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LIMITED SCOPE SITE ASSESSMENT REPORT FOR BUILDING 842 UNDERGROUND  
STORAGE TANK G842B BASE REALIGNMENT AND CLOSURE NAS CECIL FIELD FL NAS  
CECIL FIELD FL  
12/1/2004  
TETRA TECHNUS INC

**Limited Scope  
Site Assessment Report**  
for  
**Building 842,  
Underground Storage Tank G842B**

**Base Realignment and Closure**

**Naval Air Station Cecil Field  
Jacksonville, Florida**



**Southern Division  
Naval Facilities Engineering Command  
Contract Number N62467-94-D-0888  
Contract Task Order 0248**

December 2004

**LIMITED SCOPE SITE ASSESSMENT REPORT  
FOR  
BUILDING 842, UNDERGROUND STORAGE TANK G842B  
BASE REALIGNMENT AND CLOSURE  
NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA  
COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

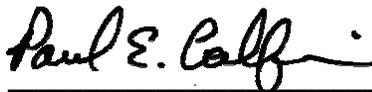
**Submitted to:  
Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
North Charleston, South Carolina 29406**

**Submitted by:  
Tetra Tech NUS, Inc.  
661 Andersen Drive  
Foster Plaza 7  
Pittsburgh, Pennsylvania 15220**

**CONTRACT NUMBER N62467-94-D-0888  
CONTRACT TASK ORDER 0248**

**DECEMBER 2004**

**PREPARED UNDER THE SUPERVISION OF:**



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**PAUL E. CALLIGAN, P.G.  
TASK ORDER MANAGER  
TETRA TECH NUS, INC.  
TAMPA, FLORIDA**

**APPROVED FOR SUBMITTAL BY:**



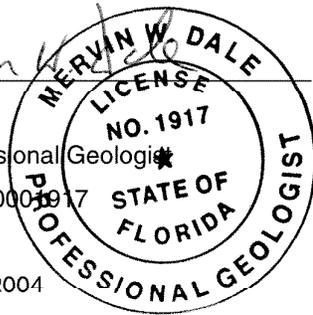
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**DEBRA M. HUMBERT  
PROGRAM MANAGER  
TETRA TECH NUS, INC.  
PITTSBURGH, PENNSYLVANIA**

## PROFESSIONAL REVIEW CERTIFICATION

The Limited Scope Site Assessment contained in this report was prepared using sound hydrogeologic principles and judgment. This assessment 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 assessment described in this report. This Site Assessment Report was developed for Building 842, Tank G842B at the former Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

  
Mervin Dale  
Florida Professional Geologist  
P.G. Number 0001917



December 6, 2004

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## ACRONYMS

bls	Below Land Surface
CCI	CH2M Hill Constructors, Inc.
COCs	Contaminants of Concern
CompQAP	Comprehensive Quality Assurance Plan
CSR	Confirmatory Sampling Report
DPT	Direct Push Technology
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
ft	Feet or Foot
HLA	Harding Lawson Associates
JAA	Jacksonville Airport Authority
KAG	Kerosene Analytical Group
LSSA	Limited Scope Site Assessment
mg/kg	Milligrams per Kilogram
NAS	Naval Air Station
NAVFAC EFD SOUTH	Southern Division, Naval Facilities Engineering Command
OVA	Organic Vapor Analyzer
PAHs	Polynuclear Aromatic Hydrocarbons
ppm	Parts per Million
SAR	Site Assessment Report
SCTLs	Soil Cleanup Target Levels
SRR	Source Removal Report
TRPH	Total Recoverable Petroleum Hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USGS	United States Geological Survey
UST	Underground Storage Tank
VOAs	Volatile Organic Aromatics

## EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed a Limited Scope Site Assessment (LSSA) at Building 842, Tank G842B, former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida. The focal point of the study was on the west side of the former location of Building 842 where a 550-gallon diesel underground storage tank (UST) was formerly in service. The investigation was conducted in accordance with requirements of Chapter 62-770, Florida Administrative Code (FAC). This report is being submitted to the Florida Department of Environmental Protection (FDEP) for approval.

The elements of this LSSA are as follows:

- Existing literature was reviewed to identify potential petroleum hydrocarbon sources and receptors in the site vicinity; to locate nearby surface water bodies, if any; and to determine surface drainage features.
- Reports of previous environmental investigations and remedial activities at the site were reviewed to estimate the magnitude of potential contamination to environmental media. Two separate previous investigations made it evident that no groundwater contamination exists at the site.
- A soil headspace screening survey was performed by collecting and field analyzing soil samples at 2-foot (ft) vertical intervals from ground surface to the water table at 14 locations around the former source area.
- One soil sample was collected from each soil boring and analyzed for polynuclear aromatic hydrocarbons (PAHs) at a fixed-base laboratory. A combination of previous investigations and FDEP response made it possible to determine that PAHs are the only contaminants of concern (COCs) for this investigation.

No significant headspace screening responses or stained soil were identified during field screening procedures, and no PAHs were reported at concentrations above the detection limit in soil samples analyzed at the fixed-base laboratory.

Based on results of this investigation, TtNUS recommends that additional soil be excavated from the hot spots. Confirmatory soil samples should be submitted to an off-site laboratory for PAH analysis to verify that soil remaining at the site does not exceed the PAH soil cleanup target levels (SCTLs). Removal of soil with PAH exceedances may allow future unrestricted reuse of the site and approval of no further action at the site.

## **1.0 INTRODUCTION**

TtNUS was authorized by the United States Navy Southern Division, Naval Facilities Engineering Command (NAVFAC EFD SOUTH) to conduct a LSSA at Building 842, UST G842B at NAS Cecil Field, in Jacksonville, Florida. The LSSA was conducted at the former location of a 550-gallon UST located on the western side of Building 842. Available background information for the site is provided in the following sections.

### **1.1 SITE DESCRIPTION**

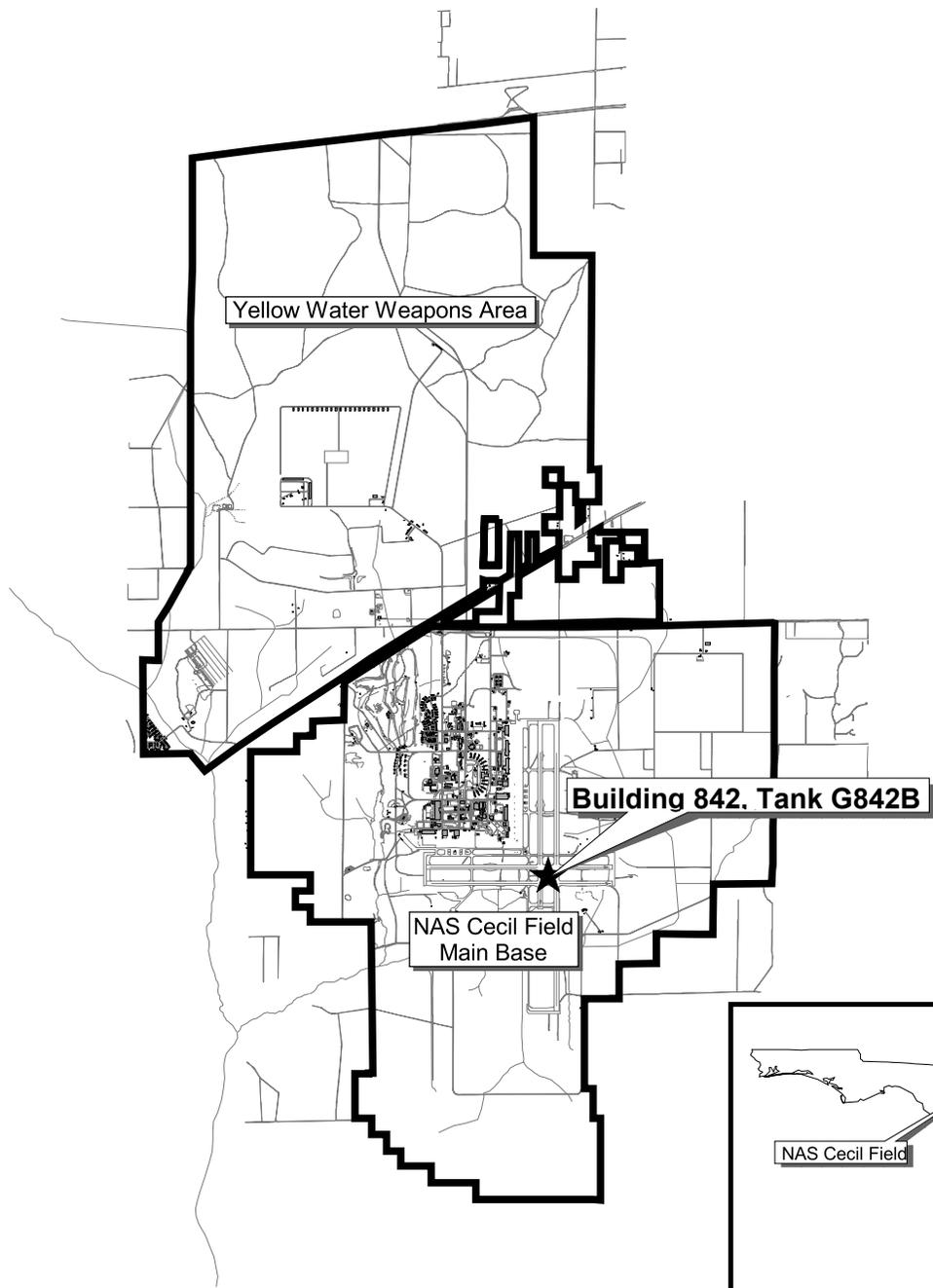
Building 842 was the radar building and housed ground electronics used for aircraft navigation. Building 842 was located in the central portion of NAS Cecil Field at the intersection of the north-south and east-west runways (see Figure 1-1). The building was removed by the Jacksonville Airport Authority (JAA). UST G842B was located to the west of Building 842 in a grassy area. The area immediately surrounding the former location of Building 842 is paved, with a driveway extending from the northern side of Building 842 to the runway north of the building. The remainder of the area is grass covered.

### **1.2 SURROUNDING PROPERTIES**

The area of the former Building 842 is surrounded to the north, south, east, and west by paved areas of the runways and flightline with maintained grass areas in between. The area adjacent to Building 842 is shown on an aerial photograph reproduction as Figure 1-2. The JAA continues to use these runways and taxiways.

### **1.3 TOPOGRAPHIC SETTING**

A portion of the Fiftone, Florida United States Geological Survey (USGS) 7.5-minute quadrangle has been reproduced as Figure 1-3 to illustrate the subject site in relation to its topographic surroundings. The site area is elevated approximately 2 ft above the runways. A shallow depression surrounds the site on the western, eastern, and northern sides between the site and the runways. Surface water run off in the immediate vicinity of the former Building 842 location is directed into the storm water drain system. The nearest surface water bodies are drainage canals 1,000 to 2,000 ft from the site.



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GENERAL LOCATION MAP  
 BUILDING 842, TANK G842B  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

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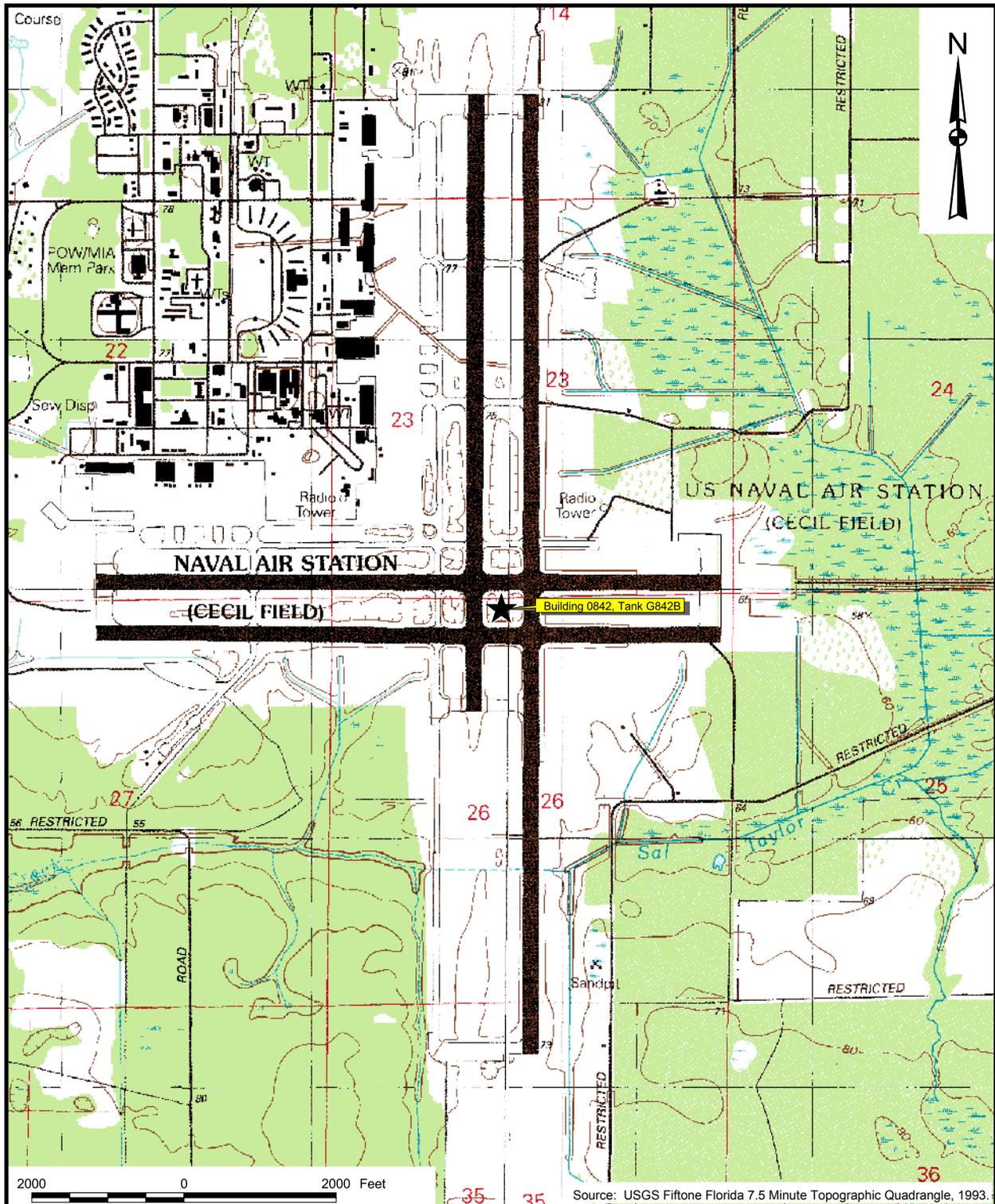


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BUILDING 842 AND SURROUNDING PROPERTIES  
 BUILDING 842, TANK G842B  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

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DRAWN BY MJJ		DATE 27Aug03			<b>TOPOGRAPHIC MAP</b> BUILDING 842, TANK G842B NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA		CONTRACT NUMBER 4248		
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## 1.4 INVESTIGATIVE HISTORY

Two petroleum storage tanks were identified in the vicinity of Building 842 in the Tank Management Plan for NAS Cecil Field [ABB Environmental Services (ABB-ES), 1997a]. Tank G842A, a 275-gallon aboveground storage tank, was never located and was deleted from the Tank Management Plan. Tank G842B was a 550-gallon UST for storing diesel fuel installed in 1985 and removed in 1999. The following investigations have been conducted at UST G842B:

- **1997.** A confirmation sampling investigation conducted in January 1997 evaluated the site soil for petroleum impact (ABB-ES, 1997b). Soil samples were collected from around the tank and field screened with an organic vapor analyzer (OVA). No excessively contaminated soil was encountered at that time. However, the Confirmatory Sampling Report (CSR) recommended installation of a monitoring well and groundwater sampling to complete the investigation.
- **1998.** A confirmation sampling investigation conducted in April 1998 evaluated groundwater at Tank Site G842B for petroleum impacts [Harding Lawson and Associates (HLA), 1998]. One shallow monitoring well (CEF-842-1S) was installed downgradient of the tank and sampled for volatile organic aromatics (VOAs), PAHs, and total recoverable petroleum hydrocarbons (TRPH). Since that investigation detected no contaminants in the groundwater and no excessively contaminated soil was indicated previously (ABB-ES, 1997b), the CSR recommended that no further action be taken at the site until the tank was removed.
- **1999.** A tank excavation and soil removal were conducted in September and November 1999 to remove any petroleum contaminated soil that might be encountered [CH2M Hill Constructors, Inc. (CCI), 2000]. The extent of the excavation was determined by field OVA screening and the results of offsite laboratory analysis of soil samples by Kerosene Analytical Group (KAG) methods. Approximately 13 cubic yards of soil were removed for offsite disposal in September, and an additional 2.3 yards were removed in November. A temporary monitoring well was installed in the tank excavation, and a groundwater sample was collected for off-site analysis by KAG methods. The Source Removal Report (SRR) recommended that no further action was required at the site because the groundwater analytical results from the temporary well were below groundwater cleanup target levels and the soil analytical results from the confirmation samples were less than the leachability SCTLs.

In April 2001, the FDEP issued a letter requesting additional site investigation because analytical results from two of the soil samples collected during the source removal had dibenzo(a,h)anthracene and/or benzo(a)pyrene concentrations above the residential direct exposure SCTLs. A copy of the FDEP letter is provided in Appendix A. A LSSA was conducted in 2003 and 2004 to delineate the extent of petroleum impact beyond the hot spots detected during the source removal. The LSSA activities and results are documented in this Site Assessment Report (SAR).

## **2.0 INVESTIGATIVE METHODOLOGY**

The LSSA activities were conducted at UST G842B following the tank closure and source removal. Soil samples were collected during this investigation for field headspace screening and for off-site laboratory analysis on May 7, 2003, and March 30, 2004. The results of the LSSA are discussed in Chapters 3.0 and 4.0 of this report.

### **2.1 QUALITY ASSURANCE**

The field activities described in this SAR were performed in general accordance with the FDEP Standard Operating Procedures described in the TtNUS Comprehensive Quality Assurance Plan (CompQAP) Number 980038 and with the Work Plan Addendum (TtNUS, 2003). Soil samples collected for analyses by the fixed-base laboratory were shipped on ice and under chain of custody to Accutest Laboratory, Orlando, Florida. The CompQAP number for the Accutest Florida facility is 940304. Based on the type of analytes detected in the SRR, TtNUS submitted soil samples for PAH analysis only.

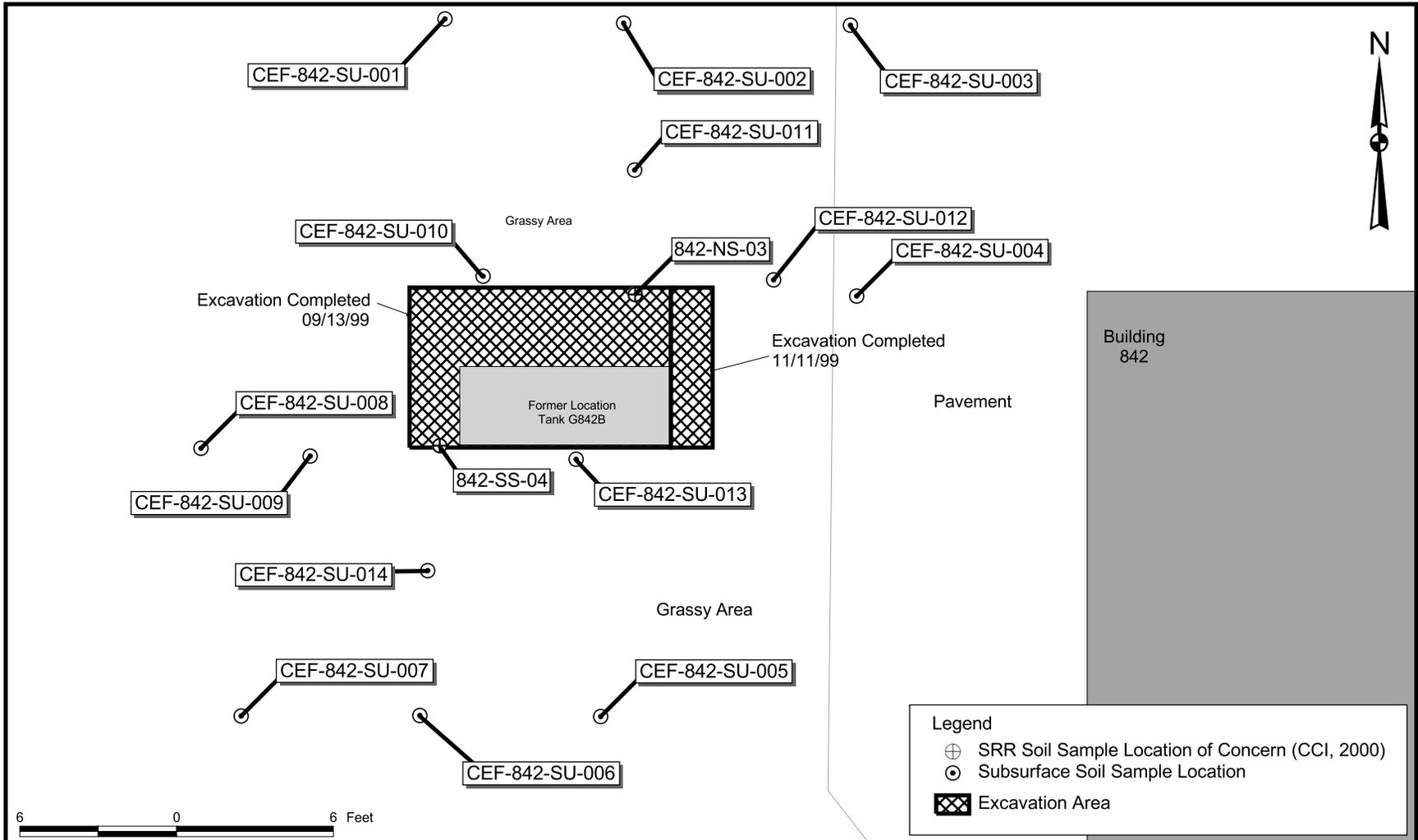
### **2.2 SOIL ASSESSMENT**

Soil samples were collected for field headspace screening and off-site laboratory analysis from 14 soil boring locations during the LSSA.

#### **2.2.1 Soil Headspace Screening**

Fourteen borings were completed for lithologic description and soil headspace screening. The soil borings were located approximately adjacent to the two soil sample locations of concern (842-SS-04 and 842-NS-03) from the tank excavation where PAH SCTL exceedances were detected. The soil boring locations and their relation to the SRR excavations and SRR soil sample locations of concern are shown on Figure 2-1. For brevity in this SAR, boring identification numbers may be shortened from CEF-842-SU-001 to SU-001, SU-002, etc.

Soil samples were collected for lithologic description at 2-ft vertical intervals to a total depth of approximately 7 ft below land surface (bls) at each soil boring location using direct push technology (DPT) soil sampling techniques and/or a stainless steel hand auger. The soil samples were visually inspected for petroleum staining. Soil samples collected from intervals above the water table were field screened using headspace analysis techniques in general accordance with Chapter 62-770, FAC. The soil headspace readings were measured using a PhotoVac MicroFID Flame Ionization Detector (FID). The soil boring logs for each location with the unfiltered/filtered OVA-FID results are included in Appendix B. The field notes documenting the investigation are included in Appendix C.



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SOIL SAMPLE LOCATIONS  
 BUILDING 842, TANK G842B  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

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### **2.2.2 Laboratory Analyses**

Confirmatory soil samples were collected from each of the soil borings. Because no significant OVA responses [greater than 10 parts per million (ppm)] or soil staining were observed, soil samples for confirmatory analysis were selected from the interval directly above the water table. The samples were shipped on ice via overnight courier and under chain-of-custody to the fixed-base laboratory (Accutest in Orlando, Florida) and analyzed for PAHs using United States Environmental Protection Agency Method 8310.

### **2.3 DETERMINATION OF GROUNDWATER GRADIENT**

The assumed direction of groundwater flow at Building 842 is toward the northwest based on the USGS groundwater model for NAS Cecil Field as described in the CSR (HLA, 1998).

### **2.4 GROUNDWATER ASSESSMENT**

The groundwater assessment for this investigation was limited to a review of the groundwater sampling results reported in the CSR (HLA, 1998) and the SRR (CCI, 2000).

## 3.0 RESULTS OF INVESTIGATION

### 3.1 SOIL ASSESSMENT

#### 3.1.1 OVA-FID Headspace Analyses

No significant OVA responses (greater than 10 ppm) or soil staining were observed. Soil samples for confirmatory analysis were selected from the interval directly above the water table. The lithologic descriptions and OVA-FID headspace measurements are summarized in Table 3-1. Because no significant OVA responses or soil staining were observed, soil samples for confirmatory analysis were selected from the interval directly above the water table.

#### 3.1.2 Fixed-Base Confirmatory Results

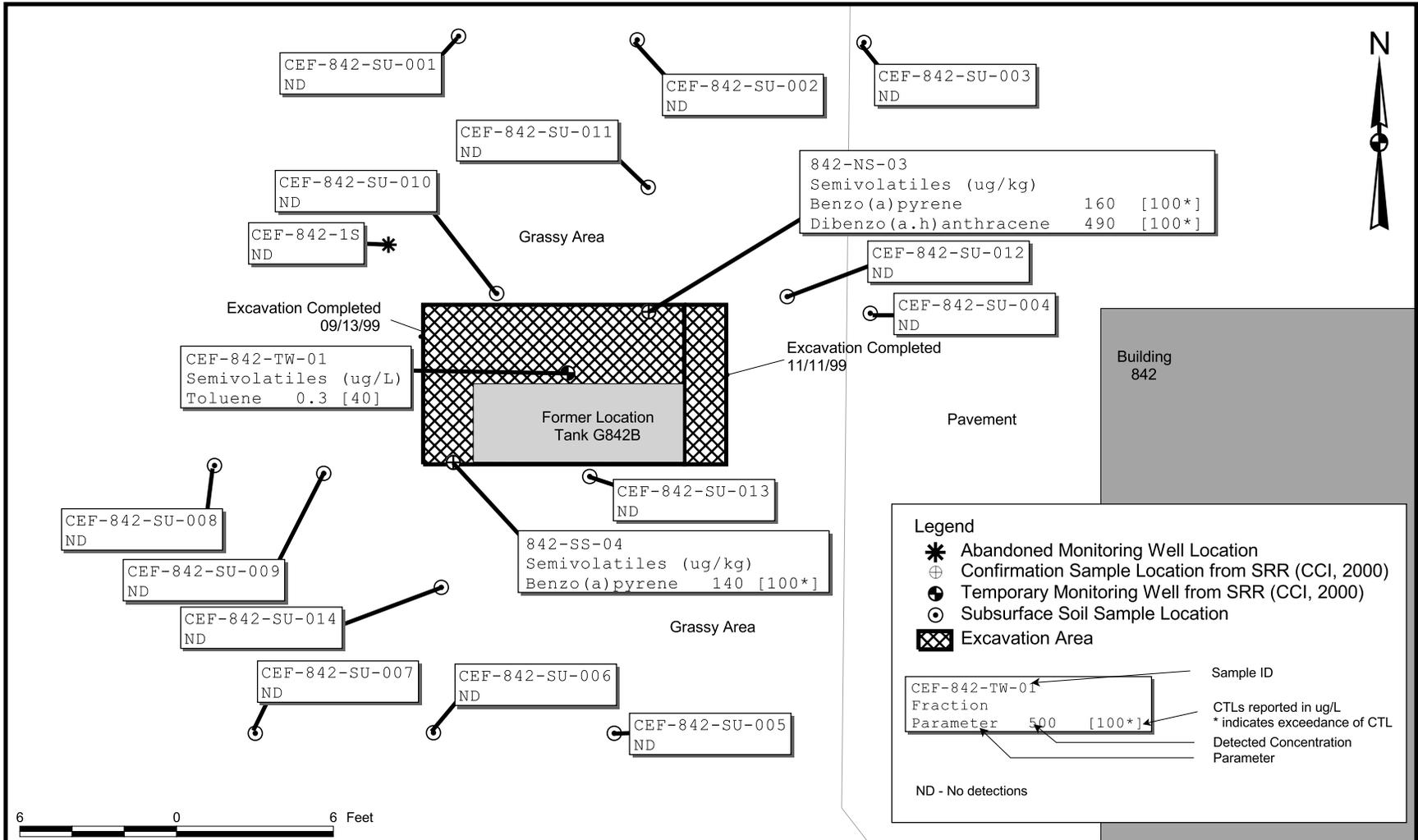
No PAHs were detected in the soil samples submitted for laboratory analysis as part of the LSSA. Figure 3-1 illustrates those findings. The detection limits reported by the laboratory were less than the SCTLs. Table 3-2 summarizes the laboratory analytical results and copies of the applicable laboratory reports are provided in Appendix D.

### 3.2 GROUNDWATER ASSESSMENT

Groundwater samples were not collected as part of this LSSA. A groundwater sample was collected from a shallow downgradient well during confirmatory sampling and analyzed for VOAs, PAHs, and TRPH (HLA, 1998). Analyte concentrations in that sample were reported below standard laboratory detection limits. A temporary well was installed in the tank excavation during the source removal and the groundwater sample was analyzed for benzene, toluene, ethylbenzene, total xylenes, methyl-tert-butyl ether, PAHs, and TRPH (CCI, 2000). Toluene was reported in this sample at a concentration of 0.3 micrograms per liter. The other groundwater COC concentrations were below standard laboratory detection limits.

<b>Table 3-1</b> <b>Soil Vapor Field Screening Results</b>  Site Assessment Report Building 842, UST G842B Naval Air Station Cecil Field Jacksonville, Florida							
Sample Identification	Depth (ft bls)	OVA Result (ppm)			Lithologic Description	Analytical Sample	Analysis
		Unfiltered	Filtered	Net			
"CEF-842-SU-" 001	2	7.2	7.4	0.2	Silty fine sand, light brown	CEF-842-SU-001-06	PAHs
	4	7.7	7.5	0.2	Silty fine sand, light brown/black		
	6	15.8	14.2	1.6	Silty fine sand, gray/brown		
002	2	4.4	4.1	0.3	Silty fine sand, light brown	CEF-842-SU-002-06	PAHs
	4	4.5	2.8	1.7	Silty fine sand, light brown		
	6	14.5	6.7	7.8	Silty fine sand, black/gray		
003	2	4.2	5.6	-1.4	Silty fine sand, light brown	CEF-842-SU-003-06	PAHs
	4	2.8	2.8	0	Silty fine sand, light brown/gray		
	6	4.5	1.0	3.5	Silty fine sand, black		
004	2	3.2	3.1	0.1	Silty fine sand, light brown	CEF-842-SU-004-06	PAHs
	4	3.3	0	3.3	Silty fine sand, gray		
	6	3.1	0	3.1	Silty Fine sand, black		
005	2	1.4	0	1.4	Silty fine sand, light brown, with limerock	CEF-842-SU-005-07	PAHs
	4	3.8	0	3.8	Silty fine sand, gray		
	7	5.7	0	5.7	Silty fine sand, black		
006	2	3.2	0	3.2	Silty fine sand, light brown	CEF-842-SU-006-06	PAHs
	4	2.8	0	2.8	Silty fine sand, light brown/gray		
	6	3.0	0	3.0	Silty fine sand, black		
007	2	2.3	0	2.3	Silty fine sand, light brown	CEF-842-SU-007-04	PAHs
	4	2.8	0	2.8	Silty fine sand, black Wet at 4.5 ft		
008	2	0.6	0	0.6	Silty fine sand, light brown	CEF-842-SU-008-04	PAHs
	4	0.9	0	0.9	Silty fine sand, black Wet at 4.5 ft		

<p align="center"><b>Table 3-1 (Continued)</b>  <b>Soil Vapor Field Screening Results</b></p> <p align="center">Site Assessment Report            Building 842, UST G842B            Naval Air Station Cecil Field            Jacksonville, Florida</p>							
Sample Identification	Depth (ft bls)	OVA Result (ppm)			Lithologic Description	Analytical Sample	Analysis
		Unfiltered	Filtered	Net			
"CEF-842-SU-"  009	2	3.8	0	3.8	Silty fine sand, light brown	CEF-842-SU-009-06	PAHs
	4	4.1	0	4.1	Silty fine sand, brown		
	6	3.9	0	3.9	Silty fine sand, black/gray Wet at 7.25 ft		
010	2	1.1	0	1.1	Silty fine sand, light gray brown	CEF-842-SU-010-06	PAHs
	4	1.4	0	1.4	Silty fine sand, light gray brown		
	6	1.2	0	1.2	Silty fine sand, dark brown/light gray Wet at 7.5 ft		
011	2	0.2	0	0.2	Silty fine sand, light brown	CEF-842-SU-011-06	PAHs
	4	0.1	0	0.1	Silty fine sand, brown		
	6	0.0	0	0.0	Silty fine sand, black/gray Wet at 7.25 ft		
012	2	0.0	0	0.0	Silty fine sand, brown	CEF-842-SU-012-06	PAHs
	4	0.0	0	0.0	Silty fine sand, dark brown		
	6	0.0	0	0.0	Silty fine sand, dark brown Wet at 7.25 ft		
013	2	0.0	0	0.0	Silty fine sand, brown	CEF-842-SU-013-06	PAHs
	4	0.0	0	0.0	Silty fine sand, brown		
	6	0.0	0	0.0	Silty fine sand, gray/brown Wet at 7.5 ft		
014	2	0.0	0	0.0	Silty fine sand, yellow/brown	CEF-842-SU-014-06	PAHs
	4	0.0	0	0.0	Silty fine sand, gray/brown		
	6	0.0	0	0.0	Silty fine sand, dark gray/black Wet at 7.25 ft		



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SITE ASSESSMENT RESULTS  
 BUILDING 842, TANK G842B  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

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<b>Table 3-2</b>									
<b>Summary of Soil Sample Analytical Results</b>									
Site Assessment Report Building 842, UST G842B Naval Air Station Cecil Field Jacksonville, Florida									
Sample ID CEF-842-		SU-001-06	SU-002-06	SU-003-06	SU-004-06	SU-005-07	SU-006-06	SU-007-04	
Sample Depth		6 ft bls	6 ft bls	6 ft bls	6 ft bls	7 ft bls	6 ft bls	4 ft bls	
Sample Date		05/07/03	05/07/03	05/07/03	05/07/03	05/07/03	05/07/03	05/07/03	
Compounds	SCTLs <sup>1</sup>								
<b>PAHs (mg/kg)</b>	<b>Residential</b>	<b>Leachability</b>							
Acenaphthene	1,900	2.1	<0.200	<0.200	<0.190	<0.180	<0.190	<0.190	<0.180
Acenaphthylene	1,100	27	<0.200	<0.200	<0.190	<0.180	<0.190	<0.190	<0.180
Anthracene	18,000	2,500	<0.200	<0.200	<0.190	<0.180	<0.190	<0.190	<0.180
Benzo(a)anthracene	1.4	3.2	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
Benzo(a)pyrene	0.1	8	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Benzo(b)fluoranthene	1.4	10	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Benzo(g,h,i)perylene	2,300	32,000	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Benzo(k)fluoranthene	15	25	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Chrysene	140	77	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
Dibenzo(a,h)anthracene	0.1	30	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Fluoranthene	2,900	1,200	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
Fluorene	2,200	160	<0.200	<0.200	<0.190	<0.180	<0.190	<0.190	<0.180
Indeno(1,2,3-cd)pyrene	1.5	28	<0.020	<0.020	<0.019	<0.018	<0.019	<0.019	<0.018
Naphthalene	40	1.7	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
1-Methylnaphthalene	68	2.2	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
2-Methylnaphthalene	80	6.1	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
Phenanthrene	2,000	250	<0.200	<0.200	<0.190	<0.180	<0.190	<0.190	<0.180
Pyrene	2,200	880	<0.098	<0.100	<0.095	<0.089	<0.094	<0.095	<0.092
See notes at end of table.									

<b>Table 3-2 (Continued)</b>									
<b>Summary of Soil Sample Analytical Results</b>									
Site Assessment Report Building 842, UST G842B Naval Air Station Cecil Field Jacksonville, Florida									
<b>Sample ID CEF-842-</b>		SU-008-04	SU-009-06	SU-010-06	SU-011-06	SU-012-06	SU-013-06	SU-014-06	
<b>Sample Depth</b>		4 ft bls	6 ft bls	6 ft bls	6 ft bls	6 ft bls	6 ft bls	6 ft bls	6 ft bls
<b>Sample Date</b>		05/07/03	03/30/04	03/30/04	03/30/04	03/30/04	03/30/04	03/30/04	03/30/04
<b>Compounds</b>	<b>SCTLs<sup>1</sup></b>								
<b>PAHs (mg/kg)</b>	<b>Residential</b>	<b>Leachability</b>							
Acenaphthene	1,900	2.1	<0.190	<0.180	<0.180	<0.200	<0.200	<0.190	<0.210
Acenaphthylene	1,100	27	<0.190	<0.180	<0.180	<0.200	<0.200	<0.190	<0.210
Anthracene	18,000	2,500	<0.190	<0.180	<0.180	<0.200	<0.200	<0.190	<0.210
Benzo(a)anthracene	1.4	3.2	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
Benzo(a)pyrene	0.1	8	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Benzo(b)fluoranthene	1.4	10	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Benzo(g,h,i)perylene	2,300	32,000	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Benzo(k)fluoranthene	15	25	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Chrysene	140	77	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
Dibenzo(a,h)anthracene	0.1	30	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Fluoranthene	2,900	1,200	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
Fluorene	2,200	160	<0.190	<0.180	<0.180	<0.200	<0.200	<0.190	<0.210
Indeno(1,2,3-cd)pyrene	1.5	28	<0.019	<0.018	<0.018	<0.020	<0.020	<0.019	<0.021
Naphthalene	40	1.7	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
1-Methylnaphthalene	68	2.2	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
2-Methylnaphthalene	80	6.1	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110
Phenanthrene	2,000	250	<0.190	<0.180	<0.180	<0.200	<0.200	<0.190	<0.210
Pyrene	2,200	880	<0.094	<0.090	<0.090	<0.099	<0.098	<0.096	<0.110

**Notes:**  
<sup>1</sup>Established in Chapter 62-777, FAC.  
mg/kg = milligrams per kilogram  
All units are in mg/kg.  
< = less than

## 4.0 SUMMARY AND RECOMMENDATIONS

TtNUS completed this LSSA on the site of the former UST (Tank G842B) that was adjacent to the former radar building, Building 842, at NAS Cecil Field. This LSSA was conducted based on the data presented in the SRR (CCI, 2000) and the resulting response from the FDEP. The conclusions based on the data collected during this LSSA of the former UST (Tank G842B) are summarized as follows:

- The SRR soil data indicated that a petroleum impact appeared to have occurred in the area adjacent to the former location of UST G842B.
- No free product was reported in the CSR or the SRR, and none was encountered during this LSSA.
- The results of soil screening (both visual and OVA-FID headspace analysis) and confirmatory soil sampling indicate that no excessively contaminated soil is present at the site.
- Any remaining petroleum impact to site soil appears to be limited to two locations at the edges of the source removal excavation. PAHs were detected in two soil samples at concentrations above the residential direct exposure SCTLs.
- The groundwater sampling results reported in the CSR and SRR indicated that petroleum impact to the shallow groundwater had not occurred. The groundwater flow direction is reported to be to the northwest. Because no petroleum impact to site groundwater was detected during the CSR and SRR, installation of vertical extent wells, a potable water supply well inventory, and aquifer testing were not conducted at this site.

Based on the results of this investigation and the industrial land use intended for this site for the present and future as an airfield, TtNUS recommends that the soil around the two soil sample locations (842-SS-04 and 842-NS-03) remain in place. Therefore, TtNUS recommends approval of no further action for the Building 842, Tank G842B site.

## REFERENCES

ABB-ES (ABB Environmental Services), 1997a. "Tank Management Plan" Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. January.

ABB-ES, 1997b. "Confirmatory Sampling Report" Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for NAVFAC EFD SOUTH, North Charleston, South Carolina. December.

CCI (CH2M HILL Constructors, Inc.), 2000. "Source Removal Report Underground Storage Tank Removal at Building 842, Tank G842B," Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for NAVFAC EFD SOUTH, Charleston, South Carolina. August.

HLA (Harding Lawson Associates), 1998. "Confirmatory Sampling Report Building 842, Tank G842B, Revision 2.0," Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for NAVFAC EFD SOUTH, Charleston, South Carolina. November.

TtNUS (Tetra Tech NUS, Inc.), 2003. "Work Plan Addendum for UST Investigations at South Fuel Farm and Other Sites," Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for NAVFAC EFD SOUTH, Charleston, South Carolina. April.

**APPENDIX A**

**FDEP LETTER REGARDING SOURCE REMOVAL REPORT**



# Department of Environmental Protection

JEN BUSH  
Governor

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

David B. Struhs  
Secretary

April 5, 2001

Mr. Nick Ugolini  
Code 1843 (UST RPM)  
Southern Division  
Naval Facilities Engineering Command  
Post Office Box 190010  
North Charleston, South Carolina 29419-9010

RE: Source Removal Report, Underground Storage Tank Removal at  
Building 842, Tank G842B, Naval Air Station Cecil Field,  
Jacksonville, Florida

Dear Mr. Ugolini:

I have completed the review of the Source Removal Report, Underground Storage Tank Removal at Building 842, Tank 842B, Naval Air Station Cecil Field, dated August 2000 (draft received August 7, 2000, green cover received March 21, 2001), prepared and submitted by CH2M Hill Constructors, Inc. A total of 2.47 tons of soil were excavated and properly disposed. The Department cannot concur with the recommendation for No Further Action at this site because soil contaminated with benzo(a)pyrene and dibenzo(a,h)anthracene at concentrations exceeding the Department's residential Soil Cleanup Target Levels was detected in grab samples from the north and south sides of the excavation. Since groundwater has not been impacted, Site Assessment activities should be limited to delineating the extent of contaminated soil. AS OVA data proved to be of no use in delineating contaminated soil during source removal activities at this site, assessment of soil contamination should be determined by laboratory analyses.

If I can be of any further assistance with this matter, please contact me at (850) 488-3693.

Sincerely,

David P. Grabka  
Remedial Project Manager

cc: Scott Glass, Southern Division  
Debbie Vaughn-Wright, USEPA Region 4  
Mark Speranza, TetraTech NUS, Pittsburgh

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

Mr. Nick Ugolini  
Building 842, Tank G842B  
Naval Air Station Cecil Field  
April 5, 2001  
Page Two

Sam Ross, CH2M Hill Constructors, Inc.  
Mike Fitzsimmons, FDEP Northeast District

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

**APPENDIX B**

**DPT SOIL BORING LOGS**



Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 842  
 Project No.: N4248, CTO 248

Sample ID No.: CEF-842-<sup>54</sup>SB-001-06  
 Sample Location: CEF-842-58-001  
 Sampled By: MD/CG  
 C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

Type of Sample:  
 Low Concentration  
 High Concentration

GRAB SAMPLE DATA:

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1136</u>			
Method: <u>SS hand auger &amp; DPR sleeve</u>	<u>5-6'</u>	<u>brown</u>	<u>silty fine sd. dry to damp</u>
Monitor Reading (ppm): <u>0.0</u>			

BORING LOG DATA:

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-2.5</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>2.5-4</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4-5</u>	<u>gray</u>	<u>SM</u>	<u>silty fine sand, dry to damp?</u>
<u>5-6</u>	<u>brown</u>	<u>SM</u>	<u>silty fine sand, damp?</u>
<u>6-8.5</u>	<u>black</u>	<u>SM</u>	<u>silty fine sd. 've 7' bls.</u>
<u>8.5-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sd., wet</u>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
PAHs SW 846 8310	1-4oz. Jar	<u>yes</u>	accutest

OBSERVATIONS / NOTES:

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>7.2</u>	<u>7.4</u>	<u>0.2</u>
<u>4</u>	<u>7.7</u>	<u>7.5</u>	<u>0.2</u>
<u>6</u>	<u>15.8</u>	<u>14.2</u>	<u>1.6</u>

MAP:

see work plans

Check if Applicable:

ID No.:  MSMSD  DUPLICATE

Signature(s):

M.D. Dale

global BS = background, BH = borehole, BZ = breaking age.

BG

st read  
1118 1123  
1122/127  
1136 1141



Tetra Tech NUS, Inc.

# SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 842  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-54-002-06  
Sample Location: CEF-842-5B-002  
Sampled By: MD/CG  
C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other: \_\_\_\_\_
- QA Sample Type: \_\_\_\_\_

Type of Sample:  
 Low Concentration  
 High Concentration

### GRAB SAMPLE DATA:

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1202</u>	<u>5-6'</u>	<u>gray</u>	<u>silty fine sand, damp</u>
Method: <u>SS H.P. &amp; DPT Acetate</u>			
Monitor Reading (ppm): <u>7.0-8.0 e/e</u>			

bk  
grnd

### BORING LOG DATA:

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-4</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4-5</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>5-7</u>	<u>gray</u>	<u>SM</u>	<u>silty fine sand, damp</u>
<u>7-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sand, moist at 7', 7 @ 8' bls.</u>

### SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
PAHs	SW 846 8310	1-4oz. Jar	yes accutest

### OBSERVATIONS / NOTES:

st read  
1152 1157  
1155 1200  
1200 1205

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>44 MD</u>	<u>44.1</u>	<u>0.3</u>
<u>4</u>	<u>24.5</u>	<u>2.8</u>	
<u>6</u>	<u>14.5</u>	<u>6.7</u>	

MAP:  
See workplan.

BZ = BQ = BH  
Note: hand auger to 5' + core to 10' bls.

### Check if Applicable:

ID No.:  MSMSD  DUPLICATE

Signature(s):  
J.M. W. Dale

none  
bg = background



Project Site Name: NAS Cecil Field Building 842  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SU-003-06  
Sample Location: CEF-842-JB-003  
Sampled By: MD/CG  
C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1233</u>			
Method: <u>HA(SS) + DPT ACE</u>	<u>5-6'</u>	<u>black</u>	<u>silty fine sand, damp</u>
Monitor Reading (ppm): <u>5.9</u>			

BG

**BORING LOG DATA:**

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>1'-3'</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sd., dry</u>
<u>3-4.5</u>	<u>grey</u>	<u>SM</u>	<u>silty fine sd., dry</u>
<u>4.5-7</u>	<u>black</u>	<u>SM</u>	<u>silty fine sd., dry</u>
<u>7-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sd., moist @ 7.57', 7.8'</u>

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs	SW 846 8310	1-4oz. Jar	yes accutest

**OBSERVATIONS / NOTES:**

Depth (ft bis)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>4.2</u>	<u>5.6</u>	<u>-1.4</u>
<u>4</u>	<u>2.8</u>	<u>2.8</u>	<u>0</u>
<u>6</u>	<u>4.5</u>	<u>1.0</u>	<u>3.5</u>

**MAP:**

1" asphalt on top  
see workplan

Hand auger to 5'; core to 10' bis.

BK = BH = BZ

**Check if Applicable:**

ID No.:  MSMSD  DUPLICATE

None

**Signature(s):**

Maurin W. Dede

SE 1220  
1224 1229  
1228 1233  
1234 1239

# SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 842  
 Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SM-004-86  
 Sample Location: CEF-842-SB-004  
 Sampled By: MD/CG  
 C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other: \_\_\_\_\_
- QA Sample Type: \_\_\_\_\_

Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1305</u>	<u>5-6</u>	<u>black</u>	<u>silty fine sd. damp</u>
Method: <u>CSHA-DTAQTA</u>			
Monitor Reading (ppm): <u>3.2</u>			

BG

**BORING LOG DATA:**

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-2</u>	<u>lk. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>2-4.5</u>	<u>gray</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4.5-6</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>6-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sand, moist @ 6.5', ve 7'6"</u>

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs SW 846 8310	1-4oz. Jar	<u>yes</u>	accutest

**OBSERVATIONS / NOTES:**

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>3.2</u>	<u>3.1</u>	<u>0.1</u>
<u>4</u>	<u>3.3</u>	<u>0</u>	<u>3.3</u>
<u>6</u>	<u>3.1</u>	<u>0</u>	<u>3.1</u>

hand auger to 5' bls, core to 10' bls  
 BG=BZ=BH

**MAP:**

1" asphalt on top  
  
see workplan

**Check if Applicable:**

ID No.:  MSMSD  DUPLICATE  
None

**Signature(s):**

M.W. Dale

st road  
 1254 1259  
 1256 1301  
 1305 1310



Tetra Tech NUS, Inc.

# SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 842  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SK-005-07  
Sample Location: CEF-842-SB-035  
Sampled By: MD/CG  
C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

Type of Sample:  
 Low Concentration  
 High Concentration

### GRAB SAMPLE DATA:

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1520</u>			
Method: <u>H.A. (SS) &amp; DPT Acetate</u>	<u>6-7'</u>	<u>black</u>	<u>Silty fine sand, damp</u>
Monitor Reading (ppm): <u>4.8</u>			

BG

### BORING LOG DATA:

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-2</u>	<u>lt. brn</u>	<u>SM</u>	<u>Silty fine sand w/ limrock dry</u>
<u>2-3.5</u>	<u>gray</u>	<u>SM</u>	<u>Silty fine sand w/ dry</u>
<u>3.5-5</u>	<u>black</u>	<u>SM</u>	<u>Silty fine sand dry</u>
<u>5-7.5</u>	<u>black</u>	<u>SM</u>	<u>Silty fine sd. dry</u>
<u>7.5-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>Silty fine sd., moist @ 7.5' b/s, To 8' b/s</u>

### SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
PAHs	SW 846 8310	1-4oz. Jar	yes accutest

### OBSERVATIONS / NOTES:

Depth (ft b/s)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>1.4</u>	<u>0</u>	<u>1.4</u>
<u>4</u>	<u>3.8</u>	<u>0</u>	<u>3.8</u>
<u>7</u>	<u>5.7</u>	<u>0</u>	<u>5.7</u>

MAP:  
See work plan

st. read  
1453 1458  
1516 1521  
1523 1528

Hand auger to 5' b/s, core to 10' b/s.  
BG = BH = BZ

Check if Applicable:

- ID No.:  MSMSD  DUPLICATE
- None

Signature(s):

M. W. Dede



Project Site Name: NAS Cecil Field Building 842  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SU-006-06  
Sample Location: CEF-842-JB-006  
Sampled By: MD/CG  
C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other: \_\_\_\_\_
- QA Sample Type: \_\_\_\_\_

Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1539</u>	<u>5-6' bls</u>	<u>black</u>	<u>silty fine sand, dry</u>
Method: <u>SS, H.A. / DPT Acetone</u>			
Monitor Reading (ppm): <u>3.2</u>			

BG

**BORING LOG DATA:**

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-3</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>3-4</u>	<u>gray</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4-6</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>6-6.5</u>	<u>brown</u>	<u>SM</u>	<u>silty fine sand, Moist @ 6.5' bls</u>
<u>6.5-10</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sand, @ 7' bls</u>

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
<u>PAHs</u>	<u>SW 846 8310</u>	<u>1-4oz. Jar</u>	<u>yes</u>
			<u>accutest</u>

**OBSERVATIONS / NOTES:**

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>3.2</u>	<u>0</u>	<u>3.2</u>
<u>4</u>	<u>2.8</u>	<u>0</u>	<u>2.8</u>
<u>6</u>	<u>3.0</u>	<u>0</u>	<u>3.0</u>

BG = B4 = B7  
Hand meter to 5' bls; core to 10' bls.

**MAP:**

See map in work folder

**Check if Applicable:**

ID No.:  MSMSD  DUPLICATE  
None

**Signature(s):**

M. J. Dale

St read  
1532 1537  
1535 1540  
1541 1546



Tetra Tech NUS, Inc.

# SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 842  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SU-007-04  
Sample Location: CEF-842-SB-007  
Sampled By: MD/CG  
C.O.C. No.: 2310

- Surface Soil
- Subsurface Soil
- Sediment
- Other:
- QA Sample Type:

Type of Sample:  
 Low Concentration  
 High Concentration

### GRAB SAMPLE DATA:

Date: <u>5/7/03</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1552</u>			
Method: <u>SSH.A. / Acetone DT</u>	<u>3-4</u>	<u>black</u>	<u>silty fine sd., dry</u>
Monitor Reading (ppm): <u>2.8</u>			

BG

### BORING LOG DATA:

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-2.5</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>2.5-4</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4-5</u>	<u>dk. brn</u>	<u>JM</u>	<u>silty fine sand, moist @ 4.5', wet @ 5'</u>

### SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
PAHs	SW 846 8310	1-4oz. Jar	yes accutest

### OBSERVATIONS / NOTES:

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>2.3</u>	<u>0</u>	<u>2.3</u>
<u>4</u>	<u>2.8</u>	<u>0</u>	<u>2.8</u>

BZ = BG = BH  
S.S. hand danger to 5' bls, core to 10' bls

### MAP:

see map in workplan

SI read  
1550 1559  
1552 1557

### Check if Applicable:

ID No.:  MSMSD  DUPLICATE

CEF-842-SU-007-04

### Signature(s):

M.W. Dale



Project Site Name: NAS Cecil Field Building 842  
 Project No.: N4248, CTO 248

Surface Soil  
 Subsurface Soil  
 Sediment  
 Other:  
 QA Sample Type:

Sample ID No.: CEF-842-SU-008-04  
 Sample Location: CEF-842-SB-008  
 Sampled By: MD/CG  
 C.O.C. No.: 2310

Type of Sample:  
 Low Concentration  
 High Concentration

GRAB SAMPLE DATA:

Date: <u>5/7/03</u>	Depth: <u>3-4'</u>	Color:	Description (Sand, Silt, Clay, Moisture, etc.):
Time: <u>1608</u>			
Method: <u>SS HA/ DDT Acetate</u>			
Monitor Reading (ppm): <u>0.7</u>			

BORING LOG DATA:

Depth	Color	USCS	Description (Sand, Silt, Clay, Moisture, etc.)
<u>0-2.5</u>	<u>lt. brn</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>2.5-3</u>	<u>black</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>3-4</u>	<u>gray</u>	<u>SM</u>	<u>silty fine sand, dry</u>
<u>4-34.5</u>	<u>dk. brn</u>	<u>SM</u>	<u>silty fine sand, moist at 4.5' b/s</u>
<u>4.58-5</u>	<u>brn</u>	<u>SM</u>	<u>silty fine sand, <math>\nabla</math> at 5' b/s.</u>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
PAHs	SW 846 8310	1-4oz. Jar	YPA
			accutest

OBSERVATIONS / NOTES:

Depth (ft b/s)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
<u>2</u>	<u>0.6</u>	<u>0</u>	<u>0.6</u>
<u>4</u>	<u>0.9</u>	<u>0</u>	<u>0.9</u>

B6 = B7 = BH  
hand auger to 5' b/s; core to 10' b/s MB

MAP:  
 see map in workplan

Check if Applicable:

ID No.:  MSMSD  DUPLICATE  
CEF-842-DU01-04

Signature(s):  
M. W. Dale

BG

st read  
1605 1610  
1607 1612





# BORING LOG



Tetra Tech NUS, Inc.

Page 1 of 1

PROJECT NAME: NASCF, Building 842 BORING NO.: CEF-842-SB- 011  
 PROJECT NUMBER: N4248 DATE: 3/30/04  
 DRILLING COMPANY: TINUS GEOLOGIST: Mervin Dale  
 DRILLING RIG: SS Hand Auger DRILLER: Mervin Dale

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		U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/ Consistency or Rock Hardness	Color			Material Classification	Sample	Sampler BZ	Borehole**	Driller BZ**
	0-6"					Yel. Limerock		dry					
	6"-1'					lt. br silty fine sand	SM	dry				0.2	0.2
	1-3.5'					Yel. br silty fine sand	SM	dry					
	3.5-4'					dk. br silty fine sand	SM	dry				0.2	0.2
	4-5.5'					lt. gr silty fine sand	SM	damp					
	5.5-6'					blk. silty fine sand	SM	damp				0.0	0.0
	6-7.25'					dk. br silty fine sand	SM	moist				@7.25' b/s.	

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: \_\_\_\_\_

Drilling Area Background (ppm): 0, 2

Converted to Well: Yes \_\_\_\_\_ No X Well I.D. #: \_\_\_\_\_









Project Site Name: NAS Cecil Field Building 324  
 Project No.: N4248, CTO 248  
 Surface Soil  
 Subsurface Soil  
 Sediment  
 Other:  
 QA Sample Type:  
 Sample ID No.: CEF-842-SU-009-06  
 Sample Location: CEF-842-SB-009  
 Sampled By: MD  
 C.O.C. No.: 842-033004  
 Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date:	<u>3/30/04</u>	Depth		Color		Description (Sand, Silt, Clay, Moisture, etc.)
Time:	<u>12:22</u>					
Method:	<u>Disposable Trowel</u>	<u>5-6' b/s</u>		<u>gray to black</u>		<u>silty fine sand, damp</u>
Monitor Reading (ppm):	<u>SS HA</u>					

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs	8310	1 - 4 oz jar	4.0 accutest

**OBSERVATIONS / NOTES:**

Depth (ft bis)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)	MAP:
<u>2</u>	<u>3.8</u>	<u>-</u>	<u>3.8</u>	<u>See Fig 3.1</u>
<u>4</u>	<u>4.1</u>	<u>-</u>	<u>4.1</u>	
<u>6</u>	<u>3.9</u>	<u>-</u>	<u>3.9</u>	

Tc TM  
 1240 1249  
 1252 1257  
 1307 1312

Check if Applicable:  
 ID No.:  MSMSD  DUPLICATE  
None  
 Signature(s): MD



Tetra Tech NUS, Inc.

# SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Cecil Field Building 324  
 Project No.: N4248, CTO 248  
 Sample ID No.: CEF-842-SU-010-06  
 Sample Location: CEF-842-SB-010  
 Sampled By: MA  
 C.O.C. No.: 842-033007  
 Surface Soil  
 Subsurface Soil  
 Sediment  
 Other:  
 QA Sample Type:  
 Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>3/30/04</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1442</u>	<u>5-6' bbl.</u>	<u>gray</u>	<u>silty fine sand, damp</u>
Method: <u>Disposable Trowel SSA</u>			
Monitor Reading (ppm):			

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

**SAMPLE COLLECTION INFORMATION:**

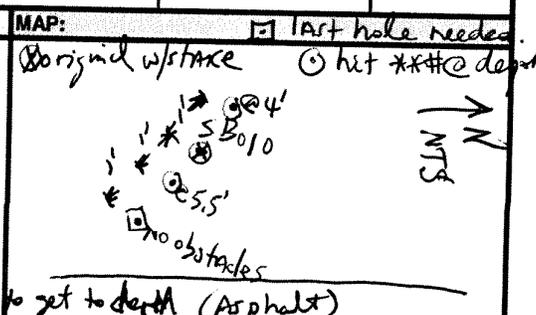
Analysis	Container Requirements	Collected	LAB
PAHs 8310	1 - 4 oz jar	<u>MA</u>	accutest

TC TM  
 1352 1352  
 1407 1412  
 1422 1427

**OBSERVATIONS / NOTES:**

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)
2	1.1	-	1.1
4	1.4	-	1.4
6	1.2	-	1.2

hit obstacles 4in 1' of stake - had to move 2' SE to get to depth (Asphalt)



Check if Applicable:  
 ID No.:  MSMSD  DUPLICATE  
CEF-842-SU-DU07 MA MA NME

Signature(s): M. d. Dale



Project Site Name: NAS Cecil Field Building 324 Sample ID No.: CEF-842-SU-011-06  
 Project No.: N4248, CTO 248 Sample Location: CEF-842-SB-011  
 Sampled By: MD  
 C.O.C. No.: 842-033004

Surface Soil  
 Subsurface Soil  
 Sediment  
 Other:  
 QA Sample Type:

Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date:	<u>2/20/04</u>	Depth	<u>5-6' bbs</u>	Color	<u>blk</u>	Description (Sand, Silt, Clay, Moisture, etc.)	<u>silty fine sand, damp</u>
Time:	<u>11530</u>						
Method:	<u>Disposable Crowet NA, SS</u>						
Monitor Reading (ppm):							

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):			<u>NA</u>	

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs	8310	1 - 4 oz jar	<u>700</u> accutest

**OBSERVATIONS / NOTES:**

Depth (ft bbs)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)	MAP:
<u>2</u>	<u>0.2</u>	<u>-</u>	<u>0.2</u>	<u>See Fig 3.1</u>
<u>4</u>	<u>0.1</u>	<u>-</u>	<u>0.1</u>	
<u>6</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>	

Check if Applicable:  
 ID No.:  MSMSD  DUPLICATE  
CEF-842-SU-DU02

Signature(s): [Signature]

Tc Tm  
1453 1459  
1505 1511  
1517 1525



Project Site Name: NAS Cecil Field Building 324  
Project No.: N4248, CTO 248

Sample ID No.: CEF-842-SU-012-06  
Sample Location: CEF-842-SB-012  
Sampled By: MD  
C.O.C. No.: 842-033004

- Surface Soil
- Subsurface Soil
- Sediment
- Other: \_\_\_\_\_
- QA Sample Type: \_\_\_\_\_

Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>3/30/04</u>	Depth: <u>5-6' b/s</u>	Color: <u>dk. brn</u>	Description (Sand, Silt, Clay, Moisture, etc.): <u>silty fine sand, damp</u>
Time: <u>1614</u>			
Method: <u>Disposable Trowel HA, SS</u>			
Monitor Reading (ppm):			

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs 8310	1 - 4 oz jar	<u>yes</u>	accutest

**OBSERVATIONS / NOTES:**

Depth (ft b/s)	Unfiltered (ppm)	Filtered (ppm)	Net (ppm)
<u>1557 1602 2'</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>
<u>1602 1607 4'</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>
<u>1614 1619 6'</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>

MAP: see fig. 3.1

**Check if Applicable:**

ID No.:  MSMSD  DUPLICATE  
CEF-842-SU-012-06

Signature(s): M. W. Dale



Project Site Name: NAS Cecil Field Building 324  
 Project No.: N4248, CTO 248  
 Sample ID No.: CEF-842-5U-013-06  
 Sample Location: CEF-842-5B-013  
 Sampled By: MO  
 C.O.C. No.: 842-033004  
 Surface Soil  
 Subsurface Soil  
 Sediment  
 Other:  
 QA Sample Type:  
 Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>3/30/04</u>	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: <u>1649</u>	<u>5-6' bls</u>	<u>gray blk. sm</u> <u>MO</u>	<u>silty fine sand, damp</u>
Method: <u>Disposable Trowel SSHA</u>			
Monitor Reading (ppm):			

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):			<u>NONE</u>	

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs 8310	1 - 4 oz jar	<u>Y</u>	accutest

**OBSERVATIONS / NOTES:**

Depth (ft bls)	Unifilter (ppm)	Filtered (ppm)	Net (ppm)	MAP:
<u>TC TM 1637 1642 2'</u>	<u>0.0</u>	<u>-</u>	<u>R.P</u>	<u>See fig. 3.1</u>
<u>1641 1646 4'</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>	
<u>1649 1654 6'</u>	<u>0.0</u>	<u>-</u>	<u>0.0</u>	

**Check if Applicable:**  
 ID No.:  MSMSD  DUPLICATE  
none  
 Signature(s): [Signature]



Project Site Name: NAS Cecil Field Building 324 Sample ID No.: CEF-842-SU-014-06  
 Project No.: N4248, CTO 248 Sample Location: CEF-842-SB-014  
 [ ] Surface Soil Sampled By: MO  
 [X] Subsurface Soil C.O.C. No.: 842-033004  
 [ ] Sediment  
 [ ] Other:  
 [ ] QA Sample Type: Type of Sample:  
 Low Concentration  
 High Concentration

**GRAB SAMPLE DATA:**

Date: <u>3/20/04</u>	Depth: <u>5-6' bls</u>	Color: <u>black</u>	Description (Sand, Silt, Clay, Moisture, etc.): <u>silty fine sand, damp</u>
Time: <u>1722</u>			
Method: <u>Disposable Trowel SSA</u>			
Monitor Reading (ppm):			

**COMPOSITE SAMPLE DATA:**

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

**SAMPLE COLLECTION INFORMATION:**

Analysis	Container Requirements	Collected	LAB
PAHs 8310	1 - 4 oz jar	<u>yes</u>	accutest

**OBSERVATIONS / NOTES:**

Depth (ft bls)	Unfilter (ppm)	Filtered (ppm)	Net (ppm)	MAP:
<u>TC TM</u> 1703 1708 2'	0.0	~	0.0	<u>see fig. 3.1</u>
1714 1719 4'	0.0	~	0.0	
1722 1727 6'	0.0	~	0.0	

**Check if Applicable:** ID No.:  MSMSD  DUPLICATE  
 Signature(s): MW Dale  
NOTE

**APPENDIX C**

**FIELD NOTES**

5/7/03

B.842

CECIL FIELD 070248

L.S. NAM

- 0700 Merv Dave AT Cecil Field. IN Range (cell ph 845-7048).  
Chris Gleason to arrive later.  
WEAT: 76°F (L), 92°F (H), 0% Rain chance, winds from SW  
@ 5-10 mph.
- 0805 Merv loaded Prosonic DPT crew (Victor Terrell + Maurice Crepanke)  
and @ B.1 for 4x5' + workplan.
- 0815 Merv calibrate FID # 44 from Field Env. See calibration  
sheet for details.
- 0835 Work plan detailing. See workplan Addendum dated 4/03.  
Notes: Utility locates completed (started 5/5/03 A.M.) See  
Sunshine ticket # 12530216.  
No live utilities on site. There are dead utility lines  
on site. Jason of JAA was here on 5/5/03 and indicated  
the nearest airborne flight line lines/utilities are about  
100 ft. away and next to the runways (w/in 5' of runways)
- 0850 Hold AT'S briefing per plan dated 4/03. See separate  
permits 842-1 thru 842-4. Also signed medical  
data sheets for crew.
- 0930 Merv + Prosonic crew go to B.82 to get escort w/ JAA.  
Note: PPE Level D - safety glasses, gloves + hard hats  
included. Notes: C. Gleason arrived at 1000.
- 1045 Roy Craigie pre us his blessing to go out to the site. He  
said that Cecil Ground is ready for our cell.
- 1050 M. Dale (Tetra Tech 2) has permission to cross runways  
with 2 vehicles following.
- 1055 on site. Set up decont station for DPT and for one  
soil screen Mason jacks on concrete pad where B.842 used to be  
located.
- 1100 Chris Gleason doing eq. insp. of 66DT rig. (veh. # 6601).
- 1110 Rig okay to work - Kill switch at operators station works.  
See eqmt. inspection sheet for further detail.
- 1112 Air background 7-8 ppm. NOTE: P-3's + other aircraft  
are flying by on the runways.
- 1118-  
1141 Collecting soil samples for OVA-FID screen per FOIA recommended  
headsapce screening guidelines. Sampling at 2' intervals to the  
water table per workplan. See Soil/Sediment Sample log sheets for  
bathology, air monitor + soil sample data.
- \*1136 Merv collect sample for Pats (8314) @ 5-6' bls. interval from DPT  
acetate sleeve. I.D. Cef-842-SU-001-06.

M. W. Dale

f. Delayed atny

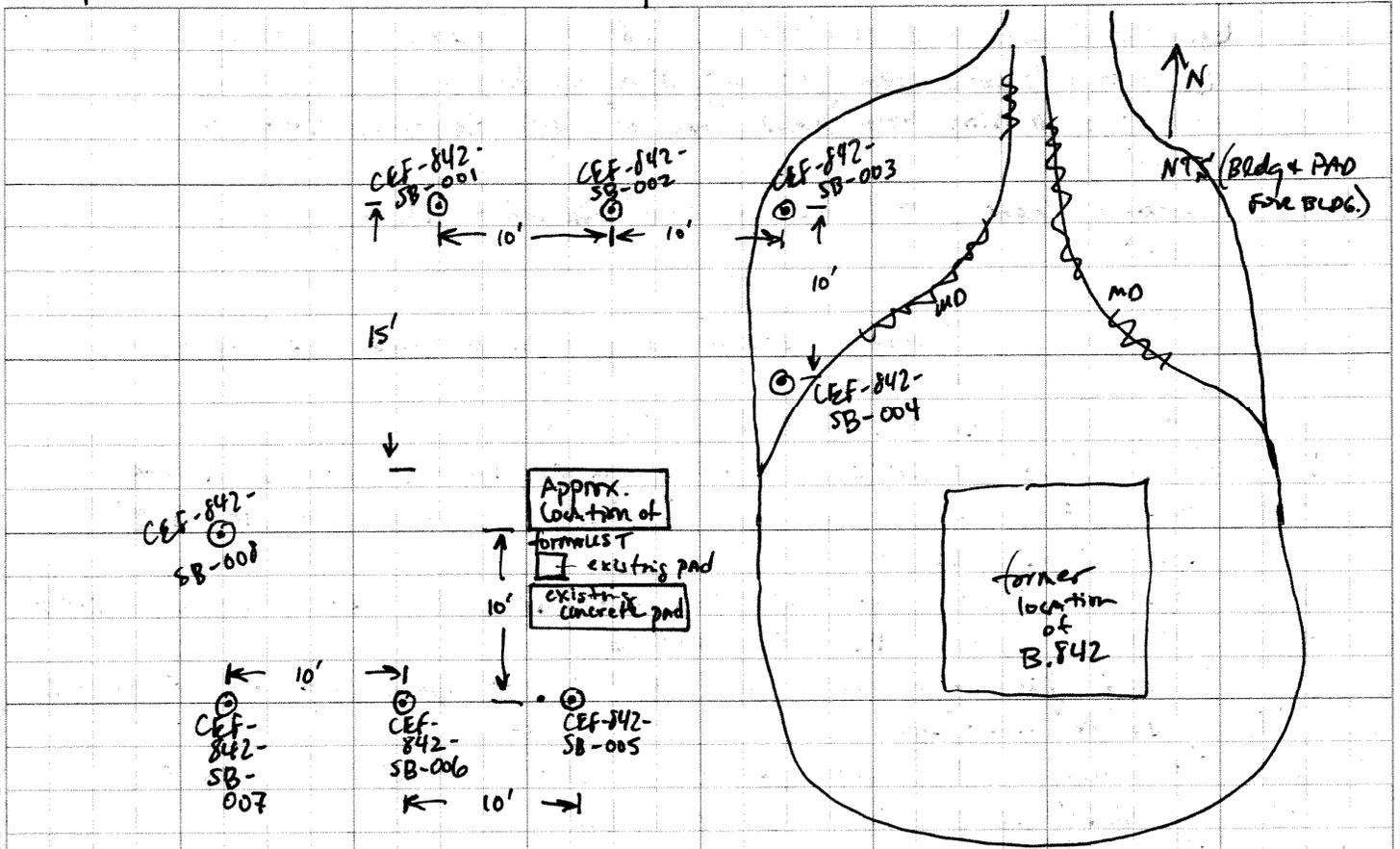
P.62

5/7/03

B.842, Limited Scope Soil Inv. CTD 240

FIELD

4.2.1.1.1



Former TANK shown w/ dimensions 3' x 8' (Approximated).

- 1142 Chris is decontaminating mason jars after each OVA-FID reading. DPT helper (Victor) is decontaminating the hand auger and MACRO-CORE DPT tool after each hole per TIMUS SOP SA 7.1.
  - 1150 Victor set up on CEF-842-SB-002.
  - 1152-1205 Merv + Chris collecting soil samples using same procedure for soil screening per FOEP recommended guideline for headspace screening. See soil/sediment log sheet for lithologic data, air monitor & soil sample data.
  - \*1202 Merv collect soil sample for PATTs. Sample I.D. CEF-842-SU-002-06.
  - 1220 Victor set up on CEF-842-SB-003.
  - 1224-1239 Merv + Chris collecting soil samples for headspace screening per FOEP guidelines. See soil/sediment log sheet for lithologic data, air monitor & soil sample data.
  - \*1233 Merv collected soil sample for PATTs. Sample I.D. CEF-842-SU-003-06.
  - 1251 Victor set up CEF-842-SB-004.
  - 1254-1310 Merv + Chris collecting soil samples for headspace screening per FOEP guidelines. See soil/sediment log sheet for lithologic data, air monitor data & soil sample data.
- M.W. del  
\* delayed entry.

5/7/03

CECIL  
FIELD

B.842 Limited Soil Inv.

GD 248

U.S. NAVY

- \* 1305 Merv collect soil sample for PAHs. I.D.# is CEF-842-SU-004-06.
- 1315 Merv, Chris + Prosonic crew securing site for lunch.
- 1323 We have permission from DIANA Stone of JFA to leave truck + trailer on site.
- 1325 2 vehicles depart Highline w/ Cecil Ground's okay.
- 1330-  
1435 Lunch.
- 1435-1445 Merv, Chris + Prosonic crew rec'd permission from Cecil Ground to return to B.842 area.
- 1450 Victor set up on CEF-842-SB-005.
- 1453-  
1528 Merv + Chris set soils collected per workplan + screen w/OVA-FRD per FDEP headspace analysis guidelines. Still sampling @ 2' intervals per workplan.
- \* 1520 Merv collect soil for Lab PAH analysis. I.D.# CEF-842-SU-005-07.
- 1538 Victor set up on CEF-842-SB-006.
- 1532-  
1546 Merv + Chris collect soils for OVA-FRD headspace screening w/OVA-FRD per FDEP guidelines.
- \* 1539 Merv collect soil sample for PAHs. I.D.# CEF-842-SU-006-06.
- 1548 Victor set up on CEF-842-SB-007.
- 1550-  
1557 Merv + Chris collecting and screening soils at this location per FDEP headspace guidelines. Note: ▽ showered here so we only have to hand auger (stainless steel type).
- \* 1552 Merv collect soil for Lab PAH analysis. I.D.# CEF-842-SU-007-04. Also collect extra jar for Lab MSM5D. See Soil/Sediment log sheet for soil lithologic + sampling data and air monitor data.
- 1600 Victor set up on CEF-842-SB-008.
- 1605-  
1612 Merv + Chris collecting + screening soils per FDEP recommended headspace analysis guidelines. See Soil/Sediment Sample Log Sheet for lithologic data, air monitor data + sampling data.
- \* 1608 Merv collect PAH soil sample. I.D.# CEF-842-SU-008-04. Also collect duplicate (time on label = 0000) and I.D.# CEF-842-DU01-04. here @ SB008 (same interval as sample).
- 1615 Victor doing final clean of eqmt. Since OVA-FRD soil reads were below 10 ppm (wet) - we are putting soil back in hole it came from. We also spread the 10% decan H<sub>2</sub>O on the asphalt to evaporate there.
- 1630 Prosonic crew, Merv + Chris have secured site and departed with Cecil Ground's permission.
- 1633 Back at office. Merv took samples from ice chest + put \* delayed entry. p.64

M.W. Selo

5/7/03

Cecil Head, B.842 Soil Inv.

170248

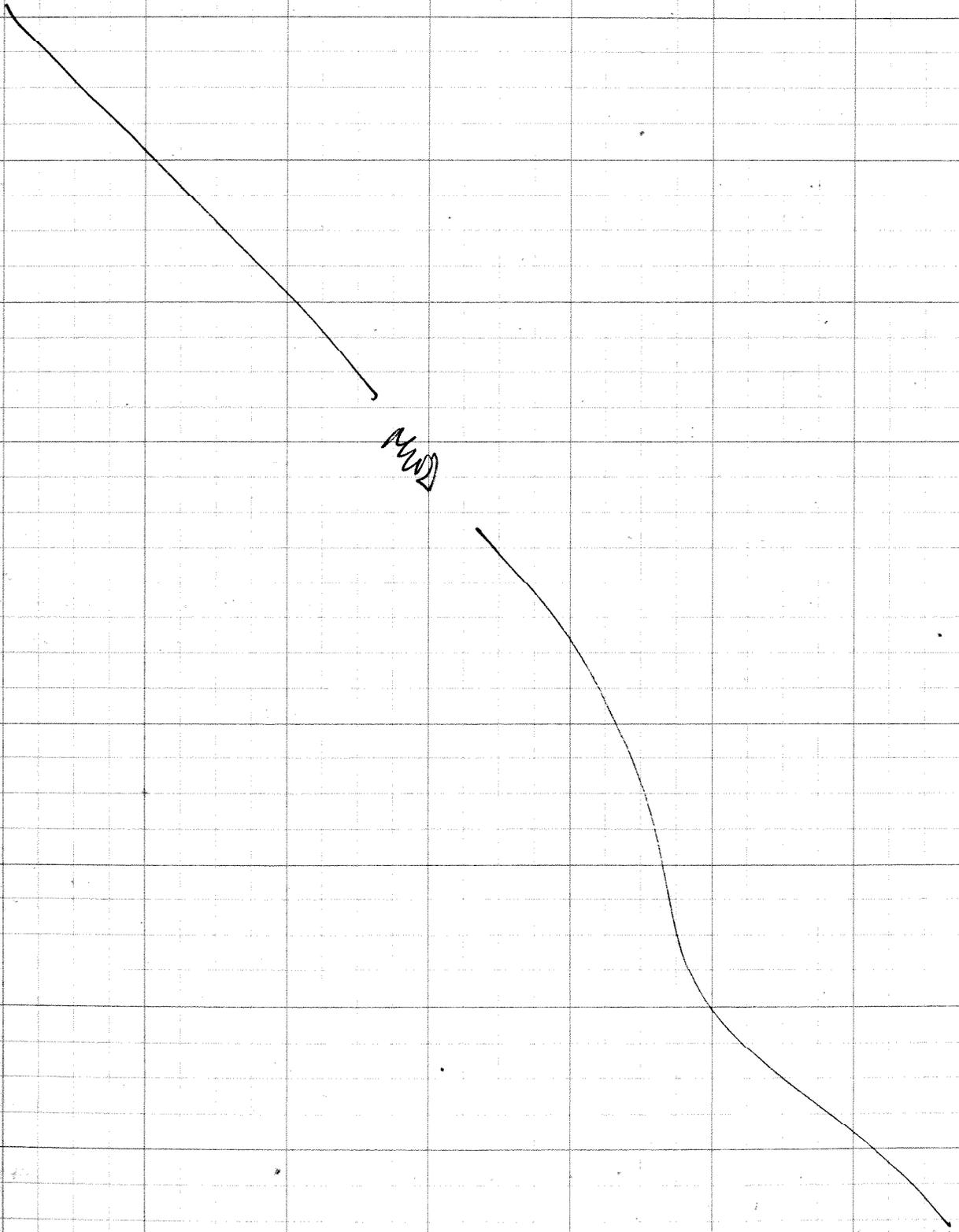
U.S. NAVY

1633

in fridge for overnight storage. Note: Sample fridge is locked.  
Samples logged on COC# 2310. Hold time - 7 days to extraction.

1635

Prosonic crew depart Cecil - we will meet them @ 0800 tomorrow.



John A. Deane

p. 65

B.842 NASCF  
LSSAR, Ph. II

3/2/04

U.S.N.

CTD 248

1605 Have permission to degrade flightline.  
1610 Clear of runways.  
Now proceed to Site 57 (CTD 78) on  
errand for Pittsburgh's M. Tommet.

MWD

MWD

B.842 NASCF

3/30/04

LSSAR, Ph. II

USN

1038 M. Dale Leggett office for CECIL to  
conduct Ph. II so. sampling at Bldg. 842  
(SB 00944 or SB-014). Sampling for  
PATHS only (0310). Lab is ACCEPTED.  
PPE = Lechl D w/ gloves  
Clearance letter of 3/26/04 in possession.  
HASP attached. reviewed.

WEAX: Hi 78°F, Lo 42°F, WINDY (from  
west).

1100. At Publix to get fail & sub for lunch.

1117 Leave for Cecil.

1133 At B.I., load other supplies, fill  
Micro F10 w/ hydrogen + calibrate  
(FINE ENT. Rental #401). See cal  
sheet for details.

1145-1200 Lunch.

1205 At JAA, notify P. Dillor-Hole  
going to site. Cell ph. 545-7048.

1230 Make permission from Cecil Gbor no  
to go to site.

1238 on site. Set up. Sinks still  
here. Note: New locate ticket in

effect # 08545841 (sunshine on cell).  
MWD

Bldg. 842  
U.S.N. CTO 248  
Date 3/30/64  
WSSAR, Ph. II

Bldg. 842  
U.S.N. CTO 248  
Date 3/30/64  
WSSAR, Ph. II

DECON: SOP SA 7.1 done before,  
between & after each location on  
the stainless steel hand auger.  
MASON JAMES DONE AS NEEDED.

1332 Collect 1 jar "CEF-842-SU-009-06"  
from 5-6' bls. DECON

1352 Screen & log soils for CEF-842-SB-010.

1442 Collect 1 jar "CEF-842-SU-010-06"  
from 5-6' bls. DECON

See Boring logs for each  
location and for Lithology  
and air monitor data.  
See Soil Sample log sheet for  
sample details and soil screen  
data.

1453- Screen & log soils for

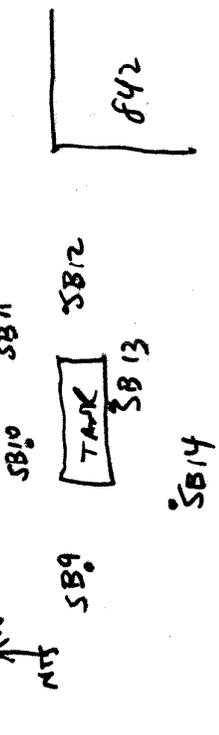
1523 CEF-842-SB-011.

1530 Collect 1 jar "CEF-842-SU-011-06"  
from 5 to 6' bls. Also, collect

1 other jar for duplicate  
"CEF-842-SU-0102" & give it  
time 000. DECON

1240- Screen & log soils for CEF-842-

1312 SB-009, See Fig 3-1 AS  
Modified by Paul Collins and  
AS MARKED in field for locations



1557- Screen and log soils for

1619 CEF-842-SB-012.

\*1614 Collect 2 jars (extra for MSMSO)  
from 5 to 6' bls AS "CEF-842-SU-  
012-06". DECON

1637- Screen & log soils for

1654 CEF-842-SB-013.

\*1649 Collect 1 jar for "CEF-842-SU-  
013-06". DECON

1703- Screen and log soils for

1729 CEF-842-SB-014.

This fig. is general sketch for  
relative case only.

M. W. De

\* Delayed entry M.W. De

Bldg. 842, Ph. II Date 3/30/04  
USSAR, Ph. II Soils  
U.S.N. CTO 248

\*1722 Collect CEF-842-SU-014-06" from  
5-6' bls. (1 jar). DECON.  
NOTE: Samples put on ice after  
collection.

CHAIN # 842-033004.

LAB WORK release N3965-395 Mod 6.

1747 DECON complete, holes refilled,  
have about 1.5 gals of decon  
water to take to Bldg. 18.

1750 Cecil Ground guided me back  
to ADA next to tower.

1755 Back on Bldg. 1 (dumped  
decon water on B. 18).

PACK cooler (1) with 8 jms for  
ACQUATEST per SOL SA 6.1.  
Also packing FID to return it to  
PING.

1825 FedEx airb. ill for cooler is  
8402 7227 1877.

1829 Leave Cecil, lock door, CH<sub>2</sub>M<sub>4</sub>U  
still here.

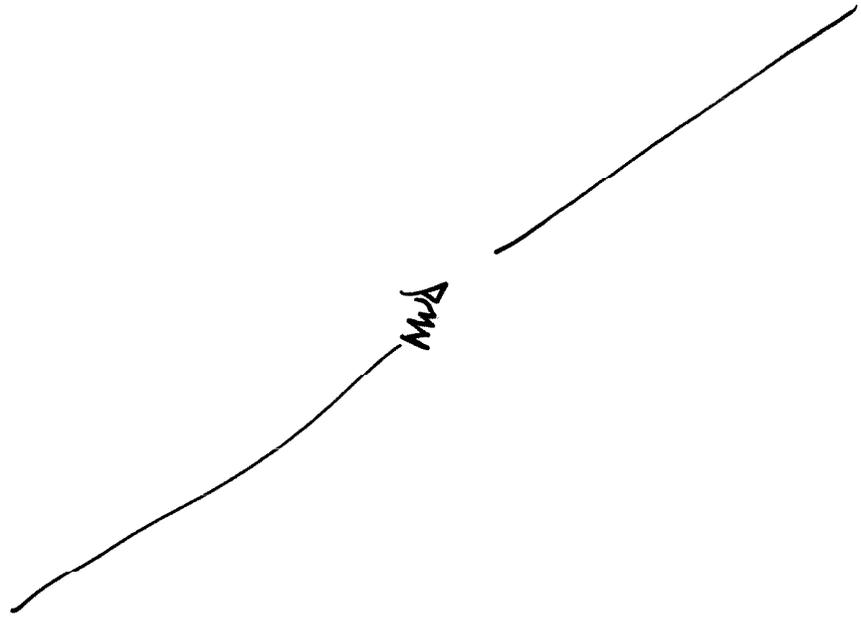
1900 At FedEx, ship cooler. FID shipped  
on 8458 5691 6635.

M.W. Dole

M.W. Dole

Location: B-842, Soils Date: 3/30/04  
Project Client: Ph. II, USSAR  
U.S.N., CTO 248

1908 Leave FedEx for office.  
1932 Back at office. Unload cargo to  
warehouse.



**APPENDIX D**

**SOIL LABORATORY REPORT**

**Technical Report for**

**Tetra Tech, NUS**

**NAS Cecil Field-CTO-248**

**WR#N4248-WR334 B842 NASCF**

**Accutest Job Number: F17755**

**Report to:**

**Tetra Tech, NUS**

**dalem@ttnus.com**

**ATTN: Merv Dale**

**Total number of pages in report: 12**



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.

## Sample Summary

Tetra Tech, NUS

Job No: F17755

NAS Cecil Field-CTO-248

Project No: WR#N4248-WR334 B842 NASCF

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F17755-1	05/07/03	11:36 MD	05/10/03	SO	Soil	CEF-842-SU-001-06
F17755-2	05/07/03	12:02 MD	05/10/03	SO	Soil	CEF-842-SU-002-06
F17755-3	05/07/03	12:33 MD	05/10/03	SO	Soil	CEF-842-SU-003-06
F17755-4	05/07/03	13:05 MD	05/10/03	SO	Soil	CEF-842-SU-004-06
F17755-5	05/07/03	15:20 MD	05/10/03	SO	Soil	CEF-842-SU-005-07
F17755-6	05/07/03	15:39 MD	05/10/03	SO	Soil	CEF-842-SU-006-06
F17755-7	05/07/03	15:52 MD	05/10/03	SO	Soil	CEF-842-SU-007-04
F17755-8	05/07/03	16:08 MD	05/10/03	SO	Soil	CEF-842-SU-008-04
F17755-9	05/07/03	00:00 MD	05/10/03	SO	Soil	CEF-842-DU01-04
F17755-10	05/08/03	08:50 MD	05/10/03	AQ	Field Blank Water	CEF-842-RB1

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

## Report of Analysis

Client Sample ID:	CEF-842-SU-001-06	Date Sampled:	05/07/03
Lab Sample ID:	F17755-1	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	84.7
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015295.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	790	200	ug/kg	
208-96-8	Acenaphthylene	ND	790	200	ug/kg	
120-12-7	Anthracene	ND	390	200	ug/kg	
56-55-3	Benzo(a)anthracene	ND	390	98	ug/kg	
50-32-8	Benzo(a)pyrene	ND	79	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	79	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	79	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	79	20	ug/kg	
218-01-9	Chrysene	ND	390	98	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	79	20	ug/kg	
206-44-0	Fluoranthene	ND	390	98	ug/kg	
86-73-7	Fluorene	ND	390	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	79	20	ug/kg	
91-20-3	Naphthalene	ND	390	98	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	98	ug/kg	
91-57-6	2-Methylnaphthalene	ND	390	98	ug/kg	
85-01-8	Phenanthrene	ND	390	200	ug/kg	
129-00-0	Pyrene	ND	390	98	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		38-139%
92-94-4	p-Terphenyl	103%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-002-06	
Lab Sample ID:	F17755-2	Date Sampled: 05/07/03
Matrix:	SO - Soil	Date Received: 05/10/03
Method:	EPA 8310 SW846 3550B	Percent Solids: 81.6
Project:	NAS Cecil Field-CTO-248	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015296.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		38-139%
92-94-4	p-Terphenyl	102%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-003-06	Date Sampled:	05/07/03
Lab Sample ID:	F17755-3	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	87.2
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015297.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		38-139%
92-94-4	p-Terphenyl	98%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-004-06	Date Sampled:	05/07/03
Lab Sample ID:	F17755-4	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	93.2
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015298.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	710	180	ug/kg	
208-96-8	Acenaphthylene	ND	710	180	ug/kg	
120-12-7	Anthracene	ND	360	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	360	89	ug/kg	
50-32-8	Benzo(a)pyrene	ND	71	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	71	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	71	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	71	18	ug/kg	
218-01-9	Chrysene	ND	360	89	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	71	18	ug/kg	
206-44-0	Fluoranthene	ND	360	89	ug/kg	
86-73-7	Fluorene	ND	360	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	18	ug/kg	
91-20-3	Naphthalene	ND	360	89	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	89	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	89	ug/kg	
85-01-8	Phenanthrene	ND	360	180	ug/kg	
129-00-0	Pyrene	ND	360	89	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		38-139%
92-94-4	p-Terphenyl	103%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-005-07	Date Sampled:	05/07/03
Lab Sample ID:	F17755-5	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	87.2
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015299.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	750	190	ug/kg	
208-96-8	Acenaphthylene	ND	750	190	ug/kg	
120-12-7	Anthracene	ND	380	190	ug/kg	
56-55-3	Benzo(a)anthracene	ND	380	94	ug/kg	
50-32-8	Benzo(a)pyrene	ND	75	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	75	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	75	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	75	19	ug/kg	
218-01-9	Chrysene	ND	380	94	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	75	19	ug/kg	
206-44-0	Fluoranthene	ND	380	94	ug/kg	
86-73-7	Fluorene	ND	380	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	75	19	ug/kg	
91-20-3	Naphthalene	ND	380	94	ug/kg	
90-12-0	1-Methylnaphthalene	ND	380	94	ug/kg	
91-57-6	2-Methylnaphthalene	ND	380	94	ug/kg	
85-01-8	Phenanthrene	ND	380	190	ug/kg	
129-00-0	Pyrene	ND	380	94	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		38-139%
92-94-4	p-Terphenyl	104%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-006-06	Date Sampled:	05/07/03
Lab Sample ID:	F17755-6	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	87.0
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015301.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		38-139%
92-94-4	p-Terphenyl	108%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-007-04	Date Sampled:	05/07/03
Lab Sample ID:	F17755-7	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	88.2
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015302.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.8 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	740	180	ug/kg	
208-96-8	Acenaphthylene	ND	740	180	ug/kg	
120-12-7	Anthracene	ND	370	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	370	92	ug/kg	
50-32-8	Benzo(a)pyrene	ND	74	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	74	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	74	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	74	18	ug/kg	
218-01-9	Chrysene	ND	370	92	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	74	18	ug/kg	
206-44-0	Fluoranthene	ND	370	92	ug/kg	
86-73-7	Fluorene	ND	370	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	74	18	ug/kg	
91-20-3	Naphthalene	ND	370	92	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	92	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	92	ug/kg	
85-01-8	Phenanthrene	ND	370	180	ug/kg	
129-00-0	Pyrene	ND	370	92	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		38-139%
92-94-4	p-Terphenyl	107%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-008-04	Date Sampled:	05/07/03
Lab Sample ID:	F17755-8	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	87.8
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015303.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	750	190	ug/kg	
208-96-8	Acenaphthylene	ND	750	190	ug/kg	
120-12-7	Anthracene	ND	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	ND	370	94	ug/kg	
50-32-8	Benzo(a)pyrene	ND	75	19	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	75	19	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	75	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	75	19	ug/kg	
218-01-9	Chrysene	ND	370	94	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	75	19	ug/kg	
206-44-0	Fluoranthene	ND	370	94	ug/kg	
86-73-7	Fluorene	ND	370	190	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	75	19	ug/kg	
91-20-3	Naphthalene	ND	370	94	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	94	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	94	ug/kg	
85-01-8	Phenanthrene	ND	370	190	ug/kg	
129-00-0	Pyrene	ND	370	94	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		38-139%
92-94-4	p-Terphenyl	109%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-DU01-04	Date Sampled:	05/07/03
Lab Sample ID:	F17755-9	Date Received:	05/10/03
Matrix:	SO - Soil	Percent Solids:	80.9
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015304.D	1	05/19/03	SM	05/16/03	OP7595	GEE652
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	820	200	ug/kg	
208-96-8	Acenaphthylene	ND	820	200	ug/kg	
120-12-7	Anthracene	ND	410	200	ug/kg	
56-55-3	Benzo(a)anthracene	ND	410	100	ug/kg	
50-32-8	Benzo(a)pyrene	ND	82	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	82	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	82	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	82	20	ug/kg	
218-01-9	Chrysene	ND	410	100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	82	20	ug/kg	
206-44-0	Fluoranthene	ND	410	100	ug/kg	
86-73-7	Fluorene	ND	410	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	82	20	ug/kg	
91-20-3	Naphthalene	ND	410	100	ug/kg	
90-12-0	1-Methylnaphthalene	ND	410	100	ug/kg	
91-57-6	2-Methylnaphthalene	ND	410	100	ug/kg	
85-01-8	Phenanthrene	ND	410	200	ug/kg	
129-00-0	Pyrene	ND	410	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		38-139%
92-94-4	p-Terphenyl	103%		46-149%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-RB1	Date Sampled:	05/08/03
Lab Sample ID:	F17755-10	Date Received:	05/10/03
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE015236.D	1	05/15/03	SM	05/15/03	OP7583	GEE649
Run #2							

Run #	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.3	1.1	ug/l	
208-96-8	Acenaphthylene	ND	4.3	1.1	ug/l	
120-12-7	Anthracene	ND	2.2	1.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	0.11	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	0.11	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	0.11	ug/l	
218-01-9	Chrysene	ND	2.2	1.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	0.11	ug/l	
206-44-0	Fluoranthene	ND	2.2	0.54	ug/l	
86-73-7	Fluorene	ND	2.2	1.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	0.11	ug/l	
91-20-3	Naphthalene	ND	2.2	0.54	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.54	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.54	ug/l	
85-01-8	Phenanthrene	ND	2.2	1.1	ug/l	
129-00-0	Pyrene	ND	2.2	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		32-142%
92-94-4	p-Terphenyl	78%		30-128%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



PROJECT NO: N4248, C0248		FACILITY: B. 842, NASCF		PROJECT MANAGER PAUL CULLIGAN		PHONE NUMBER 813 806 0202		LABORATORY NAME AND CONTACT: Accutest Sue Bell													
SAMPLERS (SIGNATURE) Maurin H. Dale E. Hunter				FIELD OPERATIONS LEADER MEY DARE		PHONE NUMBER 904 636 6125		ADDRESS 4405 Vine Land Rd. C-15													
STANDARD TAT <input checked="" type="checkbox"/> RUSH TAT <input type="checkbox"/> <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day				CARRIER/WAYBILL NUMBER Fedex 8371 1005 6337/6348		CONTAINER TYPE PLASTIC (P) or GLASS (G) G		PRESERVATIVE USED None													
DATE 2003		TIME		SAMPLE ID		LOCATION ID		TOP DEPTH (FT)		BOTTOM DEPTH (FT)		MATRIX (GW, SO, SW, SD, OC, ETC.)		COLLECTION METHOD GRAP (G) COMP (C)		No. OF CONTAINERS		TYPE OF ANALYSIS PAHS * SW/646 8310		COMMENTS	
1		5/7 1136		CEF-842-SU-001-06		SB001		5		6		SO		G		1		1		Cool to 4°C	
2		5/7 1202		CEF-842-SU-002-06		SB002		5		6		SO		G		1		1			
3		5/7 1233		CEF-842-SU-003-06		SB003		5		6		SO		G		1		1		N4248-WR334	
4		5/7 1305		CEF-842-SU-004-06		SB004		5		6		SO		G		1		1			
5		5/7 1520		CEF-842-SU-005-07		SB005		6		7		SO		G		1		1		* INC. 1-4 2- methyl-naphthalene	
6		5/7 1539		CEF-842-SU-006-06		SB006		5		6		SO		G		1		1			
7		5/7 1552		CEF-842-SU-007-04		SB007		3		4		SO		G		2		2		**	
8		5/7 1608		CEF-842-SU-008-04		SB008		3		4		SO		G		1		1		** USE EXTRA for Lab MSMSD	
9		5/7 0000		CEF-842-DU01-04		-		-		-		SO		G		1		1			
10		5/8 0850		CEF-842-RB1		-		-		-		W		G		2		2			
1. RELINQUISHED BY Maurin H. Dale				DATE 5/9/03		TIME 1600		1. RECEIVED BY Fedex				DATE		TIME							
2. RELINQUISHED BY FED EX				DATE		TIME		2. RECEIVED BY Mura Mohammed				DATE 5/10/03		TIME 110							
3. RELINQUISHED BY				DATE		TIME		3. RECEIVED BY				DATE		TIME							
COMMENTS												3.0, 2.8									



06/30/04

**Technical Report for**

**Tetra Tech, NUS**

NAS Cecil Field-CTO-248

N3965-WR395 (MOD 6)

Accutest Job Number: F23131

**Sampling Date: 03/30/04**

Report to:

Tetra Tech, NUS

dalem@tnus.com

ATTN: Merv Dale

Total number of pages in report: **14**



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*  
Harry Behzadi, Ph.D.  
Laboratory Director

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

Tetra Tech, NUS

Job No: F23131

NAS Cecil Field-CTO-248

Project No: N3965-WR395 (MOD 6)

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F23131-1	03/30/04	13:32 MD	03/31/04	SO	Soil	CEF-842-SU-009-06
F23131-2	03/30/04	14:42 MD	03/31/04	SO	Soil	CEF-842-SU-010-06
F23131-3	03/30/04	15:30 MD	03/31/04	SO	Soil	CEF-842-SU-011-06
F23131-4	03/30/04	16:14 MD	03/31/04	SO	Soil	CEF-842-SU-012-06
F23131-5	03/30/04	16:49 MD	03/31/04	SO	Soil	CEF-842-SU-013-06
F23131-6	03/30/04	17:22 MD	03/31/04	SO	Soil	CEF-842-SU-014-06
F23131-7	03/30/04	00:00 MD	03/31/04	SO	Soil	CEF-842-SU-DU02

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



## Report of Analysis

Client Sample ID:	CEF-842-SU-009-06	Date Sampled:	03/30/04
Lab Sample ID:	F23131-1	Date Received:	03/31/04
Matrix:	SO - Soil	Percent Solids:	91.7
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021007.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	720	180	ug/kg	
208-96-8	Acenaphthylene	ND	720	180	ug/kg	
120-12-7	Anthracene	ND	360	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	360	90	ug/kg	
50-32-8	Benzo(a)pyrene	ND	72	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	72	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	72	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	72	18	ug/kg	
218-01-9	Chrysene	ND	360	90	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	72	18	ug/kg	
206-44-0	Fluoranthene	ND	360	90	ug/kg	
86-73-7	Fluorene	ND	360	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	18	ug/kg	
91-20-3	Naphthalene	ND	360	90	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	90	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	90	ug/kg	
85-01-8	Phenanthrene	ND	360	180	ug/kg	
129-00-0	Pyrene	ND	360	90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		49-124%
92-94-4	p-Terphenyl	89%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-010-06	Date Sampled:	03/30/04
Lab Sample ID:	F23131-2	Date Received:	03/31/04
Matrix:	SO - Soil	Percent Solids:	90.4
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021008.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	720	180	ug/kg	
208-96-8	Acenaphthylene	ND	720	180	ug/kg	
120-12-7	Anthracene	ND	360	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	360	90	ug/kg	
50-32-8	Benzo(a)pyrene	ND	72	18	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	72	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	72	18	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	72	18	ug/kg	
218-01-9	Chrysene	ND	360	90	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	72	18	ug/kg	
206-44-0	Fluoranthene	ND	360	90	ug/kg	
86-73-7	Fluorene	ND	360	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	18	ug/kg	
91-20-3	Naphthalene	ND	360	90	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	90	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	90	ug/kg	
85-01-8	Phenanthrene	ND	360	180	ug/kg	
129-00-0	Pyrene	ND	360	90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		49-124%
92-94-4	p-Terphenyl	95%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: CEF-842-SU-011-06	Date Sampled: 03/30/04
Lab Sample ID: F23131-3	Date Received: 03/31/04
Matrix: SO - Soil	Percent Solids: 83.5
Method: EPA 8310 SW846 3550B	
Project: NAS Cecil Field-CTO-248	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021009.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	790	200	ug/kg	
208-96-8	Acenaphthylene	ND	790	200	ug/kg	
120-12-7	Anthracene	ND	400	200	ug/kg	
56-55-3	Benzo(a)anthracene	ND	400	99	ug/kg	
50-32-8	Benzo(a)pyrene	ND	79	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	79	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	79	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	79	20	ug/kg	
218-01-9	Chrysene	ND	400	99	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	79	20	ug/kg	
206-44-0	Fluoranthene	ND	400	99	ug/kg	
86-73-7	Fluorene	ND	400	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	79	20	ug/kg	
91-20-3	Naphthalene	ND	400	99	ug/kg	
90-12-0	1-Methylnaphthalene	ND	400	99	ug/kg	
91-57-6	2-Methylnaphthalene	ND	400	99	ug/kg	
85-01-8	Phenanthrene	ND	400	200	ug/kg	
129-00-0	Pyrene	ND	400	99	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		49-124%
92-94-4	p-Terphenyl	88%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.4  
3

Client Sample ID: CEF-842-SU-012-06	
Lab Sample ID: F23131-4	Date Sampled: 03/30/04
Matrix: SO - Soil	Date Received: 03/31/04
Method: EPA 8310 SW846 3550B	Percent Solids: 84.1
Project: NAS Cecil Field-CTO-248	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021011.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	790	200	ug/kg	
208-96-8	Acenaphthylene	ND	790	200	ug/kg	
120-12-7	Anthracene	ND	390	200	ug/kg	
56-55-3	Benzo(a)anthracene	ND	390	98	ug/kg	
50-32-8	Benzo(a)pyrene	ND	79	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	79	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	79	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	79	20	ug/kg	
218-01-9	Chrysene	ND	390	98	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	79	20	ug/kg	
206-44-0	Fluoranthene	ND	390	98	ug/kg	
86-73-7	Fluorene	ND	390	200	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	79	20	ug/kg	
91-20-3	Naphthalene	ND	390	98	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	98	ug/kg	
91-57-6	2-Methylnaphthalene	ND	390	98	ug/kg	
85-01-8	Phenanthrene	ND	390	200	ug/kg	
129-00-0	Pyrene	ND	390	98	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		49-124%
92-94-4	p-Terphenyl	90%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: CEF-842-SU-013-06	Date Sampled: 03/30/04
Lab Sample ID: F23131-5	Date Received: 03/31/04
Matrix: SO - Soil	Percent Solids: 85.9
Method: EPA 8310 SW846 3550B	
Project: NAS Cecil Field-CTO-248	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021014.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

## Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		49-124%
92-94-4	p-Terphenyl	86%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	CEF-842-SU-014-06	Date Sampled:	03/30/04
Lab Sample ID:	F23131-6	Date Received:	03/31/04
Matrix:	SO - Soil	Percent Solids:	76.9
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021015.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	5.0 ml
Run #2		

## Polynuclear Aromatic Hydrocarbons

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		49-124%
92-94-4	p-Terphenyl	97%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

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Client Sample ID:	CEF-842-SU-DU02	Date Sampled:	03/30/04
Lab Sample ID:	F23131-7	Date Received:	03/31/04
Matrix:	SO - Soil	Percent Solids:	85.2
Method:	EPA 8310 SW846 3550B		
Project:	NAS Cecil Field-CTO-248		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA021016.D	1	04/14/04	MRE	04/06/04	OP10144	GAA995
Run #2							

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

**Polynuclear Aromatic Hydrocarbons**

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		49-124%
92-94-4	p-Terphenyl	84%		56-141%

ND = Not detected    MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

**F23131**

NUMBER 84203004

PROJECT NO: <b>N4248 C0218</b>		FACILITY: <b>Stgs. 842</b>		PROJECT MANAGER: <b>Paul Calligan</b>		PHONE NUMBER: <b>813 806 0202</b>		LABORATORY NAME AND CONTACT: <b>ACCUTEST Joe Bell</b>	
SAMPLERS (SIGNATURE): <b>Martin W. de</b>		FIELD OPERATIONS LEADER: <b>MERV DAVE</b>		PHONE NUMBER: <b>904 636 6125</b>		ADDRESS: <b>4405 Vineland Rd. C-15</b>			
		CARRIER/WAYBILL NUMBER: <b>Fedex 8402 7227 1877</b>		CITY, STATE: <b>ORLANDO, FL 32811</b>					
STANDARD TAT: <input checked="" type="checkbox"/> RUSH TAT: <input type="checkbox"/>						CONTAINER TYPE: <b>PLASTIC (P) or GLASS (G)</b>			
<input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day						PRESERVATIVE USED: <b>None</b>			
DATE YEAR: <b>2004</b>	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, GC, ETC.)	COLLECTION METHOD (GRAP (G) COMP (C))	No. OF CONTAINERS	COMMENTS
3/30	1332	CEF-842-SU-009-06		5	6	SO	G	1	Cool to 4°C
3/30	1442	CEF-842-SU-010-06		5	6	SO	G	1	
3/30	1530	CEF-842-SU-011-06		5	6	SO	G	1	N3965-WR395
3/30	1614	CEF-842-SU-012-06		5	6	SO	G	2	use extra vol. for MSMSD Mod 6
3/30	1649	CEF-842-SU-013-06		5	6	SO	G	1	
3/30	1722	CEF-842-SU-014-06		5	6	SO	G	1	
3/30	0000	CEF-842-SU-DU02		5	6	SO	G	1	

1. RELINQUISHED BY: <b>Martin W. de</b>	DATE: <b>3/30/04</b>	TIME: <b>1900</b>	1. RECEIVED BY: <b>Fedex</b>	DATE: <b>3/31/04</b>	TIME: <b>07:15</b>
2. RELINQUISHED BY: <b>FED</b>	DATE:	TIME:	2. RECEIVED BY: <b>Calligan</b>	DATE:	TIME:
3. RELINQUISHED BY:	DATE:	TIME:	3. RECEIVED BY:	DATE:	TIME:

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) **46** PINK (FILE COPY) FORM NO. 402R TTNUS-001

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ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F23131  
 Client: TETRA TECH Project: N4248  
 Date Received: 3/31/04 Time Received: 09:15  
 # of Coolers Received: 1 Cooler Temperatures: 4.6  
 Delivery Method:  FedEx  UPS  Accutest Courier  Greyhound  Delivery  Other  
 Air Bill Number: \_\_\_\_\_

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

Summary of Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Signature: *Carla Puz* Date: 3/31/04  
 Review Signature: \_\_\_\_\_

ASBD 12/30/03

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F23131: Chain of Custody  
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