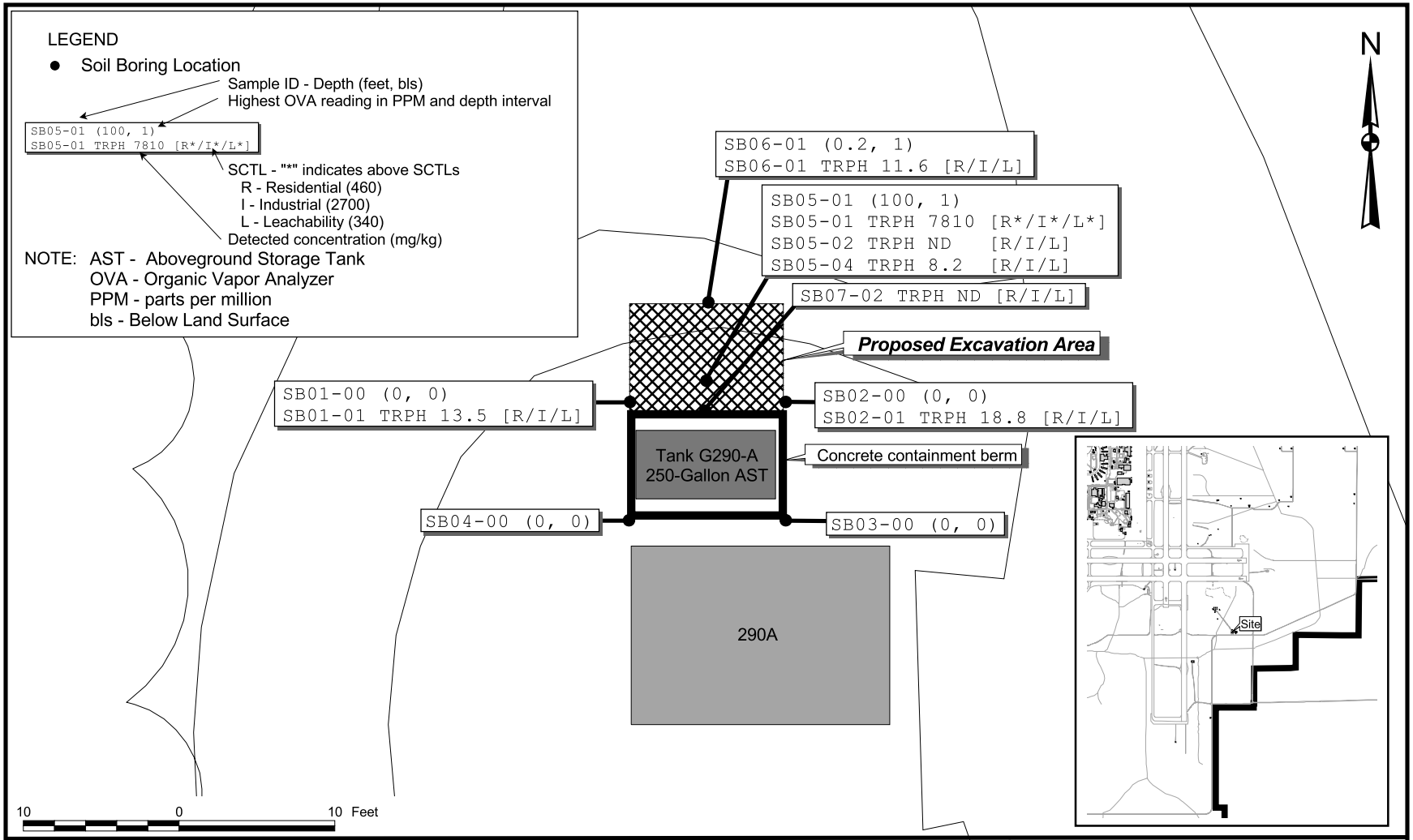
c: M. Davidson, NAVFAC SE
M. Halil, CH2M Hill
J. Logan, TtNUS
R. Simcik, TtNUS (Bookcase File)
M. Jonnet, TtNUS (Cecil DMS)
M. Perry, TtNUS (unbound)
M. Speranza, TtNUS (letter only)
D. Humbert, TtNUS (letter only)
J. Johnson, TtNUS (Information Repository)
CTO 0248 Project File

CERTIFICATION

The information contained herein is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Dig and Haul Package was developed for the Building 290 A, Tank 290A, and should not be construed to apply to any other site.

November 16, 2007
Mark A. Peterson, P.G.
Florida License Number PG-0001852

FIGURE



DRAWN BY	DATE
MJJ	25Aug05
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE	AS NOTED

NAVFAC

PROPOSED SOIL REMOVAL AREA
BUILDING 290A, TANK G290-A
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
248	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3	REV 0

P:\GIS\CECIL\tank_g290a-2.apr 07Nov07 MJJ Layout2

Appendix N
Supplemental Soil Assessment Letter Report for Tank G290-A
(Tetra Tech NUS, Inc., November 2006)

TETRA TECH NUS, INC.
8640 Philips Highway, Suite 16 • Jacksonville, FL 32256
Tel 904.636.6125 • Fax 904.636.6165 • www.tetratech.com

Document Tracking Number 06JAX0074

November 9, 2006

Project Number 112GN4248

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN III Contract Number N62467-94-D-0888
Contract Task Order 0248

Subject: Supplemental Soil Assessment Letter Report for Tank G290-A
Naval Air Station Cecil Field, Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Supplemental Soil Assessment Letter Report for Tank G290-A at Naval Air Station (NAS) Cecil Field. This report has been prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) 0248 of the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888. This Supplemental Soil Assessment Letter Report addresses comments issued by the Florida Department of Environmental Protection (FDEP) in a technical review letter dated March 10, 2004.

SITE HISTORY

Tank G290-A is an aboveground storage tank (AST) located immediately north of Building 290A and southeast of the intersection of the north-south and east-west runways. Building 290A houses a standby generator for Building 290. Tank G290-A was installed in 1995, has a 250-gallon capacity, and is in compliance with State tank regulations. Tank G290-A replaced Tank G290-U, which was an underground storage tank located west of Building 290A. Tank G290-U was removed in November 1995 by Innovative Services International and received a clean closure.

Confirmatory soil screening was conducted by ABB Environmental Services, Inc. (ABB-ES) in 1998. Three soil borings were installed around the AST, and soil samples were collected for screening with an organic vapor analyzer (OVA). The results of that investigation indicated that contaminated soil was not present at the site. However, because the tanks could not be taken out of service at that time, it was agreed that supplemental confirmatory sampling would be conducted when the tanks were taken out of service or transferred to confirm that no releases had occurred subsequent to the original investigation.

A soil investigation was conducted by TtNUS between June 7 and 16, 2000. The Sampling and Analysis Plan (SAP) specified that existing monitoring well CEF-290-2S be sampled as part of the field investigation. However, when TtNUS personnel arrived at the site to conduct the investigation, the monitoring well could not be located. Therefore, a replacement monitoring well was installed and sampled in accordance with the SAP. Replacement well CEF-290A-2SR was installed on September 12, 2000, and sampled on September 26, 2000. The soil investigation indicated that soil boring B290-A-SB-005

(SB-005), located directly under the secondary containment drain, exhibited an OVA equipped with a flame ionization detector (FID) response of approximately 100 parts per million (ppm) at the 0- to 1-foot (ft) interval. The 1- to 3- and 3- to 5-ft sample intervals both exhibited responses of 20 ppm. Laboratory analytical results from the groundwater sample indicated that concentrations of contaminants of concern were less than detection limits, and the detection limits were less than the Groundwater Cleanup Target Levels (GCTLs) specified in Chapter 62-770, Florida Administrative Code (FAC). Based on the findings of this investigation and of the previous investigation conducted by ABB-ES, TtNUS recommended No Further Action for Tank Site G290-A.

An April 5, 2002, FDEP comment letter stated that the Department could not concur with the recommendation for No Further Action because an elevated OVA-FID response was detected in a surface soil sample collected from under the secondary containment drain, possibly indicating petroleum-impacted soil. The letter requested that a soil sample be collected from that location and analyzed for the gasoline analytical group (GAG) and kerosene analytical group (KAG) listed in Chapter 62-770, FAC, to determine if there has been a petroleum release requiring further assessment.

On April 12, 2002, TtNUS collected a soil sample from under the secondary containment drain, at the approximate location and depth interval of the elevated OVA-FID response [SB-005 at 0 to 1 ft below ground surface (bgs)]. The sample was analyzed for constituents of the GAG and KAG as defined by Chapter 62-770, FAC. The laboratory analytical results indicated that the total petroleum hydrocarbon (TPH) concentration exceeded the Soil Cleanup Target Level (SCTL) specified in Chapter 62-770, FAC. In addition, detection limits for several polynuclear aromatic hydrocarbons (PAHs) were elevated due to matrix interference. TtNUS recommended that a source removal be conducted to remove petroleum-impacted soil from the site. Prior to initiating the source removal, additional soil samples needed to be collected to delineate the extent of contaminated soil and to define the limits of the excavation.

An FDEP comment letter dated March 10, 2004, stated that the Department concurred that additional delineation to determine the extent of contaminated soil should be conducted prior to initiating source removal.

FIELD OPERATIONS

TtNUS mobilized to the site on March 22, 2005, for additional sampling and analysis of soil as proposed for delineation of soil to be excavated for the Tank G290-A, Building 290A. The general location within the former NAS Cecil Field Main Base is shown on the attached Figure 1. During this investigation, soils were screened with an OVA-FID at CEF-B290A-SB-006-01 located approximately 5 ft due north of CEF-B290A-SB-005 (see Figure 2). The screening intervals were the same as previously accomplished for this site on June 16, 2000, (0 to 1 ft bls, 1 to 3 ft bls, and 3 to 5 ft bls). Two locations (east and west of CEF-B290A-SB-005) were sampled, but were not be screened because OVA-FID data was generated for those approximate locations during the previous sampling event in June 2000. The two sampling locations are labeled CEF-B290A-SB-001-01 and CEF-B290A-SB-002-01 on the attached Figure 2. The screening was accomplished in accordance with Chapter 62-770.200(12), FAC.

The corrected screening data at CEF-B290A-SB-006-01 were then used to determine the depth of collection for the fixed-base laboratory samples. The depth to water was determined so that no laboratory sample was collected below the capillary fringe. The samples for CEF-B290A-SB-001-01 and CEF-B290A-SB-002-01 were collected from the same interval (0 to 1 ft bls) as previously collected at the CEF-B290A-SB-005 location.

The sampling activities and procedures were performed in general accordance with FDEP and TtNUS Standard Operating Procedures.

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 PAHs using United States

Environmental Protection Agency Method SW-846 8310 and TPH using the Florida Petroleum Range Organics (FL-PRO) method.

RESULTS

Soil boring B290A-SB-006-001, located approximately 5 ft due north of CEF-B290A-SB-005, exhibited an OVA-FID response of approximately 0.2 ppm at the 0- to 1-ft interval. The 1- to 3- and 3- to 5- ft sample intervals did not exhibit OVA-FID responses. The general lithology of the soils excavated were silty fine-grained sands in various shades of gray and brown. The depth of the water table was 3.5 ft bgs at B290A-SB-006-001. The soil OVA-FID data collected during the investigation are summarized in Table 1.

The laboratory analytical results indicate that PAH concentrations for all three locations were less than the detection limit of the instrument, and TPH concentrations were less than the SCTLs specified in Chapter 62-770, FAC. The laboratory analytical results are summarized in Table 2, and the laboratory analytical report is provided in Attachment A.

CONCLUSIONS AND RECOMMENDATIONS

TtNUS recommends that a source removal be conducted to remove petroleum-impacted soil from an approximate 10-ft by 13-ft area as presented in Figure 3 and as delineated by the location of the three soil samples discussed in this report (CEF-B290A-SB-001-01, CEF-B290A-SB-002-01, and CEF-B290A-SB-006-01) as well as soil sampling locations previously screened by OVA-FID on June 16, 2000 (CEF-B290A-SB-003 and CEF-B290A-SB-004). The proposed area should be excavated to the top of the water table and replaced with clean fill material. To obtain site closure, post-excavation groundwater monitoring will be necessary in accordance with Chapter 62-770.750, FAC. Analyses should be for PAHs and TPH. Well CEF-290A-2SR and well CEF-290A-02S should be sampled for the post-excavation monitoring event. Figure 4 shows the monitoring well locations.

Since soil contamination at this site is restricted to shallow soils, post excavation monitoring is required for one event rather than quarterly. At the completion of monitoring, assuming GCTLs are not exceeded, a no further action proposal should be prepared in accordance with Chapter 62-780, FAC.

If you have any questions regarding the information presented in this document, please contact me by phone at (904) 636-6125 or via e-mail at Mark.Peterson@ttnus.com.

Sincerely,

Mark A. Peterson, P.G.
Task Order Manager
Florida License Number PG-0001852

Enclosures (6)

pc: G. Magwood, NAVFAC SE (CD only)
M. Halil, CH2M Hill (CD only)
M. Perry, TtNUS (unbound and CD)
D. Humbert, TtNUS (letter only)
M. Speranza, TtNUS (letter only)
M. Jonnet, TtNUS (Cecil DMS) (CD)
J. Logan, TtNUS
R. Simcik, TtNUS (Bookcase File)
J. Johnson, TtNUS (Information Repository) (CD)
CTO 0248 Project File

CERTIFICATION

The information contained is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Supplemental Soil Assessment Letter Report was developed for Tank G290-A at the Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

November 9, 2006
Mark A. Peterson, P.G.
Florida License Number PG-0001852

TABLES

Table 1
Soil Vapor Field Screening Results

Building 290A, Tank G290-A
Naval Air Station Cecil Field
Jacksonville, Florida

Sample Identification	Depth (ft bgs)	OVA Result (ppm)			Lithologic Description	Analytical Sample	Analysis
CEF-B290A-SB		Unfiltered	Filtered	Net			
001	1	ND	ND	ND	Silty fine sand, light gray	CEF-B290A-SB001-01	PAHs by 8310 and TPH by FL-PRO
002	1	ND	ND	ND	Silty fine sand, light gray	CEF-B290A-SB002-01	PAHs by 8310 and TPH by FL-PRO
006	1	0.2	0.0	0.2	Silty fine sand, gray	CEF-B290A-SB006-01	PAHs by 8310 and TPH by FL-PRO
	2	0.0	ND	0.0	Silty fine sand, brown		
	4	0.0	0.0	0.0	Silty fine sand, brown		

Table 2
Summary of Soil Sample Analytical Results

Building 290A, Tank G290-A
Naval Air Station Cecil Field
Jacksonville, Florida

Compounds	SCTLs[1]			CEF-B290A-		
				SB-001-01	SB-002-01	SB-006-01
	Residential	Leachability	Industrial	1 ft bls	1 ft bls	1 ft bls
PAHs						
Acenaphthene	2,400	2.1	20,000	0.190 U	0.180 U	0.190 U
Acenaphthylene	1,800	27	20,000	0.190 U	0.180 U	0.190 U
Anthracene	21,000	2,500	300,000	0.190 U	0.180 U	0.190 U
Benzo(a)anthracene	#	0.8	#	0.093 U	0.088 U	0.095 U
Benzo(a)pyrene	0.1	8	0.7	0.019 U	0.018 U	0.019 U
Benzo(b)fluoranthene	#	2.4	#	0.019 U	0.018 U	0.019 U
Benzo(g,h,i)perylene	2,500	32,000	52,000	0.019 U	0.018 U	0.019 U
Benzo(k)fluoranthene	#	24	#	0.019 U	0.018 U	0.019 U
Chrysene	#	77	#	0.093 U	0.088 U	0.095 U
Dibenz(a,h)anthracene	#	0.7	#	0.019 U	0.018 U	0.019 U
Fluoranthene	3,200	1,200	59,000	0.093 U	0.088 U	0.095 U
Fluorene	2,600	160	33000	0.190 U	0.180 U	0.190 U
Indeno(1,2,3-cd)pyrene	#	6.6	#	0.019 U	0.018 U	0.019 U
Naphthalene	55	1.2	300	0.093 U	0.088 U	0.095 U
1-Methylnaphthalene	200	3.1	1800	0.093 U	0.088 U	0.095 U
2-Methylnaphthalene	210	8.5	2100	0.093 U	0.088 U	0.095 U
Phenanthrene	2,200	250	36000	0.190 U	0.180 U	0.190 U
Pyrene	2,400	880	45000	0.093 U	0.088 U	0.095 U
TPH (C8-C40)	460	340	2700	13.5	18.8	11.6
Benzo(a)pyrene Equivalents[2]	0.1	nc	0.8	0	0	0

Notes:

1 Established in Chapter 62-777, FAC.

All results are in milligrams per kilogram.

U = Indicates that the compound was analyzed for but not detected in excess the laboratory method detection limit.

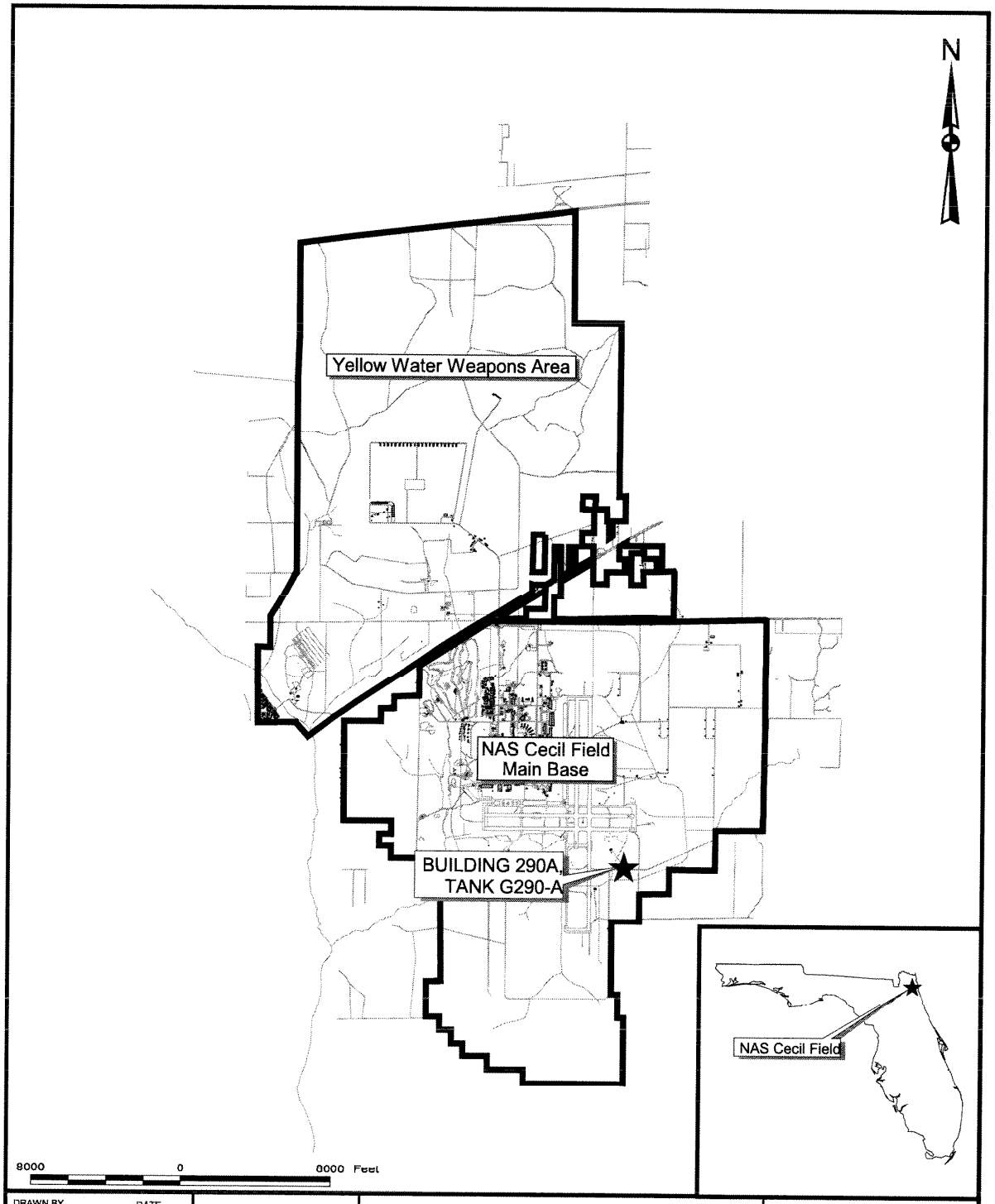
= Site concentrations of carcinogenic PAHs must be converted to benzo(a)pyrene equivalents before comparison with benzo(a)pyrene SCTLs for using the approach described.

in the February 2005 Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, FAC.

2 Calculated.

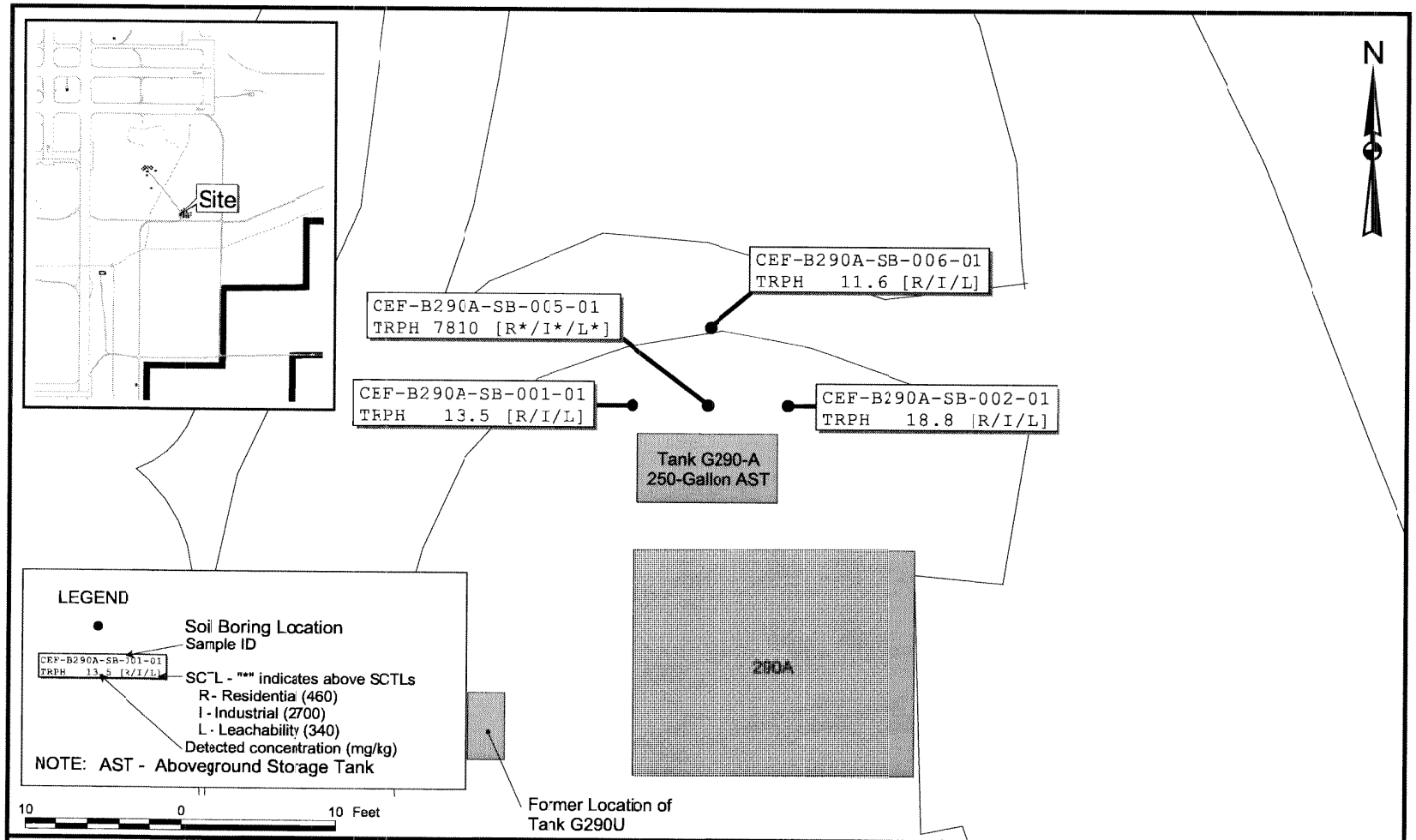
NC = no criterion.

FIGURES



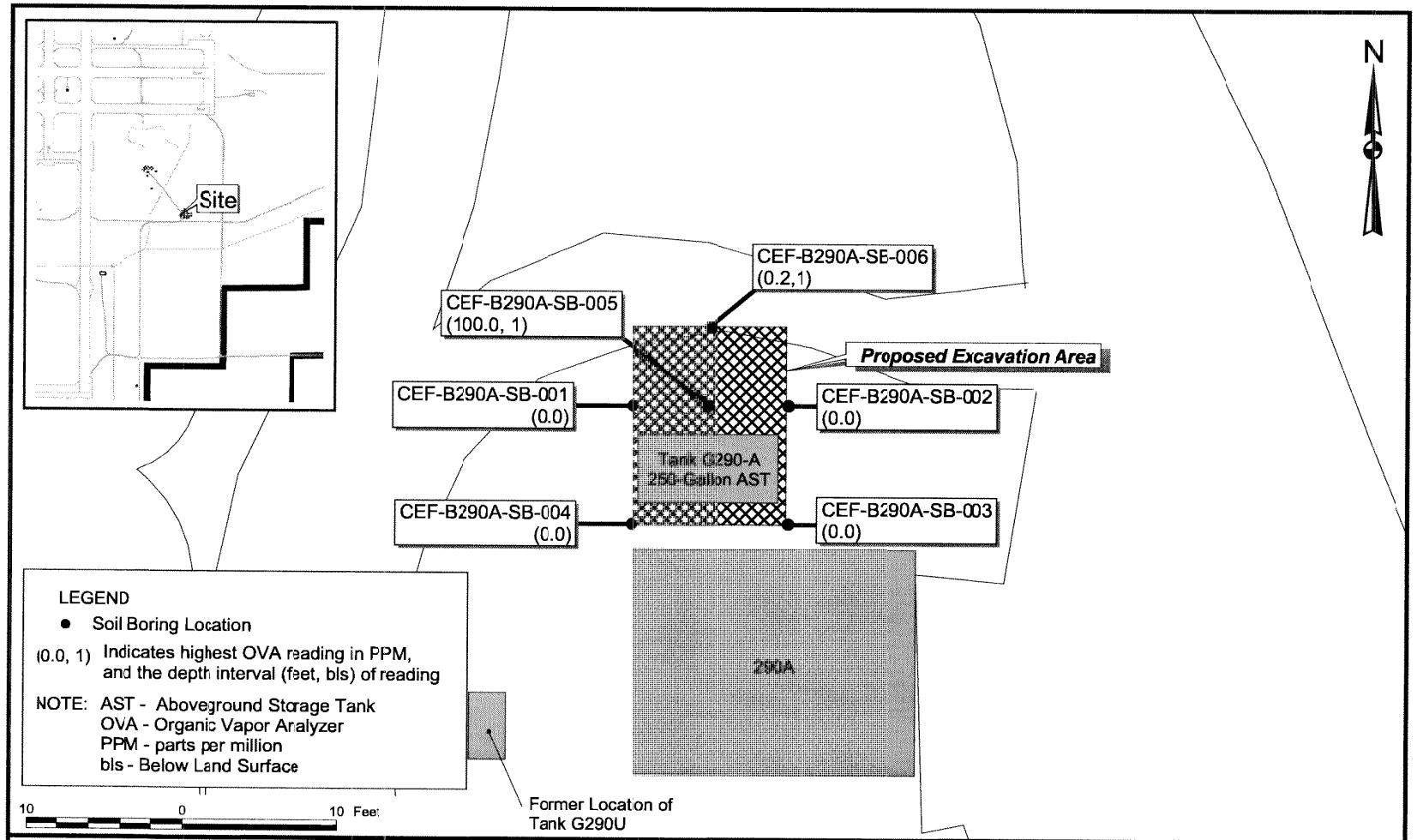
DRAWN BY MJJ	DATE 24Mar06	GENERAL LOCATION MAP BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 248
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV 0

P:\GIS\CECIL\tank_g290a-2.apr 24Mar06 MJJ Layout3



DRAWN BY MJJ	DATE 25Aug05	SOIL SAMPLE LOCATION MAP BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 248
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 2 / REV 0

P:\GIS\CECIL\tank_g290a-2.apr 25Aug05 MJJ Layout1



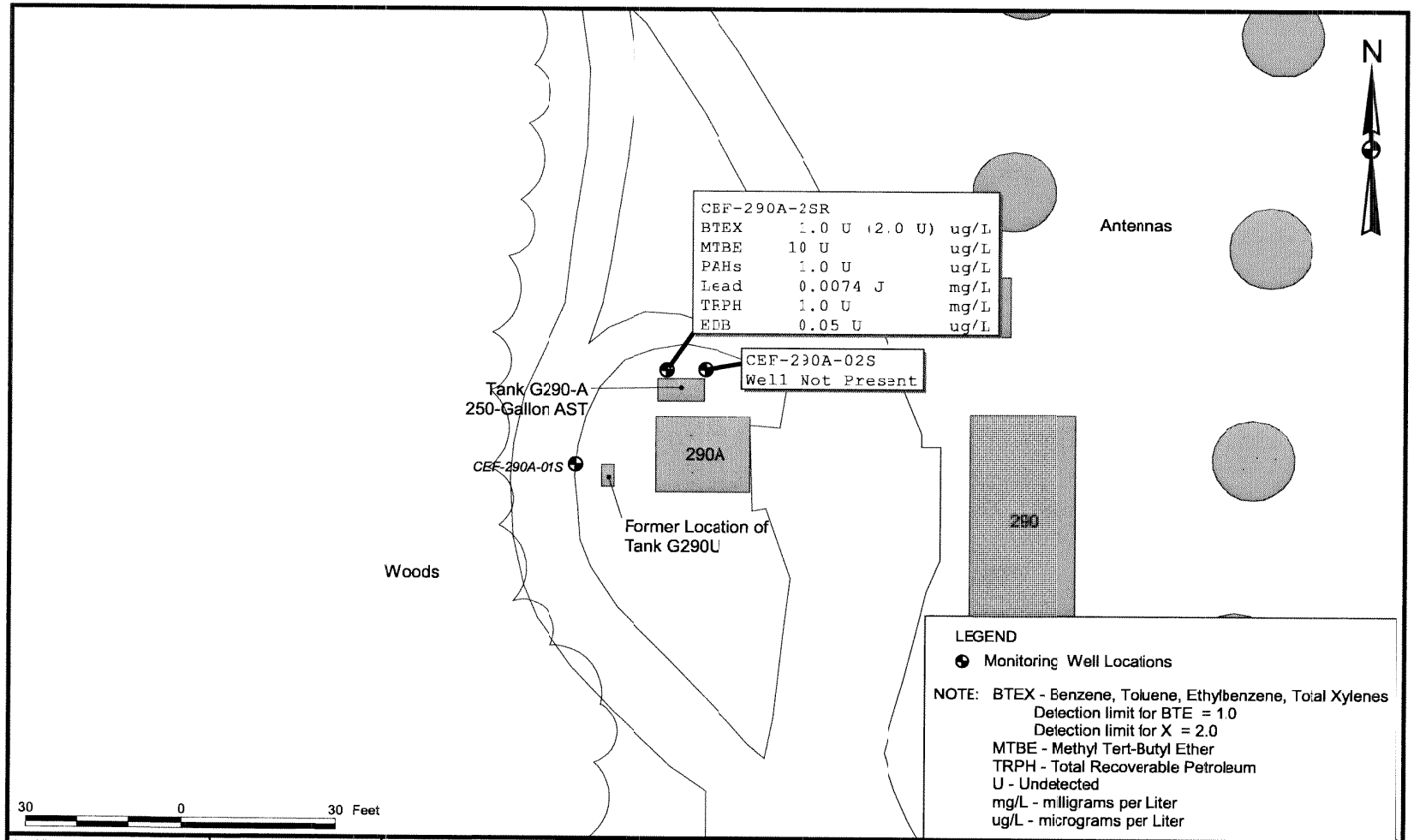
DRAWN BY	DATE
MJJ	25Aug05
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

PROPOSED SOIL REMOVAL AREA
BUILDING 290A, TANK G290-A
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 248	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3	REV 0

P:\GIS\CECIL\tank_g290a-2.apr 25Aug05 MJJ Layout2



DRAWN BY MJJ	DATE 15Nov00	GROUNDWATER MONITORING WELL LOCATIONS AND CONTAMINANT CONCENTRATIONS CONFIRMATORY SAMPLING REPORT BUILDING 290A, TANK G290-A NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 121
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO FIGURE 4 / REV 0

P:\GIS\CECIL\tank_g290a-l.apr 04Dec00 MJJLayout2

ATTACHMENT A

LABORATORY ANALYTICAL REPORT

Southeast
ACCUTEST.
Laboratories

04/13/05

Technical Report for

Tetra Tech NUS

NAS Cecil Field-CTO-248

N4242-WR#1001712/ Tank 290A

Accutest Job Number: F30558

Sampling Date: 03/22/05

Report to:

Tetra-Tech,Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, PA 15220

ATTN: Amy Thomson

Total number of pages in report: 263

ACCREDITED IN ACCORDANCE WITH nela

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

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

TABLE OF CONTENTS
FULL LABORATORY DATA DELIVERABLES

1. **TITLE / COVER PAGE**
2. **TABLE OF CONTENTS**
3. **CASE NARRATIVE**
4. **SAMPLE RECEIPT FORM**
5. **CUSTODY DOCUMENTATION**
6. **SUMMARY PACKAGE**
7. **RESULTS SUMMARY**

8. **GC SUPPORT DATA (SW846- METHOD 8310)**

8.1.	Sample Result Report of Analysis	SGC.01
8.2.	Surrogate Recoveries Summary	SGC.02
8.3.	GC Surrogate Retention Time Summary	SGC.03
8.4.	Method Blank Summary	SGC.04
8.5.	Blank Spike Summary	SGC.05
8.6.	Matrix Spike / Matrix Spike Duplicate Summary	SGC.06
8.7.	Sample Duplicate Summary	SGC.07
8.8.	Initial Calibration Summary	SGC.08
8.9.	Continuing Calibration Summary	SGC.09
8.10.	Logs and Bench Sheets	SGC.10
8.11.	Sample Prep Report	SGC.11

9. **GC SUPPORT DATA (METHOD FL PRO)**

9.1.	Sample Result Report of Analysis	SGC.01
9.2.	Surrogate Recoveries Summary	SGC.02
9.3.	GC Surrogate Retention Time Summary	SGC.03
9.4.	Method Blank Summary	SGC.04
9.5.	Blank Spike Summary	SGC.05
9.6.	Matrix Spike / Matrix Spike Duplicate Summary	SGC.06
9.7.	Sample Duplicate Summary	SGC.07
9.8.	Initial Calibration Summary	SGC.08
9.9.	Continuing Calibration Summary	SGC.09
9.10.	Logs and Bench Sheets	SGC.10
9.11.	Sample Prep Report	SGC.11

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS **Job No:** F30558

Site: NAS Cecil Field-CTO-248 **Report Date:** 4/13/2005 10:59:52

4 Samples were collected on 03/22/2005 and were received at Accutest on 03/23/2005 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of F30558. 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.

Extractables by GC by Method SW846 8310

Matrix: SO **Batch ID:** OP12790

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 F30558-1MS, F30558-1MSD were used as the QC samples indicated.

Extractables by GC by Method FLORIDA-PRO

Matrix: SO **Batch ID:** OP12789

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 F30558-1MS, F30558-1MSD were used as the QC samples indicated.

Wet Chemistry by Method EPA 160.3 M

Matrix: SO **Batch ID:** GN16921

Sample F30596-2DUP 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: April 13, 2005

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F30558 CLIENT: Tetra Tech PROJECT: N4242, CTO 248

DATE/TIME RECEIVED: 3/23/05 9:00 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 3.8

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

COOLER INFORMATION

- [x] CUSTODY SEAL NOT PRESENT/INTACT
- [ ] NO COC RECEIVED
- [ ] ANALYSES NOT MARKED ON COC
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [x] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] CORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] SAMPLE RECEIVED PAST HOLD TIME
- [ ] TIMES ON COC DON'T MATCH LABEL
- [ ] ID'S ON COC DON'T MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING INSTRUCTIONS
- [ ] UNCLEAR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED

SOIL INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? Ø

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 3/23/05 TECHNICIAN SIGNATURE/DATE

0006

ASBD02/04/05

TETRA TECH NUS, INC. F305558 CHAIN OF CUSTODY | NUMBER 290A-032105 | PAGE 1 OF 1

PROJECT NO: N4242 CTO 248	FACILITY: NASCF, TANK 290A	PROJECT MANAGER: PAUL CALLIGAN	PHONE NUMBER: 813 806 0202
LABORATORY NAME AND CONTACT: ACCUTEST H. WANDRAY		SAMPLERS (SIGNATURE): Merwin W. Dale	FIELD OPERATIONS LEADER: MERV DALE
PHONE NUMBER: 904 636 6125	ADDRESS: 4405 Vineland Rd., C-15	CARRIER/WAYBILL NUMBER: Fedex 8427 1834 9649	CITY, STATE: ORLANDO, FL 32811

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	PAHs SW8270 8310	TRPH FL-PRO						COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)										G	G						
PRESERVATIVE USED										None	None						
1	03/22	1125	CEF-B290A-SB006-01 *		0	1	SO	G	4	2	2						Cool to 4°C
2	03/22	1140	CEF-B290A-SB001-01		0	1	SO	G	2	1	1						
3	03/22	1153	CEF-B290A-SB002-01		0	1	SO	G	2	1	1						Work Release
4	03/22	0000	CEF-B290A-SB-D002		0	1	SO	G	2	1	1						1001712
																	* Use extra volume for Lab MS/MSD.

MLD

1. RELINQUISHED BY: Merwin W. Dale	DATE 03/22/05	TIME 1600	1. RECEIVED BY: Fedex	DATE 03/22/05	TIME —
2. RELINQUISHED BY: FX	DATE 3/23/05	TIME 9:00	2. RECEIVED BY: [signature]	DATE 3/23/05	TIME 9:00
3. RELINQUISHED BY:	DATE	TIME	3. RECEIVED BY:	DATE	TIME

COMMENTS 0008

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004064.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	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	53%		49-124%
92-94-4	p-Terphenyl	57%		56-141%

0010

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004067.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	190 U	750	190	ug/kg	
208-96-8	Acenaphthylene	190 U	750	190	ug/kg	
120-12-7	Anthracene	190 U	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	93 U	370	93	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	75	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	75	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	75	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	75	19	ug/kg	
218-01-9	Chrysene	93 U	370	93	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	75	19	ug/kg	
206-44-0	Fluoranthene	93 U	370	93	ug/kg	
86-73-7	Fluorene	190 U	370	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	75	19	ug/kg	
91-20-3	Naphthalene	93 U	370	93	ug/kg	
90-12-0	1-Methylnaphthalene	93 U	370	93	ug/kg	
91-57-6	2-Methylnaphthalene	93 U	370	93	ug/kg	
85-01-8	Phenanthrene	190 U	370	190	ug/kg	
129-00-0	Pyrene	93 U	370	93	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		49-124%
92-94-4	p-Terphenyl	91%		56-141%

0011

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004068.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	710	180	ug/kg	
208-96-8	Acenaphthylene	180 U	710	180	ug/kg	
120-12-7	Anthracene	180 U	350	180	ug/kg	
56-55-3	Benzo(a)anthracene	88 U	350	88	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	71	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	71	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	71	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	71	18	ug/kg	
218-01-9	Chrysene	88 U	350	88	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	71	18	ug/kg	
206-44-0	Fluoranthene	88 U	350	88	ug/kg	
86-73-7	Fluorene	180 U	350	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	71	18	ug/kg	
91-20-3	Naphthalene	88 U	350	88	ug/kg	
90-12-0	1-Methylnaphthalene	88 U	350	88	ug/kg	
91-57-6	2-Methylnaphthalene	88 U	350	88	ug/kg	
85-01-8	Phenanthrene	180 U	350	180	ug/kg	
129-00-0	Pyrene	88 U	350	88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		49-124%
92-94-4	p-Terphenyl	87%		56-141%

0012

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004069.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	730	180	ug/kg	
208-96-8	Acenaphthylene	180 U	730	180	ug/kg	
120-12-7	Anthracene	180 U	370	180	ug/kg	
56-55-3	Benzo(a)anthracene	92 U	370	92	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	73	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	73	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	73	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	73	18	ug/kg	
218-01-9	Chrysene	92 U	370	92	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	73	18	ug/kg	
206-44-0	Fluoranthene	92 U	370	92	ug/kg	
86-73-7	Fluorene	180 U	370	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	73	18	ug/kg	
91-20-3	Naphthalene	92 U	370	92	ug/kg	
90-12-0	1-Methylnaphthalene	92 U	370	92	ug/kg	
91-57-6	2-Methylnaphthalene	92 U	370	92	ug/kg	
85-01-8	Phenanthrene	180 U	370	180	ug/kg	
129-00-0	Pyrene	92 U	370	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		49-124%
92-94-4	p-Terphenyl	92%		56-141%

C013

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

Method Blank Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12790-MB	PP004056.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162

The QC reported here applies to the following samples: **Method:** SW846 8310

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	670	170	ug/kg	
208-96-8	Acenaphthylene	ND	670	170	ug/kg	
120-12-7	Anthracene	ND	330	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	330	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	67	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	67	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	67	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	67	17	ug/kg	
218-01-9	Chrysene	ND	330	83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	67	17	ug/kg	
206-44-0	Fluoranthene	ND	330	83	ug/kg	
86-73-7	Fluorene	ND	330	170	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	67	17	ug/kg	
91-20-3	Naphthalene	ND	330	83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	330	83	ug/kg	
91-57-6	2-Methylnaphthalene	ND	330	83	ug/kg	
85-01-8	Phenanthrene	ND	330	170	ug/kg	
129-00-0	Pyrene	ND	330	83	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	99%	49-124%
92-94-4	p-Terphenyl	102%	56-141%

0014

Method Blank Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12790-MB	PP004073.D	1	03/28/05	MRE	03/24/05	OP12790	GPP163

The QC reported here applies to the following samples: **Method:** SW846 8310

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	670	170	ug/kg	
208-96-8	Acenaphthylene	ND	670	170	ug/kg	
120-12-7	Anthracene	ND	330	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	330	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	67	17	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	67	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	67	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	67	17	ug/kg	
218-01-9	Chrysene	ND	330	83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	67	17	ug/kg	
206-44-0	Fluoranthene	ND	330	83	ug/kg	
86-73-7	Fluorene	ND	330	170	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	67	17	ug/kg	
91-20-3	Naphthalene	ND	330	83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	330	83	ug/kg	
91-57-6	2-Methylnaphthalene	ND	330	83	ug/kg	
85-01-8	Phenanthrene	ND	330	170	ug/kg	
129-00-0	Pyrene	ND	330	83	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	99%	49-124%
92-94-4	p-Terphenyl	102%	56-141%

0015

Blank Spike Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12790-BS	PP004055.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162

The QC reported here applies to the following samples: **Method:** SW846 8310

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	3330	3370	101	67-112
208-96-8	Acenaphthylene	3330	3280	98	64-110
120-12-7	Anthracene	1670	1850	111	78-117
56-55-3	Benzo(a)anthracene	1670	1780	107	80-120
50-32-8	Benzo(a)pyrene	1670	1820	109	76-120
205-99-2	Benzo(b)fluoranthene	1670	1810	109	80-126
191-24-2	Benzo(g,h,i)perylene	1670	1820	109	81-122
207-08-9	Benzo(k)fluoranthene	1670	1870	112	79-126
218-01-9	Chrysene	1670	1820	109	79-123
53-70-3	Dibenzo(a,h)anthracene	1670	1820	109	81-124
206-44-0	Fluoranthene	3330	3600	108	77-119
86-73-7	Fluorene	3330	3470	104	69-114
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1840	110	81-125
91-20-3	Naphthalene	3330	3060	92	57-101
90-12-0	1-Methylnaphthalene	3330	3200	96	60-104
91-57-6	2-Methylnaphthalene	3330	3230	97	61-105
85-01-8	Phenanthrene	3330	3590	108	72-116
129-00-0	Pyrene	3330	3630	109	77-119

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	100%	49-124%
92-94-4	p-Terphenyl	101%	56-141%

0016

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12790-MS	PP004065.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
OP12790-MSD	PP004066.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
F30558-1	PP004064.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162

The QC reported here applies to the following samples: **Method:** SW846 8310

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	F30558-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	760 U		3830	3690	96	3660	97	1	51-123/25
208-96-8	Acenaphthylene	760 U		3830	3600	94	3570	95	1	48-121/27
120-12-7	Anthracene	380 U		1910	2010	105	1980	105	2	65-125/20
56-55-3	Benzo(a)anthracene	380 U		1910	1940	101	1890	100	3	57-132/20
50-32-8	Benzo(a)pyrene	76 U		1910	2000	104	1930	103	4	61-128/21
205-99-2	Benzo(b)fluoranthene	76 U		1910	1950	102	1920	102	2	57-138/21
191-24-2	Benzo(g,h,i)perylene	76 U		1910	1930	101	1880	100	3	60-131/20
207-08-9	Benzo(k)fluoranthene	76 U		1910	1970	103	1990	106	1	58-134/20
218-01-9	Chrysene	380 U		1910	1970	103	1920	102	3	65-132/21
53-70-3	Dibenzo(a,h)anthracene	76 U		1910	1970	103	1930	103	2	61-132/19
206-44-0	Fluoranthene	380 U		3830	3910	102	3860	103	1	63-127/21
86-73-7	Fluorene	380 U		3830	3770	98	3750	100	1	46-133/23
193-39-5	Indeno(1,2,3-cd)pyrene	76 U		1910	1950	102	1930	103	1	68-127/20
91-20-3	Naphthalene	380 U		3830	3250	85	3260	87	0	44-107/28
90-12-0	1-Methylnaphthalene	380 U		3830	3470	91	3460	92	0	44-115/26
91-57-6	2-Methylnaphthalene	380 U		3830	3490	91	3480	92	0	44-117/26
85-01-8	Phenanthrene	380 U		3830	3880	101	3860	103	1	59-122/21
129-00-0	Pyrene	380 U		3830	3950	103	3890	103	2	61-127/21

CAS No.	Surrogate Recoveries	MS	MSD	F30558-1	Limits
84-15-1	o-Terphenyl	93%	97%	53%	49-124%
92-94-4	p-Terphenyl	95%	97%	57%	56-141%

0017

Semivolatile Surrogate Recovery Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Method: SW846 8310 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
F30558-1	PP004064.D	53.0	57.0
F30558-2	PP004067.D	88.0	91.0
F30558-3	PP004068.D	86.0	87.0
F30558-4	PP004069.D	90.0	92.0
OP12790-BS	PP004055.D	100.0	101.0
OP12790-MB	PP004056.D	99.0	102.0
OP12790-MB	PP004073.D	99.0	102.0
OP12790-MS	PP004065.D	93.0	95.0
OP12790-MSD	PP004066.D	97.0	97.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	49-124%
S2 = p-Terphenyl	56-141%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GPP162-CC107	**Injection Date:**	03/25/05
Lab File ID:	PP004054.D	**Injection Time:**	20:48
Instrument ID:	GCPP	**Method:**	SW846 8310

	S1 [a] RT	S2 [a] RT
Check Std	6.52	8.49

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP12790-BS	PP004055.D	03/25/05	21:07	6.52	8.49
OP12790-MB	PP004056.D	03/25/05	21:26	6.52	8.48
ZZZZZZ	PP004057.D	03/25/05	21:45	6.52	8.49
ZZZZZZ	PP004058.D	03/25/05	22:04	6.52	8.48
ZZZZZZ	PP004059.D	03/25/05	22:23	6.52	8.48
ZZZZZZ	PP004060.D	03/25/05	22:42	6.52	8.48

Surrogate Compounds

S1 = o-Terphenyl
S2 = p-Terphenyl

(a) Retention time from GC signal #1

0019

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GPP162-CC107	**Injection Date:**	03/25/05
Lab File ID:	PP004062.D	**Injection Time:**	23:21
Instrument ID:	GCPP	**Method:**	SW846 8310

	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
Check Std	6.52	6.52	8.48	8.48

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT	S2 [a] RT	S2 [b] RT
ZZZZZZ	PP004063.D	03/25/05	23:40	6.52		8.48	
F30558-1	PP004064.D	03/25/05	23:59	6.52		8.48	
OP12790-MS	PP004065.D	03/26/05	00:18	6.52		8.48	
OP12790-MSD	PP004066.D	03/26/05	00:37	6.52		8.48	
F30558-2	PP004067.D	03/26/05	00:56	6.53		8.48	
F30558-3	PP004068.D	03/26/05	01:15	6.53		8.48	
F30558-4	PP004069.D	03/26/05	01:34	6.53		8.48	
GPP162-ECC107	PP004070.D	03/26/05	01:53	6.53	6.53	8.48	8.48

Surrogate Compounds

S1 = o-Terphenyl
S2 = p-Terphenyl

(a) Retention time from GC signal #1
(b) Retention time from GC signal #2

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GPP163-CC107	**Injection Date:**	03/28/05
Lab File ID:	PP004072.D	**Injection Time:**	13:48
Instrument ID:	GCPP	**Method:**	SW846 8310

	S1 [a] RT	S2 [a] RT
Check Std	6.52	8.48

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S2 [a] RT
OP12790-MB	PP004073.D	03/28/05	14:07	6.52	8.47
ZZZZZZ	PP004074.D	03/28/05	14:26	6.52	8.48
OP12754-BS	PP004075.D	03/28/05	14:45	6.52	8.48
OP12754-MB	PP004076.D	03/28/05	15:04	6.52	8.48
ZZZZZZ	PP004077.D	03/28/05	15:23	6.52	8.48
ZZZZZZ	PP004078.D	03/28/05	15:42	6.52	8.48
F30432-8	PP004079.D	03/28/05	16:02	6.51	8.48
OP12754-MS	PP004080.D	03/28/05	16:21	6.52	8.48
OP12754-MSD	PP004081.D	03/28/05	16:40	6.52	8.48

Surrogate Compounds

S1 = o-Terphenyl
S2 = p-Terphenyl

(a) Retention time from GC signal #1

0021

Initial Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP107-ICC107
Lab FileID: PP002554.D

Response Factor Report G1315B

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Fri Jan 07 10:38:21 2005
Response via : Initial Calibration

Calibration Files
L1 =PP002551.D L2 =PP002552.D L3 =PP002553.D L4 =PP002554.D
L5 =PP002555.D L6 =PP002556.D L7 =PP002557.D ICV =PP002558.D

Compound	L1	L2	L3	L4	L5	L6	L7	ICV	Avg		%RSD
1) Naphthalene	5.004	4.797	4.920	5.002	5.009	4.941	4.984	4.785	4.930	E5	1.86
2) Acenaphthyle	2.057	1.922	1.948	1.960	2.004	1.972	1.992	1.913	1.971	E5	2.37
3) 1-Methyl Nap	4.070	3.987	4.089	4.070	4.169	4.105	4.151	4.142	4.098	E5	1.43
4) 2-Methyl Nap	4.065	4.022	4.138	4.121	4.223	4.163	4.222	3.990	4.118	E5	2.11
5) Acenaphthene	2.888	2.881	2.980	2.963	3.034	2.986	3.033	2.940	2.963	E5	1.96
6) Fluorene	1.158	1.126	1.153	1.147	1.174	1.154	1.169	1.119	1.150	E6	1.66
7) Phenanthrene	1.026	0.975	0.993	0.984	1.004	0.987	0.999	0.969	0.992	E6	1.81
8) O-Terphenyl	3.932	3.512	3.637	3.593	3.668	3.591	3.664		3.657	E5	3.63
9) Anthracene	1.285	1.152	1.300	1.223	1.167	1.104	1.090	1.086	1.176	E5	7.25
10) Fluoranthene	8.381	8.035	8.310	8.259	8.452	8.289	8.359	8.153	8.280	E5	1.60
11) Pyrene	1.314	1.255	1.290	1.274	1.285	1.237	1.206	1.258	1.265	E6	2.65
12) P-Terphenyl	1.420	1.329	1.354	1.349	1.383	1.399	1.410		1.378	E6	2.50
13) Benzo(a)Anth	2.292	2.172	2.216	2.204	2.256	2.213	2.221	2.170	2.218	E6	1.84
14) Chrysene	2.964	2.816	2.861	2.830	2.851	2.756	2.657	2.748	2.810	E6	3.26
15) Benzo(b)Fluo	1.095	1.062	1.085	1.086	1.116	1.096	1.107	1.074	1.090	E6	1.59
16) Benzo(k)Fluo	6.389	6.027	6.173	6.307	6.530	6.408	6.465	6.311	6.326	E5	2.57
17) Benzo(a) Pyr	1.136	1.105	1.139	1.140	1.175	1.157	1.175	1.100	1.141	E6	2.47
18) Dibenzo(a,h)	9.502	8.980	9.196	9.208	9.449	9.275	9.371	8.965	9.243	E5	2.15
19) Benzo(g,h,i)	6.093	5.833	5.954	5.965	6.170	6.115	6.213	6.217	6.070	E5	2.29
20) Indeno(1,2,3	5.098	4.590	4.730	4.735	4.841	4.762	4.808	4.588	4.769	E5	3.38

Signal #2

1) Naphthalene	2.815	2.800	2.814	2.829	2.941	2.911	2.931	2.805	2.856	E5	2.12
2) Acenaphthyle	2.039	1.935	1.976	1.960	1.994	1.993	2.008	1.942	1.981	E5	1.75
3) 1-Methyl Nap	1.735	1.731	1.774	1.763	1.797	1.779	1.794	1.787	1.770	E5	1.42
4) 2-Methyl Nap	2.484	2.437	2.504	2.500	2.552	2.524	2.546	2.406	2.494	E5	2.04
5) Acenaphthene	1.093	1.073	1.014	1.035	1.050	1.010	1.014	0.995	1.035	E5	3.28
6) Fluorene	1.297	1.252	1.281	1.276	1.305	1.287	1.295	1.241	1.279	E6	1.76
7) Phenanthrene	3.449	3.320	3.378	3.343	3.367	3.236	2.972	3.319	3.298	E6	4.40
8) O-Terphenyl	6.615	6.051	6.088	6.091	6.218	6.095	6.176		6.190	E5	3.16
9) Anthracene	7.263	6.950	6.988	6.777	6.405	5.707	4.645	6.033	6.346	E6	13.59
10) Fluoranthene	8.094	7.796	8.073	8.124	8.300	8.155	8.264	8.045	8.106	E5	1.90
11) Pyrene	7.397	7.098	7.383	7.364	7.531	7.358	7.433	7.215	7.347	E5	1.82
12) P-Terphenyl	7.039	6.588	6.712	6.686	6.849	6.915	7.000		6.827	E5	2.49
13) Benzo(a)Anth	1.666	1.606	1.636	1.632	1.672	1.645	1.663	1.608	1.641	E6	1.55
14) Chrysene	2.386	2.296	2.343	2.333	2.381	2.336	2.336	2.267	2.335	E6	1.70
15) Benzo(b)Fluo	0.977	0.966	0.987	0.982	1.004	0.989	0.992	0.966	0.983	E6	1.32
16) Benzo(k)Fluo	1.508	1.424	1.460	1.459	1.495	1.473	1.485	1.439	1.468	E6	1.91
17) Benzo(a) Pyr	9.534	9.100	9.347	9.342	9.562	9.397	9.457	8.980	9.340	E5	2.18
18) Dibenzo(a,h)	2.416	2.326	2.371	2.363	2.391	2.321	2.291	2.303	2.348	E6	1.88
19) Benzo(g,h,i)	0.994	0.957	0.981	0.981	1.010	0.995	1.006	0.970	0.987	E6	1.83
20) Indeno(1,2,3	6.944	6.390	6.636	6.619	6.791	6.684	6.757	6.533	6.669	E5	2.5[illegible]

(#) = Out of Range ### Number of calibration levels exceeded format ###

8310_32.M Fri Jan 07 10:42:31 2005

6022

Initial Calibration Verification

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP107-ICV107
Lab FileID: PP002558.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0106PAH\PP002558.D\dad1B.ch Vial: 10
Signal #2 : P:\HPCHEM\1\DATA\0106PAH\PP002558.D\dad1A.ch
Acq On : 06-Jan-2005, 15:22:11 Operator: MIKEE
Sample : ICV107-20 Inst : G1315B
Misc : OP12194,gpp107,1000,,,1,,water Multiplr: 1.00
IntFile Signal #1: EVENTS2.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Fri Jan 07 10:38:21 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	20.000	19.411	2.9	100	0.00	3.85- 4.35
2		Acenaphthylene	20.000	19.408	3.0	100	0.00	4.37- 4.87
3		1-Methyl Naphthalene	20.000	20.218	-1.1	100	0.00	4.73- 5.23
4		2-Methyl Naphthalene	20.000	19.377	3.1	100	0.00	4.93- 5.43
5		Acenaphthene	20.000	19.847	0.8	100	0.00	5.16- 5.66
6		Fluorene	20.000	19.461	2.7	100	0.00	5.31- 5.81
7		Phenanthrene	10.000	9.771	2.3	100	0.00	5.88- 6.38
8	S	O-Terphenyl		----------NA----------				
9		Anthracene	20.000	18.474	7.6	100	0.00	6.44- 6.94
10		Fluoranthene	10.000	9.846	1.5	100	0.00	7.01- 7.51
11		Pyrene	10.000	9.945	0.5	100	0.00	7.48- 7.98
12	S	P-Terphenyl		----------NA----------				
13		Benzo(a)Anthracene	10.000	9.782	2.2	100	0.00	8.70- 9.20
14		Chrysene	10.000	9.778	2.2	100	0.00	9.01- 9.51
15		Benzo(b)Fluoranthene	10.000	9.854	1.5	100	0.01	9.90-10.40
16		Benzo(k)Fluoranthene	10.000	9.976	0.2	100	0.01	10.38-10.88
17		Benzo(a) Pyrene	10.000	9.644	3.6	100	0.01	10.88-11.38
18		Dibenzo(a,h)anthracene	10.000	9.699	3.0	100	0.03	11.37-12.37
19		Benzo(g,h,i) Perylene	10.000	10.243	-2.4	100	0.03	12.04-13.04
20		Indeno(1,2,3-cd)pyrene	10.000	9.621	3.8	100	0.03	12.49-13.49

***** Signal #2 *****

1		Naphthalene	20.000	19.647	1.8	100	0.00	3.85- 4.35
2		Acenaphthylene	20.000	19.613	1.9	100	0.00	4.37- 4.87
3		1-Methyl Naphthalene	20.000	20.195	-1.0	100	0.00	4.73- 5.23
4		2-Methyl Naphthalene	20.000	19.297	3.5	100	0.00	4.93- 5.43
5		Acenaphthene	20.000	19.216	3.9	100	0.00	5.16- 5.66
6		Fluorene	20.000	19.397	3.0	100	0.00	5.31- 5.81
7		Phenanthrene	10.000	10.063	-0.6	100	0.00	5.88- 6.38
8	S	O-Terphenyl		----------NA----------				
9		Anthracene	20.000	19.014	4.9	100	0.00	6.44- 6.94
10		Fluoranthene	10.000	9.925	0.7	100	0.00	7.01- 7.51
11		Pyrene	10.000	9.819	1.8	100	0.00	7.48- 7.98
12	S	P-Terphenyl		----------NA----------				
13		Benzo(a)Anthracene	10.000	9.797	2.0	100	0.00	8.70- 9.20
14		Chrysene	10.000	9.709	2.9	100	0.00	9.01- 9.51
15		Benzo(b)Fluoranthene	10.000	9.831	1.7	100	0.01	9.90-10.40
16		Benzo(k)Fluoranthene	10.000	9.801	2.0	100	0.01	10.38-10.88
17		Benzo(a) Pyrene	10.000	9.615	3.8	100	0.01	10.88-11.38
18		Dibenzo(a,h)anthracene	10.000	9.809	1.9	100	0.03	11.37-12.37

0023

Initial Calibration Verification

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP107-ICV107
Lab FileID: PP002558.D

19	Benzo(g,h,i) Perylene	10.000	9.827	1.7	100	0.03	12.04-13.04
20	Indeno(1,2,3-cd)pyrene	10.000	9.796	2.0	100	0.03	12.49-13.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002558.D 8310_32.M Fri Jan 07 10:42:57 2005

0024

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-CC107
Lab FileID: PP004054.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0325PAH\PP004054.D\dad1B.ch Vial: 3
Signal #2 : P:\HPCHEM\1\DATA\0325PAH\PP004054.D\dad1A.ch
Acq On : 25-Mar-2005, 20:48:15 Operator: MIKEE
Sample : CC107-20 Inst : G1315B
Misc : OP12796,gpp162,1000,,,1,,water Multiplr: 1.00
IntFile Signal #1: EVENTS1.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Tue Mar 01 14:00:58 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	20.000	20.322	-1.6	100	0.00	3.93- 4.43
2		Acenaphthylene	20.000	19.992	0.0	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.260	-1.3	102	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.537	-2.7	103	0.00	5.02- 5.52
5		Acenaphthene	20.000	20.316	-1.6	102	0.00	5.24- 5.74
6		Fluorene	20.000	20.419	-2.1	102	0.00	5.40- 5.90
7		Phenanthrene	20.000	20.173	-0.9	102	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	20.405	-2.0	104	0.00	6.26- 6.76
9		Anthracene	10.000	10.376	-3.8	100	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.766	-3.8	104	0.01	7.11- 7.61
11		Pyrene	20.000	20.604	-3.0	102	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	20.999	-5.0	107	0.01	8.22- 8.72
13		Benzo(a)Anthracene	10.000	10.018	-0.2	101	0.02	8.78- 9.28
14		Chrysene	10.000	10.135	-1.3	101	0.02	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.038	-0.4	101	0.02	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.235	-2.3	103	0.02	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.525	-5.3	105	0.02	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.059	-0.6	101	0.03	11.52-12.52
19		Benzo(g,h,i) Perylene	10.000	10.141	-1.4	103	0.03	12.19-13.19
20		Indeno(1,2,3-cd)pyrene	10.000	10.073	-0.7	101	0.03	12.66-13.66

***** Signal #2 *****

1		Naphthalene	20.000	20.366	-1.8	103	0.00	3.93- 4.43
2		Acenaphthylene	20.000	19.975	0.1	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.317	-1.6	102	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.556	-2.8	103	0.00	5.02- 5.52
5		Acenaphthene	20.000	19.900	0.5	99	0.00	5.24- 5.74
6		Fluorene	20.000	20.435	-2.2	102	0.00	5.40- 5.90
7		Phenanthrene	20.000	20.672	-3.4	102	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	20.500	-2.5	104	0.00	6.26- 6.76
9		Anthracene	10.000	10.971	-9.7	103	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.485	-2.4	102	0.01	7.11- 7.61
11		Pyrene	20.000	20.542	-2.7	102	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	20.964	-4.8	107	0.01	8.22- 8.72
13		Benzo(a)Anthracene	10.000	9.990	0.1	100	0.02	8.78- 9.28
14		Chrysene	10.000	10.047	-0.5	101	0.02	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.076	-0.8	101	0.02	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.030	-0.3	101	0.02	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.529	-5.3	105	0.02	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.145	-1.4	101	0.03	11.52-12.52

6025

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-CC107
Lab FileID: PP004054.D

19	Benzo(g,h,i) Perylene	10.000	10.325	-3.2	104	0.03	12.19-13.19
20	Indeno(1,2,3-cd)pyrene	10.000	10.117	-1.2	102	0.03	12.66-13.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002554.D 8310_32.M Mon Mar 28 13:20:57 2005

0026

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-CC107
Lab FileID: PP004062.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0325PAH\PP004062.D\dad1B.ch Vial: 3
Signal #2 : P:\HPCHEM\1\DATA\0325PAH\PP004062.D\dad1A.ch
Acq On : 25-Mar-2005, 23:21:02 Operator: MIKEE
Sample : CC107-20 Inst : G1315B
Misc : OP12790,gpp162,30.0,,,5,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS1.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Tue Mar 01 14:00:58 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	20.000	20.340	-1.7	100	0.00	3.93- 4.43
2		Acenaphthylene	20.000	20.073	-0.4	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.288	-1.4	102	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.545	-2.7	103	0.00	5.02- 5.52
5		Acenaphthene	20.000	20.397	-2.0	102	0.00	5.24- 5.74
6		Fluorene	20.000	20.455	-2.3	103	0.00	5.40- 5.90
7		Phenanthrene	20.000	20.205	-1.0	102	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	20.434	-2.2	104	0.00	6.26- 6.76
9		Anthracene	10.000	10.339	-3.4	99	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.498	-2.5	103	0.00	7.11- 7.61
11		Pyrene	20.000	20.637	-3.2	102	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	21.049	-5.2	107	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	10.054	-0.5	101	0.00	8.78- 9.28
14		Chrysene	10.000	10.171	-1.7	101	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.136	-1.4	102	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	9.890	1.1	99	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.371	-3.7	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.125	-1.3	102	0.00	11.52-12.52
19		Benzo(g,h,i) Perylene	10.000	10.007	-0.1	102	0.00	12.19-13.19
20		Indeno(1,2,3-cd)pyrene	10.000	10.410	-4.1	105	0.01	12.66-13.66

***** Signal #2 *****

1		Naphthalene	20.000	20.355	-1.8	103	0.00	3.93- 4.43
2		Acenaphthylene	20.000	20.057	-0.3	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.232	-1.2	102	0.00	4.83- 5.33
4		2 Methyl Naphthalene	20.000	20.399	-2.0	102	0.00	5.02- 5.52
5		Acenaphthene	20.000	19.631	1.8	98	0.00	5.24- 5.74
6		Fluorene	20.000	20.386	-1.9	102	0.00	5.40- 5.90
7		Phenanthrene	20.000	20.637	-3.2	102	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	20.281	-1.4	103	0.00	6.26- 6.76
9		Anthracene	10.000	10.898	-9.0	102	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.284	-1.4	101	0.00	7.11- 7.61
11		Pyrene	20.000	20.465	-2.3	102	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	21.004	-5.0	107	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	10.043	-0.4	101	0.00	8.78- 9.28
14		Chrysene	10.000	10.101	-1.0	101	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.139	-1.4	101	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.031	-0.3	101	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.395	-3.9	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.211	-2.1	101	0.00	11.52-12.52

0027

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-CC107
Lab FileID: PP004062.D

19	Benzo(g,h,i) Perylene	10.000	10.303	-3.0	104	0.00	12.19-13.19
20	Indeno(1,2,3-cd)pyrene	10.000	10.286	-2.9	104	0.00	12.66-13.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002554.D 8310_32.M Mon Mar 28 13:20:59 2005

0028

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-ECC107
Lab FileID: PP004070.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0325PAH\PP004070.D\dad1B.ch Vial: 3
Signal #2 : P:\HPCHEM\1\DATA\0325PAH\PP004070.D\dad1A.ch
Acq On : 26-Mar-2005, 01:53:58 Operator: MIKEE
Sample : ECC107-20 Inst : G1315B
Misc : OP12790,gpp162,30.0,,,5,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS1.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Tue Mar 01 14:00:58 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	20.000	20.268	-1.3	100	0.00	3.93- 4.43
2		Acenaphthylene	20.000	20.037	-0.2	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.291	-1.5	102	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.579	-2.9	103	0.00	5.02- 5.52
5		Acenaphthene	20.000	20.505	-2.5	103	0.01	5.24- 5.74
6		Fluorene	20.000	20.437	-2.2	102	0.01	5.40- 5.90
7		Phenanthrene	20.000	20.228	-1.1	102	0.01	5.97- 6.47
8	S	O-Terphenyl	20.000	20.423	-2.1	104	0.01	6.26- 6.76
9		Anthracene	10.000	10.388	-3.9	100	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.503	-2.5	103	0.00	7.11- 7.61
11		Pyrene	20.000	20.692	-3.5	103	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	21.076	-5.4	108	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	10.072	-0.7	101	0.00	8.78- 9.28
14		Chrysene	10.000	10.197	-2.0	101	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.094	-0.9	101	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.265	-2.7	103	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.410	-4.1	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.118	-1.2	102	0.00	11.52-12.52
19		Benzo(g,h,i) Perylene	10.000	10.119	-1.2	103	0.00	12.19-13.19
20		Indeno(1,2,3-cd)pyrene	10.000	10.110	-1.1	102	0.00	12.66-13.66

***** Signal #2 *****

1		Naphthalene	20.000	20.291	-1.5	102	0.00	3.93- 4.43
2		Acenaphthylene	20.000	20.022	-0.1	101	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	20.230	-1.2	102	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.421	-2.1	102	0.00	5.02- 5.52
5		Acenaphthene	20.000	19.749	1.3	99	0.01	5.24- 5.74
6		Fluorene	20.000	20.367	-1.8	102	0.01	5.40- 5.90
7		Phenanthrene	20.000	20.646	-3.2	102	0.01	5.97- 6.47
8	S	O-Terphenyl	20.000	20.238	-1.2	103	0.01	6.26- 6.76
9		Anthracene	10.000	10.916	-9.2	102	0.01	6.53- 7.03
10		Fluoranthene	20.000	20.292	-1.5	101	0.00	7.11- 7.61
11		Pyrene	20.000	20.531	-2.7	102	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	21.046	-5.2	107	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	10.041	-0.4	101	0.00	8.78- 9.28
14		Chrysene	10.000	10.108	-1.1	101	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	10.120	-1.2	101	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.074	-0.7	101	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.427	-4.3	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	10.196	-2.0	101	0.00	11.52-12.52

0029

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP162-ECC107
Lab FileID: PP004070.D

19	Benzo(g,h,i) Perylene	10.000	10.339	-3.4	104	0.00	12.19-13.19
20	Indeno(1,2,3-cd)pyrene	10.000	10.149	-1.5	102	0.00	12.66-13.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002554.D 8310_32.M Mon Mar 28 13:21:00 2005

0030

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP163-CC107
Lab FileID: PP004072.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0328PAH\PP004072.D\dad1B.ch Vial: 2
Signal #2 : P:\HPCHEM\1\DATA\0328PAH\PP004072.D\dad1A.ch
Acq On : 28-Mar-2005, 13:48:20 Operator: MIKEE
Sample : CC107-10 Inst : G1315B
Misc : OP12790,gpp163,30.0,,,5,,soil Multiplr: 1.00
IntFile Signal #1: EVENTS1.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Tue Mar 01 14:00:58 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	10.000	9.915	0.9	99	0.00	3.93- 4.43
2		Acenaphthylene	10.000	9.802	2.0	99	0.00	4.47- 4.97
3		1-Methyl Naphthalene	10.000	9.894	1.1	99	0.00	4.83- 5.33
4		2-Methyl Naphthalene	10.000	10.057	-0.6	100	0.00	5.02- 5.52
5		Acenaphthene	10.000	9.994	0.1	99	0.00	5.24- 5.74
6		Fluorene	10.000	10.046	-0.5	100	0.00	5.40- 5.90
7		Phenanthrene	10.000	9.951	0.5	99	0.00	5.97- 6.47
8	S	O-Terphenyl	10.000	10.063	-0.6	101	0.00	6.26- 6.76
9		Anthracene	5.000	5.377	-7.5	97	0.00	6.53- 7.03
10		Fluoranthene	10.000	10.242	-2.4	102	0.00	7.11- 7.61
11		Pyrene	10.000	10.244	-2.4	100	0.00	7.57- 8.07
12	S	P-Terphenyl	10.000	10.354	-3.5	105	0.00	8.22- 8.72
13		Benzo(a)Anthracene	5.000	4.948	1.0	99	0.00	8.78- 9.28
14		Chrysene	5.000	5.047	-0.9	99	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	5.000	4.933	1.3	99	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	5.000	5.027	-0.5	103	0.00	10.48-10.98
17		Benzo(a) Pyrene	5.000	5.160	-3.2	103	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	5.000	4.935	1.3	99	0.00	11.52-12.52
19		Benzo(g,h,i) Perylene	5.000	4.965	0.7	101	0.00	12.19-13.19
20		Indeno(1,2,3-cd)pyrene	5.000	4.897	2.1	99	0.00	12.66-13.66

***** Signal #2 *****

1		Naphthalene	10.000	9.959	0.4	101	0.00	3.93- 4.43
2		Acenaphthylene	10.000	9.850	1.5	99	0.00	4.47- 4.97
3		1-Methyl Naphthalene	10.000	9.857	1.4	98	0.00	4.83- 5.33
4		2-Methyl Naphthalene	10.000	9.922	0.8	99	0.00	5.02- 5.52
5		Acenaphthene	10.000	9.506	4.9	97	0.00	5.24- 5.74
6		Fluorene	10.000	9.958	0.4	99	0.00	5.40- 5.90
7		Phenanthrene	10.000	10.180	-1.8	99	0.00	5.97- 6.47
8	S	O-Terphenyl	10.000	9.915	0.9	101	0.00	6.26- 6.76
9		Anthracene	5.000	5.548	-11.0	101	0.00	6.53- 7.03
10		Fluoranthene	10.000	10.178	-1.8	102	0.00	7.11- 7.61
11		Pyrene	10.000	10.104	-1.0	101	0.00	7.57- 8.07
12	S	P-Terphenyl	10.000	10.341	-3.4	105	0.00	8.22- 8.72
13		Benzo(a)Anthracene	5.000	4.931	1.4	99	0.00	8.78- 9.28
14		Chrysene	5.000	4.968	0.6	99	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	5.000	4.968	0.6	99	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	5.000	4.937	1.3	99	0.00	10.48-10.98
17		Benzo(a) Pyrene	5.000	5.181	-3.6	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	5.000	5.018	-0.4	99	0.00	11.52-12.52

C031

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP163-CC107
Lab FileID: PP004072.D

19	Benzo(g,h,i) Perylene	5.000	5.083	-1.7	102	0.00	12.19-13.19
20	Indeno(1,2,3-cd)pyrene	5.000	4.926	1.5	99	0.00	12.66-13.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002553.D 8310_32.M Tue Mar 29 14:57:21 2005

0032

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP163-CC107
Lab FileID: PP004082.D

Evaluate Continuing Calibration Report

Signal #1 : P:\HPCHEM\1\DATA\0328PAH\PP004082.D\dad1B.ch Vial: 3
Signal #2 : P:\HPCHEM\1\DATA\0328PAH\PP004082.D\dad1A.ch
Acq On : 28-Mar-2005, 16:59:22 Operator: MIKEE
Sample : CC107-20 Inst : G1315B
Misc : OP12754,gpp163,1000,,,1,,water Multiplr: 1.00
IntFile Signal #1: EVENTS1.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\2\METHODS\8310_32.M (Chemstation Integrator)
Title : PAH's BY EPA 8310
Last Update : Tue Mar 01 14:00:58 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1		Naphthalene	20.000	19.750	1.3	97	0.00	3.93- 4.43
2		Acenaphthylene	20.000	19.588	2.1	99	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	19.780	1.1	100	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	20.092	-0.5	100	0.00	5.02- 5.52
5		Acenaphthene	20.000	20.094	-0.5	100	0.00	5.24- 5.74
6		Fluorene	20.000	20.012	-0.1	100	0.00	5.40- 5.90
7		Phenanthrene	20.000	19.810	1.0	100	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	20.017	-0.1	102	0.00	6.26- 6.76
9		Anthracene	10.000	10.177	-1.8	98	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.049	-0.2	100	0.00	7.11- 7.61
11		Pyrene	20.000	20.220	-1.1	100	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	20.658	-3.3	105	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	9.860	1.4	99	0.00	8.78- 9.28
14		Chrysene	10.000	9.982	0.2	99	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	9.880	1.2	99	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	10.185	-1.9	102	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.356	-3.6	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	9.880	1.2	99	0.00	11.52-12.52
19		Benzo(g,h,i) Perylene	10.000	9.897	1.0	101	0.00	12.19-13.19
20		Indeno(1,2,3-cd)pyrene	10.000	9.966	0.3	100	0.00	12.66-13.66

***** Signal #2 *****

1		Naphthalene	20.000	19.810	1.0	100	0.00	3.93- 4.43
2		Acenaphthylene	20.000	19.588	2.1	99	0.00	4.47- 4.97
3		1-Methyl Naphthalene	20.000	19.630	1.9	99	0.00	4.83- 5.33
4		2-Methyl Naphthalene	20.000	19.756	1.2	99	0.00	5.02- 5.52
5		Acenaphthene	20.000	19.010	4.9	95	0.00	5.24- 5.74
6		Fluorene	20.000	19.829	0.9	99	0.00	5.40- 5.90
7		Phenanthrene	20.000	20.165	-0.8	99	0.00	5.97- 6.47
8	S	O-Terphenyl	20.000	19.701	1.5	100	0.00	6.26- 6.76
9		Anthracene	10.000	10.724	-7.2	100	0.00	6.53- 7.03
10		Fluoranthene	20.000	20.289	-1.4	101	0.00	7.11- 7.61
11		Pyrene	20.000	20.060	-0.3	100	0.00	7.57- 8.07
12	S	P-Terphenyl	20.000	20.617	-3.1	105	0.00	8.22- 8.72
13		Benzo(a)Anthracene	10.000	9.827	1.7	99	0.00	8.78- 9.28
14		Chrysene	10.000	9.875	1.3	99	0.00	9.09- 9.59
15		Benzo(b)Fluoranthene	10.000	9.881	1.2	99	0.00	9.99-10.49
16		Benzo(k)Fluoranthene	10.000	9.836	1.6	99	0.00	10.48-10.98
17		Benzo(a) Pyrene	10.000	10.354	-3.5	104	0.00	10.99-11.49
18		Dibenzo(a,h)anthracene	10.000	9.962	0.4	99	0.00	11.52-12.52

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GPP163-CC107
Lab FileID: PP004082.D

19	Benzo(g,h,i) Perylene	10.000	10.142	-1.4	102	0.00	12.19-13.19
20	Indeno(1,2,3-cd)pyrene	10.000	9.926	0.7	100	0.00	12.66-13.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
PP002554.D 8310_32.M Tue Mar 29 14:57:44 2005

0034

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP48296.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	11.6	9.5	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		59-121%

0035

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22607.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
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)	13.5	9.3	6.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		59-121%

0036

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22608.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	18.8	8.8	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		59-121%

0037

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22609.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	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)	10.5	9.1	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		59-121%

0038

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

Method Blank Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12789-MB	IJ22592.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	8.3	5.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	59-121%

0039

Method Blank Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12789-MB	OP48294.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	8.3	5.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	91%	59-121%

0040

Blank Spike Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12789-BS	IJ22591.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C8-C40)	28.3	24.0	85	70-115

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	88%	59-121%

0041

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12789-MS	OP48297.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417
OP12789-MSD	OP48298.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417
F30558-1	OP48296.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F30558-1, F30558-2, F30558-3, F30558-4

CAS No.	Compound	F30558-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C8-C40)	11.6		32.4	39.4	86	46.2	108	16	42-131/28

CAS No.	Surrogate Recoveries	MS	MSD	F30558-1	Limits
84-15-1	o-Terphenyl	94%	91%	96%	59-121%

0042

Semivolatile Surrogate Recovery Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Method: FLORIDA-PRO **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
F30558-1	OP48296.D	96.0
F30558-2	IJ22607.D	102.0
F30558-3	IJ22608.D	101.0
F30558-4	IJ22609.D	108.0
OP12789-BS	IJ22591.D	88.0
OP12789-MB	IJ22592.D	83.0
OP12789-MB	OP48294.D	91.0
OP12789-MS	OP48297.D	94.0
OP12789-MSD	OP48298.D	91.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	59-121%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GIJ1112-CC1107	**Injection Date:**	03/26/05
Lab File ID:	IJ22590.D	**Injection Time:**	01:40
Instrument ID:	GCIJ	**Method:**	FLORIDA-PRO

	S1 [a] RT
Check Std	5.54

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
OP12789-BS	IJ22591.D	03/26/05	02:03	5.54
OP12789-MB	IJ22592.D	03/26/05	02:25	5.54
ZZZZZZ	IJ22593.D	03/26/05	02:47	5.53
ZZZZZZ	IJ22594.D	03/26/05	03:09	5.54
ZZZZZZ	IJ22595.D	03/26/05	03:32	5.53
ZZZZZZ	IJ22596.D	03/26/05	03:54	5.53
ZZZZZZ	IJ22598.D	03/26/05	04:38	5.54
ZZZZZZ	IJ22599.D	03/26/05	05:00	5.53
ZZZZZZ	IJ22600.D	03/26/05	05:23	5.53

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

0044

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GIJ1112-CC1107	**Injection Date:**	03/26/05
Lab File ID:	IJ22601.D	**Injection Time:**	05:45
Instrument ID:	GCIJ	**Method:**	FLORIDA-PRO

	S1 [a] RT
Check Std	5.54

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
ZZZZZZ	IJ22602.D	03/26/05	06:07	5.54
ZZZZZZ	IJ22603.D	03/26/05	06:29	5.53
F30558-2	IJ22607.D	03/26/05	07:58	5.53
F30558-3	IJ22608.D	03/26/05	08:21	5.54
F30558-4	IJ22609.D	03/26/05	08:43	5.53
GIJ1112-ECC1107	IJ22610.D	03/26/05	09:04	5.53

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

0045

GC Surrogate Retention Time Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Check Std:	GOP1417-CC1383	**Injection Date:**	03/28/05
Lab File ID:	OP48289.D	**Injection Time:**	15:04
Instrument ID:	GCOP	**Method:**	FLORIDA-PRO

	S1 [a] RT
Check Std	5.03

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
ZZZZZZ	OP48293.D	03/28/05	16:28	5.03
OP12789-MB	OP48294.D	03/28/05	16:49	5.03
ZZZZZZ	OP48295.D	03/28/05	17:10	5.03
F30558-1	OP48296.D	03/28/05	17:31	5.03
OP12789-MS	OP48297.D	03/28/05	17:52	5.03
OP12789-MSD	OP48298.D	03/28/05	18:13	5.03
GOP1417-ECC1380	OP48299.D	03/28/05	18:34	5.03

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

0046

Initial Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GIJ1107-ICC1107
Lab FileID: IJ22462.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 18 13:10:37 2005
Response via : Initial Calibration

Calibration Files
1 =IJ22460.D 2 =IJ22461.D 3 =IJ22462.D 4 =IJ22463.D
5 =IJ22464.D 6 =IJ22465.D 7 =IJ22466.D icv =IJ22467.D

Compound	1	2	3	4	5	6	7	icv	Avg	%RSD
1) O-TERPHENYL	1.405	1.395	1.450	1.463	1.409				1.424 E4	2.12
2) TPH (C8-C40)	1.417	1.367	1.410	1.414	1.356	1.306	1.294		1.366 E4	3.74

(#) = Out of Range ### Number of calibration levels exceeded format ###

FL_PRO_F.M Sat Mar 19 11:24:13 2005

0047

Initial Calibration Verification

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GIJ1107-ICV1107
Lab FileID: IJ22467.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0318PRO\IJ22467.D
Acq On : 18 Mar 2005 12:49 pm
Sample : icv1107-850
Misc : op12726,gij1107,30.0,,,1,1,soil
IntFile : events.e

Vial: 9
Operator: sarahm
Inst : FID 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 18 13:10:37 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL		----------NA----------				
2 H	TPH (C8-C40)	850.000	913.656	-7.5	0	0.00	2.47-11.59

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ22467.D FL_PRO_F.M Sat Mar 19 11:51:34 2005

0048

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GIJ1112-CC1107
Lab FileID: IJ22590.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0325PRO\IJ22590.D
Acq On : 26 Mar 2005 1:40 am
Sample : cc1107-1020
Misc : op12795,gij1112,1010,,,1,1,water
IntFile : events.e

Vial: 1
Operator: sarahm
Inst : FID 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 25 15:08:45 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	58.677	2.2	96	0.00	5.43- 5.63
2 H	TPH (C8-C40)	1020.000	1043.522	-2.3	99	0.00	2.44-11.51

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ22462.D FL_PRO_F.M Mon Mar 28 08:03:59 2005

0049

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GIJ1112-CC1107
Lab FileID: IJ22601.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0325PRO\IJ22601.D
Acq On : 26 Mar 2005 5:45 am
Sample : cc1107-1020
Misc : op12789,gij1112,30.6,,,1,1,soil
IntFile : events.e

Vial: 1
Operator: sarahm
Inst : FID 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 25 15:08:45 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	74.280	-23.8	122	0.00	5.43- 5.63
2 H	TPH (C8-C40)	1020.000	1263.171	-23.8	120	0.00	2.44-11.51

(#) = Out of Range
IJ22462.D FL_PRO_F.M

SPCC's out = 0 CCC's out = 0
Mon Mar 28 08:03:59 2005

0050

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GIJ1112-ECC1107
Lab FileID: IJ22610.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0325PRO\IJ22610.D
Acq On : 26 Mar 2005 9:04 am
Sample : ecc1107-1020
Misc : op12789,gij1112,30.6,,,1,1,soil
IntFile : events.e

Vial: 1
Operator: sarahm
Inst : FID 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 25 15:08:45 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	75.410	-25.7#	123	0.00	5.43- 5.63
2 H	TPH (C8-C40)	1020.000	1263.342	-23.9	120	0.00	2.44-11.51

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ22462.D FL_PRO_F.M Mon Mar 28 08:04:00 2005

0051

Initial Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GOP1383-ICC1383
Lab FileID: OP46584.D

Response Factor Report FID 2

Method : C:\HPCHEM\2\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Feb 01 13:57:46 2005
Response via : Initial Calibration

Calibration Files
1 =OP46585.D 2 =OP46586.D 3 =OP46584.D 4 =OP46587.D
5 =OP46588.D 6 =OP46589.D 7 =OP46590.D ICV =OP46432.D

Compound	1	2	3	4	5	6	7	ICV	Avg	%RSD
1) O-TERPHENYL	2.024	2.015	1.979	2.399	2.122				2.108 E4	8.11
2) TPH (C8-C40)	2.006	1.928	1.889	2.233	1.974	1.821	1.688		1.934 E4	8.74

(#) = Out of Range ### Number of calibration levels exceeded format ###

FL_PRO_F.M Wed Feb 02 07:10:54 2005

0052

Initial Calibration Verification

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GOP1383-ICV1383
Lab FileID: OP46591.D

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\0201PRO\OP46591.D          Vial: 8
Acq On    :  1 Feb 2005   1:39 pm                    Operator: sarahm
Sample    : icv1383-850                              Inst    : FID 2
Misc      : op12390,gop1383,1000,,,1,1,water         Multiplr: 1.00
IntFile   : events.e

Method       : C:\HPCHEM\2\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Tue Feb 01 13:57:46 2005
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	O-TERPHENYL		----------NA----------				
2	H	TPH (C8-C40)	850.000	882.109	-3.8	0	0.00	1.97-10.66

(#) = Out of Range SPCC's out = 0 CCC's out = 0
OP46432.D FL_PRO_F.M Wed Feb 02 07:09:53 2005

0053

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO 248

Sample: GOP1417-CC1383
Lab FileID: OP48289.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\0328PRO\OP48289.D Vial: 1
Acq On : 28 Mar 2005 3:04 pm Operator: sarahm
Sample : cc1383-1020 Inst : FID 2
Misc : op12795,gop1417,1050,,,1,40,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 25 12:39:14 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1	S	O-TERPHENYL	60.000	61.454	-2.4	109	0.00	4.93- 5.13
2	H	TPH (C8-C40)	1020.000	1044.457	-2.4	105	0.00	1.49- 9.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0
OP46584.D FL_PRO_F.M Tue Mar 29 08:23:20 2005

0054

Continuing Calibration Summary

Job Number: F30558
Account: TETRPAPT Tetra Tech NUS
Project: NAS Cecil Field-CTO-248

Sample: GOP1417-ECC1383
Lab FileID: OP48299.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\0328PRO\OP48299.D
Acq On : 28 Mar 2005 6:34 pm
Sample : ecc1383-1020
Misc : op12789,gop1417,30.6,,,1,1,soil
IntFile : events.e

Vial: 1
Operator: sarahm
Inst : FID 2
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Mar 25 12:39:14 2005
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	64.255	-7.1	114	0.00	4.93- 5.13
2 H	TPH (C8-C40)	1020.000	1070.149	-4.9	107	0.00	1.49- 9.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0
OP46584.D FL_PRO_F.M Tue Mar 29 08:23:20 2005

0055

Accutest Laboratories

Sample Summary

Tetra Tech NUS

Job No: F30558

NAS Cecil Field-CTO-248
Project No: N4242-WR#1001712/ Tank 290A

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F30558-1	03/22/05	11:25 MD	03/23/05	SO	Soil	CEF-B290A-SB006-01
F30558-1D	03/22/05	11:25 MD	03/23/05	SO	Soil Dup/MSD	CEF-B290A-SB006-01
F30558-1S	03/22/05	11:25 MD	03/23/05	SO	Soil Matrix Spike	CEF-B290A-SB006-01
F30558-2	03/22/05	11:40 MD	03/23/05	SO	Soil	CEF-B290A-SB001-01
F30558-3	03/22/05	11:53 MD	03/23/05	SO	Soil	CEF-B290A-SB002-01
F30558-4	03/22/05	00:00 MD	03/23/05	SO	Soil	CEF-B290A-SB-DU02

0057

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

Accutest Laboratories

Sample Summary

Tetra Tech NUS

Job No: F30558

NAS Cecil Field-CTO-248
Project No: N4242-WR#1001712/ Tank 290A

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F30558-1	03/22/05	11:25 MD	03/23/05	SO	Soil	CEF-B290A-SB006-01
F30558-1D	03/22/05	11:25 MD	03/23/05	SO	Soil Dup/MSD	CEF-B290A-SB006-01
F30558-1S	03/22/05	11:25 MD	03/23/05	SO	Soil Matrix Spike	CEF-B290A-SB006-01
F30558-2	03/22/05	11:40 MD	03/23/05	SO	Soil	CEF-B290A-SB001-01
F30558-3	03/22/05	11:53 MD	03/23/05	SO	Soil	CEF-B290A-SB002-01
F30558-4	03/22/05	00:00 MD	03/23/05	SO	Soil	CEF-B290A-SB-DU02

0058

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004064.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	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	53%		49-124%
92-94-4	p-Terphenyl	57%		56-141%

0059

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004067.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	190 U	750	190	ug/kg	
208-96-8	Acenaphthylene	190 U	750	190	ug/kg	
120-12-7	Anthracene	190 U	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	93 U	370	93	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	75	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	75	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	75	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	75	19	ug/kg	
218-01-9	Chrysene	93 U	370	93	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	75	19	ug/kg	
206-44-0	Fluoranthene	93 U	370	93	ug/kg	
86-73-7	Fluorene	190 U	370	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	75	19	ug/kg	
91-20-3	Naphthalene	93 U	370	93	ug/kg	
90-12-0	1-Methylnaphthalene	93 U	370	93	ug/kg	
91-57-6	2-Methylnaphthalene	93 U	370	93	ug/kg	
85-01-8	Phenanthrene	190 U	370	190	ug/kg	
129-00-0	Pyrene	93 U	370	93	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		49-124%
92-94-4	p-Terphenyl	91%		56-141%

0060

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004068.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	710	180	ug/kg	
208-96-8	Acenaphthylene	180 U	710	180	ug/kg	
120-12-7	Anthracene	180 U	350	180	ug/kg	
56-55-3	Benzo(a)anthracene	88 U	350	88	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	71	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	71	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	71	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	71	18	ug/kg	
218-01-9	Chrysene	88 U	350	88	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	71	18	ug/kg	
206-44-0	Fluoranthene	88 U	350	88	ug/kg	
86-73-7	Fluorene	180 U	350	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	71	18	ug/kg	
91-20-3	Naphthalene	88 U	350	88	ug/kg	
90-12-0	1-Methylnaphthalene	88 U	350	88	ug/kg	
91-57-6	2-Methylnaphthalene	88 U	350	88	ug/kg	
85-01-8	Phenanthrene	180 U	350	180	ug/kg	
129-00-0	Pyrene	88 U	350	88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		49-124%
92-94-4	p-Terphenyl	87%		56-141%

0061

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004069.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	730	180	ug/kg	
208-96-8	Acenaphthylene	180 U	730	180	ug/kg	
120-12-7	Anthracene	180 U	370	180	ug/kg	
56-55-3	Benzo(a)anthracene	92 U	370	92	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	73	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	73	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	73	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	73	18	ug/kg	
218-01-9	Chrysene	92 U	370	92	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	73	18	ug/kg	
206-44-0	Fluoranthene	92 U	370	92	ug/kg	
86-73-7	Fluorene	180 U	370	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	73	18	ug/kg	
91-20-3	Naphthalene	92 U	370	92	ug/kg	
90-12-0	1-Methylnaphthalene	92 U	370	92	ug/kg	
91-57-6	2-Methylnaphthalene	92 U	370	92	ug/kg	
85-01-8	Phenanthrene	180 U	370	180	ug/kg	
129-00-0	Pyrene	92 U	370	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		49-124%
92-94-4	p-Terphenyl	92%		56-141%

0062

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP48296.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	O
	TPH (C8-C40)	11.6	9.5	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		59-121%

0063

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22607.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
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)	13.5	9.3	6.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		59-121%

0064

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22608.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	18.8	8.8	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		59-121%

0065

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22609.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	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)	10.5	9.1	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		59-121%

0066

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

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: FAH

nsample	CEF-B290A-SB001-01	nsample	CEF-B290A-SB002-01	nsample	CEF-B290A-SB006-01
samp_date	3/22/2005	samp_date	3/22/2005	samp_date	3/22/2005
lab_id	F30558-2	lab_id	F30558-3	lab_id	F30558-1
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.1	Pct_Solids	93.8	Pct_Solids	86.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	93	U	U	
2-METHYLNAPHTHALENE	93	U	U	
ACENAPHTHENE	190	U	U	
ACENAPHTHYLENE	190	U	U	
ANTHRACENE	190	U	U	
BENZO(A)ANTHRACENE	93	U	U	
BENZO(A)PYRENE	19	U	U	
BENZO(B)FLUORANTHENE	19	U	U	
BENZO(G,H,I)PERYLENE	19	U	U	
BENZO(K)FLUORANTHENE	19	U	U	
CHRYSENE	93	U	U	
DIBENZO(A,H)ANTHRACENE	19	U	U	
FLUORANTHENE	93	U	U	
FLUORENE	190	U	U	
INDENO(1,2,3-CD)PYRENE	19	U	U	
NAPHTHALENE	93	U	U	
PHENANTHRENE	190	U	U	
PYRENE	93	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	88	U	U	
2-METHYLNAPHTHALENE	88	U	U	
ACENAPHTHENE	180	U	U	
ACENAPHTHYLENE	180	U	U	
ANTHRACENE	180	U	U	
BENZO(A)ANTHRACENE	88	U	U	
BENZO(A)PYRENE	18	U	U	
BENZO(B)FLUORANTHENE	18	U	U	
BENZO(G,H,I)PERYLENE	18	U	U	
BENZO(K)FLUORANTHENE	18	U	U	
CHRYSENE	88	U	U	
DIBENZO(A,H)ANTHRACENE	18	U	U	
FLUORANTHENE	88	U	U	
FLUORENE	180	U	U	
INDENO(1,2,3-CD)PYRENE	18	U	U	
NAPHTHALENE	88	U	U	
PHENANTHRENE	180	U	U	
PYRENE	88	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	95	U	U	
2-METHYLNAPHTHALENE	95	U	U	
ACENAPHTHENE	190	U	U	
ACENAPHTHYLENE	190	U	U	
ANTHRACENE	190	U	U	
BENZO(A)ANTHRACENE	95	U	U	
BENZO(A)PYRENE	19	U	U	
BENZO(B)FLUORANTHENE	19	U	U	
BENZO(G,H,I)PERYLENE	19	U	U	
BENZO(K)FLUORANTHENE	19	U	U	
CHRYSENE	95	U	U	
DIBENZO(A,H)ANTHRACENE	19	U	U	
FLUORANTHENE	95	U	U	
FLUORENE	190	U	U	
INDENO(1,2,3-CD)PYRENE	19	U	U	
NAPHTHALENE	95	U	U	
PHENANTHRENE	190	U	U	
PYRENE	95	U	U	

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: PAH

nsample	CEF-B290A-SB-DU02
samp_date	3/22/2005
lab_id	F30558-4
qc_type	NM
units	UG/KG
Pct_Solids	89.5
DUP_CF:	CEF-B290A-SB001-01

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	92	U	U	
2-METHYLNAPHTHALENE	92	U	U	
ACENAPHTHENE	180	U	U	
ACENAPHTHYLENE	180	U	U	
ANTHRACENE	180	U	U	
BENZO(A)ANTHRACENE	92	U	U	
BENZO(A)PYRENE	18	U	U	
BENZO(B)FLUORANTHENE	18	U	U	
BENZO(G,H,I)PERYLENE	18	U	U	
BENZO(K)FLUORANTHENE	18	U	U	
CHRYSENE	92	U	U	
DIBENZO(A,H)ANTHRACENE	18	U	U	
FLUORANTHENE	92	U	U	
FLUORENE	180	U	U	
INDENO(1,2,3-CD)PYRENE	18	U	U	
NAPHTHALENE	92	U	U	
PHENANTHRENE	180	U	U	
PYRENE	92	U	U	

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: PET

nsample	CEF-B290A-SB001-01
samp_date	3/22/2005
lab_id	F30558-2
qc_type	NM
units	MG/KG
Pct_Solids	89.1
DUP_CF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
TOTAL PETROLEUM HYDROCARBONS	13.5			

nsample	CEF-B290A-SB002-01
samp_date	3/22/2005
lab_id	F30558-3
qc_type	NM
units	MG/KG
Pct_Solids	93.8
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
TOTAL PETROLEUM HYDROCARBONS	18.8			

nsample	CEF-B290A-SB006-01
samp_date	3/22/2005
lab_id	F30558-1
qc_type	NM
units	MG/KG
Pct_Solids	86.5
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
TOTAL PETROLEUM HYDROCARBONS	11.6			

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: PET

nsample	CEF-B290A-SB-DU02
samp_date	3/22/2005
lab_id	F30558-4
qc_type	NM
units	MG/KG
Pct_Solids	89.5
DUP_OF:	CEF-B290A-SB001-01

Parameter	Result	Lab Qual	Val Qual	Qual Code
TOTAL PETROLEUM HYDROCARBONS	10.5			

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: MISC

nsample	CEF-B290A-SB001-01
samp_date	3/22/2005
lab_id	F30558-2
qc_type	NM
Pct_Solids	89.1
DUP_OF:	

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	89.1			

nsample	CEF-B290A-SB002-01
samp_date	3/22/2005
lab_id	F30558-3
qc_type	NM
Pct_Solids	93.8
DUP_OF:	

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	93.8			

nsample	CEF-B290A-SB006-01
samp_date	3/22/2005
lab_id	F30558-1
qc_type	NM
Pct_Solids	86.5
DUP_OF:	

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	86.5			

PROJ_NO: 4248

SDG: F30558 MEDIA: SOIL DATA FRACTION: MISC

nsample	CEF-B290A-SB-DU02
samp_date	3/22/2005
lab_id	F30558-4
qc_type	NM
Pct_Solids	89.5
DUP_OF:	CEF-B290A-SB001-01

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	89.5			

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004067.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	190 U	750	190	ug/kg	
208-96-8	Acenaphthylene	190 U	750	190	ug/kg	
120-12-7	Anthracene	190 U	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	93 U	370	93	ug/kg	
50-32-8	Benzo(a)pyrene	19 U	75	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	19 U	75	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	19 U	75	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	19 U	75	19	ug/kg	
218-01-9	Chrysene	93 U	370	93	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	19 U	75	19	ug/kg	
206-44-0	Fluoranthene	93 U	370	93	ug/kg	
86-73-7	Fluorene	190 U	370	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	75	19	ug/kg	
91-20-3	Naphthalene	93 U	370	93	ug/kg	
90-12-0	1-Methylnaphthalene	93 U	370	93	ug/kg	
91-57-6	2-Methylnaphthalene	93 U	370	93	ug/kg	
85-01-8	Phenanthrene	190 U	370	190	ug/kg	
129-00-0	Pyrene	93 U	370	93	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		49-124%
92-94-4	p-Terphenyl	91%		56-141%

0011

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004068.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	710	180	ug/kg	
208-96-8	Acenaphthylene	180 U	710	180	ug/kg	
120-12-7	Anthracene	180 U	350	180	ug/kg	
56-55-3	Benzo(a)anthracene	88 U	350	88	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	71	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	71	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	71	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	71	18	ug/kg	
218-01-9	Chrysene	88 U	350	88	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	71	18	ug/kg	
206-44-0	Fluoranthene	88 U	350	88	ug/kg	
86-73-7	Fluorene	180 U	350	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	71	18	ug/kg	
91-20-3	Naphthalene	88 U	350	88	ug/kg	
90-12-0	1-Methylnaphthalene	88 U	350	88	ug/kg	
91-57-6	2-Methylnaphthalene	88 U	350	88	ug/kg	
85-01-8	Phenanthrene	180 U	350	180	ug/kg	
129-00-0	Pyrene	88 U	350	88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		49-124%
92-94-4	p-Terphenyl	87%		56-141%

0012

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004064.D	1	03/25/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	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	53%		49-124%
92-94-4	p-Terphenyl	57%		56-141%

0010

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	SW846 8310 SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP004069.D	1	03/26/05	MRE	03/24/05	OP12790	GPP162
Run #2							

	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	180 U	730	180	ug/kg	
208-96-8	Acenaphthylene	180 U	730	180	ug/kg	
120-12-7	Anthracene	180 U	370	180	ug/kg	
56-55-3	Benzo(a)anthracene	92 U	370	92	ug/kg	
50-32-8	Benzo(a)pyrene	18 U	73	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	18 U	73	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	18 U	73	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	18 U	73	18	ug/kg	
218-01-9	Chrysene	92 U	370	92	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	18 U	73	18	ug/kg	
206-44-0	Fluoranthene	92 U	370	92	ug/kg	
86-73-7	Fluorene	180 U	370	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	18 U	73	18	ug/kg	
91-20-3	Naphthalene	92 U	370	92	ug/kg	
90-12-0	1-Methylnaphthalene	92 U	370	92	ug/kg	
91-57-6	2-Methylnaphthalene	92 U	370	92	ug/kg	
85-01-8	Phenanthrene	180 U	370	180	ug/kg	
129-00-0	Pyrene	92 U	370	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		49-124%
92-94-4	p-Terphenyl	92%		56-141%

0013

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB001-01		
Lab Sample ID:	F30558-2	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.1
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22607.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
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)	13.5	9.3	6.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		59-121%

0036

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB002-01		
Lab Sample ID:	F30558-3	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	93.8
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22608.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	18.8	8.8	6.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		59-121%

0037

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB006-01		
Lab Sample ID:	F30558-1	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	86.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP48296.D	1	03/28/05	SM	03/24/05	OP12789	GOP1417
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	11.6	9.5	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		59-121%

0035

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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-B290A-SB-DU02		
Lab Sample ID:	F30558-4	**Date Sampled:**	03/22/05
Matrix:	SO - Soil	**Date Received:**	03/23/05
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	89.5
Project:	NAS Cecil Field-CTO-248		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ22609.D	1	03/26/05	SM	03/24/05	OP12789	GIJ1112
Run #2							

	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)	10.5	9.1	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		59-121%

0038

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

TETRA TECH NUS, INC. F305558 CHAIN OF CUSTODY | NUMBER 290A-032105 | PAGE 1 OF 1

PROJECT NO: N4242, CTO 248	FACILITY: NASCF, TANK 290A	PROJECT MANAGER: PAUL CALLIGAN	PHONE NUMBER: 813 806 0202
LABORATORY NAME AND CONTACT: ACCUTEST H. WANDROY	SAMPLERS (SIGNATURE): Merwin W. Dale	FIELD OPERATIONS LEADER: MERV DALE	PHONE NUMBER: 904 636 6125
ADDRESS: 4405 VINELAND Rd., C-15	CARRIER/WAYBILL NUMBER: Fedex 8427 1834 9649	CITY, STATE: ORLANDO, FL 32811	

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	PAHs SW8270 8310	TRPH FL-PRO							COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)										G	G							
PRESERVATIVE USED										None	None							
1	03/22	1125	CEF-B290A-SB006-01	*	0	1	SO	G	4	2	2							Cool to 4°C
2	03/22	1140	CEF-B290A-SB001-01		0	1	SO	G	2	1	1							
3	03/22	1153	CEF-B290A-SB002-01		0	1	SO	G	2	1	1							Work Release
4	03/22	0000	CEF-B290A-SB-D402		0	1	SO	G	2	1	1							1001712
																		* Use extra volume for Lab MSMSD.

MWD

1. RELINQUISHED BY: Merwin W. Dale	DATE 03/22/05	TIME 1600	1. RECEIVED BY: Fedex	DATE 03/22/05	TIME —
2. RELINQUISHED BY: FX	DATE 3/23/05	TIME 9:00	2. RECEIVED BY: [signature]	DATE 3/23/05	TIME 9:00
3. RELINQUISHED BY:	DATE	TIME	3. RECEIVED BY:	DATE	TIME

COMMENTS 0008

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

HOLDTIME

SDG F30558

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	CEF-B290A-SB001-01	F30558-2	NM	3/22/2005	3/27/2005	3/27/2005	5	0	5
PCS	%	CEF-B290A-SB-DU02	F30558-4	NM	3/22/2005	3/27/2005	3/27/2005	5	0	5
PCS	%	CEF-B290A-SB006-01	F30558-1	NM	3/22/2005	3/27/2005	3/27/2005	5	0	5
PCS	%	CEF-B290A-SB002-01	F30558-3	NM	3/22/2005	3/27/2005	3/27/2005	5	0	5
PAH	%	CEF-B290A-SB002-01	F30558-3	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	%	CEF-B290A-SB006-01	F30558-1	NM	3/22/2005	3/24/2005	3/25/2005	2	1	3
PAH	%	CEF-B290A-SB-DU02	F30558-4	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	%	CEF-B290A-SB001-01	F30558-2	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	UG/KG	CEF-B290A-SB001-01	F30558-2	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	UG/KG	CEF-B290A-SB002-01	F30558-3	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	UG/KG	CEF-B290A-SB-DU02	F30558-4	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
PAH	UG/KG	CEF-B290A-SB006-01	F30558-1	NM	3/22/2005	3/24/2005	3/25/2005	2	1	3
TPH	MG/KG	CEF-B290A-SB-DU02	F30558-4	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
TPH	MG/KG	CEF-B290A-SB001-01	F30558-2	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4
TPH	MG/KG	CEF-B290A-SB002-01	F30558-3	NM	3/22/2005	3/24/2005	3/26/2005	2	2	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	MG/KG	CEF-B290A-SB006-01	F30558-1	NM	3/22/2005	3/24/2005	3/28/2005	2	4	6

FIELD DUPLICATE PRECISION

ANALYTE	CEF-B290A-SB-DU02	CEF-B290A-SB001-01	RPD
TPH	10.5	13.5	25.00

ATTACHMENT B

WELL COMPLETION LOG AND FIELD DATA SHEETS

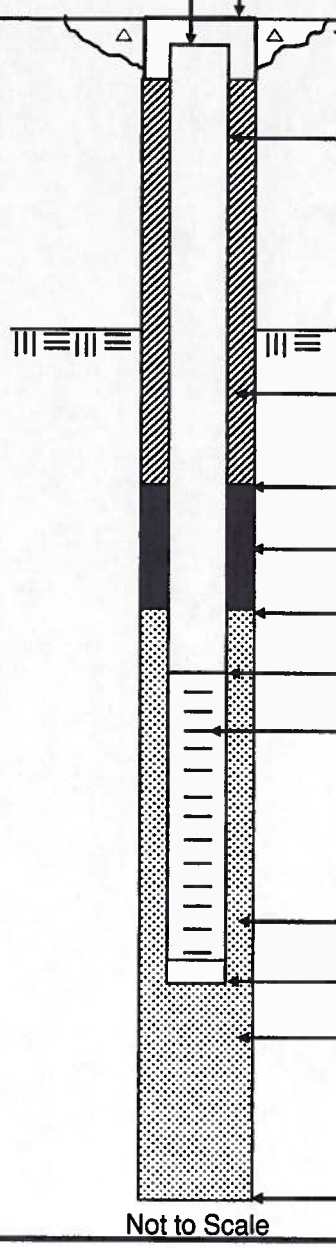
Tetra Tech NUS, Inc.

WELL No.: CEF-290A-01S

MONITORING WELL SHEET

PROJECT: NAS Cecil Field	DRILLING Co.: Groundwater Protection	BORING No.:	1
PROJECT No. 2G00746	DRILLER: Kevin	DATE COMPLETED:	9/13/10
SITE: 290A	DRILLING METHOD: Sonic	NORTHING:	30°-12.61C
GEOLOGIST: Jeff Kronc	DEV. METHOD:	EASTING:	081-52.08

Ground Elevation =
Datum:



Not to Scale

Elevation / Depth of Top of Riser:	/
Elevation / Height of Top of Surface Casing:	/
I.D. of Surface Casing:	8"
Type of Surface Casing:	manhole / steel
Type of Surface Seal:	Grout 2 1/2
I.D. of Riser:	2"
Type of Riser:	PVC
Borehole Diameter:	6"
Elevation / Depth Top of Rock:	/
Type of Backfill:	Portland Cement 1/2
Elevation / Depth of Seal:	/3.5
Type of Seal:	fine sand 30/65
Elevation / Depth of Top of Filter Pack:	/15
Elevation / Depth of Top of Screen:	/ 5
Type of Screen:	2" Pre pack
Slot Size x Length:	.006
I.D. of Screen:	2"
Type of Filter Pack:	30/45
Elevation / Depth of Bottom of Screen:	/15
Elevation / Depth of Bottom of Filter Pack:	/15
Type of Backfill Below Well:	none
Elevation / Total Depth of Borehole:	/15

1

3.5

dense sand, may purge slow or dry

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAS CECIL FIELD		SITE LOCATION: SITE 290A
WELL NO: CEF-290A-1S	SAMPLE ID: CEF-290A-1S-201009~~1~~S	DATE: 09/15/10

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 6.51	PURGE PUMP TYPE OR BAILER: Peristaltic pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
15 - 6.51 = 8.49 X .16 = 1.35 X 3.785 = 5.14
5X = 25.70 5.14 Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
_____ Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8	PURGING INITIATED AT: 9/14 1305	PURGING ENDED AT: 9/15 1026	TOTAL VOLUME PURGED (Liters): 410

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (lpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	~~ODOR~~ ORP (describe)
9/14 1305	—	—	800	6.51	—						
1605	380	380	800	14.5	—						
9/15 0900	—	380	300	7.90	—						
1010	21	401	300	7.92	5.45	26.30	0.102	1.31	271	cloudy	4.0
1020	3	404	300	7.92	5.45	26.30	0.102	1.30	260	cloudy	1.7
1023	3	407	300	7.92	5.45	26.30	0.102	1.31	268	cloudy	1.9
1026	3	410	300	7.92	5.45	26.31	0.102	1.35	264	cloudy	-0.7
1033	Sample time										

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone TtNUS	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1033	SAMPLING ENDED AT: 1100
PUMP OR TUBING DEPTH IN WELL (feet): 8	SAMPLE PUMP FLOW RATE (mL per minute): 800/300	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type: _____ FILTER SIZE: ____ µm	DUPLICATE: (Y) N ms/msD	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
	3	G	40ml	Hcl			VOCs	
	2	G	1 liter	~~Hcl~~ H_2SO_4			TRPH	
	2	G	1 liter				PAHs	

REMARKS: Unable to reduce turbidity. Purged well dry 3 times & Purged 100+ Gallons.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

SITE NAME: NAS CECIL FIELD	SITE LOCATION: SITE 502

ATTACHMENT C

GROUNDWATER ANALYTICAL REPORT
SEPTEMBER 2010

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**R. SIMCIK**	**DATE:**	**NOVEMBER 29, 2010**
FROM:	**MICHELLE ALLEN**	**COPIES:**	**DV FILE/REV.1**

SUBJECT: **ORGANIC DATA VALIDATION – VOC/PAH/PET**
CTO 076, NAS CECIL FIELD
SDG CTOJM09CF_008

SAMPLES: 9/Aqueous /VOC

CEF-290A-01S-20100915	CEF-290A-DUP-20100915	CEF-502-6S-20100915
CEF-502-07D-20100915	CEF-502-TB-20100915	CEF-502-9S-20100915
CEF-502-3S-20100916	CEF-502-DUP-02-20100916	CEF-502-4S-20100916

8/Aqueous/PAH/PET

CEF-290A-01S-20100915	CEF-290A-DUP-20100915	CEF-502-6S-20100915
CEF-502-07D-20100915	CEF-502-9S-20100915	CEF-502-3S-20100916
CEF-502-DUP-02-20100916	CEF-502-4S-20100916	

OVERVIEW

The sample set for CTO 076 NAS Cecil Field SDG CTOJM09CF_008 consisted of nine (9) aqueous environmental samples including one (1) aqueous trip blank sample. The samples were analyzed as indicated above for volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), and petroleum extractables (PET). The trip blank sample was only analyzed for VOC. Two field duplicate pairs were associated with this Sample Delivery Group (SDG), CEF-290A-01S-20100915/CEF-290A-DUP-20100915 and CEF-502-9S-20100916/CEF-502-DUP-02-20100916.

The samples were collected by TetraTech NUS on September 15 and 16, 2010 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with SW-846 Methods 8260B, 8270C, and Method FL-PRO analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- * Data Completeness
- * Holding Times/Sample Preservation
- * Initial/Continuing Calibrations
- * Laboratory Method Blank Results
- Field Duplicate Results
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and the elimination of false positives.

VOC

No issues were identified.

PAH

The compound phenanthrene was detected in sample CEF-502-9S-20100916, but not in the duplicate pair sample, CEF-502-DUP-02-20100916. The difference between the positive result and the non-detected result was greater than 2X the Reporting Limit (RL), therefore, the results for phenanthrene were qualified as estimated (J) and (UJ), respectively.

The Relative Percent Difference (%RPD) was greater than 30% for a few compounds in the field duplicate pair, CEF-290A-01S-20100915/CEF-290A-DUP-20100915. Additionally, several compounds were detected below the RL in sample CEF-290A-01S-20100915, but not detected in the duplicate pair sample, CEF-290A-DUP-20100915. No action was necessary since the difference between the positive results reported below the RL, and the difference between the positive and non-detected results did not exceed 2X the RL.

PET

No issues were identified.

NOTES

Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

EXECUTIVE SUMMARY

Laboratory Performance Issues: There were no laboratory issues.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for one PAH compound in one field duplicate pair. Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

TO: R. SIMCIK
SDG: CTOJM09CF_008

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

For Tetra Tech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 02267	NSAMPLE	CEF-290A-01S-20100915			CEF-290A-DUP-20100915			CEF-502-07D-20100915			CEF-502-3S-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-01			1009134-02			1009134-04			1009134-08		
FRACTION: OV	SAMP_DATE	9/15/2010			9/15/2010			9/15/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				CEF-290A-01S-20100915								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,2,4-TRIMETHYLBENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
1,3,5-TRIMETHYLBENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
BENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
ETHYLBENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
TOLUENE		0.3	U		0.3	U		0.3	U		0.3	U	
TOTAL XYLENES		0.3	U		0.3	U		0.3	U		0.3	U	

PROJ_NO: 02267	NSAMPLE	CEF-502-4S-20100916			CEF-502-6S-20100915			CEF-502-9S-20100916			CEF-502-DUP-02-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-09			1009134-03			1009134-06			1009134-07		
FRACTION: OV	SAMP_DATE	9/16/2010			9/15/2010			9/16/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										CEF-502-9S-20100916		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,2,4-TRIMETHYLBENZENE		0.3	U		0.3	U		0.415	J	P	0.44	J	P
1,3,5-TRIMETHYLBENZENE		0.3	U		0.3	U		0.396	J	P	0.418	J	P
BENZENE		0.3	U		0.3	U		0.3	U		0.3	U	
ETHYLBENZENE		0.3	U		0.3	U		0.745	J	P	0.787	J	P
ISOPROPYLBENZENE		0.3	U		0.3	U		0.376	J	P	0.408	J	P
TOLUENE		0.3	U		0.3	U		0.3	U		0.3	U	
TOTAL XYLENES		0.3	U		0.3	U		0.3	U		0.3	U	

PROJ_NO: 02267	NSAMPLE	CEF-502-TB-20100915		
SDG: CTOJM09CF008	LAB_ID	1009134-05		
FRACTION: OV	SAMP_DATE	9/15/2010		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,2,4-TRIMETHYLBENZENE		0.3	U	
1,3,5-TRIMETHYLBENZENE		0.3	U	
BENZENE		0.3	U	
ETHYLBENZENE		0.3	U	
ISOPROPYLBENZENE		0.3	U	
TOLUENE		0.3	U	
TOTAL XYLENES		0.3	U	

PROJ_NO: 02267	NSAMPLE	CEF-290A-01S-20100915			CEF-290A-DUP-20100915			CEF-502-07D-20100915			CEF-502-3S-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-01			1009134-02			1009134-04			1009134-08		
FRACTION: PAH	SAMP_DATE	9/15/2010			9/15/2010			9/15/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				CEF-290A-01S-20100915								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0187	U		0.0189	U		0.0187	U		0.519		
2-METHYLNAPHTHALENE		0.0189	J	P	0.0189	U		0.0187	U		0.0547	J	P
ACENAPHTHENE		0.0206	J	P	0.0189	U		0.0187	U		0.0614	J	P
ACENAPHTHYLENE		0.0187	U		0.0189	U		0.0187	U		0.0185	U	
ANTHRACENE		0.0284	J	P	0.0189	U		0.0187	U		0.0185	U	
BENZO(A)ANTHRACENE		0.0357	J	P	0.0189	U		0.0187	U		0.0185	U	
BENZO(A)PYRENE		0.0316	J	P	0.0189	U		0.0187	U		0.0185	U	
BENZO(B)FLUORANTHENE		0.0455	J	P	0.0189	U		0.0187	U		0.0185	U	
BENZO(G,H,I)PERYLENE		0.0465	J	P	0.0189	U		0.0187	U		0.0185	U	
BENZO(K)FLUORANTHENE		0.0427	J	P	0.0189	U		0.0187	U		0.0185	U	
CHRYSENE		0.0425	J	P	0.0189	U		0.019	J	P	0.0185	U	
DIBENZO(A,H)ANTHRACENE		0.044	J	P	0.0189	U		0.0187	U		0.0185	U	
FLUORANTHENE		0.0403	J	P	0.0196	J	P	0.0259	J	P	0.0218	J	P
FLUORENE		0.0268	J	P	0.0189	U		0.0187	U		0.0185	U	
INDENO(1,2,3-CD)PYRENE		0.0465	J	P	0.0189	U		0.0187	U		0.0185	U	
NAPHTHALENE		0.0187	U		0.0189	U		0.0187	U		0.0711	J	P
PHENANTHRENE		0.0454	J	P	0.025	J	P	0.0302	J	P	0.0185	U	
PYRENE		0.0421	J	P	0.0193	J	P	0.0289	J	P	0.0209	J	P

PROJ_NO: 02267	NSAMPLE	CEF-502-4S-20100916			CEF-502-6S-20100915			CEF-502-9S-20100916			CEF-502-DUP-02-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-09			1009134-03			1009134-06			1009134-07		
FRACTION: PAH	SAMP_DATE	9/16/2010			9/15/2010			9/16/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										CEF-502-9S-20100916		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0546	J	P	0.727			2.03			1.6		
2-METHYLNAPHTHALENE		0.907			0.829			1.67			1.25		
ACENAPHTHENE		0.0296	J	P	1.09			0.0185	U		0.0187	U	
ACENAPHTHYLENE		0.0187	U		0.0185	U		0.0185	U		0.0187	U	
ANTHRACENE		0.0187	U		0.0185	U		0.0185	U		0.0187	U	
BENZO(A)ANTHRACENE		0.0187	U		0.0303	J	P	0.0185	U		0.0187	U	
BENZO(A)PYRENE		0.0187	U		0.0223	J	P	0.0185	U		0.0187	U	
BENZO(B)FLUORANTHENE		0.0187	U		0.0323	J	P	0.0185	U		0.0187	U	
BENZO(G,H,I)PERYLENE		0.0187	U		0.0263	J	P	0.0185	U		0.0187	U	
BENZO(K)FLUORANTHENE		0.0187	U		0.034	J	P	0.0185	U		0.0187	U	
CHRYSENE		0.0187	U		0.0288	J	P	0.0185	U		0.0187	U	
DIBENZO(A,H)ANTHRACENE		0.0187	U		0.0271	J	P	0.0185	U		0.0187	U	
FLUORANTHENE		0.0187	U		0.0433	J	P	0.0185	U		0.0187	U	
FLUORENE		0.032	J	P	0.0185	U		0.0185	U		0.0187	U	
INDENO(1,2,3-CD)PYRENE		0.0187	U		0.0297	J	P	0.0185	U		0.0187	U	
NAPHTHALENE		0.12			0.0185	U		0.879			0.695		
PHENANTHRENE		0.0195	J	P	0.0185	U		0.0185	UJ	G	0.459	J	G
PYRENE		0.0187	U		0.0494	J	P	0.0185	U		0.0187	U	

PROJ_NO: 02267	NSAMPLE	CEF-290A-01S-20100915			CEF-290A-DUP-20100915			CEF-502-07D-20100915			CEF-502-3S-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-01			1009134-02			1009134-04			1009134-08		
FRACTION: PET	SAMP_DATE	9/15/2010			9/15/2010			9/15/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF				CEF-290A-01S-20100915								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		0.0794	U		0.0787	U		0.0787	U		0.33		

PROJ_NO: 02267	NSAMPLE	CEF-502-4S-20100916			CEF-502-6S-20100915			CEF-502-9S-20100916			CEF-502-DUP-02-20100916		
SDG: CTOJM09CF008	LAB_ID	1009134-09			1009134-03			1009134-06			1009134-07		
FRACTION: PET	SAMP_DATE	9/16/2010			9/15/2010			9/16/2010			9/16/2010		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF										CEF-502-9S-20100916		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		0.0794	U		0.652			2.36			2.26		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

CEF-290A-01S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-01	File ID:	0913401.D
Sampled:	09/15/10 10:33	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 20:23
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.74	102	75 - 120	
Dibromofluoromethane	30.00	33.52	112	85 - 115	
1,2-Dichloroethane-d4	30.00	29.54	98.5	70 - 120	
Toluene-d8	30.00	28.20	94.0	85 - 120	

ANALYSIS DATA SHEET

CEF-290A-DUP-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-02	File ID:	0913402.D
Sampled:	09/15/10 00:00	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 20:54
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.80	103	75 - 120	
Dibromofluoromethane	30.00	33.25	111	85 - 115	
1,2-Dichloroethane-d4	30.00	30.99	103	70 - 120	
Toluene-d8	30.00	28.51	95.0	85 - 120	

ANALYSIS DATA SHEET

CEF-502-6S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-03	File ID:	0913403.D
Sampled:	09/15/10 13:23	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 21:24
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.95	103	75 - 120	
Dibromofluoromethane	30.00	33.62	112	85 - 115	
1,2-Dichloroethane-d4	30.00	31.11	104	70 - 120	
Toluene-d8	30.00	28.38	94.6	85 - 120	

ANALYSIS DATA SHEET

CEF-502-07D-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-04	File ID:	0913404.D
Sampled:	09/15/10 13:49	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 21:55
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.49	105	75 - 120	
Dibromofluoromethane	30.00	33.99	113	85 - 115	
1,2-Dichloroethane-d4	30.00	30.11	100	70 - 120	
Toluene-d8	30.00	28.73	95.8	85 - 120	

ANALYSIS DATA SHEET

CEF-502-TB-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Water	Laboratory ID:	1009134-05	File ID:	0913405.D
Sampled:	09/15/10 00:00	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 22:25
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.76	106	75 - 120	
Dibromofluoromethane	30.00	34.29	114	85 - 115	
1,2-Dichloroethane-d4	30.00	29.45	98.2	70 - 120	
Toluene-d8	30.00	28.69	95.6	85 - 120	

ANALYSIS DATA SHEET

CEF-502-9S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-06	File ID:	0913406.D
Sampled:	09/16/10 11:45	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 22:56
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene	0.745	0.300	0.500	1.00	I
98-82-8	Isopropylbenzene	0.376	0.300	0.500	1.00	I
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.396	0.300	0.500	1.00	I
95-63-6	1,2,4-Trimethylbenzene	0.415	0.300	0.500	1.00	I
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.22	104	75 - 120	
Dibromofluoromethane	30.00	33.34	111	85 - 115	
1,2-Dichloroethane-d4	30.00	30.67	102	70 - 120	
Toluene-d8	30.00	28.55	95.2	85 - 120	

ANALYSIS DATA SHEET

CEF-502-DUP-02-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-07	File ID:	0913407.D
Sampled:	09/16/10 00:00	Prepared:	09/25/10 00:00	Analyzed:	09/25/10 23:26
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene	0.787	0.300	0.500	1.00	I
98-82-8	Isopropylbenzene	0.408	0.300	0.500	1.00	I
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene	0.418	0.300	0.500	1.00	I
95-63-6	1,2,4-Trimethylbenzene	0.440	0.300	0.500	1.00	I
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.65	105	75 - 120	
Dibromofluoromethane	30.00	33.00	110	85 - 115	
1,2-Dichloroethane-d4	30.00	30.28	101	70 - 120	
Toluene-d8	30.00	28.78	95.9	85 - 120	

ANALYSIS DATA SHEET

CEF-502-3S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-08	File ID:	0913408.D
Sampled:	09/16/10 12:45	Prepared:	09/27/10 00:00	Analyzed:	09/27/10 12:06
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I27002 Sequence: 0I27013 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.15	107	75 - 120	
Dibromofluoromethane	30.00	34.04	113	85 - 115	
1,2-Dichloroethane-d4	30.00	30.64	102	70 - 120	
Toluene-d8	30.00	28.94	96.5	85 - 120	

ANALYSIS DATA SHEET

CEF-502-4S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-09	File ID:	0913409.D
Sampled:	09/16/10 13:35	Prepared:	09/27/10 00:00	Analyzed:	09/27/10 12:37
Solids:		Preparation:	5030B	Dilution:	1

Batch: 0I27002 Sequence: 0I27013 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.98	107	75 - 120	
Dibromofluoromethane	30.00	33.67	112	85 - 115	
1,2-Dichloroethane-d4	30.00	28.85	96.2	70 - 120	
Toluene-d8	30.00	29.44	98.1	85 - 120	

ANALYSIS DATA SHEET

CEF-290A-01S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-01	File ID:	0913401.D
Sampled:	09/15/10 10:33	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 14:57
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.0206	0.0187	0.0374	0.0935	I
208-96-8	Acenaphthylene		0.0187	0.0374	0.0935	U
120-12-7	Anthracene	0.0284	0.0187	0.0374	0.0935	I
56-55-3	Benzo(a)anthracene	0.0357	0.0187	0.0374	0.0935	N I
50-32-8	Benzo(a)pyrene	0.0316	0.0187	0.0374	0.0935	I
205-99-2	Benzo(b)fluoranthene	0.0455	0.0187	0.0374	0.0935	N I
191-24-2	Benzo(g,h,i)perylene	0.0465	0.0187	0.0374	0.0935	N I
207-08-9	Benzo(k)fluoranthene	0.0427	0.0187	0.0374	0.0935	N I
218-01-9	Chrysene	0.0425	0.0187	0.0374	0.0935	N I
53-70-3	Dibenz(a,h)anthracene	0.0440	0.0187	0.0374	0.0935	N I
206-44-0	Fluoranthene	0.0403	0.0187	0.0374	0.0935	I
86-73-7	Fluorene	0.0268	0.0187	0.0374	0.0935	I
193-39-5	Indeno(1,2,3-cd)pyrene	0.0465	0.0187	0.0374	0.0935	I
90-12-0	1-Methylnaphthalene		0.0187	0.0374	0.0935	U
91-57-6	2-Methylnaphthalene	0.0189	0.0187	0.0374	0.0935	I
91-20-3	Naphthalene		0.0187	0.0374	0.0935	U
85-01-8	Phenanthrene	0.0454	0.0187	0.0374	0.0935	I
129-00-0	Pyrene	0.0421	0.0187	0.0374	0.0935	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	26.03	55.7	34 - 167	
Terphenyl-d14	46.73	17.94	38.4	34 - 167	

ANALYSIS DATA SHEET

CEF-290A-DUP-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-02	File ID:	0913402.D
Sampled:	09/15/10 00:00	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 15:26
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0189	0.0377	0.0943	U
208-96-8	Acenaphthylene		0.0189	0.0377	0.0943	U
120-12-7	Anthracene		0.0189	0.0377	0.0943	U
56-55-3	Benzo(a)anthracene		0.0189	0.0377	0.0943	U
50-32-8	Benzo(a)pyrene		0.0189	0.0377	0.0943	U
205-99-2	Benzo(b)fluoranthene		0.0189	0.0377	0.0943	U
191-24-2	Benzo(g,h,i)perylene		0.0189	0.0377	0.0943	U
207-08-9	Benzo(k)fluoranthene		0.0189	0.0377	0.0943	U
218-01-9	Chrysene		0.0189	0.0377	0.0943	U
53-70-3	Dibenz(a,h)anthracene		0.0189	0.0377	0.0943	U
206-44-0	Fluoranthene	0.0196	0.0189	0.0377	0.0943	I
86-73-7	Fluorene		0.0189	0.0377	0.0943	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0189	0.0377	0.0943	U
90-12-0	1-Methylnaphthalene		0.0189	0.0377	0.0943	U
91-57-6	2-Methylnaphthalene		0.0189	0.0377	0.0943	U
91-20-3	Naphthalene		0.0189	0.0377	0.0943	U
85-01-8	Phenanthrene	0.0250	0.0189	0.0377	0.0943	I
129-00-0	Pyrene	0.0193	0.0189	0.0377	0.0943	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	30.74	65.2	34 - 167	
Terphenyl-d14	47.17	32.70	69.3	34 - 167	

ANALYSIS DATA SHEET

CEF-502-07D-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-04	File ID:	0913404.D
Sampled:	09/15/10 13:49	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 16:23
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0187	0.0374	0.0935	U
208-96-8	Acenaphthylene		0.0187	0.0374	0.0935	U
120-12-7	Anthracene		0.0187	0.0374	0.0935	U
56-55-3	Benzo(a)anthracene		0.0187	0.0374	0.0935	U
50-32-8	Benzo(a)pyrene		0.0187	0.0374	0.0935	U
205-99-2	Benzo(b)fluoranthene		0.0187	0.0374	0.0935	U
191-24-2	Benzo(g,h,i)perylene		0.0187	0.0374	0.0935	U
207-08-9	Benzo(k)fluoranthene		0.0187	0.0374	0.0935	U
218-01-9	Chrysene	0.0190	0.0187	0.0374	0.0935	I
53-70-3	Dibenz(a,h)anthracene		0.0187	0.0374	0.0935	U
206-44-0	Fluoranthene	0.0259	0.0187	0.0374	0.0935	I
86-73-7	Fluorene		0.0187	0.0374	0.0935	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0187	0.0374	0.0935	U
90-12-0	1-Methylnaphthalene		0.0187	0.0374	0.0935	U
91-57-6	2-Methylnaphthalene		0.0187	0.0374	0.0935	U
91-20-3	Naphthalene		0.0187	0.0374	0.0935	U
85-01-8	Phenanthrene	0.0302	0.0187	0.0374	0.0935	I
129-00-0	Pyrene	0.0289	0.0187	0.0374	0.0935	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	25.59	54.8	34 - 167	
Terphenyl-d14	46.73	29.46	63.0	34 - 167	

ANALYSIS DATA SHEET

CEF-502-3S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-08	File ID:	0913408.D
Sampled:	09/16/10 12:45	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 17:49
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.0614	0.0185	0.0370	0.0926	I
208-96-8	Acenaphthylene		0.0185	0.0370	0.0926	U
120-12-7	Anthracene		0.0185	0.0370	0.0926	U
56-55-3	Benzo(a)anthracene		0.0185	0.0370	0.0926	U
50-32-8	Benzo(a)pyrene		0.0185	0.0370	0.0926	U
205-99-2	Benzo(b)fluoranthene		0.0185	0.0370	0.0926	U
191-24-2	Benzo(g,h,i)perylene		0.0185	0.0370	0.0926	U
207-08-9	Benzo(k)fluoranthene		0.0185	0.0370	0.0926	U
218-01-9	Chrysene		0.0185	0.0370	0.0926	U
53-70-3	Dibenz(a,h)anthracene		0.0185	0.0370	0.0926	U
206-44-0	Fluoranthene	0.0218	0.0185	0.0370	0.0926	I
86-73-7	Fluorene		0.0185	0.0370	0.0926	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0185	0.0370	0.0926	U
90-12-0	1-Methylnaphthalene	0.519	0.0185	0.0370	0.0926	
91-57-6	2-Methylnaphthalene	0.0547	0.0185	0.0370	0.0926	I
91-20-3	Naphthalene	0.0711	0.0185	0.0370	0.0926	I
85-01-8	Phenanthrene		0.0185	0.0370	0.0926	U
129-00-0	Pyrene	0.0209	0.0185	0.0370	0.0926	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	26.32	56.9	34 - 167	
Terphenyl-d14	46.30	27.42	59.2	34 - 167	

ANALYSIS DATA SHEET

CEF-502-4S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-09	File ID:	0913409.D
Sampled:	09/16/10 13:35	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 18:17
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.0296	0.0187	0.0374	0.0935	I
208-96-8	Acenaphthylene		0.0187	0.0374	0.0935	U
120-12-7	Anthracene		0.0187	0.0374	0.0935	U
56-55-3	Benzo(a)anthracene		0.0187	0.0374	0.0935	U
50-32-8	Benzo(a)pyrene		0.0187	0.0374	0.0935	U
205-99-2	Benzo(b)fluoranthene		0.0187	0.0374	0.0935	U
191-24-2	Benzo(g,h,i)perylene		0.0187	0.0374	0.0935	U
207-08-9	Benzo(k)fluoranthene		0.0187	0.0374	0.0935	U
218-01-9	Chrysene		0.0187	0.0374	0.0935	U
53-70-3	Dibenz(a,h)anthracene		0.0187	0.0374	0.0935	U
206-44-0	Fluoranthene		0.0187	0.0374	0.0935	U
86-73-7	Fluorene	0.0320	0.0187	0.0374	0.0935	I
193-39-5	Indeno(1,2,3-cd)pyrene		0.0187	0.0374	0.0935	U
90-12-0	1-Methylnaphthalene	0.0546	0.0187	0.0374	0.0935	I
91-57-6	2-Methylnaphthalene	0.907	0.0187	0.0374	0.0935	
91-20-3	Naphthalene	0.120	0.0187	0.0374	0.0935	
85-01-8	Phenanthrene	0.0195	0.0187	0.0374	0.0935	I
129-00-0	Pyrene		0.0187	0.0374	0.0935	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	32.36	69.2	34 - 167	
Terphenyl-d14	46.73	34.51	73.8	34 - 167	

ANALYSIS DATA SHEET

CEF-502-6S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-03	File ID:	0913403.D
Sampled:	09/15/10 13:23	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 15:55
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1.09	0.0185	0.0370	0.0926	
208-96-8	Acenaphthylene		0.0185	0.0370	0.0926	U
120-12-7	Anthracene		0.0185	0.0370	0.0926	U
56-55-3	Benzo(a)anthracene	0.0303	0.0185	0.0370	0.0926	I
50-32-8	Benzo(a)pyrene	0.0223	0.0185	0.0370	0.0926	I
205-99-2	Benzo(b)fluoranthene	0.0323	0.0185	0.0370	0.0926	I
191-24-2	Benzo(g,h,i)perylene	0.0263	0.0185	0.0370	0.0926	I
207-08-9	Benzo(k)fluoranthene	0.0340	0.0185	0.0370	0.0926	I
218-01-9	Chrysene	0.0288	0.0185	0.0370	0.0926	I
53-70-3	Dibenz(a,h)anthracene	0.0271	0.0185	0.0370	0.0926	I
206-44-0	Fluoranthene	0.0433	0.0185	0.0370	0.0926	I
86-73-7	Fluorene		0.0185	0.0370	0.0926	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0297	0.0185	0.0370	0.0926	I
90-12-0	1-Methylnaphthalene	0.727	0.0185	0.0370	0.0926	
91-57-6	2-Methylnaphthalene	0.829	0.0185	0.0370	0.0926	
91-20-3	Naphthalene		0.0185	0.0370	0.0926	U
85-01-8	Phenanthrene		0.0185	0.0370	0.0926	U
129-00-0	Pyrene	0.0494	0.0185	0.0370	0.0926	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	25.78	55.7	34 - 167	
Terphenyl-d14	46.30	31.49	68.0	34 - 167	

ANALYSIS DATA SHEET

CEF-502-9S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-06	File ID:	0913406.D
Sampled:	09/16/10 11:45	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 16:52
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0185	0.0370	0.0926	U
208-96-8	Acenaphthylene		0.0185	0.0370	0.0926	U
120-12-7	Anthracene		0.0185	0.0370	0.0926	U
56-55-3	Benzo(a)anthracene		0.0185	0.0370	0.0926	U
50-32-8	Benzo(a)pyrene		0.0185	0.0370	0.0926	U
205-99-2	Benzo(b)fluoranthene		0.0185	0.0370	0.0926	U
191-24-2	Benzo(g,h,i)perylene		0.0185	0.0370	0.0926	U
207-08-9	Benzo(k)fluoranthene		0.0185	0.0370	0.0926	U
218-01-9	Chrysene		0.0185	0.0370	0.0926	U
53-70-3	Dibenz(a,h)anthracene		0.0185	0.0370	0.0926	U
206-44-0	Fluoranthene		0.0185	0.0370	0.0926	U
86-73-7	Fluorene		0.0185	0.0370	0.0926	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0185	0.0370	0.0926	U
90-12-0	1-Methylnaphthalene	2.03	0.0185	0.0370	0.0926	
91-57-6	2-Methylnaphthalene	1.67	0.0185	0.0370	0.0926	
91-20-3	Naphthalene	0.879	0.0185	0.0370	0.0926	
85-01-8	Phenanthrene		0.0185	0.0370	0.0926	U
129-00-0	Pyrene		0.0185	0.0370	0.0926	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	32.38	69.9	34 - 167	
Terphenyl-d14	46.30	31.72	68.5	34 - 167	

ANALYSIS DATA SHEET

CEF-502-DUP-02-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-07	File ID:	0913407.D
Sampled:	09/16/10 00:00	Prepared:	09/20/10 10:45	Analyzed:	09/24/10 17:20
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0187	0.0374	0.0935	U
208-96-8	Acenaphthylene		0.0187	0.0374	0.0935	U
120-12-7	Anthracene		0.0187	0.0374	0.0935	U
56-55-3	Benzo(a)anthracene		0.0187	0.0374	0.0935	U
50-32-8	Benzo(a)pyrene		0.0187	0.0374	0.0935	U
205-99-2	Benzo(b)fluoranthene		0.0187	0.0374	0.0935	U
191-24-2	Benzo(g,h,i)perylene		0.0187	0.0374	0.0935	U
207-08-9	Benzo(k)fluoranthene		0.0187	0.0374	0.0935	U
218-01-9	Chrysene		0.0187	0.0374	0.0935	U
53-70-3	Dibenz(a,h)anthracene		0.0187	0.0374	0.0935	U
206-44-0	Fluoranthene		0.0187	0.0374	0.0935	U
86-73-7	Fluorene		0.0187	0.0374	0.0935	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0187	0.0374	0.0935	U
90-12-0	1-Methylnaphthalene	1.60	0.0187	0.0374	0.0935	
91-57-6	2-Methylnaphthalene	1.25	0.0187	0.0374	0.0935	
91-20-3	Naphthalene	0.695	0.0187	0.0374	0.0935	
85-01-8	Phenanthrene	0.459	0.0187	0.0374	0.0935	
129-00-0	Pyrene		0.0187	0.0374	0.0935	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	27.64	59.1	34 - 167	
Terphenyl-d14	46.73	31.77	68.0	34 - 167	

ANALYSIS DATA SHEET

CEF-290A-01S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-01	File ID:	010B1001.D
Sampled:	09/15/10 10:33	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 16:10
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
.	Petroleum Range Organics		0.0794	0.159	0.318	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04673	0.03888	83.2	50 - 150	
o-Terphenyl	0.04673	0.03155	67.5	82 - 142	*

ANALYSIS DATA SHEET

CEF-290A-DUP-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-02	File ID:	013B1301.D
Sampled:	09/15/10 00:00	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 17:54
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.0787	0.157	0.315	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03731	80.6	50 - 150	
o-Terphenyl	0.04630	0.03112	67.2	82 - 142	*

ANALYSIS DATA SHEET

CEF-502-07D-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-04	File ID:	015B1501.D
Sampled:	09/15/10 13:49	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 19:02
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.0787	0.157	0.315	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03984	86.1	50 - 150	
o-Terphenyl	0.04630	0.04272	92.3	82 - 142	

ANALYSIS DATA SHEET

CEF-502-3S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-08	File ID:	018B1801.D
Sampled:	09/16/10 12:45	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 20:44
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	0.330	0.0787	0.157	0.315	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.04436	95.8	50 - 150	
o-Terphenyl	0.04630	0.04594	99.2	82 - 142	

ANALYSIS DATA SHEET

CEF-502-4S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-09	File ID:	021B2101.D
Sampled:	09/16/10 13:35	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 22:26
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.0794	0.159	0.318	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04673	0.03947	84.5	50 - 150	
o-Terphenyl	0.04673	0.03790	81.1	82 - 142	*

ANALYSIS DATA SHEET

CEF-502-6S-20100915

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-03	File ID:	014B1401.D
Sampled:	09/15/10 13:23	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 18:28
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	0.652	0.0787	0.157	0.315	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.04357	94.1	50 - 150	
o-Terphenyl	0.04630	0.04492	97.0	82 - 142	

ANALYSIS DATA SHEET

CEF-502-9S-20100916

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:	Ground Water	Laboratory ID:	1009134-06	File ID:	016B1601.D
Sampled:	09/16/10 11:45	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 19:37
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.36	0.0787	0.157	0.315	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03906	84.4	50 - 150	
o-Terphenyl	0.04630	0.04560	98.5	82 - 142	

ANALYSIS DATA SHEET

CEF-502-DUP-02-20100916

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM09CF_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM09 BP Wells_2010	
Matrix:	Ground Water	Laboratory ID:	1009134-07	File ID:	017B1701.D
Sampled:	09/16/10 00:00	Prepared:	09/20/10 11:47	Analyzed:	09/22/10 20:10
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.26	0.0787	0.157	0.315	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03894	84.1	50 - 150	
o-Terphenyl	0.04630	0.04629	100	82 - 142	

APPENDIX C

SUPPORT DOCUMENTATION

SDG CTOJM09CF_

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	CEF-502-DUP-02-201009	1009134-07	NM	09/16/2010	09/25/2010	09/25/2010	9	0	9
OV	UG/L	CEF-290A-01S-20100915	1009134-01	NM	09/15/2010	09/25/2010	09/25/2010	10	0	10
OV	UG/L	CEF-502-TB-20100915	1009134-05	NM	09/15/2010	09/25/2010	09/25/2010	10	0	10
OV	UG/L	CEF-502-9S-20100916	1009134-06	NM	09/16/2010	09/25/2010	09/25/2010	9	0	9
OV	UG/L	CEF-502-6S-20100915	1009134-03	NM	09/15/2010	09/25/2010	09/25/2010	10	0	10
OV	UG/L	CEF-502-4S-20100916	1009134-09	NM	09/16/2010	09/27/2010	09/27/2010	11	0	11
OV	UG/L	CEF-502-3S-20100916	1009134-08	NM	09/16/2010	09/27/2010	09/27/2010	11	0	11
OV	UG/L	CEF-502-07D-20100915	1009134-04	NM	09/15/2010	09/25/2010	09/25/2010	10	0	10
OV	UG/L	CEF-290A-DUP-20100915	1009134-02	NM	09/15/2010	09/25/2010	09/25/2010	10	0	10
SIM	UG/L	CEF-502-4S-20100916	1009134-09	NM	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-290A-01S-20100915	1009134-01	SUR	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-290A-DUP-20100915	1009134-02	NM	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-290A-DUP-20100915	1009134-02	SUR	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-502-07D-20100915	1009134-04	NM	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-502-07D-20100915	1009134-04	SUR	09/15/2010	09/20/2010	09/24/2010	5	4	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	CEF-290A-01S-20100915	1009134-01	NM	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-502-DUP-02-201009	1009134-07	NM	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-3S-20100916	1009134-08	NM	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-DUP-02-201009	1009134-07	SUR	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-3S-20100916	1009134-08	SUR	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-9S-20100916	1009134-06	SUR	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-9S-20100916	1009134-06	NM	09/16/2010	09/20/2010	09/24/2010	4	4	8
SIM	UG/L	CEF-502-6S-20100915	1009134-03	SUR	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-502-6S-20100915	1009134-03	NM	09/15/2010	09/20/2010	09/24/2010	5	4	9
SIM	UG/L	CEF-502-4S-20100916	1009134-09	SUR	09/16/2010	09/20/2010	09/24/2010	4	4	8
TPH	MG/L	CEF-502-DUP-02-201009	1009134-07	NM	09/16/2010	09/20/2010	09/22/2010	4	2	6
TPH	MG/L	CEF-290A-DUP-20100915	1009134-02	NM	09/15/2010	09/20/2010	09/22/2010	5	2	7
TPH	MG/L	CEF-502-07D-20100915	1009134-04	NM	09/15/2010	09/20/2010	09/22/2010	5	2	7
TPH	MG/L	CEF-502-3S-20100916	1009134-08	NM	09/16/2010	09/20/2010	09/22/2010	4	2	6
TPH	MG/L	CEF-502-4S-20100916	1009134-09	NM	09/16/2010	09/20/2010	09/22/2010	4	2	6
TPH	MG/L	CEF-502-6S-20100915	1009134-03	NM	09/15/2010	09/20/2010	09/22/2010	5	2	7
TPH	MG/L	CEF-502-9S-20100916	1009134-06	NM	09/16/2010	09/20/2010	09/22/2010	4	2	6
TPH	MG/L	CEF-290A-01S-20100915	1009134-01	NM	09/15/2010	09/20/2010	09/22/2010	5	2	7

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
No anomalies or deviations are noted.

SW8270C PAH:
The matrix spikes associated to sample 1009134-01 exceeded criteria for Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene and Dibenz(a,h)anthracene.

No additional anomalies or deviations are noted and the data is properly qualified.

FLPRO:
The surrogate o-Terphenyl exceeded criteria in samples 1009134-01, -01MS, -01MSD, -02, and -09.

The retention time for the surrogates o-Terphenyl and/or 2-Fluorobiphenyl exceeded the retention time window in 0I20004-BLK1, 1009134-01, -02, -04, -06, -07, -08, -08MS, -08MSD, and -09. Sample results biased due to the retention time shift were determined to be negligible.

No additional anomalies or deviations are noted and the data is properly qualified.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within

a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 2083 PAGE 1 OF 2

PROJECT NO: 112600746	FACILITY: Cecil Field Site 502 & 290A	PROJECT MANAGER: Rob Simcik	PHONE NUMBER: 4129218163
LABORATORY NAME AND CONTACT: Empirical Laboratories / Kim Kosteer			
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jeff Kronc	PHONE NUMBER: 904 699-7473
ADDRESS: 621 Mainstream Dr Suite 270			
		CARRIER/WAYBILL NUMBER: FEDEX Airbill 8660 1730 2171	CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2010	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	BTEX (8260B)	Naphthalene (8260B)	PAH (8270C)	TRPH (FL PRO)					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G						
PRESERVATIVE USED									HCl	—	HCl	H_2SO_4					
TYPE OF ANALYSIS																	1009134
9/15	1033	CEF-290A-01S-20100915				GW	G	21	X	X	X						MS/MSD -01
9/15	0000	CEF-290A-DUP-20100915				GW	G	7	X	X	X						Cool to 4°C -02
9/15	1323	CEF-502-6S-20100915				GW	G	7	X	X	X						-03
9/15	1349	CEF-502-07D-20100915				GW	G	7	X	X	X						-04
9/15	1000	CEF-502-TB-20100915				QC	G	2	X								-05

1. RELINQUISHED BY	DATE 9/16/10	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE 9/17/10	TIME 08:45

COMMENTS 2.6°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

CTOJM09CF_008

9

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER No. 2089 PAGE 2 OF 2

PROJECT NO: 112G00746	FACILITY: Cecil Field SHe 502 & 290A	PROJECT MANAGER: Rob Simcik	PHONE NUMBER: 4129218163
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jeff Klonk	PHONE NUMBER: 904699-7423
		CARRIER/WAYBILL NUMBER: Fedex Airbill 8660 1730 2171	

LABORATORY NAME AND CONTACT: Empirical Labs / Kim Koszer
ADDRESS: 621 Mainstream Drive Suite 270
CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G
PRESERVATIVE USED: HCl — H2SO4
TYPE OF ANALYSIS: BTEX (SW8260B) Naphthalene (8260B) Isopropylbenzene 135 — QAH (8270C) — TRPH (FLPRO)

1009134

DATE YEAR 2010	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	BTEX	Naphthalene	Isopropylbenzene	QAH	TRPH					COMMENTS
9/16	1145	CEF-502-9$-20100916				GW	G	7	X	X	X							Cool to 4°C -06
9/16	0000	CEF-502-DUP-02-20100916				GW	G	7	X	X	X							-07
9/16	1245	CEF-502-3$-20100916				GW	G	21	X	X	X							MS/MSD -08
9/16	1335	CEF-502-4$-20100916				GW	G	7	X	X	X							-09

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	9/16/10	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	9/17/10	08:45

COMMENTS: 2.6°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

10

CTOJM09CF_008

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 1 of 7

Client: JTNUS Project: Cecil Field Sites 502+290A

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 6440

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 2-6 °C

Dates samples were logged-in: 9/17/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A pH < 2 for all FL-PRO's
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____ CAR#: _____

1 1L Amber (UNP) broken in shipment for CEF-502-35-20100916. 1 1L Amber (H_2SO_4) for CEF-502-45-20100916 broken in shipment.

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 5 of 7

Client: ITNOS Project: Cecil Field Site 5024 290A

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 6439

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 2.3 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

See Page 1 of 7

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 6 of 7

Client: TTNUS Project: Cecil Field Sites 5042904

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [illegible]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 6406

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 2.0 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

See Page 1 of 7

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 7 of 7

Client: JTNUS Project: Cecil Field Sites 5024-290A

Date/Time Received: **9/17/10** **08:45** Date cooler(s) opened: **9/17/10**

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered

EL Courier Other: _____

If applicable, enter airbill number here: 6450

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 1.1 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

See Page 1 of 7

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 4 of 7

Client: ITNOS Project: Cecil Field Site SOL+2904

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 2171

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 4.2 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

Housed trip Blank

See Page 1 of 7

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 3 of 7

Client: ITNOS Project: Cecil Field Sites 504+290A

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 6417

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 3.3 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

See Page 1 of 7

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1009134 Number of Coolers: 2 of 7

Client: ITNUS Project: Cecil Field Site 504-2904

Date/Time Received: 9/17/10 08:45 Date cooler(s) opened: 9/17/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
   EL Courier Other: _____

If applicable, enter airbill number here: 6428

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 9/16/10 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A
7. Was project identifiable from custody papers? ..... Yes No N/A
8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 0-6 °C

~~Dates samples were logged in: 9/17/10~~

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

See Page 1 of 7

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____

HOLDING TIME SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
CEF-290A-01S-20100915	09/15/10 10:33	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 20:23	10.45	14.00	
CEF-290A-DUP-20100915	09/15/10 00:00	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 20:54	10.91	14.00	
CEF-502-6S-20100915	09/15/10 13:23	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 21:24	10.38	14.00	
CEF-502-07D-20100915	09/15/10 13:49	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 21:55	10.38	14.00	
CEF-502-TB-20100915	09/15/10 00:00	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 22:25	10.98	14.00	
CEF-502-9S-20100916	09/16/10 11:45	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 22:56	9.51	14.00	
CEF-502-DUP-02-20100916	09/16/10 00:00	09/17/10 08:45	09/25/10 00:00	N/A	14.00	09/25/10 23:26	10.02	14.00	
CEF-502-3S-20100916	09/16/10 12:45	09/17/10 08:45	09/27/10 00:00	N/A	14.00	09/27/10 12:06	11.01	14.00	
CEF-502-4S-20100916	09/16/10 13:35	09/17/10 08:45	09/27/10 00:00	N/A	14.00	09/27/10 12:37	11.00	14.00	

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Batch: 0I25920 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Blank	0I25920-BLK1	09/25/10 00:00	5.00	5.00
LCS	0I25920-BS1	09/25/10 00:00	5.00	5.00
CEF-290A-01S-20100915	0I25920-MS1	09/25/10 00:00	5.00	5.00
CEF-290A-01S-20100915	0I25920-MSD1	09/25/10 00:00	5.00	5.00
CEF-290A-01S-20100915	1009134-01	09/25/10 00:00	5.00	5.00
CEF-290A-DUP-20100915	1009134-02	09/25/10 00:00	5.00	5.00
CEF-502-6S-20100915	1009134-03	09/25/10 00:00	5.00	5.00
CEF-502-07D-20100915	1009134-04	09/25/10 00:00	5.00	5.00
CEF-502-TB-20100915	1009134-05	09/25/10 00:00	5.00	5.00
CEF-502-9S-20100916	1009134-06	09/25/10 00:00	5.00	5.00
CEF-502-DUP-02-20100916	1009134-07	09/25/10 00:00	5.00	5.00

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Batch: 0I27002 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Blank	0I27002-BLK1	09/27/10 00:00	5.00	5.00
LCS	0I27002-BS1	09/27/10 00:00	5.00	5.00
CEF-502-3S-20100916	0I27002-MS1	09/27/10 00:00	5.00	5.00
CEF-502-3S-20100916	0I27002-MSD1	09/27/10 00:00	5.00	5.00
CEF-502-3S-20100916	1009134-08	09/27/10 00:00	5.00	5.00
CEF-502-4S-20100916	1009134-09	09/27/10 00:00	5.00	5.00

ANALYSIS SEQUENCE SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I26801	Instrument:	MS-VOA3
Calibration:	0268001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	0I26801-TUN1	SEQ-TUN1.D	09/23/10 08:49
Cal Standard	0I26801-CAL1	SEQ-CAL1.D	09/23/10 09:34
Cal Standard	0I26801-CAL2	SEQ-CAL2.D	09/23/10 10:05
Cal Standard	0I26801-CAL3	SEQ-CAL3.D	09/23/10 10:36
Cal Standard	0I26801-CAL4	SEQ-CAL4.D	09/23/10 11:06
Cal Standard	0I26801-CAL6	SEQ-CAL6.D	09/23/10 12:08
Cal Standard	0I26801-CAL7	SEQ-CAL7.D	09/23/10 12:39
Cal Standard	0I26801-CAL8	SEQ-CAL8.D	09/23/10 13:10
Cal Standard	0I26801-CAL9	SEQ-CAL9.D	09/23/10 13:40
Initial Cal Check	0I26801-ICV1	SEQ-ICV1.D	09/23/10 14:11

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/23/10
Instrument ID:	MS-VOA3	Injection Time:	08:49
Sequence:	0I26801	Lab Sample ID:	0I26801-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	15.7	PASS
75	30 - 60% of 95	46.4	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.02	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	109	PASS
175	5 - 9% of 174	7.28	PASS
176	95 - 101% of 174	99.4	PASS
177	5 - 9% of 176	6.82	PASS

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	MS-VOA3	Calibration:	0268001
Lab File ID:	SEQ-ICV1.D	Calibration Date:	09/23/10 06:31
Sequence:	0I26801	Injection Date:	09/23/10
Lab Sample ID:	0I26801-ICV1	Injection Time:	14:11

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	95.99	0.777743	0.7465904		-4.0	20
Ethylbenzene	Q	100.0	99.44	2.401782	2.070524		-0.6	20
Isopropylbenzene	A	100.0	87.24	2.155401	1.880459		-12.8	20
Toluene	A	100.0	91.80	1.241631	1.139788		-8.2	20
1,3,5-Trimethylbenzene	A	100.0	92.13	1.502416	1.38421		-7.9	20
1,2,4-Trimethylbenzene	A	100.0	92.22	1.552578	1.431838		-7.8	20
Xylenes (total)	Q	300.0	283.2	2.07955	1.650208		-5.6	20
Bromofluorobenzene	A	30.00	29.18	1.006847	0.9792466		-2.7	20
Dibromofluoromethane	A	30.00	29.85	0.3013951	0.2998407		-0.5	20
1,2-Dichloroethane-d4	A	30.00	30.90	5.822045E-02	5.996842E-02		3.0	20
Toluene-d8	A	30.00	29.32	2.167989	2.119043		-2.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I27008	Instrument:	MS-VOA3
Calibration:	0268001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	0I27008-TUN1	SEQ-TUN1.D	09/25/10 12:33
Calibration Check	0I27008-CCV1	SEQ-CCV1.D	09/25/10 13:04
LCS	0I25920-BS1	V3LCS01.D	09/25/10 13:47
Blank	0I25920-BLK1	V3BLK01.D	09/25/10 15:17
CEF-290A-01S-20100915	1009134-01	0913401.D	09/25/10 20:23
CEF-290A-DUP-20100915	1009134-02	0913402.D	09/25/10 20:54
CEF-502-6S-20100915	1009134-03	0913403.D	09/25/10 21:24
CEF-502-07D-20100915	1009134-04	0913404.D	09/25/10 21:55
CEF-502-TB-20100915	1009134-05	0913405.D	09/25/10 22:25
CEF-502-9S-20100916	1009134-06	0913406.D	09/25/10 22:56
CEF-502-DUP-02-20100916	1009134-07	0913407.D	09/25/10 23:26
CEF-290A-01S-20100915	0I25920-MS1	0913401M.D	09/25/10 23:57
CEF-290A-01S-20100915	0I25920-MSD1	0913401S.D	09/26/10 00:27

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/25/10
Instrument ID:	MS-VOA3	Injection Time:	12:33
Sequence:	0I27008	Lab Sample ID:	0I27008-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	17.8	PASS
75	30 - 60% of 95	55.7	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.38	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	120	PASS
175	5 - 9% of 174	7.64	PASS
176	95 - 101% of 174	97.3	PASS
177	5 - 9% of 176	5.64	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	MS-VOA3	Calibration:	0268001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/23/10 06:31
Sequence:	0I27008	Injection Date:	09/25/10
Lab Sample ID:	0I27008-CCV1	Injection Time:	13:04

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	93.57	0.777743	0.7277682		-6.4	20
Ethylbenzene	Q	100.0	100.6	2.401782	2.087921		0.6	20
Isopropylbenzene	A	100.0	92.28	2.155401	1.989022		-7.7	20
Toluene	A	100.0	83.92	1.241631	1.042048		-16.1	20
1,3,5-Trimethylbenzene	A	100.0	92.92	1.502416	1.396069		-7.1	20
1,2,4-Trimethylbenzene	A	100.0	95.54	1.552578	1.483322		-4.5	20
Xylenes (total)	Q	300.0	304.6	2.07955	1.750913		1.5	20
Bromofluorobenzene	A	30.00	31.08	1.006847	1.043097		3.6	20
Dibromofluoromethane	A	30.00	31.63	0.3013951	0.3178094		5.4	20
1,2-Dichloroethane-d4	A	30.00	28.15	5.822045E-02	0.0546318		-6.2	20
Toluene-d8	A	30.00	26.90	2.167989	1.944352		-10.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Matrix: Laboratory ID: 0I25920-BLK1 File ID: V3BLK01.D

Sampled: Prepared: Analyzed: 09/25/10 15:17

Solids: Preparation: 5030B Dilution:

Batch: 0I25920 Sequence: 0I27008 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.49	105	75 - 120	
Dibromofluoromethane	30.00	33.09	110	85 - 115	
1,2-Dichloroethane-d4	30.00	30.05	100	70 - 120	
Toluene-d8	30.00	30.03	100	85 - 120	

ANALYSIS SEQUENCE SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I27013	Instrument:	MS-VOA3
Calibration:	0268001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	0I27013-TUN1	SEQ-TUN1.D	09/27/10 06:01
Calibration Check	0I27013-CCV1	SEQ-CCV1.D	09/27/10 06:32
LCS	0I27002-BS1	V3LCS01.D	09/27/10 07:03
Blank	0I27002-BLK1	V3BLK01.D	09/27/10 08:32
CEF-502-3S-20100916	1009134-08	0913408.D	09/27/10 12:06
CEF-502-4S-20100916	1009134-09	0913409.D	09/27/10 12:37
CEF-502-3S-20100916	0I27002-MS1	0913408M.D	09/27/10 16:11
CEF-502-3S-20100916	0I27002-MSD1	0913408S.D	09/27/10 16:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/27/10
Instrument ID:	MS-VOA3	Injection Time:	06:01
Sequence:	0I27013	Lab Sample ID:	0I27013-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	19.6	PASS
75	30 - 60% of 95	56.2	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	5.83	PASS
173	Less than 2% of 174	0.55	PASS
174	50 - 200% of 95	81.2	PASS
175	5 - 9% of 174	8.81	PASS
176	95 - 101% of 174	99.9	PASS
177	5 - 9% of 176	7.89	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	MS-VOA3	Calibration:	0268001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/23/10 06:31
Sequence:	0I27013	Injection Date:	09/27/10
Lab Sample ID:	0I27013-CCV1	Injection Time:	06:32

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	94.72	0.777743	0.7366512		-5.3	20
Ethylbenzene	Q	100.0	96.53	2.401782	2.025081		-3.5	20
Isopropylbenzene	A	100.0	90.30	2.155401	1.946379		-9.7	20
Toluene	A	100.0	80.57	1.241631	1.000422		-19.4	20
1,3,5-Trimethylbenzene	A	100.0	94.45	1.502416	1.418994		-5.6	20
1,2,4-Trimethylbenzene	A	100.0	96.45	1.552578	1.497512		-3.5	20
Xylenes (total)	Q	300.0	290.6	2.07955	1.685648		-3.1	20
Bromofluorobenzene	A	30.00	30.02	1.006847	1.007453		0.06	20
Dibromofluoromethane	A	30.00	32.18	0.3013951	0.323353		7.3	20
1,2-Dichloroethane-d4	A	30.00	28.45	5.822045E-02	5.521963E-02		-5.2	20
Toluene-d8	A	30.00	26.26	2.167989	1.897458		-12.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM09 BP Wells_2010
Matrix:		Laboratory ID:	0I27002-BLK1	File ID:	V3BLK01.D
Sampled:		Prepared:		Analyzed:	09/27/10 08:32
Solids:		Preparation:	5030B	Dilution:	

Batch: 0I27002 Sequence: 0I27013 Calibration: 0268001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.300	0.500	1.00	U
100-41-4	Ethylbenzene		0.300	0.500	1.00	U
98-82-8	Isopropylbenzene		0.300	0.500	1.00	U
108-88-3	Toluene		0.300	0.500	1.00	U
108-67-8	1,3,5-Trimethylbenzene		0.300	0.500	1.00	U
95-63-6	1,2,4-Trimethylbenzene		0.300	0.500	1.00	U
1330-20-7	Xylenes (total)		0.300	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.71	102	75 - 120	
Dibromofluoromethane	30.00	32.46	108	85 - 115	
1,2-Dichloroethane-d4	30.00	30.44	101	70 - 120	
Toluene-d8	30.00	28.09	93.6	85 - 120	

HOLDING TIME SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
CEF-290A-01S-20100915	09/15/10 10:33	09/17/10 08:45	09/20/10 10:45	5.05	7.00	09/24/10 14:57	4.18	40.00	
CEF-290A-DUP-20100915	09/15/10 00:00	09/17/10 08:45	09/20/10 10:45	5.49	7.00	09/24/10 15:26	4.20	40.00	
CEF-502-6S-20100915	09/15/10 13:23	09/17/10 08:45	09/20/10 10:45	4.93	7.00	09/24/10 15:55	4.22	40.00	
CEF-502-07D-20100915	09/15/10 13:49	09/17/10 08:45	09/20/10 10:45	4.91	7.00	09/24/10 16:23	4.23	40.00	
CEF-502-9S-20100916	09/16/10 11:45	09/17/10 08:45	09/20/10 10:45	4.00	7.00	09/24/10 16:52	4.25	40.00	
CEF-502-DUP-02-20100916	09/16/10 00:00	09/17/10 08:45	09/20/10 10:45	4.49	7.00	09/24/10 17:20	4.27	40.00	
CEF-502-3S-20100916	09/16/10 12:45	09/17/10 08:45	09/20/10 10:45	3.96	7.00	09/24/10 17:49	4.29	40.00	
CEF-502-4S-20100916	09/16/10 13:35	09/17/10 08:45	09/20/10 10:45	3.92	7.00	09/24/10 18:17	4.31	40.00	

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Batch: 0I20006 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Blank	0I20006-BLK1	09/20/10 10:45	1,000.00	1.00
LCS	0I20006-BS1	09/20/10 10:45	1,000.00	1.00
CEF-290A-01S-20100915	0I20006-MS1	09/20/10 10:45	1,070.00	1.00
CEF-502-3S-20100916	0I20006-MS2	09/20/10 10:45	1,080.00	1.00
CEF-290A-01S-20100915	0I20006-MSD1	09/20/10 10:45	1,070.00	1.00
CEF-502-3S-20100916	0I20006-MSD2	09/20/10 10:45	1,080.00	1.00
CEF-290A-01S-20100915	1009134-01	09/20/10 10:45	1,070.00	1.00
CEF-290A-DUP-20100915	1009134-02	09/20/10 10:45	1,060.00	1.00
CEF-502-6S-20100915	1009134-03	09/20/10 10:45	1,080.00	1.00
CEF-502-07D-20100915	1009134-04	09/20/10 10:45	1,070.00	1.00
CEF-502-9S-20100916	1009134-06	09/20/10 10:45	1,080.00	1.00
CEF-502-DUP-02-20100916	1009134-07	09/20/10 10:45	1,070.00	1.00
CEF-502-3S-20100916	1009134-08	09/20/10 10:45	1,080.00	1.00
CEF-502-4S-20100916	1009134-09	09/20/10 10:45	1,070.00	1.00

ANALYSIS SEQUENCE SUMMARY
SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0H23613	Instrument:	MS-BNA4
Calibration:	0237003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	0H23613-TUN1	SEQ-TUN1.D	08/23/10 10:58
Cal Standard	0H23613-CAL1	SEQ-CAL1.D	08/23/10 11:18
Cal Standard	0H23613-CAL2	SEQ-CAL2.D	08/23/10 11:46
Cal Standard	0H23613-CAL3	SEQ-CAL3.D	08/23/10 12:14
Cal Standard	0H23613-CAL4	SEQ-CAL4.D	08/23/10 12:43
Cal Standard	0H23613-CAL5	SEQ-CAL5.D	08/23/10 13:12
Cal Standard	0H23613-CAL6	SEQ-CAL6.D	08/23/10 13:41
Cal Standard	0H23613-CAL7	SEQ-CAL7.D	08/23/10 14:09
Cal Standard	0H23613-CAL8	SEQ-CAL8.D	08/23/10 14:38
Cal Standard	0H23613-CAL9	SEQ-CAL9.D	08/23/10 15:07
Cal Standard	0H23613-CALA	SEQ-CALA.D	08/23/10 15:35
Cal Standard	0H23613-CALB	SEQ-CALB.D	08/23/10 16:04
Initial Cal Check	0H23613-ICV1	SEQ-ICV1.D	08/23/10 16:33

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	08/23/10
Instrument ID:	MS-BNA4	Injection Time:	10:58
Sequence:	0H23613	Lab Sample ID:	0H23613-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	37.1	PASS
68	Less than 2% of 69	1.35	PASS
69	Less than 200% of 198	35.2	PASS
70	Less than 2% of 69	0.535	PASS
127	40 - 60% of 198	44.6	PASS
197	Less than 1% of 198	0.57	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.65	PASS
275	10 - 30% of 198	29.4	PASS
365	1 - 200% of 198	4.31	PASS
441	0.001 - 100% of 443	81.1	PASS
442	40 - 200% of 198	171	PASS
443	17 - 23% of 442	19.6	PASS

INITIAL CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	MS-BNA4	Calibration:	0237003
Lab File ID:	SEQ-ICV1.D	Calibration Date:	08/23/10 14:19
Sequence:	0H23613	Injection Date:	08/23/10
Lab Sample ID:	0H23613-ICV1	Injection Time:	16:33

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.459	0.8490211	0.9269866		9.2	20
Acenaphthylene	A	5.000	5.703	1.256297	1.432929		14.1	20
Anthracene	A	5.000	5.160	1.162297	1.199487		3.2	20
Benzo(a)anthracene	A	5.000	5.178	1.05022	1.087508		3.6	20
Benzo(a)pyrene	A	5.000	5.685	1.281052	1.456646		13.7	20
Benzo(b)fluoranthene	A	5.000	5.211	1.518281	1.582416		4.2	20
Benzo(g,h,i)perylene	A	5.000	5.197	1.255234	1.304654		3.9	20
Benzo(k)fluoranthene	A	5.000	5.510	1.472463	1.622768		10.2	20
Chrysene	A	5.000	5.161	1.036307	1.069754		3.2	20
Dibenz(a,h)anthracene	A	5.000	5.628	1.117366	1.257663		12.6	20
Fluoranthene	A	5.000	5.209	1.238826	1.290573		4.2	20
Fluorene	A	5.000	5.488	0.8096793	0.8887667		9.8	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.500	1.182429	1.300687		10.0	20
1-Methylnaphthalene	A	5.000	5.971	0.7624406	0.9105566		19.4	20
2-Methylnaphthalene	A	5.000	5.658	0.8439543	0.9550044		13.2	20
Naphthalene	A	5.000	5.701	1.34026	1.528177		14.0	20
Phenanthrene	A	5.000	5.284	1.181841	1.249062		5.7	20
Pyrene	A	5.000	5.200	1.285122	1.336607		4.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I26707	Instrument:	MS-BNA4
Calibration:	0237003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	0I26707-TUN1	SEQ-TUN1.D	09/24/10 09:36
Calibration Check	0I26707-CCV1	SEQ-CCV1.D	09/24/10 09:55
LCS	0I20006-BS1	I20006L1.D	09/24/10 14:00
Blank	0I20006-BLK1	I20006B1.D	09/24/10 14:29
CEF-290A-01S-20100915	1009134-01	0913401.D	09/24/10 14:57
CEF-290A-DUP-20100915	1009134-02	0913402.D	09/24/10 15:26
CEF-502-6S-20100915	1009134-03	0913403.D	09/24/10 15:55
CEF-502-07D-20100915	1009134-04	0913404.D	09/24/10 16:23
CEF-502-9S-20100916	1009134-06	0913406.D	09/24/10 16:52
CEF-502-DUP-02-20100916	1009134-07	0913407.D	09/24/10 17:20
CEF-502-3S-20100916	1009134-08	0913408.D	09/24/10 17:49
CEF-502-4S-20100916	1009134-09	0913409.D	09/24/10 18:17
CEF-290A-01S-20100915	0I20006-MS1	0913401M.D	09/24/10 18:45
CEF-290A-01S-20100915	0I20006-MSD1	0913401S.D	09/24/10 19:13
CEF-502-3S-20100916	0I20006-MS2	0913408M.D	09/24/10 19:40
CEF-502-3S-20100916	0I20006-MSD2	0913408S.D	09/24/10 20:08

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/24/10
Instrument ID:	MS-BNA4	Injection Time:	09:36
Sequence:	0I26707	Lab Sample ID:	0I26707-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	58.7	PASS
68	Less than 2% of 69	1.54	PASS
69	Less than 200% of 198	56.4	PASS
70	Less than 2% of 69	0.401	PASS
127	40 - 60% of 198	57	PASS
197	Less than 1% of 198	0.707	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.01	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.72	PASS
441	0.001 - 100% of 443	79.7	PASS
442	40 - 200% of 198	90.8	PASS
443	17 - 23% of 442	20	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	MS-BNA4	Calibration:	0237003
Lab File ID:	SEQ-CCV1.D	Calibration Date:	08/23/10 14:19
Sequence:	0I26707	Injection Date:	09/24/10
Lab Sample ID:	0I26707-CCV1	Injection Time:	09:55

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.446	0.8490211	0.7548814		-11.1	20
Acenaphthylene	A	5.000	4.416	1.256297	1.10953		-11.7	20
Anthracene	A	5.000	4.840	1.162297	1.125216		-3.2	20
Benzo(a)anthracene	A	5.000	4.862	1.05022	1.021165		-2.8	20
Benzo(a)pyrene	A	5.000	4.895	1.281052	1.254239		-2.1	20
Benzo(b)fluoranthene	A	5.000	4.915	1.518281	1.492521		-1.7	20
Benzo(g,h,i)perylene	A	5.000	4.545	1.255234	1.140965		-9.1	20
Benzo(k)fluoranthene	A	5.000	4.913	1.472463	1.446764		-1.7	20
Chrysene	A	5.000	5.063	1.036307	1.049442		1.3	20
Dibenz(a,h)anthracene	A	5.000	4.817	1.117366	1.076457		-3.7	20
Fluoranthene	A	5.000	4.973	1.238826	1.232085		-0.5	20
Fluorene	A	5.000	4.900	0.8096793	0.7934381		-2.0	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.604	1.182429	1.088711		-7.9	20
1-Methylnaphthalene	A	5.000	4.501	0.7624406	0.6863228		-10.0	20
2-Methylnaphthalene	A	5.000	4.608	0.8439543	0.7778331		-7.8	20
Naphthalene	A	5.000	4.405	1.34026	1.180845		-11.9	20
Phenanthrene	A	5.000	4.832	1.181841	1.142114		-3.4	20
Pyrene	A	5.000	4.984	1.285122	1.281009		-0.3	20
2-Fluorobiphenyl	A	5.000	4.283	0.9978073	0.8546515		-14.3	20
Terphenyl-d14	A	5.000	5.143	0.9438304	0.9708986		2.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM09CF_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM09 BP Wells_2010	
Matrix:		Laboratory ID:	0I20006-BLK1	File ID:	I20006B1.D
Sampled:		Prepared:		Analyzed:	09/24/10 14:29
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 0I20006 Sequence: 0I26707 Calibration: 0237003 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0200	0.0400	0.100	U
208-96-8	Acenaphthylene		0.0200	0.0400	0.100	U
120-12-7	Anthracene		0.0200	0.0400	0.100	U
56-55-3	Benzo(a)anthracene		0.0200	0.0400	0.100	U
50-32-8	Benzo(a)pyrene		0.0200	0.0400	0.100	U
205-99-2	Benzo(b)fluoranthene		0.0200	0.0400	0.100	U
191-24-2	Benzo(g,h,i)perylene		0.0200	0.0400	0.100	U
207-08-9	Benzo(k)fluoranthene		0.0200	0.0400	0.100	U
218-01-9	Chrysene		0.0200	0.0400	0.100	U
53-70-3	Dibenz(a,h)anthracene		0.0200	0.0400	0.100	U
206-44-0	Fluoranthene		0.0200	0.0400	0.100	U
86-73-7	Fluorene		0.0200	0.0400	0.100	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0200	0.0400	0.100	U
90-12-0	1-Methylnaphthalene		0.0200	0.0400	0.100	U
91-57-6	2-Methylnaphthalene		0.0200	0.0400	0.100	U
91-20-3	Naphthalene		0.0200	0.0400	0.100	U
85-01-8	Phenanthrene		0.0200	0.0400	0.100	U
129-00-0	Pyrene		0.0200	0.0400	0.100	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	32.00	64.0	34 - 167	
Terphenyl-d14	50.00	34.47	68.9	34 - 167	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
CEF-290A-01S-20100915	09/15/10 10:33	09/17/10 08:45	09/20/10 11:47	5.09	7.00	09/22/10 16:10	2.18	40.00	
CEF-290A-DUP-20100915	09/15/10 00:00	09/17/10 08:45	09/20/10 11:47	5.53	7.00	09/22/10 17:54	2.25	40.00	
CEF-502-6S-20100915	09/15/10 13:23	09/17/10 08:45	09/20/10 11:47	4.98	7.00	09/22/10 18:28	2.28	40.00	
CEF-502-07D-20100915	09/15/10 13:49	09/17/10 08:45	09/20/10 11:47	4.96	7.00	09/22/10 19:02	2.30	40.00	
CEF-502-9S-20100916	09/16/10 11:45	09/17/10 08:45	09/20/10 11:47	4.04	7.00	09/22/10 19:37	2.33	40.00	
CEF-502-DUP-02-20100916	09/16/10 00:00	09/17/10 08:45	09/20/10 11:47	4.53	7.00	09/22/10 20:10	2.35	40.00	
CEF-502-3S-20100916	09/16/10 12:45	09/17/10 08:45	09/20/10 11:47	4.00	7.00	09/22/10 20:44	2.37	40.00	
CEF-502-4S-20100916	09/16/10 13:35	09/17/10 08:45	09/20/10 11:47	3.97	7.00	09/22/10 22:26	2.44	40.00	

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM09CF_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM09 BP Wells_2010

Batch: 0I20004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Blank	0I20004-BLK1	09/20/10 11:47	1,000.00	2.00
LCS	0I20004-BS1	09/20/10 11:47	1,000.00	2.00
CEF-290A-01S-20100915	0I20004-MS1	09/20/10 11:47	1,070.00	2.00
CEF-502-3S-20100916	0I20004-MS2	09/20/10 11:47	1,080.00	2.00
CEF-290A-01S-20100915	0I20004-MSD1	09/20/10 11:47	1,080.00	2.00
CEF-502-3S-20100916	0I20004-MSD2	09/20/10 11:47	1,080.00	2.00
CEF-290A-01S-20100915	1009134-01	09/20/10 11:47	1,070.00	2.00
CEF-290A-DUP-20100915	1009134-02	09/20/10 11:47	1,080.00	2.00
CEF-502-6S-20100915	1009134-03	09/20/10 11:47	1,080.00	2.00
CEF-502-07D-20100915	1009134-04	09/20/10 11:47	1,080.00	2.00
CEF-502-9S-20100916	1009134-06	09/20/10 11:47	1,080.00	2.00
CEF-502-DUP-02-20100916	1009134-07	09/20/10 11:47	1,080.00	2.00
CEF-502-3S-20100916	1009134-08	09/20/10 11:47	1,080.00	2.00
CEF-502-4S-20100916	1009134-09	09/20/10 11:47	1,070.00	2.00

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I24408	Instrument:	GL-GCFID
Calibration:	0244001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0I24408-CAL6	002B0201.D	08/31/10 10:50
Cal Standard	0I24408-CAL5	003B0301.D	08/31/10 11:25
Cal Standard	0I24408-CAL4	004B0401.D	08/31/10 11:59
Cal Standard	0I24408-CAL3	005B0501.D	08/31/10 12:34
Cal Standard	0I24408-CAL2	006B0601.D	08/31/10 13:08
Cal Standard	0I24408-CAL1	007B0701.D	08/31/10 13:43
Initial Cal Check	0I24408-ICV1	008B0901.D	08/31/10 14:56

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I24408	Instrument:	GL-GCFID
Calibration:	0244001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
10H0857	Florida pro ICAL 85ppm	0I24408-CAL6	002B0201.D	08/31/10 10:50
10H0856	Florida pro ICAL 850ppm	0I24408-CAL5	003B0301.D	08/31/10 11:25
10H0855	Florida pro ICAL 2550ppm	0I24408-CAL4	004B0401.D	08/31/10 11:59
10H0854	Florida pro ICAL 4250ppm	0I24408-CAL3	005B0501.D	08/31/10 12:34
10H0853	Florida pro ICAL 5950ppm	0I24408-CAL2	006B0601.D	08/31/10 13:08
10H0852	Florida pro ICAL 8500ppm	0I24408-CAL1	007B0701.D	08/31/10 13:43

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	GL-GCFID	Calibration:	0244001
Lab File ID:	008B0901.D	Calibration Date:	08/31/10 00:00
Sequence:	0I24408	Injection Date:	08/31/10
Lab Sample ID:	0I24408-ICV1	Injection Time:	14:56

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	3677	1345.229	1236.544		-8.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Sequence:	0I26608	Instrument:	GL-GCFID
Calibration:	0244001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	0I26608-CCV1	007B0701.D	09/22/10 14:20
Blank	0I20004-BLK1	008B0801.D	09/22/10 15:01
LCS	0I20004-BS1	009B0901.D	09/22/10 15:36
CEF-290A-01S-20100915	1009134-01	010B1001.D	09/22/10 16:10
CEF-290A-01S-20100915	0I20004-MS1	011B1101.D	09/22/10 16:45
CEF-290A-01S-20100915	0I20004-MSD1	012B1201.D	09/22/10 17:20
CEF-290A-DUP-20100915	1009134-02	013B1301.D	09/22/10 17:54
CEF-502-6S-20100915	1009134-03	014B1401.D	09/22/10 18:28
CEF-502-07D-20100915	1009134-04	015B1501.D	09/22/10 19:02
CEF-502-9S-20100916	1009134-06	016B1601.D	09/22/10 19:37
CEF-502-DUP-02-20100916	1009134-07	017B1701.D	09/22/10 20:10
CEF-502-3S-20100916	1009134-08	018B1801.D	09/22/10 20:44
CEF-502-3S-20100916	0I20004-MS2	019B1901.D	09/22/10 21:18
CEF-502-3S-20100916	0I20004-MSD2	020B2001.D	09/22/10 21:52
CEF-502-4S-20100916	1009134-09	021B2101.D	09/22/10 22:26
Calibration Check	0I26608-CCV2	022B2201.D	09/23/10 09:35

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	GL-GCFID	Calibration:	0244001
Lab File ID:	007B0701.D	Calibration Date:	08/31/10 00:00
Sequence:	0I26608	Injection Date:	09/22/10
Lab Sample ID:	0I26608-CCV1	Injection Time:	14:20

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4254	1345.229	1346.602		0.1	25
2-Fluorobiphenyl	A	25.00	25.67	1813.167	1861.6		2.7	25
o-Terphenyl	A	25.00	25.70	2199.287	2261.12		2.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM09CF_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM09 BP Wells_2010	
Matrix:		Laboratory ID:	0I20004-BLK1	File ID:	008B0801.D
Sampled:		Prepared:		Analyzed:	09/22/10 15:01
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 0I20004 Sequence: 0I26608 Calibration: 0244001 Instrument: GL-GCFID

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.0850	0.170	0.340	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.04421	88.4	50 - 150	
o-Terphenyl	0.05000	0.04229	84.6	82 - 142	

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM09CF_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM09 BP Wells_2010
Instrument ID:	GL-GCFID	Calibration:	0244001
Lab File ID:	022B2201.D	Calibration Date:	08/31/10 00:00
Sequence:	0I26608	Injection Date:	09/23/10
Lab Sample ID:	0I26608-CCV2	Injection Time:	09:35

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4293	1345.229	1358.767		1.0	25
2-Fluorobiphenyl	A	25.00	25.07	1813.167	1818.56		0.3	25
o-Terphenyl	A	25.00	25.79	2199.287	2268.44		3.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM09CF_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM09 BP Wells_2010
Matrix: Water
Instrument: GL-GCFID

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.0850	0.340	mg/L	FLPRO

FIELD DUPLICATE CALCULATIONS SDG: CTOJM09CF_008

PARAMETERS	ORIGINAL SAMPLE	DUPLICATE SAMPLE	RPD
	CEF-290A-01S-20100915	CEF-290A-DUP-20100915	%
ACENAPTHENE	0.0206 J	NON-DETECT	NA
ANTHRACENE	0.0284 J	NON-DETECT	NA
BENZO(A)ANTHRACENE	0.0357 J	NON-DETECT	NA
BENZO(A)PYRENE	0.0316 J	NON-DETECT	NA
BENZO(B)FLUORANTHENE	0.0455 J	NON-DETECT	NA
BENZO(G,H,I)PERYLENE	0.0465 J	NON-DETECT	NA
BENZO(K)FLUORANTHENE	0.0427 J	NON-DETECT	NA
CHRYSENE	0.0425 J	NON-DETECT	NA
DIBENZ(A,H)ANTHRACENE	0.044 J	NON-DETECT	NA
FLUORANTHENE	0.0403	0.0196	69.12
FLUORENE	0.0268 J	NON-DETECT	NA
INDENO(1,2,3-CD)PYRENE	0.0465 J	NON-DETECT	NA
2-METHYLNAPHTHALENE	0.0189 J	NON-DETECT	NA
PHENANTHRENE	0.0454	0.025	57.95
PYRENE	0.0421	0.0193	74.27
	ORIGINAL SAMPLE	DUPLICATE SAMPLE	RPD
	CEF-502-9S-20100916	CEF-502-DUP-01-20100916	%
ETHYLBENZENE	0.787	0.745	5.48
ISOPROPYLBENZENE	0.408	0.376	8.16
1,3,5-TRIMETHYLBENZENE	0.418	0.396	5.41
1,2,4-TRIMETHYLBENZENE	0.44	0.415	5.85
2-METHYLNAPHTHALENE	2.03	1.6	23.69
1-METHYLNAPHTHALENE	1.67	1.25	28.77
NAPHTHALENE	0.879	0.695	23.38
PHENANTHRENE	NON-DETECT	0.459	NA
PETROLEUM RANGE ORGANICS	2.36	2.26	4.33