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SAMPLING AND ANALYSIS REPORT FOR BUILDING 16D WATER TOWER BASE  
REALIGNMENT AND CLOSURE NAS CECIL FIELD FL  
7/27/2000  
TETRA TECH NUS INC

**Sampling and Analysis Report**  
for  
**Building 16D Water Tower**  
**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 0078

July 2000

**SAMPLING AND ANALYSIS REPORT  
FOR  
BUILDING 16D WATER TOWER  
BASE REALIGNMENT AND CLOSURE**

**NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT N62467-89-D-0088**

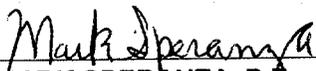
**Submitted to:  
Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
North Charleston, South Carolina 29406**

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

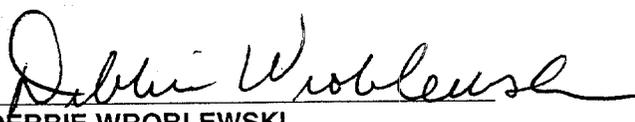
**CONTRACT NUMBER N62467-94-D-0888  
CONTRACT TASK ORDER 0078**

**JULY 2000**

**PREPARED UNDER THE SUPERVISION OF:**

  
\_\_\_\_\_  
**MARK SPERANZA, P.E.  
TASK ORDER MANAGER  
TETRA TECH NUS, INC.  
PITTSBURGH, PENNSYLVANIA**

**APPROVED FOR SUBMITTAL BY:**

  
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**DEBBIE WROBLEWSKI  
PROGRAM MANAGER  
TETRA TECH NUS, INC.  
PITTSBURGH, PENNSYLVANIA**



The professional opinions rendered in this decision document identified as Sampling and Analysis Report for Building 16D Water Tower, Naval Air Station Cecil Field, Jacksonville, Florida were developed in accordance with commonly accepted procedures consistent with applicable standards of practice. Decision documents are based on information obtained from others and under the supervision of the signing engineer. If conditions are determined to exist differently than those described in this document, then the undersigned professional engineer should be notified to evaluate the effects of any additional information on this project described in this report.

Mark Speranza  
Mark Speranza, P.E.  
Professional Engineer No. PE0050304

Date: 7/27/00

*Mark Speranza*

**Draft**  
**Sampling and Analysis Report**  
for  
**Building 16D Water Tower**  
**Base Realignment and Closure**

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



**Southern Division**  
**Naval Facilities Engineering Command**  
Contract Number N62467-94-D-0888  
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June 2000

**DRAFT  
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FOR  
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**JUNE 2000**

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**MARK SPERANZA, P.E.  
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**DEBBIE WROBLEWSKI  
PROGRAM MANAGER  
TETRA TECH NUS, INC.  
PITTSBURGH, PENNSYLVANIA**



**CERTIFICATION OF TECHNICAL  
DATA CONFORMITY**

The Contractor, Tetra Tech NUS, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-94-D-0888 are complete and accurate and comply with all requirements of this contract.

DATE: June 6, 2000

NAME AND TITLE OF CERTIFYING OFFICIAL:

Mark Speranza, P.E.  
Task Order Manager



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\_\_\_\_\_  
Mark Speranza, P.E.  
Professional Engineer No. PE0050304

Date: \_\_\_\_\_

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## LIST OF ACRONYMS AND ABBREVIATIONS

ABB-ES	ABB Environmental Services, Inc.
BCT	BRAC Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
CFR	Code of Federal Regulations
CTO	Contract Task Order
EBS	Environmental Baseline Survey
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
ft <sup>2</sup>	square foot
HLA	Harding Lawson Associates
IBDS	NAS Cecil Field Site-Specific Inorganic Background Data Set
mg/kg	milligram per kilogram
mg/L	milligram per liter
NAS	Naval Air Station
PCB	polychlorinated biphenyl
RAC	Remedial Action Contractor
RCRA	Resource Conservation and Recovery Act
SAO	Sampling and Analysis Outline
SAR	Sampling and Analysis Report
SCTL	Soil Cleanup Target Level
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
TCLP	Toxicity Characteristics Leaching Procedure
TtNUS	Tetra Tech NUS, Inc.
U.S. EPA	U.S. Environmental Protection Agency
yd <sup>3</sup>	cubic yard

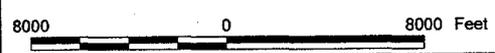
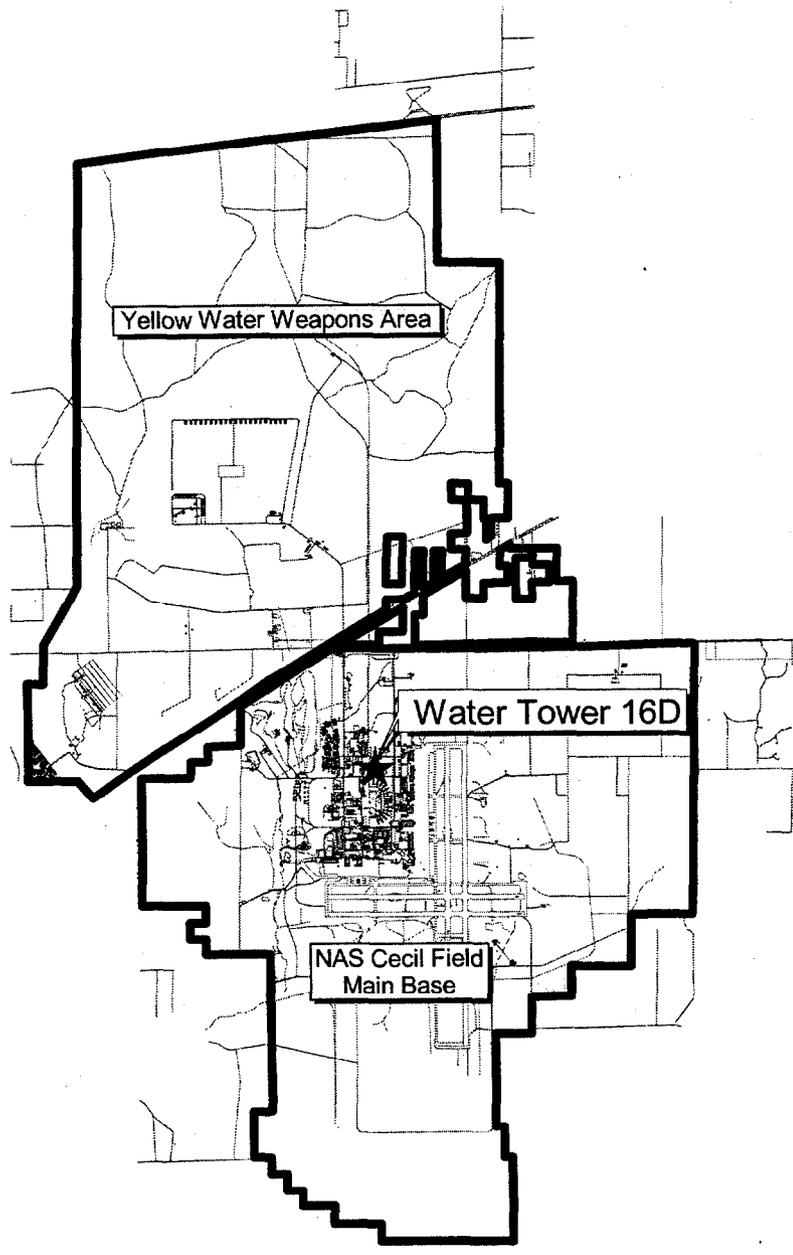
## 1.0 INTRODUCTION

Tetra Tech NUS, Inc. (TtNUS), under contract to Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), has completed the Base Realignment and Closure (BRAC) Phase II Sampling and Analysis Program for the Building 16D Water Tower at Naval Air Station (NAS) Cecil Field. This program was conducted under Contract Number N62467-94-D-088, Contract Task Order (CTO) 0078. This Sampling and Analysis Report (SAR) summarizes the related field operations, results, conclusions, and recommendation of the field investigations.

The Building 16D Water Tower is located in a grassy area north of Building 220 and Lake Newman Street, formerly 6<sup>th</sup> Street, and east of Poolside Avenue, formerly "B" Avenue, as shown on Figures 1-1 and 1-2. Limited information is available regarding this metal water tower in the Environmental Baseline Survey (EBS) [ABB Environmental Services, Inc. (ABB-ES), 1994]. Building 16D Water Tower was not color coded in the EBS. According to the NAS Cecil Field water distribution system drawings, the capacity of the Building 16D Water Tower is 250,000 gallons (NAS Cecil Field, 1992).

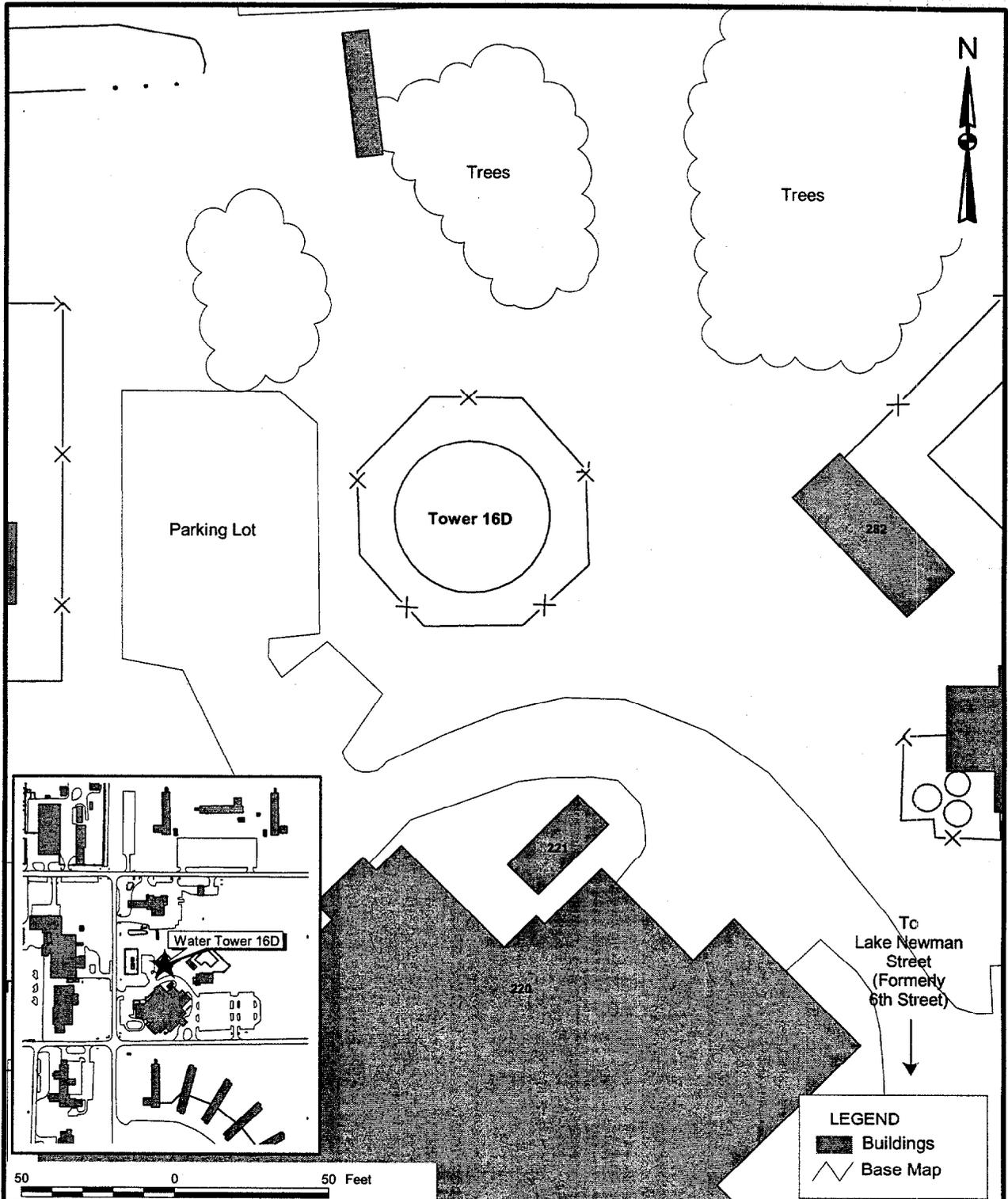
The environmental concern identified with the Building 16D Water Tower is the potential for soil contamination associated with past maintenance activities. Because the tower's age is not known, this water tower may have been painted with lead-based paint. The paint on the exterior of the tower appeared to be in good condition; however, no testing has been conducted to verify the presence of lead-based paint. Lead-based paint could have been released during sandblasting and/or repainting of the water tower. Paint chips and peels were observed on the ground beneath the water tower during a site visit conducted in November 1998.

A Sampling and Analysis Outline (SAO) (TtNUS, 1999a) for the assessment of soil in the vicinity of the Building 16D Water Tower was prepared by TtNUS and approved by the BRAC Cleanup Team (BCT). The resulting investigations were used to delineate the extent of lead contamination in the surface soil, and a subsequent Dig and Haul Package (excavation plan) was prepared by TtNUS (TtNUS, 1999b). The contaminated soil was excavated by the Remedial Action Contractor (RAC), CH2MHill, in accordance with the Dig and Haul Package.



DRAWN BY MJJ DATE 08Oct99		GENERAL LOCATION MAP SAMPLING AND ANALYSIS REPORT BUILDING 16D WATER TOWER NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039	
CHECKED BY DATE			APPROVED BY DATE	
COST/SCHEDULE-AREA			APPROVED BY DATE	
SCALE AS NOTED			DRAWING NO. FIGURE 1-1	REV 0

P:\GIS\NAS\_CecilField\water\_tank\_16d.apr 02Jun00 MJJ 1-1 Site Location Map Layout



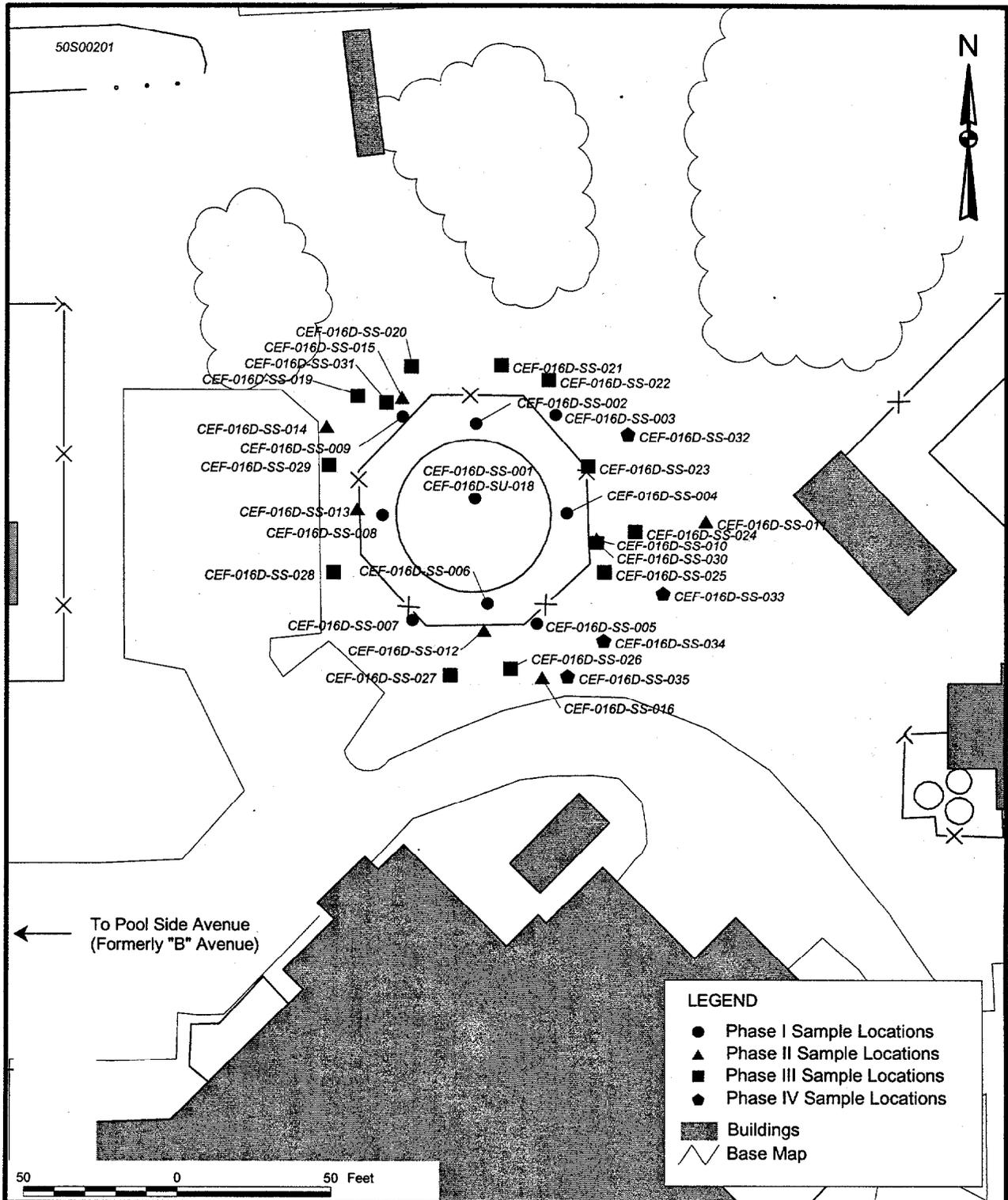
DRAWN BY MJJ CHECKED BY JL COST/SCHEDULE-AREA SCALE AS NOTED	DATE 18Oct99 DATE DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING	SITE LOCATION SAMPLING AND ANALYSIS REPORT BUILDING 16D WATER TOWER NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039 APPROVED BY DATE APPROVED BY DATE DRAWING NO. FIGURE 1-2 REV 0
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P:\GIS\NAS\_CecilField\water\_tank\_16d.apr 02Jun00 MJJ 1 - Site Location Layout

## 2.0 FIELD INVESTIGATIONS

Field investigations were conducted from February to May 1999 to assess the potential contamination of surface soil in the vicinity of the tank. Field investigations consisted of collecting and analyzing 41 surface soil samples. The investigations were conducted as an iterative process until contaminant concentrations were less than the Florida Department of Environmental Protection (FDEP, 1999) and NAS Cecil Field site-specific Inorganic Background Data Set (IBDS) [Harding Lawson Associates (HLA), 1998] criteria. For the Building 16D Water Tower, this required four phases of sampling; 10 samples were collected and analyzed as part of Phase I, 11 samples were collected and analyzed as part of Phase II, 15 samples were collected and analyzed as part of Phase III, and five samples were collected and analyzed as part of Phase IV. Two Phase III samples were collected in the area of the highest contamination and analyzed to determine the Resource Conservation and Recovery Act (RCRA) characteristics of the contaminated soil.

Field activities were conducted in general conformance with the Base-Wide Generic Work Plan (TiNUS, 1998). The surface soil samples were collected adjacent to and near the perimeter of the Building 16D Water Tower. Grab soil samples were collected from a depth of 0 to 1 foot below the ground surface (bgs) at 33 locations (CEF-16D-SS-001 to -016 and CEF-16D-SS-019 to -035) and from a depth of 1 to 2 feet bgs at two locations (CEF-16D-SU-017 and -018). Figure 2-1 shows the sampling locations. The samples, except two collected during Phase III (CEF-16D-SS-030 and -031), were analyzed for lead by the U.S. Environmental Protection Agency (U.S. EPA) Method SW-846 6010B. Three of the Phase I samples (CEF-16D-SS-001, -001 DU, and -004) were also analyzed for arsenic by U.S. EPA Method SW-846 6010B and polychlorinated biphenyls (PCBs) by U.S. EPA Method SW-846 8082B. The Toxicity Characteristics Leaching Procedure (TCLP) was performed on two Phase II samples (CEF-16D-SS-030 and -031), and the extract was analyzed for lead.



**LEGEND**

- Phase I Sample Locations
- ▲ Phase II Sample Locations
- Phase III Sample Locations
- ◆ Phase IV Sample Locations
- Buildings
- ∕ Base Map

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SCALE AS NOTED	



**SAMPLING LOCATIONS**  
**SAMPLING AND ANALYSIS REPORT**  
**BUILDING 16D WATER TOWER**  
**NAVAL AIR STATION CECIL FIELD**  
**JACKSONVILLE, FLORIDA**

CONTRACT NUMBER 0039	
APPROVED BY	DATE
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DRAWING NO. FIGURE 2-1	REV 0

P:\GIS\NAS\_CecilField\water\_tank\_16d.apr 02.Jun00 MJJ 2\_SampleLocationMap Layout

## 3.0 DATA EVALUATION AND REMOVAL ACTION

### 3.1 DATA EVALUATION

As shown on Table 3-1 and Figure 3-1, lead was detected in seven Phase I samples (CEF-16D-SS-001, -001 DU, -002, -004, -006, -008, and -009), seven Phase II samples (CEF-16D-SS-010, -012, -012 DU, -013, 015, -015 DU, and -016), and four Phase III samples (CEF-16D-SS-023, -023 DU, -025, and -026) at concentrations ranging from 479 to 2,900 mg/kg. These concentrations are in excess of both the Florida Department of Environmental Protection's (FDEP) Soil Cleanup Target Level (SCTL) for residential exposure of 400 mg/kg (FDEP, 1999) and the NAS Cecil Field site-specific Inorganic Background Data Set (IBDS) concentration of 197 mg/kg [Harding Lawson Associates (HLA), 1998]. Lead concentrations of the Phase IV samples were below FDEP SCTL.

The concentrations of individual samples are screened against the NAS Cecil Field site-specific Inorganic Background Data Set (IBDS) and the FDEP criteria, as proposed in FAC Chapter 62-777. The remediation goal for any site should never be less than the IBDS values. However, if a FDEP criterion is greater than the IBDS value, the FDEP criterion is regarded as the remediation goal. Analytical results were also compared to the SCTLs for leachability based on groundwater criteria. For the analytes at this site, the SCTLs for leachability is less restrictive than the SCTLs for residential exposure. The detailed laboratory analytical data are provided in Appendix A.

Results of the TCLP testing of one of the Phase III samples (CEF-16D-SS-030) collected near a location of high detected lead contamination (1,950 mg/kg at CEF-16D-SS-010) showed that the lead concentration of the extract (8.8 mg/L) slightly exceeded the U.S. EPA criterion for toxicity characteristics (5.0 mg/L).

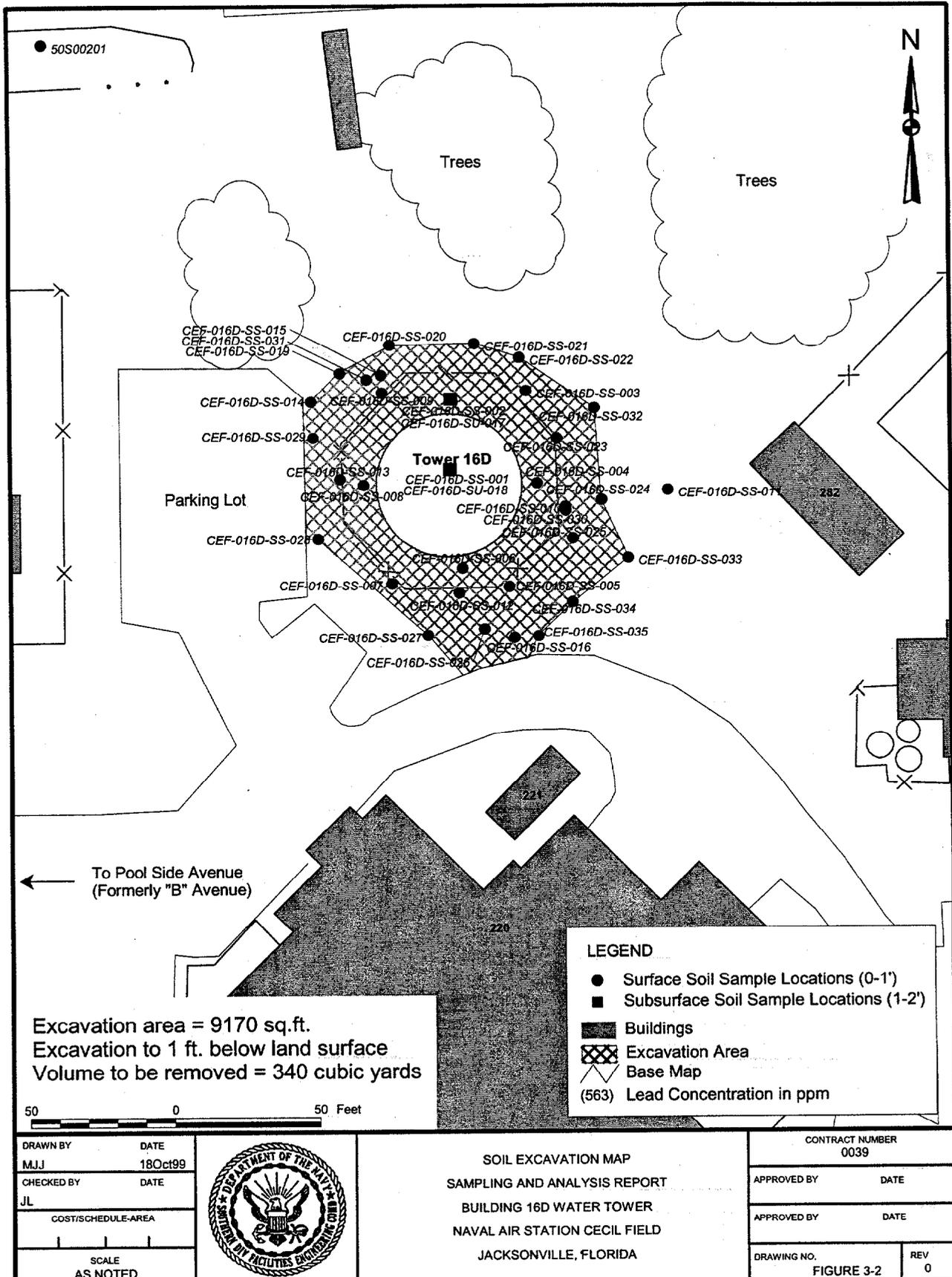
### 3.2 REMOVAL ACTION

The BCT decided that a removal action was required at Building 16D Water Tower and agreed upon the proposed removal area presented in the Dig and Haul Package. On January 18 through 21, 2000, a total of 360.04 tons of lead-contaminated soil were excavated. The excavated soil was transported and disposed off site on January 26, 2000. As shown on Figure 3-2, approximately 9,170 square feet (ft<sup>2</sup>) of soil was excavated to a depth of 1 foot bgs, for a total estimated volume of contaminated soil of 340 cubic yards (yd<sup>3</sup>). The soil was excavated using a mini-excavator and then stockpiled, bermed, and covered before it was loaded into a truck for transportation and disposal. The soil was characterized by the RAC prior to disposal. The excavated soil was transported by Pritchett Trucking to the Chesser Island Road Landfill, a Subtitle D solid waste disposal facility in Folkston, Georgia (CH2MHill, 2000).

Clean fill material from the Dallas Harts Borrow Pit was used to backfill the excavation. The site was graded and seeded with a mixture of rye and bahia grass. No confirmatory sampling was performed.

Detailed information on the remedial activities, including photographs, laboratory results, copies of the soil manifests, certificates of disposal, and certificate of clean fill, are provided in the Source Removal Report (CH2MHill, 2000).





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TABLE 3-1

**ANALYTICAL RESULTS SUMMARY FOR SURFACE SOIL  
FIELD INVESTIGATIONS  
BUILDING 16D WATER TOWER  
NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA  
PAGE 1 OF 2**

Sample Location	Lead (mg/kg)			Arsenic (mg/kg)			PCBs (µg/kg)		TCLP Lead (mg/L)		TCLP Arsenic (mg/L)	
	Concentration	IBDS	FDEP SCTL	Concentration	IBDS	FDEP SCTL	Concentration	FDEP SCTL	Concentration	RCRA TCLP	Concentration	RCRA TCLP
<b>Phase I</b>												
CEF-16D-SS-001	1030	197	400	1.6 U	2.04	0.8	37 U	500	NA	5.0	NA	5.0
CEF-16D-SS-001 DU	1090	197	400	1.3 U	2.04	0.8	35 U	500	NA	5.0	NA	5.0
CEF-16D-SS-002	2570	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-003	114	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-004	614	197	400	0.92 U	2.04	0.8	37 U	500	NA	5.0	NA	5.0
CEF-16D-SS-005	104	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-006	620	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-007	270	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-008	479	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-009	897	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
<b>Phase II</b>												
CEF-16D-SS-010	1950	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-011	320	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-012	579	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-012 DU	965	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-013	826	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-014	55.7	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-015	2900	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-015 DU	2830	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-016	2240	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SU-017	13.0	197	400	NA	2.04	0.8	NA	500	0.13	5.0	NA	5.0
CEF-16D-SU-018	7.1	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
<b>Phase III</b>												
CEF-16D-SS-019	10.8	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-019 DU	15.7	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-020	4.1	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-021	111	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-022	198	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-023	890	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-023 DU	1160	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-024	133	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-025	628	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-026	555	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-027	124	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-028	114	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0

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3-5

CTO 0078

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TABLE 3-1

**ANALYTICAL RESULTS SUMMARY FOR SURFACE SOIL  
FIELD INVESTIGATIONS  
BUILDING 16D WATER TOWER  
NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA  
PAGE 2 OF 2**

Sample Location	Lead (mg/kg)			Arsenic (mg/kg)			PCBs (µg/kg)		TCLP Lead (mg/L)		TCLP Arsenic (mg/L)	
	Concentration	IBDS	FDEP SCTL	Concentration	IBDS	FDEP SCTL	Concentration	FDEP SCTL	Concentration	RCRA TCLP	Concentration	RCRA TCLP
CEF-16D-SS-029	59.7	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-030	NA	197	400	NA	2.04	0.8	NA	500	8.8	5.0	NA	5.0
CEF-16D-SS-031	NA	197	400	NA	2.04	0.8	NA	500	0.18	5.0	NA	5.0
<b>Phase IV</b>												
CEF-16D-SS-032	103	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-032 DU	38.9	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-033	223	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-034	15.3	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0
CEF-16D-SS-035	97.4	197	400	NA	2.04	0.8	NA	500	NA	5.0	NA	5.0

**NOTES:**

Shading indicates exceedence of criterion

DU Duplicate sample

NA Not analyzed

SS Surface soil, 0 to 1 foot bgs

SU Surface soil, 1 to 2 feet bgs

U Not detected at detection limit (see Appendix A for detailed analytical data)

1. NAS Cecil Field site-specific Inorganic Background Data Set concentration [Harding Lawson Associates (HLA), 1998].
2. Lower values of the FDEP Soil Cleanup Target Levels (SCTLs) for direct residential exposure or leachability to groundwater (FAC 62-777).
3. Maximum Concentrations of Contaminants for Toxicity Characteristic as listed on Table 1 of 49CFR261.24(b).

#### 4.0 CONCLUSIONS AND RECOMMENDATION

Field investigations identified approximately 340 yd<sup>3</sup> of soil contaminated with lead at concentrations greater than the IBDS value. The BCT decided that a removal action should be performed to excavate and dispose off site the contaminated soil. This removal action occurred in January 2000. Following this removal action, the soil contaminant concentrations are less than the IBDS values and no longer represent a risk to human health and the environment.

Based upon these conclusions, the recommendation for Building 16D Water Tower is No Further Action. It is also recommended that the EBS color code for the Building 16D Water Tower should be classified as Dark Green to denote areas where release, disposal, and/or migration of hazardous substances have occurred and that remedial actions to protect human health and the environment have been taken. Residual lead concentrations in surface soil no longer represent a risk to human health or the environment.

## REFERENCES

ABB-ES (ABB Environmental Services, Inc.), 1994. Base Realignment and Closure Environmental Baseline Survey Report, Naval Air Station Cecil Field, Jacksonville, Florida. Tallahassee, FL. November.

CH2MHill, 2000. Source Removal Report, Excavation of Lead- and Arsenic-Contaminated Soil at the Building 16D Water Tower. Naval Air Station Cecil Field, Jacksonville, Florida. (Prepared for SOUTHNAVFACENGCOM, Charleston, SC.) March.

FDEP (Florida Department of Environmental Protection), 1999. Contaminant Target Levels Rule, Soil, Groundwater, and Surface Water Target Cleanup Levels. Florida Administrative Code (FAC) 62-777, August.

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TtNUS (Tetra Tech NUS, Inc.), 1998. Base-Wide Generic Work Plan, Naval Air Station Cecil Field, Jacksonville, Florida. Pittsburgh, PA. October.

TtNUS, 1999a. Sampling and Analysis Outline for Building 16D Water Tower, Base Realignment and Closure, Naval Air Station Cecil Field, Jacksonville, Florida. Pittsburgh, PA. January.

TtNUS, 1999b. Dig and Haul Package for Building 16D Water Tower, Naval Air Station Cecil Field, Jacksonville, Florida. Pittsburgh, PA. June.

## APPENDIX A

### Analytical Laboratory Results



MEMO TO: M. SPERANZA - PAGE 2  
DATE: FEBRUARY 22, 1999

PITT-02-9-179

- \* • Data Completeness
  - \* • Holding Times
  - \* • Calibration Verifications
  - Laboratory Blank Analyses
- \* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Laboratory Blank Analyses

Affected samples: All

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Action Level(soil)</u>
Arsenic	5.8µg/L	2.9 mg/kg
Lead	3.9µg/L	1.95 mg/kg

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors were taken into consideration when determining blank contamination. Positive results < the action level for arsenic were qualified as, "U", as a result of blank contamination. No action was taken for the remaining analytes since either the results were greater than the action level or were nondetects.

Notes

Samples CEF-631-SS-007, CEF-631-SS-008, CEF-631-SS-009 and CEF-631-SS-DU05 were mislabeled on the Form 1s and data summary tables. The sample IDs were corrected.

Executive Summary

**Laboratory Performance:** Arsenic and lead were present in the laboratory method blanks.

**Other Factors Affecting Data Quality:** None.

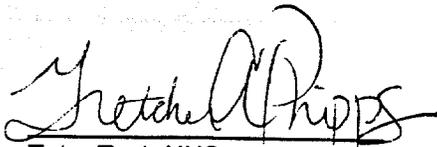
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PITT-02-9-179

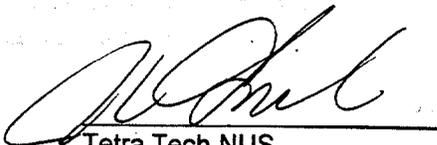
The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "Navy Installation Restoration Laboratory Quality Assurance Guide." (NFESC 2/96).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Tetra Tech NUS  
Gretchen A. Phipps



Tetra Tech NUS  
Joseph A. Samchuck  
Quality Control Officer

Attachments:

1. Appendix A - Qualified Analytical Data
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation



Tetra Tech NUS

INTERNAL CORRESPONDENCE

PITT-02-9-195

TO: ~~MARK SPERANZA~~

DATE: MARCH 4, 1999

FROM: DANA PIETO

CC: DV FILE

SUBJECT: ORGANIC DATA VALIDATION – PCBs  
CTO 078, CECIL FIELD, JACKSONVILLE, FLORIDA  
SDG F3612

SAMPLES: Soils\PCB:

CEF-16A-SS-004	CEF-16A-SS-008	CEF-16B-SS-001
CEF-16B-SS-004	CEF-16B-SS-DU02	CEF-16C-SS-001
CEF-16C-SS-004	CEF-16C-SS-DU01	CEF-16D-SS-001
CEF-16D-SS-004	CEF-16D-SS-DU03	CEF-631-SS-DU05
CEF-362-SS-004	CEF-362-SS-008	CEF-362-SS-DU04
CEF-631-SS-001	CEF-631-SS-004	

The sample set for CTO 078, Cecil Field, Jacksonville, Florida, SDG F3612, consists of seventeen soil environmental samples. The samples were analyzed for polychlorinated biphenyl (PCB) organic compounds. Five field duplicates (CEF-16C-SS-001/CEF-16C-SS-DU01, CEF-16B-SS-004/CEF-16B-SS-DU02, CEF-16D-SS-001/CEF-16D-SS-DU03, CEF-362-SS-004/CEF-362-SS-DU04, CEF-631-SS-004/CEF-631-SS-DU05) were included in this SDG.

The samples were collected by Tetra Tech NUS on February 2, 1999, and analyzed by Accutest Laboratories. The PCB compounds were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using the SW-846 Method 8082 analytical and reporting protocol.

The data were evaluated according to the following parameters:

- \*     •     Holding times
- \*     •     Initial and continuing calibrations
- \*     •     Laboratory and field blank analyses
- \*     •     Detection Limits

The symbol (\*) indicates that quality control criteria were met for this parameter. Problems affecting data usability are discussed below and the attached Table 1 summarizes the validation qualifications.

**PCBs**

No validation issues are present.

MEMO TO: MARK SPERANZA  
DATE: MARCH 4, 1999 - PAGE 2

It should be noted that the Form I for sample CEF-631-SS-DU05 was incorrectly labeled as CEF-361-SS-DU05. The appropriate corrections were made.

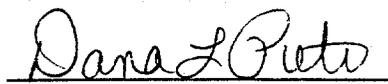
**Executive Summary**

**Laboratory Performance:** There are no validation issues present.

The data for these analyses were reviewed with reference to method-specific quality control criteria, the "National Functional Guidelines for Organic Data Evaluation" and the NFESC Interim Guidance Document entitled "Navy Installation Restoration Laboratory Quality Assurance Guide" (February 1996).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

  
Dana L. Pioto

Tetra Tech NUS  
Data Validator

  
Joseph A. Samchuck

Tetra Tech NUS  
Data Validation Quality Assurance Officer

**Attachments:**

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation



Tetra Tech NUS

INTERNAL CORRESPONDENCE

PITT-05-9-084

TO: ~~M. SPERANZA~~ DATE: MAY 24, 1999

FROM: GRETCHEN PHIPPS COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION – LEAD  
CTO 078 - CECIL FIELD  
SDG – F3982

SAMPLES: 11/Soil/

CEF-16D-SS-010	CEF-16D-SS-011	CEF-16D-SS-012
CEF-16D-SS-013	CEF-16D-SS-014	CEF-16D-SS-015
CEF-16D-SS-016	CEF-16D-SS-DUP01	CEF-16D-SS-DUP02
CEF-16D-SU-017	CEF-16D-SU-018	

1/Leachate/

CEF-16D-SU-017

Overview

The sample set for CTO 078, Cecil Field, SDG F3982, consists of eleven (11) soil environmental samples and one (1) leachate sample.

The soil samples were analyzed for lead and the leachate sample was analyzed for toxicity characteristic leaching procedure (TCLP) lead. The samples were collected by Tetra Tech NUS on April 8, 1999 and analyzed by Accutest Laboratory. Lead analyses were conducted using SW 846 method 6010B.

The data was evaluated based on the following parameters:

- \* • Data Completeness
- \* • Holding Times
- \* • Calibration Verifications
- Laboratory Blank Analyses
- \* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Notes

The following contaminant was present in a laboratory method / preparation blanks at the following maximum concentration:

Affected samples: All

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Action Level(soil)</u>	<u>Action Level(leachate)</u>
Lead	22.0µg/L	NA	10.0µg/L
Lead <sup>(1)</sup>	0.33 mg/kg	1.65 mg/kg	NA

<sup>(1)</sup> Maximum concentration present in soil preparation blank.

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors were taken into consideration when determining blank contamination. No action was required as the all the results reported for arsenic exceeded the action level.

Executive Summary

**Laboratory Performance:** Lead was present in the laboratory method/preparation blanks.

**Other Factors Affecting Data Quality:** None.

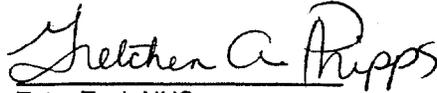
MEMO TO: M. SPERANZA - PAGE 3  
DATE: MAY 24, 1999

PITT-05-9-084

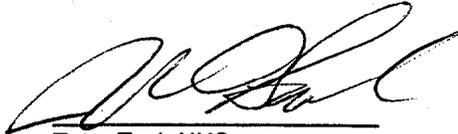
The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "Navy Installation Restoration Laboratory Quality Assurance Guide." (NFESC 2/96).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Tetra Tech NUS  
Gretchen A. Phipps



Tetra Tech NUS  
Joseph A. Samchuck  
Quality Control Officer

Attachments:

1. Appendix A - Qualified Analytical Data
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation



Tetra Tech NUS

INTERNAL CORRESPONDENCE

PITT-05-9-163

TO: M. SPERANZA DATE: MAY 24, 1999

FROM: GRETCHEN PHIPPS COPIES: DV FILE

SUBJECT: INORGANIC DATA VALIDATION - LEAD AND TCLP LEAD  
CTO 078 - CECIL FIELD  
SDG - F4102

SAMPLES: 2/Leachates/

CEF-16D-SS-030 CEF-16D-SS-031

13/Soils/

CEF-16D-SS-019 CEF-16D-SS-020  
CEF-16D-SS-021 CEF-16D-SS-022  
CEF-16D-SS-023 CEF-16D-SS-024  
CEF-16D-SS-025 CEF-16D-SS-026  
CEF-16D-SS-027 CEF-16D-SS-028  
CEF-16D-SS-029 CEF-16D-SS-DU-03  
CEF-16D-SS-DU-04

Overview

The sample set for CTO 078, Cecil Field, SDG F4102, consists of two (2) leachate environmental samples and thirteen (13) soil environmental samples. Two field duplicate pairs (CEF-16D-SS-019 / CEF-16D-SS-DU-03 and CEF-16D-SS-023 / CEF-16D-SS-DU-04) were included within this SDG.

The leachate samples were analyzed for toxicity characteristic leaching procedure (TCLP) lead. The soil samples were analyzed for lead. The samples were collected by Tetra Tech NUS on May 4, 1999 and analyzed by Accutest Laboratory. Lead analyses were conducted using SW 846 method 6010A.

The data was evaluated based on the following parameters:

- \* • Data Completeness
- \* • Holding Times
- Calibration Verifications
- Laboratory Blank Analyses
- \* - All quality control criteria were met for this parameter.

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Notes

The following contaminant was present in a laboratory method / preparation blanks at the following maximum concentration:

Affected samples: All

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Action Level(soil)</u>	<u>Action Level(leachate)</u>
Lead	3.7µg/L	1.85 mg/kg	18.5µg/L

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors were taken into consideration when determining blank contamination. No action was required as the results reported for lead were greater than the action level.

The Contract Required Detection Limit (CRDL) Percent Recovery (%R) for lead was >120% quality control limit. However, no validation action was required.

A comparison of field duplicate pairs (CEF-16D-SS-019 / CEF-16D-SS-DU-03 and CEF-16D-SS-023 / CEF-16D-SS-DU-04) is included in Appendix C.

Executive Summary

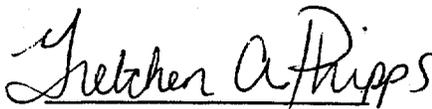
**Laboratory Performance:** Lead was present in the laboratory method / preparation blanks.

**Other Factors Affecting Data Quality:** None.

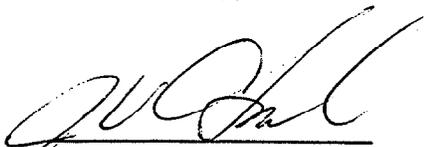
The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "Navy Installation Restoration Laboratory Quality Assurance Guide." (NFESC 2/96).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Tetra Tech NUS  
Gretchen A. Phipps



Tetra Tech NUS  
Joseph A. Samchuck  
Quality Control Officer

**MEMO TO: M. SPERANZA - PAGE 3**  
**DATE: MAY 24, 1999**

**PITT-05-9-163**

**Attachments:**

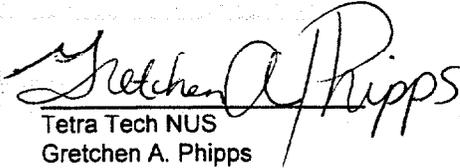
- 1. Appendix A - Qualified Analytical Data**
- 2. Appendix B - Results as reported by the Laboratory**
- 3. Appendix C - Support Documentation**

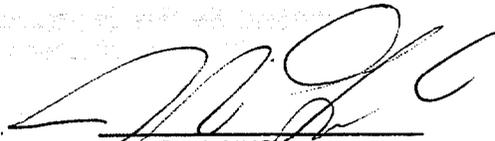


The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "Navy Installation Restoration Laboratory Quality Assurance Guide." (NFESC 2/96).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

  
Tetra Tech NUS  
Gretchen A. Phipps

  
Tetra Tech NUS  
Joseph A. Samchuck  
Quality Control Officer

Attachments:

1. Appendix A - Qualified Analytical Data
2. Appendix B - Results as reported by the Laboratory
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**CTO078 - NAS CECIL FIELD**

**SOIL DATA**

**Accutest, NJ**

**SDG: F3612**

SAMPLE NUMBER:	CEF-16D-SS-001	CEF-16D-SS-DU03	CEF-16D-SS-002	CEF-16D-SS-003
SAMPLE DATE:	02/02/99	02/02/99	02/02/99	02/02/99
LABORATORY ID:	F3612-38	F3612-47	F3612-39	F3612-40
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	91.1 %	95.7 %	96.4 %	90.0 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:		CEF-16D-SS-001		

	RESULT	QUAL	CODE									
<b>INORGANICS</b>												
ARSENIC	1.6	U	A	1.3	U	A						
LEAD	1030			1090			2570			114		

**CTO078 - NAS CECIL FIELD**

**SOIL DATA**

**Accutest, NJ**

**SDG: F3612**

SAMPLE NUMBER:	CEF-16D-SS-004	CEF-16D-SS-005	CEF-16D-SS-006	CEF-16D-SS-007
SAMPLE DATE:	02/02/99	02/02/99	02/02/99	02/02/99
LABORATORY ID:	F3612-41	F3612-42	F3612-43	F3612-44
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	90.4 %	93.3 %	91.7 %	91.0 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
<b>INORGANICS</b>												
ARSENIC	0.92	U	A									
LEAD	614			104			620			270		

**CTO078 - NAS CECIL FIELD**

**SOIL DATA**

Accutest, NJ

SDG: F3612

SAMPLE NUMBER:	CEF-16D-SS-008	CEF-16D-SS-009	CEF-362-SS-001	CEF-362-SS-002
SAMPLE DATE:	02/02/99	02/02/99	02/02/99	02/02/99
LABORATORY ID:	F3612-45	F3612-46	F3612-19	F3612-20
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	92.0 %	91.2 %	92.2 %	88.5 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
<b>INORGANICS</b>												
LEAD	479			897			5.7			12.1		

**CTO078 - NAS CECIL FIELD**  
**SOIL DATA**  
**Accutest, NJ**  
**SDG: F3982**

SAMPLE NUMBER:	CEF-16D-SS-010	CEF-16D-SS-011	CEF-16D-SS-012	CEF-16D-SS-013
SAMPLE DATE:	04/08/99	04/08/99	04/08/99	04/08/99
LABORATORY ID:	F3982-1	F3982-2	F3982-3	F3982-4
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	95.6 %	93.8 %	94.6 %	92.4 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
<b>INORGANICS</b>												
LEAD	1950			320			579			826		

**CTO078 - NAS CECIL FIELD**

**SOIL DATA**

**Accutest, NJ**

**SDG: F3982**

SAMPLE NUMBER:	CEF-16D-SS-014	CEF-16D-SS-015	CEF-16D-SS-016	CEF-16D-SS-DUP01
SAMPLE DATE:	04/08/99	04/08/99	04/08/99	04/08/99
LABORATORY ID:	F3982-5	F3982-6	F3982-7	F3982-10
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	97.6 %	96.4 %	94.3 %	96.5 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
INORGANICS												
LEAD	55.7			2900			2240			965		

**CTO078 - NAS CECIL FIELD**  
**SOIL DATA**  
**Accutest, NJ**  
**SDG: F3982**

SAMPLE NUMBER:	CEF-16D-SS-DUP02	CEF-16D-SU-017	CEF-16D-SU-018	
SAMPLE DATE:	04/08/99	04/08/99	04/08/99	//
LABORATORY ID:	F3982-11	F3982-8	F3982-9	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	94.8 %	90.7 %	89.5 %	100.0 %
UNITS:	MG/KG	MG/KG	MG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
INORGANICS												
LEAD	2830			13.0			7.1					



**CTO078 - NAS CECIL FIELD**

**SOIL DATA**  
**Accutest, NJ**  
**SDG: F4102**

SAMPLE NUMBER:	CEF-16D-SS-019	CEF-16D-SS-020	CEF-16D-SS-021	CEF-16D-SS-022
SAMPLE DATE:	05/04/99	05/04/99	05/04/99	05/04/99
LABORATORY ID:	F4102-6	F4102-10	F4102-13	F4102-9
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	99.1 %	96.9 %	93.9 %	97.2 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
INORGANICS												
LEAD	10.8			4.1			111			198		

**CTO078 - NAS CECIL FIELD**

**SOIL DATA**  
**Accutest, NJ**  
**SDG: F4102**

SAMPLE NUMBER:	CEF-16D-SS-023	CEF-16D-SS-024	CEF-16D-SS-025	CEF-16D-SS-026
SAMPLE DATE:	05/04/99	05/04/99	05/04/99	05/04/99
LABORATORY ID:	F4102-12	F4102-11	F4102-3	F4102-2
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	93.1 %	96.7 %	99.0 %	98.3 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
<b>INORGANICS</b>												
LEAD	890			133			628			555		

**CTO078 - NAS CECIL FIELD**  
**SOIL DATA**  
**Accutest, NJ**  
**SDG: F4102**

SAMPLE NUMBER:	CEF-16D-SS-027	CEF-16D-SS-028	CEF-16D-SS-029	CEF-16D-SS-DU-03
SAMPLE DATE:	05/04/99	05/04/99	05/04/99	05/04/99
LABORATORY ID:	F4102-1	F4102-5	F4102-7	F4102-14
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	97.2 %	97.8 %	96.6 %	99.1 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				CEF-16D-SS-019

	RESULT	QUAL	CODE									
INORGANICS												
LEAD	124			114			59.7			15.7		





**CTO078 - NAS CECIL FIELD**  
**SOIL DATA**  
**Accutest, NJ**  
**SDG: F4217**

SAMPLE NUMBER:  
 SAMPLE DATE:  
 LABORATORY ID:  
 QC\_TYPE:  
 % SOLIDS:  
 UNITS:  
 FIELD DUPLICATE OF:

CEF-16C-SS-029  
 05/27/99  
 F4217-6  
 NORMAL  
 96.4 %  
 MG/KG

CEF-16C-SS-030  
 05/27/99  
 F4217-7  
 NORMAL  
 98.6 %  
 MG/KG

CEF-16D-SS-032  
 05/26/99  
 F4217-1  
 NORMAL  
 98.0 %  
 MG/KG

CEF-16D-SS-033  
 05/26/99  
 F4217-2  
 NORMAL  
 98.7 %  
 MG/KG

	RESULT	QUAL	CODE									
INORGANICS												
ARSENIC	0.51			0.45								
LEAD	72.7			175			103			223		

**CTO078 - NAS CECIL FIELD**

**SOIL DATA  
Accutest, NJ  
SDG: F4217**

SAMPLE NUMBER:	CEF-16D-SS-034	CEF-16D-SS-035	CEF-16D-SS-DUP04	
SAMPLE DATE:	05/26/99	05/26/99	05/26/99	//
LABORATORY ID:	F4217-3	F4217-4	F4217-5	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	99.4 %	89.9 %	74.8 %	100.0 %
UNITS:	MG/KG	MG/KG	MG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
INORGANICS												
LEAD	15.3			97.4			38.9					

**CTO078 - NAS CECIL FIELD**  
**SOIL DATA**  
**Accutest, NJ**  
**SDG: F3612**

SAMPLE NUMBER:	CEF-16D-SS-001	CEF-16D-SS-DU03	CEF-16D-SS-004	CEF-362-SS-004
SAMPLE DATE:	02/02/99	02/02/99	02/02/99	02/02/99
LABORATORY ID:	F3612-38	F3612-47	F3612-41	F3612-2
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	91.1 %	95.7 %	90.4 %	89.6 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:		CEF-16D-SS-001		

	RESULT	QUAL	CODE									
<b>PESTICIDES/PCBs</b>												
AROCLOR-1016	37	U		35	U		37	U		37	U	
AROCLOR-1221	37	U		35	U		37	U		37	U	
AROCLOR-1232	37	U		35	U		37	U		37	U	
AROCLOR-1242	37	U		35	U		37	U		37	U	
AROCLOR-1248	37	U		35	U		37	U		37	U	
AROCLOR-1254	37	U		35	U		37	U		37	U	
AROCLOR-1260	37	U		35	U		37	U		37	U	

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-001

**Lab Sample ID:** F3612-38

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 91.1

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	1.6	1.1	mg/kg	1	02/10/99	02/11/99 JK	SW846 6010A
Lead	1030	11.0	mg/kg	1	02/10/99	02/11/99 JK	SW846 6010A

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RDL = Reported Detection Limit

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-002	
<b>Lab Sample ID:</b> F3612-39	<b>Date Sampled:</b> 02/02/99
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 02/04/99
	<b>Percent Solids:</b> 96.4
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	2570	10.4	mg/kg	1	02/10/99	02/11/99 JK	SW846 6010A

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-003

**Lab Sample ID:** F3612-40

**Matrix:** SO - Soil

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 90.0

**Project:** NAS Cecil Field

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	114	11.1	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-004

**Lab Sample ID:** F3612-41

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 90.4

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.92 B	1.1	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A
Lead	614	11.1	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-005

**Lab Sample ID:** F3612-42

**Matrix:** SO - Soil

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 93.3

**Project:** NAS Cecil Field

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	104	10.7	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-006	
<b>Lab Sample ID:</b> F3612-43	<b>Date Sampled:</b> 02/02/99
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 02/04/99
	<b>Percent Solids:</b> 91.7
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	620	10.9	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-007

**Lab Sample ID:** F3612-44

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 91.0

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	270	11.0	mg/kg	1	02/11/99	02/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-008	<b>Date Sampled:</b> 02/02/99
<b>Lab Sample ID:</b> F3612-45	<b>Date Received:</b> 02/04/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 92.0
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	479	10.9	mg/kg	1	02/11/99	02/15/99 JK	SW846 6010A

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-009

**Lab Sample ID:** F3612-46

**Matrix:** SO - Soil

**Date Sampled:** 02/02/99

**Date Received:** 02/04/99

**Percent Solids:** 91.2

**Project:** NAS Cecil Field

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	897	11.0	mg/kg	1	02/11/99	02/15/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-DU03	
<b>Lab Sample ID:</b> F3612-47	<b>Date Sampled:</b> 02/02/99
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 02/04/99
	<b>Percent Solids:</b> 95.7
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Arsenic	1.3	1.0	mg/kg	1	02/11/99	02/15/99 JK	SW846 6010A
Lead	1090	10.4	mg/kg	1	02/11/99	02/15/99 JK	SW846 6010A

RDL = Reported Detection Limit

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-010

**Lab Sample ID:** F3982-1

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 04/08/99

**Date Received:** 04/09/99

**Percent Solids:** 95.6

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	1950	10.5	mg/kg	1	04/21/99	04/22/99 JK	SW846 6010A

RDL = Reported Detection Limit

000016

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-011

**Lab Sample ID:** F3982-2

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 04/08/99

**Date Received:** 04/09/99

**Percent Solids:** 93.8

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	320	10.7	mg/kg	1	04/21/99	04/22/99 JK	SW846 6010A

RDL = Reported Detection Limit

300017

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-012	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-3	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 94.6
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	579	10.6	mg/kg	1	04/21/99	04/22/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

300018

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-013

**Lab Sample ID:** F3982-4

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 04/08/99

**Date Received:** 04/09/99

**Percent Solids:** 92.4

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	826	10.8	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

RDL = Reported Detection Limit

000015

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-014	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-5	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 97.6
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	55.7	10.2	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

000020

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-015	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-6	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.4
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	2900	10.4	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

000071

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-016	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-7	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 94.3
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	2240	10.6	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

000022

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-DUP01	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-10	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.5
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	965	10.4	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

RDL = Reported Detection Limit

000025

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-DUP02	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-11	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 94.8
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	2830	10.5	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

000026

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SU-017	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-8	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 90.7
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	13.0	11.0	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

RDL = Reported Detection Limit

000023

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SU-018	<b>Date Sampled:</b> 04/08/99
<b>Lab Sample ID:</b> F3982-9	<b>Date Received:</b> 04/09/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 89.5
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	7.1 B	11.2	mg/kg	1	04/23/99	04/23/99 JK	SW846 6010A

---

RDL = Reported Detection Limit

000024

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SU-017	
<b>Lab Sample ID:</b> F3982-8A	<b>Date Sampled:</b> 04/08/99
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 04/09/99
	<b>Percent Solids:</b> 90.7
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	0.13	0.0030	mg/l	1	04/15/99	04/16/99 JK	SW846 6010A

RDL = Reported Detection Limit

000027



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-019	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-6	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 99.1
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	10.8	10.1	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000009



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-020	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-10	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.9
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	4.1 B	10.3	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000013



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-021	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-13	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 93.9
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	111	10.6	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000016



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-022	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-9	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 97.2
<b>Project:</b> NAS Cecil Field-16D-01	

### Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	198	10.3	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000012



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-023	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-12	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 93.1
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	890	10.7	mg/kg	1	05/10/99	05/10/99 JK	SW846 6010A

RDL = Reported Detection Limit

000015



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-024	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-11	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.7
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	133	10.3	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000014



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-025	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-3	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 99.0
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	628	10	mg/kg	1	05/06/99	05/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000006



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-026	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-2	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 98.3
<b>Project:</b> NAS Cecil Field-16D-01	

### Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	555	10	mg/kg	1	05/06/99	05/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000005



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-027	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-1	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 97.2
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	124	10	mg/kg	1	05/06/99	05/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000004



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-028	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-5	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 97.8
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	114	10	mg/kg	1	05/06/99	05/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000008



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-029	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-7	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.6
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	59.7	10.4	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000010



# Report of Analysis

**Client Sample ID:** CEF-16D-SS-DU-03

**Lab Sample ID:** F4102-14

**Matrix:** SO - Soil

**Project:** NAS Cecil Field-16D-01

**Date Sampled:** 05/04/99

**Date Received:** 05/05/99

**Percent Solids:** 99.1

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	15.7	10.1	mg/kg	1	05/10/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000017



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-DU-04	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-15	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 91.6
<b>Project:</b> NAS Cecil Field-16D-01	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	1160	10.9	mg/kg	1	05/11/99	05/11/99 JK	SW846 6010A

RDL = Reported Detection Limit

000018



# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-030	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-4	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a
<b>Project:</b> NAS Cecil Field-16D-01	

### Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	8.8	0.0030	mg/l	1	05/07/99	05/10/99 JK	SW846 6010A

RDL = Reported Detection Limit

000007



**ACCUTEST.**

### Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-031	<b>Date Sampled:</b> 05/04/99
<b>Lab Sample ID:</b> F4102-8	<b>Date Received:</b> 05/05/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a
<b>Project:</b> NAS Cecil Field-16D-01	

#### Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	0.18	0.0030	mg/l	1	05/07/99	05/10/99 JK	SW846 6010A

RDL = Reported Detection Limit

000011

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-032	<b>Date Sampled:</b> 05/26/99
<b>Lab Sample ID:</b> F4217-1	<b>Date Received:</b> 05/28/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 98.0
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	103	10.2	mg/kg	1	06/02/99	06/02/99 JK	SW846 6010A

RDL = Reported Detection Limit

030013

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-033  
**Lab Sample ID:** F4217-2  
**Matrix:** SO - Soil  
**Project:** NAS Cecil Field

**Date Sampled:** 05/26/99  
**Date Received:** 05/28/99  
**Percent Solids:** 98.7

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	223	10.1	mg/kg	1	06/02/99	06/02/99 JK	SW846 6010A

RDL = Reported Detection Limit

000014

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-034	<b>Date Sampled:</b> 05/26/99
<b>Lab Sample ID:</b> F4217-3	<b>Date Received:</b> 05/28/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 99.4
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	15.3	10.1	mg/kg	1	06/02/99	06/02/99 JK	SW846 6010A

RDL = Reported Detection Limit

000015

# Report of Analysis

**Client Sample ID:** CEF-16D-SS-035

**Lab Sample ID:** F4217-4

**Matrix:** SO - Soil

**Project:** NAS Cecil Field

**Date Sampled:** 05/26/99

**Date Received:** 05/28/99

**Percent Solids:** 89.9

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	97.4	11.1	mg/kg	1	06/02/99	06/02/99 JK	SW846 6010A

RDL = Reported Detection Limit

000016

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-DUP04	<b>Date Sampled:</b> 05/26/99
<b>Lab Sample ID:</b> F4217-5	<b>Date Received:</b> 05/28/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 74.8
<b>Project:</b> NAS Cecil Field	

## Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	38.9	13.4	mg/kg	1	06/02/99	06/02/99 JK	SW846 6010A

RDL = Reported Detection Limit

000017

# Report of Analysis

<b>Client Sample ID:</b> CEF-16D-SS-001	<b>Date Sampled:</b> 02/02/99
<b>Lab Sample ID:</b> F3612-38	<b>Date Received:</b> 02/04/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 91.1
<b>Method:</b> SW846 8082	
<b>Project:</b> NAS Cecil Field	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB07259.D	1	02/05/99	SKW	02/05/99	OP670	GAB283
Run #2							

**PCB List**

CAS No.	Compound	Result	RDL	Units Q
12674-11-2	Aroclor 1016	ND	37	ug/kg
11104-28-2	Aroclor 1221	ND	37	ug/kg
11141-16-5	Aroclor 1232	ND	37	ug/kg
53469-21-9	Aroclor 1242	ND	37	ug/kg
12672-29-6	Aroclor 1248	ND	37	ug/kg
11097-69-1	Aroclor 1254	ND	37	ug/kg
11096-82-5	Aroclor 1260	ND	37	ug/kg

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		40-150%
2051-24-3	Decachlorobiphenyl	84%		30-160%

**ND** = Not detected  
**RDL** = Reported Detection 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

<b>Client Sample ID:</b> CEF-16D-SS-004	<b>Date Sampled:</b> 02/02/99
<b>Lab Sample ID:</b> F3612-41	<b>Date Received:</b> 02/04/99
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 90.4
<b>Method:</b> SW846 8082	
<b>Project:</b> NAS Cecil Field	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB07260.D	1	02/05/99	SKW	02/05/99	OP670	GAB283
Run #2							

**PCB List**

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	37	ug/kg	
11104-28-2	Aroclor 1221	ND	37	ug/kg	
11141-16-5	Aroclor 1232	ND	37	ug/kg	
53469-21-9	Aroclor 1242	ND	37	ug/kg	
12672-29-6	Aroclor 1248	ND	37	ug/kg	
11097-69-1	Aroclor 1254	ND	37	ug/kg	
11096-82-5	Aroclor 1260	ND	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	109%		40-150%
2051-24-3	Decachlorobiphenyl	90%		30-160%

**ND** = Not detected  
**RDL** = Reported Detection 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

<b>Client Sample ID:</b> CEF-16D-SS-DU03		<b>Date Sampled:</b> 02/02/99
<b>Lab Sample ID:</b> F3612-47		<b>Date Received:</b> 02/04/99
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 95.7
<b>Method:</b> SW846 8082		
<b>Project:</b> NAS Cecil Field		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB07261.D	1	02/05/99	SKW	02/05/99	OP670	GAB283
Run #2							

**PCB List**

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	35	ug/kg	
11104-28-2	Aroclor 1221	ND	35	ug/kg	
11141-16-5	Aroclor 1232	ND	35	ug/kg	
53469-21-9	Aroclor 1242	ND	35	ug/kg	
12672-29-6	Aroclor 1248	ND	35	ug/kg	
11097-69-1	Aroclor 1254	ND	35	ug/kg	
11096-82-5	Aroclor 1260	ND	35	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	108%		40-150%
2051-24-3	Decachlorobiphenyl	95%		30-160%

ND = Not detected  
 RDL = Reported Detection 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