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NAS CECIL FIELD, FL
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SITE ASSESSMENT REPORT ADDENDUM FOR BUILDING 82 TANK G82 NAS CECIL FIELD FL

3/14/2001

TETRA TECH NUS INC

Site Assessment Report Addendum
for
Building 82, Tank G82

Naval Air Station Cecil Field
Jacksonville, Florida

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0108

March 2001

Revision 0
03/14/01

SITE ASSESSMENT REPORT ADDENDUM
FOR
BUILDING 82, TANK G82

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 0108

MARCH 2001

PREPARED UNDER THE SUPERVISION OF:

JOSEPH LOGAN
TASK ORDER MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA

APPROVED FOR SUBMITTAL BY:

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: March 14, 2001

NAME AND TITLE OF CERTIFYING OFFICIAL: Joseph Logan
Task Order Manager

TABLE OF CONTENTS

TABLES

FIGURES

ACRONYMS

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
BCT	BRAC Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
CSR	Confirmatory Sampling Report
CTO	Contract Task Order
EDB	1,2-dibromoethane
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida – Petroleum Range Organics
GCTL	Groundwater Cleanup Target Level
HLA	Harding Lawson Associates
KAG	Kerosene Analytical Group
mg/kg	milligram per kilogram
mg/L	milligram per liter
MONA	Monitoring Only for Natural Attenuation
NAS	Naval Air Station
PAH	polycyclic aromatic hydrocarbon
PID	photoionization detector
ppm	part per million
PVC	polyvinyl chloride
RAC	Remedial Action Contractor
RAP	Remedial Action Plan
SA	Site Assessment
SAP	Site Assessment Plan
SAR	Site Assessment Report
SARA	Site Assessment Report Addendum
SCTL	Soil Cleanup Target Level
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
SPLP	Synthetic Precipitation Leachate Procedure
TRPH	total recoverable petroleum hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USEPA	U. S. Environmental Protection Agency
UST	underground storage tank

VOA	volatile organic aromatics
VOC	volatile organic compound

1.0 INTRODUCTION

Tetra Tech NUS, Inc. (TtNUS) was authorized by Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) to conduct a site assessment (SA) at Building 82, Tank G82 on Naval Air Station (NAS) Cecil Field in Jacksonville, Florida. The Site Assessment was performed in accordance with Florida Administrative Code (FAC) 62-770. A Site Assessment Plan (SAP) for the assessment of soil and groundwater at Tank Sites 337, 437, 815, 860 (Tanks A, B, and D), and G-82/G-82A was prepared by TtNUS (TtNUS, 1999) under Contract Task Order (CTO) 108. The Site Assessment Report (SAR) (TtNUS, 2000) summarized the related field operations, results, conclusions, and recommendations of the SA and was submitted in August 2000. One of the recommendations of the SAR was to prepare a Remedial Action Plan (RAP) for the soil. After the SAR was submitted and accepted, the Navy decided to excavate the contaminated soil rather than prepare the RAP. This SAR Addendum (SARA) describes the soil removal action, subsequent sampling and analysis, and new conclusions and recommendations. In accordance with the planning documents for CTO 108, Florida Administrative Code (FAC) Chapter 62-770 is the applicable guidance for this report.

1.1 SUMMARY OF SAR

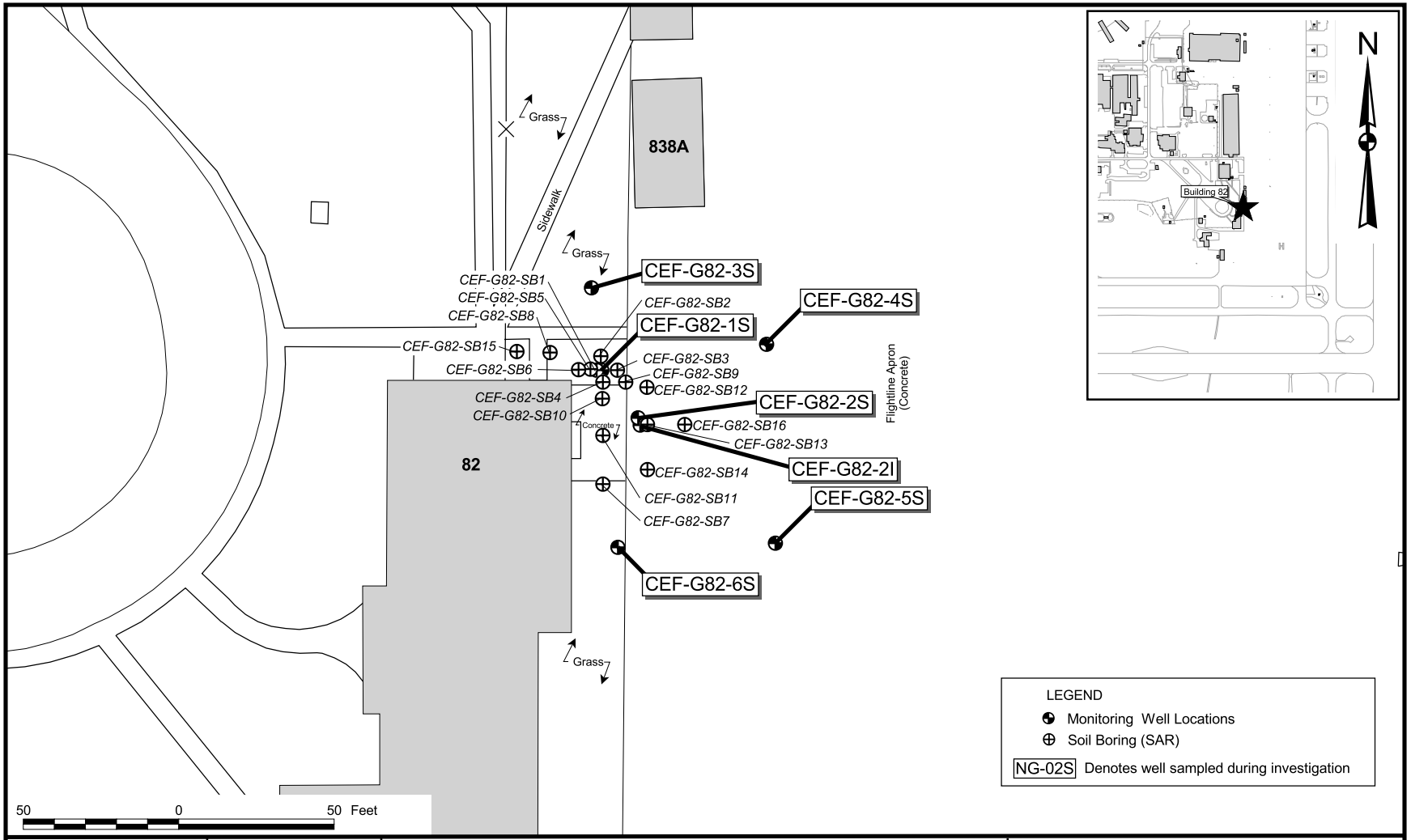
Building 82 is the air traffic control tower. Figure 1-1 shows the site plan. Tank G82, located on the northern side of the building, was an underground storage tank (UST) used to store diesel fuel for emergency generators. Tank G82 was removed on June 6, 1997, and a tank closure assessment was performed during the removal. A piezometer (CEF-G82-1S) was installed and groundwater was collected and analyzed in January 1998. Two compounds, 1-methylnaphthalene and 2-methylnaphthalene, were detected at concentrations above Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs). Harding Lawson Associates (HLA) performed a confirmatory sampling investigation in January 1999. In a Confirmatory Sampling Report (CSR), HLA recommended that a site assessment be performed (HLA, 1999).

TtNUS field activities for the SA began in October 1999 and were completed in July 2000. The work included the installation of six monitoring wells and the delineation of contaminated soil. (TtNUS, 2000). The contaminants of concern, based on the analysis of groundwater samples, are benzene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. The primary contaminants of concern in soil include xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)pyrene, total recoverable petroleum hydrocarbons (TRPH), and other polycyclic aromatic hydrocarbons (PAHs). Figure 1-2 shows the extent of soil contamination as depicted in the SAR. Most of the contaminated soil was below the concrete apron and a concrete slab next to Building 82.

The SAR recommended a Monitoring Only for Natural Attenuation (MONA) plan for groundwater and a RAP for soil. The FDEP approved the SAR on August 23, 2000. A copy of the letter is included in Appendix A. This letter only approved the implementation of the RAP; however, the Navy authorized the Remedial Action Contractor (RAC) to conduct a source removal at the site.

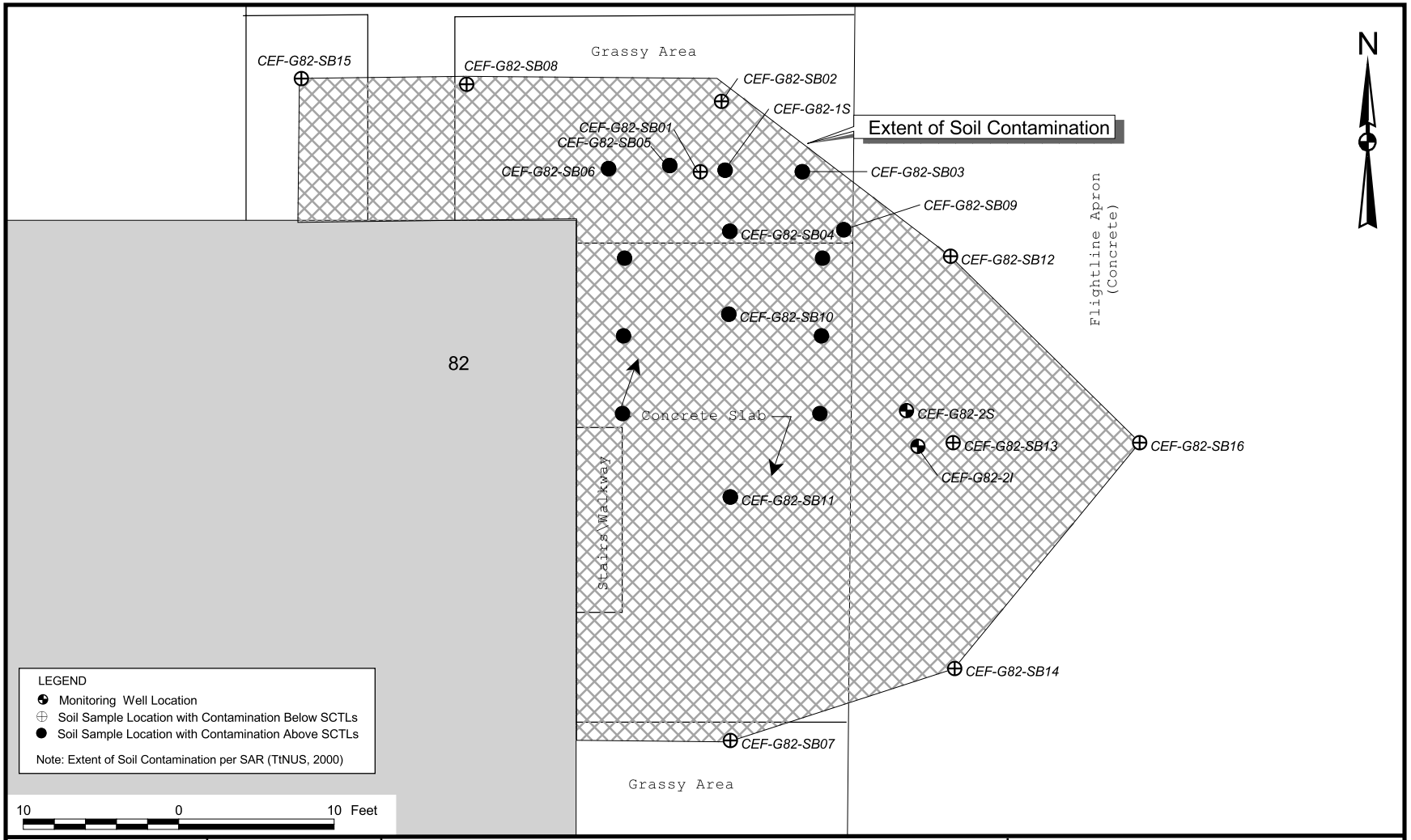
1.2 SUMMARY OF REMOVAL ACTION

In October 2000, the RAC was mobilized to remove the contaminated soil. Because of the presence of piping and the proximity of Building 82, the contaminated soil could not be completely removed. The contaminated soil that was left in place was sampled by TtNUS and analyzed using the Synthetic Precipitation Leachate Procedure (SPLP). These results were used to determine the disposition of the soil at the site and are discussed elsewhere in this report.



DRAWN BY: MJJ	DATE: 20Dec99	SITE PLAN BUILDING 82 - TANK G82 SITE ASSESSMENT REPORT ADDENDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 0394
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\bldg0082.apr 13Mar01 MJJ 1-1 Site Plan Layout



DRAWN BY: MJJ	DATE: 25Jul00	EXTENT OF CONTAMINATED SOIL BUILDING 82 - TANK G82 SITE ASSESSMENT REPORT ADDENDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 0394
CHECKED BY:	DATE:		APPROVED BY: DATE:
COST/SCHEDULE-AREA:			APPROVED BY: DATE:
SCALE: AS NOTED			DRAWING NO.: FIGURE 1-2 / REV: 0

P:\GIS\NAS_CecilField\bldg0082.apr 13Mar01 MJJ 1-2 Excavation Layout

2.0 DESCRIPTION OF REMOVAL

In October 2000, the RAC proceeded with the excavation of the contaminated soil that was delineated in the SAR. The RAC planned to excavate the soil to the water table, about 7 feet below ground surface (bgs). A copy of the text and figures from their Source Removal Report (SRR) is included in Appendix B (CH2M Hill, 2001). The following paragraphs summarize the source removal activities and TtNUS' follow-up fieldwork.

The 3-inch concrete slab between Building 82 and the flightline's concrete apron (Figure 2-1) was removed. The apron was left in place since there are no plans known to TtNUS to alter or remove the affected part of the apron. During excavation, a concrete-encased cable run was encountered under the site next to the apron along a north-south line. Thus, soil below the concrete-encased cables had to be left in place to support the cables. The side of the excavation was sloped away from the cable runs.

The bottom of the foundation of Building 82 was found to be about 3 feet bgs. Soil was left in place below the foundation and sloped away from the building to maintain the structural integrity of the building. Figure 2-1 shows the actual extent of the excavation and a typical cross-section of the excavation to illustrate the sloped sides of the excavation.

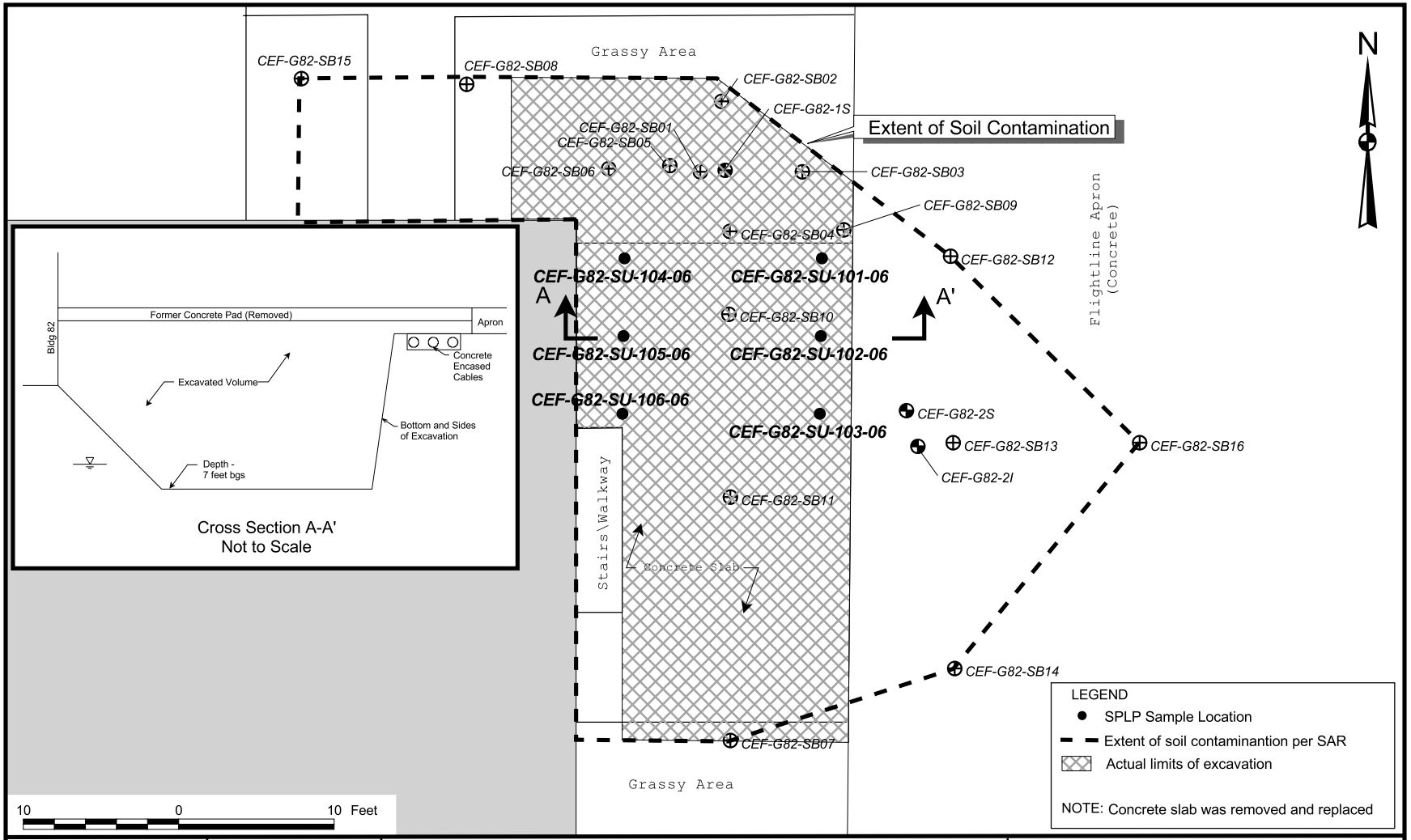
The RAC reported that visual inspection of the soil left in place to support the cables and building foundation indicated that the soil was contaminated. After the excavation was complete, the hole was backfilled with clean fill and a new 3-inch-thick concrete slab was installed to replace the slab that was removed. A total of 148.1 tons of soil were removed.

Pipelines and concrete obstructions also limited the western extent of the excavation along the northern side of the building. However, headspace measurements collected during excavation did not indicate the presence of contamination.

The RAC collected confirmatory samples that showed that contaminant concentrations in the soil at the northern end and southern end of the excavation were less than Soil Cleanup Target Levels (SCTLs). The RAC did not analyze the soil, and concentrations of contaminants in the soil that was left in place were anticipated to be greater than residential, industrial, and leachability SCTLs, based on the SAR results and the field observations.

Even though contaminated soil was left in place, the soil was covered by a concrete slab; therefore, no further action, with institutional controls and engineering controls, could be proposed for soil. However, additional soil samples were collected just before the slab was replaced and analyzed by SPLP to

determine the extent of the proposed institutional controls. Specifically, the SPLP results would determine whether the slab and apron were necessary to prevent percolation of precipitation through the contamination soil.



DRAWN BY: MJJ	DATE: 25Jul00	ACTUAL EXTENT OF EXCAVATION BUILDING 82 - TANK G82 SITE ASSESSMENT REPORT ADDENDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 0394
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE: AS NOTED			DRAWING NO.: FIGURE 2-1 / REV: 0

P:\GIS\NAS_CecilField\bldg0082.apr 30Mar01 MJJ 2-1 Excavation Layout

3.0 SPLP SAMPLING AND RESULTS

Subsurface soil samples (CEF-G82-SU-101-06 through -106-06) were collected from the contaminated soil left in place along the apron and along the building wall. Sample locations were biased to the northern end of the slab because the location of the source of contamination (the former UST) was north of the slab. The sample locations are shown on Figure 3-1. Three samples were collected from the unsaturated soil on each side of the excavation at a depth interval of 5 to 6 feet bgs. Samples were collected after the backfill was placed but before the concrete slab was poured.

Based on existing data from the SAR, the samples were first analyzed "as-is" for volatile organic compounds (VOCs), PAHs, and TRPH. A subsample was collected at the same time for SPLP analysis. If any of the as-is results were greater than the leachability criteria, then the samples were analyzed by SPLP.

Table 3-1 summarizes the as-is quantifiable results that are greater than the FDEP leachability criteria. Laboratory data sheets are included in Appendix C. The results show that each sample has at least one constituent with a concentration greater than the leachability criteria. Thus, the samples were submitted for SPLP analysis and the leachates were analyzed for the fraction that was detected in the as-is sample at concentrations greater than the leachability criteria. The laboratory data indicate that the high TRPH concentrations and naphthalene compound concentrations resulted in high detection limits for many PAHs.

The TRPH concentrations in all six samples were greater than the residential criteria and, in five samples, were greater than the industrial criteria. Similar conclusions for other compounds cannot be made because the detection limits for PAHs such as benzo(a)pyrene were often greater than the residential criteria and the industrial criteria. The detection limits were high because of the high concentrations of TRPH and naphthalene compounds.

Table 3-2 summarizes the SPLP leachate results. Two samples (CEF-G82-SU-102-06 and -103-06) had leachate concentrations of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene greater than GCTLs, thereby indicating the potential for migration into the groundwater. [Coincidentally, during the site assessment naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected in well CEF-G82-2S, which is considered a downgradient well (TtNUS, 2000)].

Table 3-3 summarizes the conclusions of the SPLP results. This table shows which samples had as-is concentrations greater than leachability criteria and which samples had SPLP leachate concentrations

greater than GCTLs. Figure 3-2 shows the as-is soil sample results that were greater than leachability criteria and the SPLP results.

The laboratory data indicate that methylene chloride was detected in the SPLP leachate samples. As noted by the laboratory, methylene chloride is a suspected laboratory contaminant and, therefore, was not evaluated as part of the investigation.

TABLE 3-1

POST-EXCAVATION SOIL SAMPLE RESULTS GREATER THAN LEACHABILITY CRITERIA
TANK G82 SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Sample Number	CEF-G82-SU-101-06	CEF-G82-SU-102-06	CEF-G82-SU-103-06	CEF-G82-SU-104-06	CEF-G82-SU-105-06	CEF-G82-SU-106-06	FDEP Leachability	FDEP Residential	FDEP Industrial
Sample Date	10/17/00	10/17/00	10/17/00	10/17/00	10/17/00	10/17/00	Criteria,	SCTL	SCTL
Sample Depth, Feet	5 - 6	5 - 6	5 - 6	5 - 6	5 - 6	5 - 6	FAC 62-777	FAC 62-777	FAC 62-777
Volatile Organic Compounds (µg/kg)									
Ethylbenzene	310 U	2010	3330	118	2190	205	600	1100000	8400000
Xylenes	940 U	9810	15700	4460	4900	617	200	5900000	560000000
Semivolatile Organic Compounds (µg/kg)									
Naphthalene	1900 U	7060	3700 U	3800 U	5860	1900 U	1700	40000	270000
1-Methylnaphthalene	1900 U	28300	9120	4620	27500	1880	2200	68000	470000
2-Methylnaphthalene	1900 U	35600	11000	5920	35500	2290	6100	80000	560000
Total Petroleum Hydrocarbons (mg/kg)									
TRPH, mg/kg	1300	3370	10900	3050	3620	3220	340	340	2500

NOTES
µ - Below detection limit shown.
µg/kg - microgram per kilogram.
mg/kg - milligram per kilogram.
Shaded denotes that "as-is" concentration was greater than leachability criteria.

TABLE 3-2

POST-EXCAVATION SOIL SAMPLE SPLP LEACHATE RESULTS
TANK G82 SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Sample Number Sample Date Sample Depth, Feet	CEF-G82-SU-101-06 10/17/00 5 - 6	CEF-G82-SU-102-06 10/17/00 5 - 6	CEF-G82-SU-103-06 10/17/00 5 - 6	CEF-G82-SU-104-06 10/17/00 5 - 6	CEF-G82-SU-105-06 10/17/00 5 - 6	CEF-G82-SU-106-06 10/17/00 5 - 6	FDEP GCTL Criteria, FAC 62-777
Volatile Organic Compounds (µg/L)							
Ethylbenzene	NA	4.7	8.5	2 U	5.3	2	30
Xylenes	NA	14.9	21.4	1.1	16	6 U	20
Semivolatile Organic Compounds (µg/L)							
Naphthalene	NA	20 U	49.1	20 U	20 U	NA	20
1-Methylnaphthalene	NA	68.5	92.6	11.7	20 U	NA	20
2-Methylnaphthalene	NA	13.8	90.8	8.8	20 U	NA	20
Total Petroleum Hydrocarbons (mg/L)							
TRPH	2.5 U	3.24	2.11 J	2.5 U	2.5 U	2.5 U	5

NOTES
U - Below detection limit shown.
NA - Analysis not performed.
µg/L - micrograms per liter.
mg/L - miligrams per liter.
Shaded denotes that leachate concentration was greater than GCTL.

TABLE 3-3

SPLP RESULTS SUMMARY
TANK G82 SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

SAMPLE NUMBER	VOCs (8260B)	PAHs (8310)	TRPH (FLPRO)	Location	Constituents greater than leachability criteria in "as-is" analysis
CEF-G82-SU-101-06	no	no	YES	Apron side, north	TRPH
CEF-G82-SU-102-06	YES	YES	YES	Apron side, middle	E, X, N, **1-MN**, 2-MN, TRPH
CEF-G82-SU-103-06	YES	YES	YES	Apron side, south	E, **X, N*, 1-MN, 2-MN,** TRPH
CEF-G82-SU-104-06	YES	YES	YES	Building side, north	X, 1-MN, TRPH
CEF-G82-SU-105-06	YES	YES	YES	Building side, middle	E, X, N, 1-MN, 2-MN, TRPH
CEF-G82-SU-106-06	YES	no	YES	Building side, south	X, TRPH

YES and no refer to whether SPLP test was performed for this fraction.
Shaded means an SPLP leachate result is above the GCTL.
Bold compound is above the GCTL in SPLP leachate.
* means was not above leachability criteria in "as-is" result.
Method number is shown in parentheses.
E - Ethylbenzene.
X - Xylenes.
N - Naphthalene.
1-MN - 1-methylnaphthalene.
2-MN - 2-methylnaphthalene.
TRPH - Total Recoverable Petroleum Hydrocarbons.

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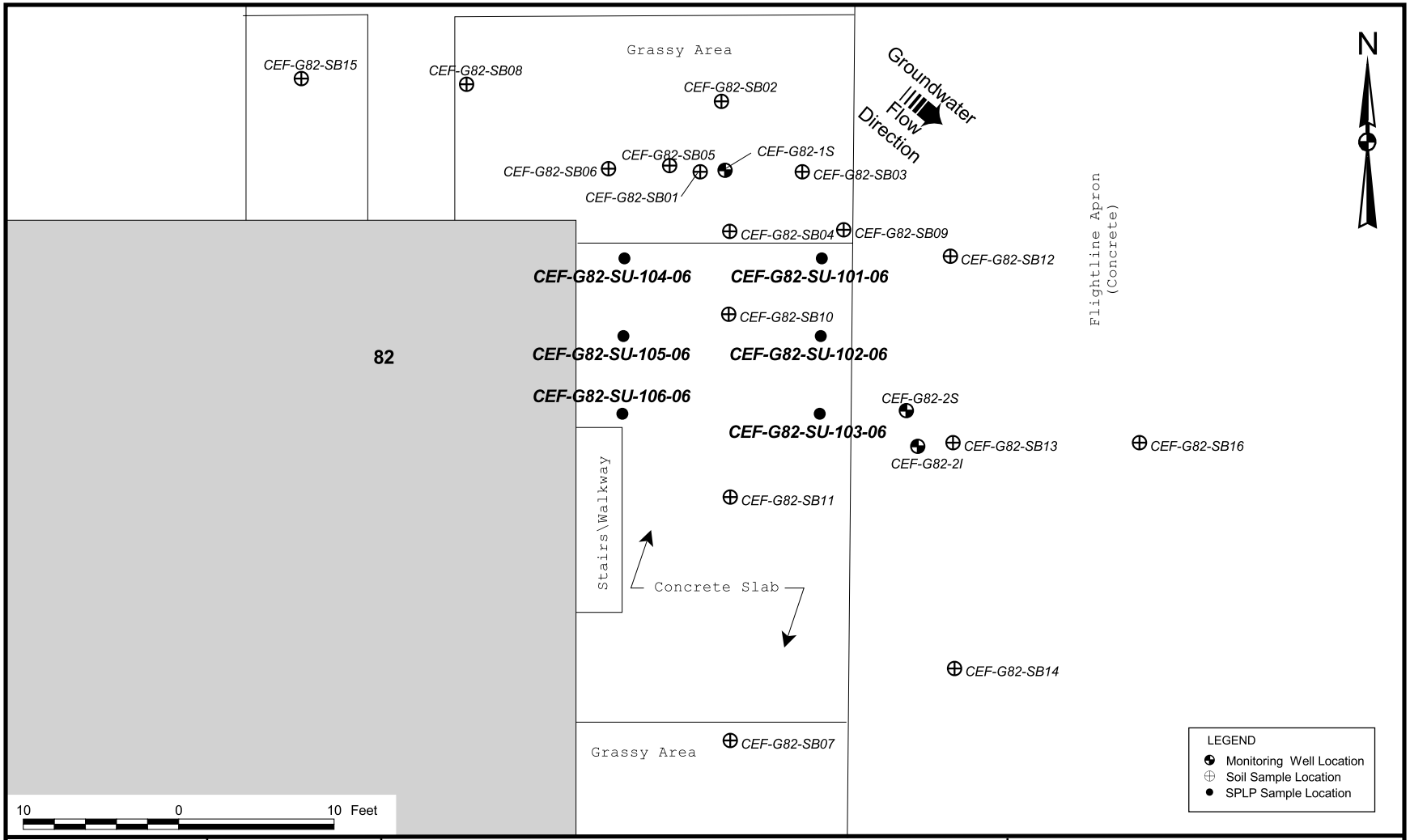

DRAWN BY: MJJ	DATE: 11Jan01	SPLP SAMPLE LOCATIONS BUILDING 82 - TANK G82 SITE ASSESSMENT REPORT ADDENDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 0394
CHECKED BY:	DATE:		APPROVED BY: DATE:
COST/SCHEDULE-AREA:			APPROVED BY: DATE:
SCALE: AS NOTED			DRAWING NO.: FIGURE 3-1 / REV: 0

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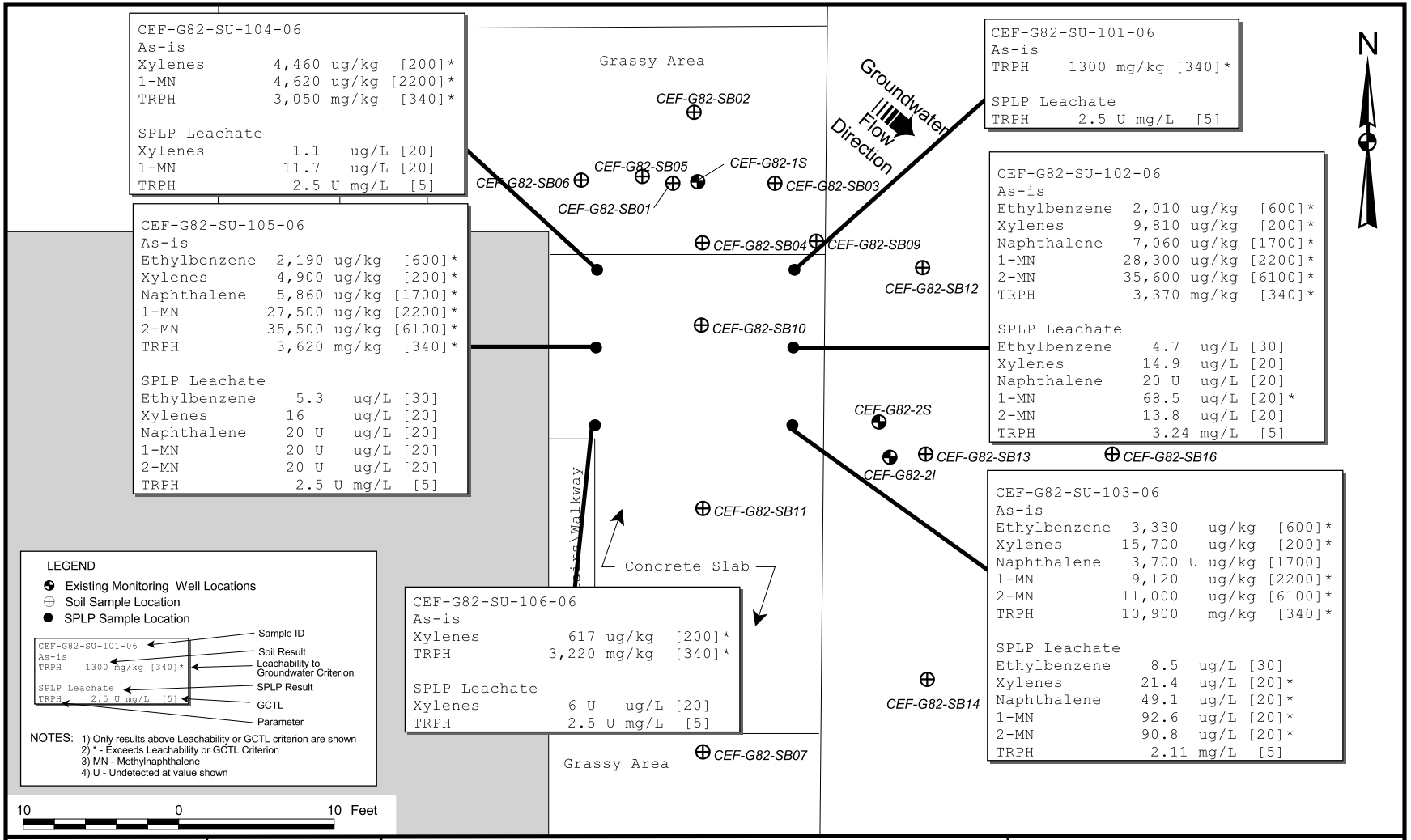

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SCALE	AS NOTED

SPLP SAMPLE RESULTS
BUILDING 82 - TANK G82
SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	0394
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APPROVED BY / DATE	
DRAWING NO.	FIGURE 3-2
REV	0

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4.0 CONCLUSIONS AND RECOMMENDATIONS

The SAR proposed a MONA. In their letter of August 23, 2000 (see Appendix A), FDEP found the SAR adequate, but did not issue a MONA order. The following conclusions and recommendations are based on the results of this SARA.

Soil

Approximately 49 cubic yards of contaminated soil were left in place along the apron and the along Building 82. Along the apron and below the concrete-encased cables, the top of the contaminated soil is about 1 to 2 feet bgs. Along the building, the top of the contaminated soil is about 3 feet bgs. Clean fill overlies the contaminated soil, and a 3-inch-thick concrete slab was poured over the excavation to replace the slab that was removed. In samples of the soil remaining in place, only the TRPH concentration is greater than residential and industrial SCTLs. The concentrations of ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene are less than residential and industrial SCTLs. However, the high concentrations of TRPH and naphthalene compounds raised the detection limits of many PAHs above their SCTLs, and so, other compounds could not be fully evaluated.

TRPH, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations are greater than leachability criteria. However, as shown in the SPLP leachate results, only xylenes, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected in two leachate samples at concentrations greater than GCTLs. TRPH and other PAHs do not leach significantly at this site.

Contaminated soil still remains in place. However, the concrete slab and the apron minimize the amount of precipitation that can percolate through the soil. The concrete slab, apron, and clean fill minimize direct exposure to the contaminants. Along the northern side of the building, a concrete sidewalk and soil minimize direct exposure to contaminants. Thus, no further action for the soil is recommended as long as institutional controls are enacted that require the site to be used for industrial purposes only and require that the slab and apron be maintained in good condition.

Groundwater

The groundwater conclusions and the MONA proposal from the SAR are provided below, but the reference to begin monitoring after the soil has been remediated has been deleted.

- The extent of groundwater contamination has been delineated and is limited to the shallow groundwater zone. The vertical extent of the groundwater contamination does not extend to the intermediate well screened at 30 feet bgs.

- The results of groundwater analyses indicate that the concentrations of constituents of concern are less than the natural attenuation default source concentrations in FAC 62-770. Therefore, Monitoring Only for Natural Attenuation (MONA) is recommended. The MONA should be conducted on a semi-annual frequency for VOCs (EPA 8260B) and PAHs (EPA 8310). The recommended monitoring wells to include in the MONA are as follows: CEF-G82-2S (source) and CEF-G82-5S (downgradient).

- The following table provides milestone objectives for a recommended monitoring period of 5 years:

Milestone Objectives (µg/L)					
	End of				
Compound	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Benzene	15.9	12.4	8.9	5.4	<1
Ethylbenzene	46	42	38	34	<30
Xylenes, Total	161	126	91	56	<20
Naphthalene	23.5	22.5	21.5	20.5	<20
1-Methylnaphthalene	47	40	33	26	<20
2-Methylnaphthalene	47	40	33	26	<20

5.0 PROFESSIONAL REVIEW CERTIFICATION

The SARA 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 SARA report was developed for Building 82, Tank G82 at the former NAS Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

Mervin W. Dale
Florida Professional Geologist
P.G. No. 0001917

03/30/01
Date

REFERENCES

CH2MHill, 2001. Source Removal Report Building 82, Excavation and Disposal of Petroleum Contaminated Soil, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, March.

HLA (Harding Lawson Associates), 1999. Confirmatory Sampling Report, Building 82, Tank G82, Naval Air Station Cecil Field. Prepared for SOUTHNAVFACENGCOM, April.

TtNUS (Tetra Tech NUS, Inc.), 1998. Base-wide Generic Work Plan, Volumes 1 and 2, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, October.

TtNUS, 1999. Site Assessment Plan for Tank Sites 337, 437, 815, 860 (Tanks A, B, and D), and G-82, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, September.

TtNUS, 2000. Site Assessment Report for Building 82, Tank G82, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for SOUTHNAVFACENGCOM, August.

APPENDIX A

FDEP SAR RESPONSE LETTER

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 23, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Nick Ugolini, Code 1843
SOUTHNAVFACENGCOM
Post Office Box 190010
North Charleston, SC 29419-9010

RE: Site Assessment Report, Building 82, Tank 82,
Naval Air Station Cecil Field Florida.

Dear Mr. Ugolini:

I have reviewed the Site Assessment Report (SAR) dated August 2000 (received August 11, 2000) submitted for this site. I found all the documents submitted to date to be adequate to meet the contamination assessment requirements of Rules 62-770.600 and 62-770.630, Florida Administrative Code (F.A.C.).

A Remedial Action Plan should now be submitted according to the time-frame established by the BRAC Cleanup Team.

If you should have any questions concerning this review, please contact me at (850) 921-9991.

Sincerely,

Michael J. Deliz

Michael J. Deliz, P.G.
Remedial Project Manager

23-Aug-00
Date

MICHAEL J. DELIZ LICENSE NO. 1481 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

cc: Brian Cheary, FDEP Northeast District
Debbie Vaughn-Wright, USEPA - Atlanta
John Flowe, City of Jacksonville
Scott Glass, SOUTHNAVFACENGCOM

TJB TB JJC JJC ESN ESN

APPENDIX B

SOURCE REMOVAL REPORT

Source Removal Report

Excavation and Disposal of Petroleum Contaminated Soil at Building 82

Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-98-D-0995
Contract Task Order No. 0002

Submitted to:

U.S. Naval Facilities Engineering Command Southern Division

Prepared by:

CH2MHILL
Constructors, Inc.

115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

March 2001

Source Removal Report
Excavation and Disposal of
Petroleum Contaminated Soil at Building 82
Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-98-D-0995
Contract Task Order No. 0002

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:

CH2MHILL
Constructors, Inc.

March 2001

Prepared/Approved By:

Samuel M. Ross, Project Manager _____ Date _____

Approved By:

R. Scott Newman, Program Manager _____ Date _____

Client Acceptance:

U.S. Navy Responsible Authority _____ Date _____

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CERTIFICATION OF TECHNICAL DATA CONFORMITY (March 2001)

The contractor, CH2M HILL Constructors, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data, delivered herewith under Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0002 is complete and accurate and complies with all requirements of this contract.

DATE:_____

NAME AND TITLE OF CERTIFYING OFFICIAL:

Samuel M. Ross
Project Manager

CH2MHILL
Constructors, Inc.

Certificate of Completion

CH2M HILL Constructors, Inc., attests that, to the best of its knowledge and belief, the excavation and disposal of petroleum contaminated soil at Building 82, delivered under Contract No. N62467-98-D-0995, Naval Air Station Cecil Field, Jacksonville, Florida, Contract Task Order (CTO) No. 0002, has been completed, inspected, and tested, and is in compliance with the contract.

_____ _____

Project QC Manager Date

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Acronyms

bls	below land surface
CCI	CH2M HILL Constructors Inc.
CTO	Contract Task Order
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FID	flame ionization detector
FL-PRO	Florida Petroleum Residual Organic
GCTLs	groundwater cleanup target levels
KAG	Kerosene Analytical Group
mg/kg	milligrams per kilogram
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
NTFF	North Tank Fuel Farm
OVA	organic vapor analyzer
PAHs	Polynuclear aromatic hydrocarbons
PID	Photoionization detector
ppm	Parts per million
SCTLs	selected soil cleanup target levels
SJRWMD	St. Johns River Water Management District
SPLP	synthetic precipitation leaching procedure
TRPH	total recoverable petroleum hydrocarbons
TOC	top of casing
TtNUS	Tetra Tech NUS, Inc.
UST	underground storage tank
VOCs	volatile organic compounds

Source Removal Report Requirements – *Checklist*

Per FAC 62-770.300(3) the Source Removal Report shall contain the following information in detail, as applicable:

Site Name: Building 82, Air Traffic Control Tower (former Tank #G82 Location)
Date(s) of Source Removal: 10/10/00

Required Information	Response
1. Volume of product that was discharged, if known	*Unknown*
2. Volume of free product and the volume of groundwater recovered	*Not Applicable – No free product observed; no groundwater recovered.*
3. Volume of contaminated soil excavated and treated or properly disposed	*A total of 148.10 tons of soil excavated and disposed of offsite (See Section 2.3.2).*
4. Disposal or recycling methods for free product and contaminated soil	*Contaminated soil recycled at Kedesh, Inc., Kingsland, Georgia by thermal treatment/recycling.*
5. Disposal methods for other contaminated media	*Not Applicable*
6. Scaled site map (including a graphical representation of the scale used) showing the area of soil removed or treated and the approximate locations of all samples taken	*See Figures 1-2 and 2-1.*
7. Table summarizing free product thickness in each monitoring well or piezometer and the dates the measurements were made	*No free product observed in monitoring wells.*
8. Type of field screening instrument or method used	*Foxboro Model 128 OVA/FID*
9. Dimensions of the excavation(s) and location(s), integrity, capacities and last known contents of storage tanks, integral piping, dispensers, or appurtenances removed	*Excavation area: approx. 46 feet long x 15.6 feet maximum width x 7 feet deep less concrete pad (see Figure 2-1.)* *Tank size unknown, contained diesel fuel (removed on June 03, 1997) (Figure 1-2).*
10. Dimensions of the excavation(s) and location(s) and capacities of replacement underground storage tanks	*Not Applicable. no replacement tank installed.*
11. Table indicating the identification, depth and field soil screening results of each sample collected	*See Table 2-2.*
12. Depth to groundwater at the time of each excavation, measurement locations and method used to obtain that information	*Depth to groundwater 5.98 feet bls. Measured by electronic water level indicator (See Section 2.2.1) in well #CEF-G82-2S.*
13. Type of petroleum or petroleum products reportedly discharged	*Diesel Fuel*
14. Documentation confirming the proper treatment or proper disposal of contaminated soil, including disposal manifests, a copy of the treatment or acceptance of the contaminated soil and results of analyses, if performed	*See Table 2-2 and Appendices B and C.*
15. For land farmed soil, a copy of the pre-treatment and post-treatment analytical results	*Not Applicable. Soil recycled offsite.*

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) was contracted by the Southern Division Naval Facilities Engineering Command (NAVFAC) to perform the excavation of petroleum contaminated soil at Building 82, Air Traffic Control Tower on Naval Air Station (NAS) Cecil Field in Jacksonville, Duval County, Florida (refer to Figure 1-1, Site Location Map). The petroleum-contaminated soil was a result of a leaking underground storage tank (Tank G82), which was removed on June 03,1997. Tank G82 was located near the northeast corner of Building 82 and had been used to store diesel fuel for use in an emergency generator system. According the Site Assessment Report prepared by TetraTech NUS, Inc. (TtNUS), groundwater contamination was detected at the site during the Closure Assessment that was conducted concurrently with the removal of Tank G82 (TtNUS). The Site Assessment conducted by TtNUS delineated the extent of soil and groundwater contamination at the site. The estimated volume of soil present at the site was to be approximately 280 cubic yards. The Site Assessment Report recommended the remediation of the soil contamination prior to addressing groundwater contamination at the site (TtNUS, 2000). The source removal was conducted in accordance with the Florida Department of Environmental Protection (FDEP) Petroleum Contamination Site Cleanup rule, Chapter 62-770, of the Florida Administrative Code (FAC).

The scope of services for the excavation of petroleum-contaminated soil at Building 82 is described in detail in the NAS Cecil Field Basewide Work Plan, Revision 01 (CCI, 1998a) and the Work Plan Addendum No. 5, Removal of the North Tank Fuel Farm (NTFF) and Removals at Various Tank Sites (CCI, 2000). This work was authorized under the Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0002.

1.1 Site Background

Soils at the site were reported to have become contaminated with diesel fuel from an underground storage tank (UST) that had formerly been located onsite (Tank G82). Tank G82 had been located near the northeast corner of Building 82, and had been used to store diesel fuel for use in an emergency generator system. The tank was reported to have been removed on June 03, 1997. According the Site Assessment Report, groundwater contamination was detected at the site at concentrations in excess of the FDEP Groundwater Cleanup Target Levels (GCTLs) during a closure assessment conducted concurrently with the removal of Tank G82 (TtNUS, 2000). The Site Assessment delineated the extent of soil and groundwater contamination at the site, and estimated the volume of contaminated soil present at the site to be approximately 280 cubic yards. The Site Assessment Report recommended the remediation of the soil contamination prior to addressing groundwater contamination at the site (TtNUS, 2000). A site plan showing the site and the site conditions prior to the source removal is presented in Figure 1-2.

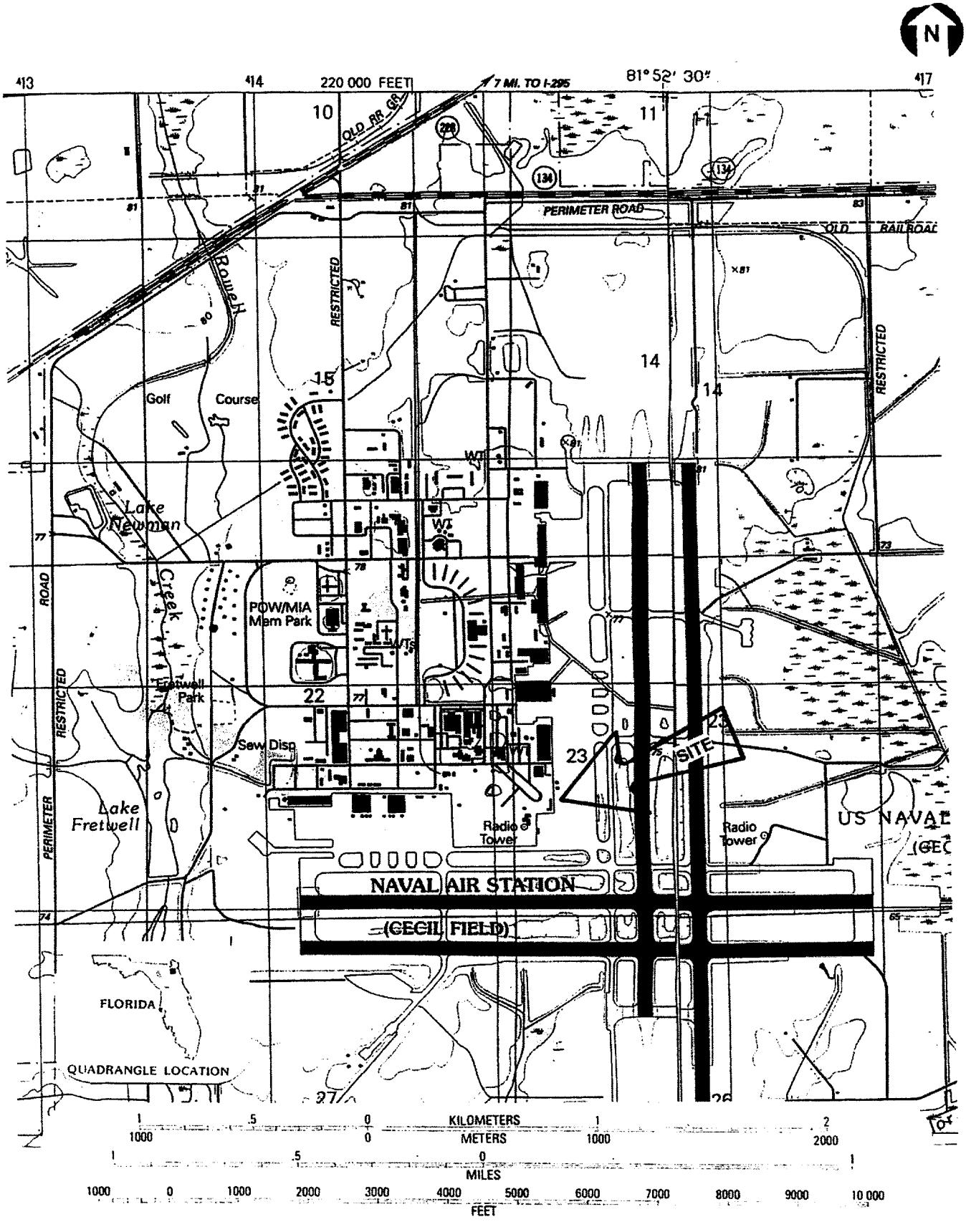

Figure 1-1
USGS Topographic Map, Fiftone and Jacksonville Heights Quadrangles
Building 82 Source Removal
NAS Cecil Field, Jacksonville, Florida

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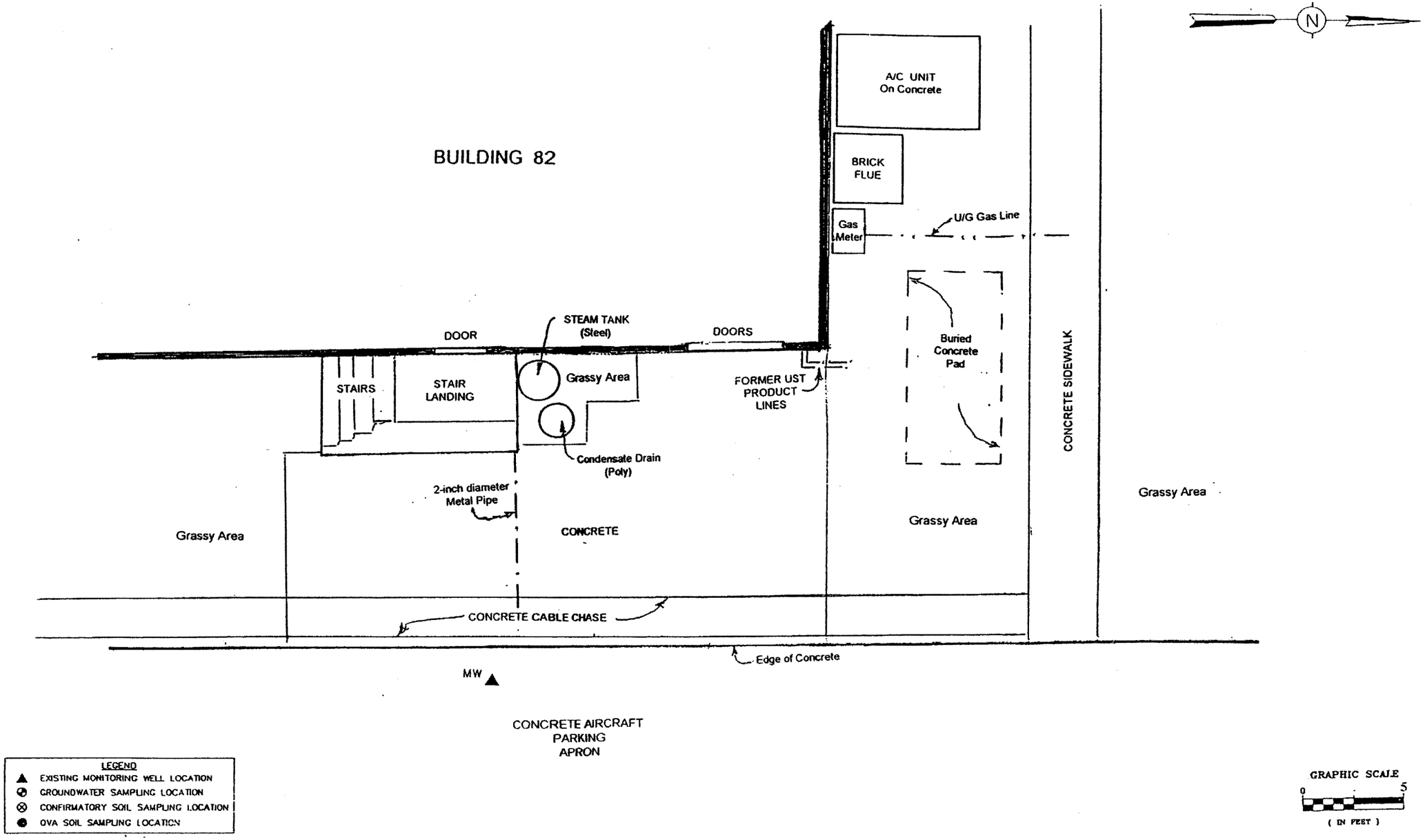

Figure 1-2
Site Map Indicating Soil Sampling Locations
NAS Cecil Field, Jacksonville, Florida

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1.2 Project Objectives

The primary objective of the source removal was to excavate and properly dispose of petroleum contaminated soil that had been previously identified onsite. Soil excavation was conducted to remove petroleum-contaminated soil that exceeded the Soil Cleanup Target Levels (SCTLs) outlined in Chapters 62-770 and 62-777 FAC. FDEP allows the use of headspace analysis as a screening tool in evaluating whether soil samples exceed the SCTLs. Soil exhibiting an organic vapor analyzer (OVA) concentration of greater than 10 parts per million (ppm) were considered to be contaminated and were expected to contain constituents exceeding the SCTLs. Soil was excavated until OVA concentrations of less than 10 ppm were achieved, or, until the pre-determined limits were reached, which included the foundation of Building 82 to the west, and the concrete aircraft-parking apron to the east. Excavation was discontinued in those areas where further excavation of contaminated soil threatened to undermine these structures. The depth of excavation was determined by the depth to groundwater at the site, which was measured in a nearby flush-mounted monitor well (well # CEF-G82-2s). The depth to groundwater, measured relative to the top of the well casing (feet, top of casing [TOC]) was determined to be 5.98 feet. Following completion of the soil excavation activities, confirmatory soil samples were collected from the excavation for laboratory analysis for those parameters in the Kerosene Analytical Group (KAG), which included volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8021B, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310, and total recoverable petroleum hydrocarbons (TRPH) by the Florida Residual Organic (FL-PRO) method.

2.0 Source Removal Activities

The source removal conducted at Building 82 on October 10, 2000, generated a total of 148.10 tons of petroleum contaminated soil. The excavated soil was disposed offsite by thermal treatment/recycling. The soil was excavated to the water table, which was encountered at a depth of approximately 6 feet bls, and was then slightly over-excavated in order to ensure that all contaminated soil was excavated. No free product was observed during the excavation. Photo documentation of the field activities is provided in Appendix A.

2.1 Site Preparation

In preparation for excavation, concrete overlying portions of the area to be excavated were removed, and underground utility locate services were contacted for underground utility locations within the area of concern. The underground utility locate service identified an active subsurface gas line extending from north to south within the proposed excavation area, (near the western boundary of the area identified by previous environmental studies as impacted). Excavation in the vicinity of this gas line was conducted using hand tools. During soil excavation activities, previously unidentified underground structures and/or conduits were encountered, including the following:

1. A concrete cable vault was encountered at a depth of approximately 1.5 feet bls, and lying in a north-south direction within the proposed area of excavation, parallel to the edge of the concrete aircraft parking apron. This structure was thought to house communications cables for Building 82. Soils overlying this structure were removed, but soil below the cable vault was not excavated.

2. A subsurface structure was discovered during soil excavation activities near the southwest corner of the excavation, adjacent to a concrete stairway leading into Building 82. This structure was determined to be a steam-boiler blow-down tank and condensate drain for a boiler system located within Building 82. The condensate drain, which was constructed of a 30-gallon poly container filled with gravel, was dismantled during the excavation activities and replaced following the completion of the soil excavation activities. Soil was excavated up to the steel-constructed blow-down tank, but the tank was left in place to during the source removal activities.

3. Metal piping, which was thought to be inactive product lines associated with a UST that had been removed from the site in the past, was encountered during soil excavation activities near the northeast corner of Building 82. This piping was removed during the source removal activities.

4. A 2-inch diameter metal pipe bisecting the center of the excavation from east to west was discovered during the soil excavation activities. The purpose of this pipe was not determined.

5. A concrete pad was encountered in the north end of the excavation at a depth of 5.0 feet bls. The pad was thought to be the dead-man for the UST that formerly occupied the site.

The location of these underground structures and utilities are identified on Figure 1-2. No other utilities were encountered during the soil excavation activities.

2.2 Tank Removal

The Site Assessment Report for Building 82 indicated that an UST was removed from the site in June 1997 (TtNUS, 2000). The tank was reported to have stored diesel fuel for use in an emergency generator system located within Building 82. A closure assessment conducted at the time of the tank removal revealed the presence of petroleum contamination at the site.

2.3 Soil Excavation and Disposal

The extent of petroleum contaminated soil in the vicinity of the former emergency generator UST location at Building 82 was determined by the results of a site assessment conducted by TtNUS. Source removal activities, including the excavation of soil from the area previously identified as contaminated, were conducted on October 10, 2000. Soil excavation was initiated at the south end of the area identified as contaminated, and continued in a northerly direction.

Soil samples were collected continuously during excavation and were screened in the field for the presence of petroleum contamination using OVA soil headspace analysis procedures, in accordance with Chapter 62-770 FAC. In this procedure, two clean 16-ounce, wide mouth glass mason jars are half-filled with the soil sample to be tested, the jars are then sealed with aluminum foil, and allowed to equilibrate at ambient temperatures for a period of 5 to 10 minutes. The organic vapor concentration in the headspace of the jars is then analyzed using the organic vapor analyzer (OVA)/flame ionization detector (FID). One sample is analyzed with a carbon filter and the other sample is analyzed without the carbon filter. This is done to detect and correct for the presence of naturally occurring organic vapors (i.e., methane). The corrected reading is reported in ppm, and represents the concentration of organic vapor from the soil sample resulting from the presence of volatile petroleum hydrocarbon compounds in the sample. Soils with OVA readings in excess of 10 ppm was removed. Excavation was continued until OVA readings were below 10 ppm. The results of the OVA soil screening are summarized in Table 2-1, and OVA soil sampling locations are shown on Figure 2-1.

TABLE 2-1
Summary of OVA Soil Headspace Screening Results

Sample Location (refer to Figure 3)	Depth (feet bls)	FID Unfiltered (ppm)	FID with Filter (ppm)	FID Corrected (ppm)	Remarks
1	2.0	0	0	0	South wall of excavation
2	4.0	0	0	0	
3	5.5	0	0	0	South wall, just above water table
4	2.0	0	0	0	East wall, SE corner
5	4.0	0	0	0	
6	5.5	15	0	15	
7	2.0	0	0	0	Center, below 2-inch diameter pipe
8	4.0	0	0	0	
9	5.5	40	0	40	
13	2.0	0	0	0	East wall, at cable chase
14	4.0	22	0	22	
15	5.5	160	0	160	
16	2.0	0	0	0	West wall of excavation
17	4.0	0	0	0	
18	5.5	0	0	0	
19	2.0	0	0	0	East wall of excavation
20	4.0	84	0	84	
21	5.5	220	0	220	
22	2.0	0	0	0	Condensate drain
23	4.0	60	0	60	(Continued excavating)
24	5.5	190	0	190	
25	2.0	0	0	0	SW corner of excavation
26	4.0	76	0	76	Steam blow-down tank
27	5.5	95	0	95	
28	2.0	0	0	0	West wall of excavation
29	4.0	22	0	22	
30	5.5	30	0	30	
31	2.0	0	0	0	East wall of excavation
32	4.0	0	0	0	
33	5.5	67	0	67	
34	2.0	0	0	0	North wall, at concrete sidewalk
35	4.0	0	0	0	
36	5.5	0	0	0	
37	2.0	0	0	0	NW corner of exc., at sidewalk
38	4.0	0	0	0	
39	5.5	0	0	0	
40	2.0	0	0	0	NE corner of Building 82

TABLE 2-1 (CONTINUED)
Summary of OVA Soil Headspace Screening Results

Sample Location (refer to Figure 3)	Depth (feet bls)	FID Unfiltered (ppm)	FID with Filter (ppm)	FID Corrected (ppm)	Remarks
41	4.0	0	0	0	
42	5.5	14	0	14	
43	2.0	0	0	0	West wall of excavation,
44	4.0	0	0	0	Near gas line
45	5.0	6.2	0	6.2	
46	2.0	0	0	0	NW corner of excavation
47	4.0	0	0	0	
48	5.0	8.3	0	8.3	
49	2.0	0	0	0	West wall, near steam sump
50	4.0	27	0	27	
51	5.5	80	0	80	
52	2.0	0	0	0	West wall, below Building 82
53	4.0	86	0	86	
54	5.5	280	0	280	
55	2.0	60	0	60	Below former product lines
56	4.0	240	0	240	(NE corner of Building 82)
57	5.5	400	0	400	
58	2.5	0	0	0	Below stairway
59	5.0	9.4	0	9.4	
60	1.0	0	0	0	Near u/g gas line
61	1.0	0	0	0	"
62	1.5	0	0	0	"
63	1.5	0	0	0	"

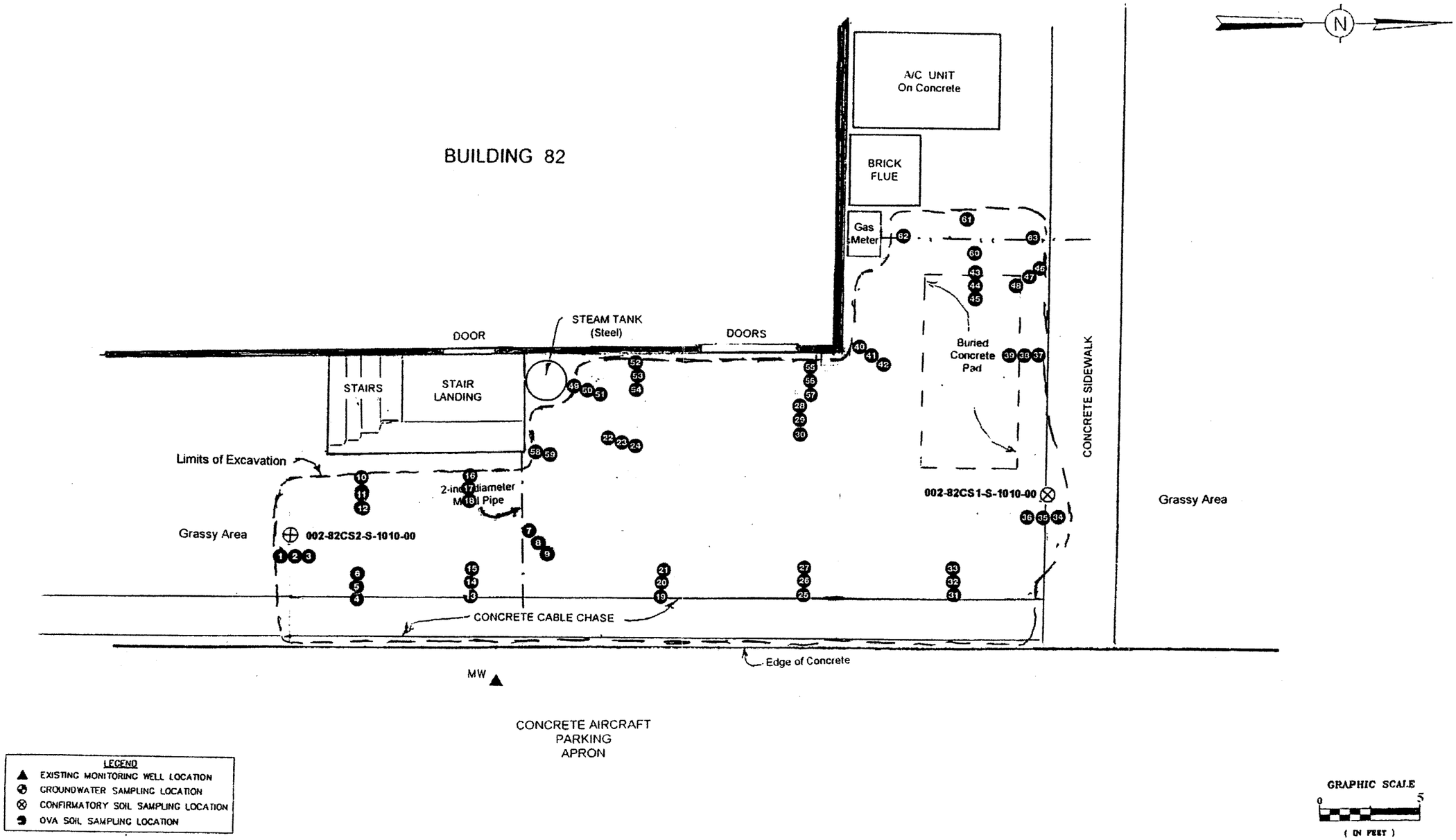

Figure 2-1
Site Map Indicating Site Conditions
Prior to Source Removal Activities
NAS Cecil Field, Jacksonville, Florida

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Soil exhibiting an OVA concentration of greater than 10 ppm was considered contaminated and was expected to contain constituents exceeding the SCTLs. Soil was excavated until OVA concentrations of less than 10 ppm were achieved, or, until the pre-determined limits were reached, which included the foundation of Building 82 to the west, and the concrete aircraft-parking apron to the east. Excavation was discontinued in those areas where further excavation of contaminated soil threatened to undermine these structures. The depth to groundwater at the site determined the depth of the excavation. Groundwater was measured in a nearby flush-mounted monitor well (well # CEF-G82-2S). The depth to groundwater, measured relative to the top of the well casing (feet, TOC) was measured using an electronic water level indicator, and was determined to be approximately 5.98 feet bls. Soil was slightly over-excavated to ensure that all contaminated soil was removed. Following completion of the soil excavation activities, confirmatory soil samples were collected from the walls of the excavation for laboratory analyses. Samples were analyzed for those parameters in the Kerosene Analytical Group (KAG), which included volatile organic compounds (VOCs) by EPA Method 8021B, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310, and total recoverable petroleum hydrocarbons (TRPH) by the Florida Residual Organic (FL-PRO) method.

2.3.1 Soil Excavation

Soil was excavated to the water table, which was measured in an adjacent monitor well (well # CEF-G82-2S). The depth to water in the monitor well was measured relative to the TOC using an electronic water level indicator, and was determined to be approximately 5.98 feet bls. Soil was slightly over-excavated (to a maximum depth of 7 feet bls) to ensure that all contaminated soil was excavated.

The soil was excavated using a track hoe. In compliance with the requirement of Chapter 62-770.300 FAC to secure excavated soil "in a manner that prevents human exposure to contaminated soil and prevents soil exposure to precipitation that may cause surface runoff," the excavated soil was stockpiled onsite on top of, and covered with, 6-mil plastic sheeting, pending disposal. Excavation was initiated at the south end of the area of impact, as indicated by the results of a previous environmental study (TtNUS, 2000), and continued in a northerly direction until the northern limits of contamination were reached. Soil in the vicinity of an active underground gas line was excavated by hand. A concrete pad was encountered at the north end of the area of excavation at a depth of approximately 5.0 feet bls. This concrete pad was thought to be the dead-man for the UST that formerly occupied the site. Soil was excavated up to and around this structure, and the pad was left in place.

The final area of excavation was irregular in shape, and measured approximately 45 feet in overall length (from north to south), and ranged in width (east to west) from approximately 7 feet at the narrowest point to approximately 15 feet at the widest point, with a maximum depth of approximately 7 feet bls (refer to Figure 2-1 and to Appendix A, Photo Documentation.). The source removal activities generated a total of 148.10 tons of petroleum-contaminated soil for disposal offsite.

2.3.2 Soil Transportation and Disposal

The source removal activities generated a total of 148.10 tons of soil requiring disposal. This soil was transported as non-hazardous waste to a permitted facility (Kedesh, Inc. of Kingsland, Georgia) for treatment and disposal by thermal treatment/recycling. The limits

of excavation are illustrated in Figure 2-1. A summary of the manifests is presented in Table 2-2 and copies of the disposal manifest and waste characterization analysis can be found in Appendix B. A copy of the Certificate of Recycling is found in Appendix C.

TABLE 2-2
Summary of Manifests for Soil Disposal

Date	Truck #	Company	Manifest #	Weight (pounds)	Tare (pounds)	Net (pounds)	Net (tons)
11/08/00	231	Modlin	163500	63,460	25,100	38,360	19.18
11/08/00	223	Modlin	163600	69,040	22,900	46,140	23.07
11/08/00	225	Modlin	163700	63,360	23,160	40,200	20.10
11/08/00	232	Modlin	163800	64,780	22,600	42,180	21.09
11/08/00	215	Modlin	163900	67,540	25,880	41,660	20.83
11/08/00	231	Modlin	164000	70,320	25,100	45,220	22.61
11/08/00	223	Modlin	164100	65,560	23,120	42,440	21.22
						Total	**148.10**

2.3.3 Backfilling and Site Restoration

The material used to backfill the excavation is certified clean fill brought in from the NTFF removal project at NAS Cecil Field. The certified clean soil used to backfill the Building 82 excavation was taken from NTFF Clean Pile 9. The laboratory analytical report showing Clean Pile 9 as clean fill is presented in Appendix D. The backfill was compacted using the excavation equipment. No compaction tests were required.

Following completion of the source removal activities, the area of excavation was returned to original grade using the clean fill and hydroseeded with a mixture of brown millet, rye, bahia grass, fertilizer and mulch.

2.4 Sampling and Analysis

Soil samples were collected from the walls and floor of the excavation and screened in the field using OVA headspace analysis procedures. Following completion of the soil excavation activities, two confirmatory soil samples was collected from the area of the excavation selected as representative of the apparent worst-case location for laboratory analysis. The soil sampling locations are shown on Figure 2-1.

2.4.1 Headspace Analysis

Soil samples collected from the excavation were screened using an OVA equipped with an FID in accordance with the procedures outlined in Chapter 62-770.200(8) FAC. See Section 2.3 for screening methodology. A methane filter was used to subtract the methane concentration from the results. The horizontal limits of excavation were expanded until net headspace concentrations were below 10 ppm, or, until the limits of excavation threatened to damage, by undermining, the foundation of Building 82 to the west, or, the concrete aircraft parking apron to the east. The results of the headspace analyses are summarized in Table 2-1.

Soil samples collected for field screening from the north and south walls of the excavation exhibited OVA headspace concentrations of less than 10 ppm. Soil samples collected from the east wall of the excavation continued to exhibit OVA headspace concentrations in excess of the 10 ppm target level; however, excavation was discontinued along the eastern perimeter at the direction of the Navy, in order to prevent damage to the adjacent concrete aircraft-parking apron. Likewise, soil samples collected from the west wall of the excavation continued to exhibit OVA headspace concentrations in excess of the 10 ppm target level, with the highest OVA readings detected in soil samples collected from immediately below a pair of fuel lines discovered during soil excavation that were believed to have been part of the former emergency generator UST system. However, excavation was discontinued in that direction at the direction of the Navy, due to the threat of damage to Building 82 through undermining.

2.4.2 Laboratory Analysis of Soil Samples

Following completion of source removal activities, two confirmatory soil samples were collected for laboratory analysis.

Confirmatory Soil Sample #002-82CS1-S-1010-00 was collected from the north wall of the excavation. The sample was collected from the wall of the excavation at a depth of approximately 5.0 feet bls, which was approximately 1 foot above the depth of the water table, from the location selected as representative of the apparent worst case location from the northern perimeter of the excavation.

Confirmatory Soil Sample #002-82CS2-S-1010-00 was collected from the south wall of the excavation. The sample was collected from the wall of the excavation at a depth of approximately 5.0 feet bls, which was approximately 1 foot above the depth of the water table, from the location selected as representative of the apparent worst case location from the southern perimeter of the excavation.

The confirmatory soil samples were collected using stainless steel hand tools and Encore brand samplers. Samples were placed into pre-cleaned; laboratory supplied sample containers, appropriately labeled, sealed in zip-lock type bags and placed on wet ice for transport. The samples were delivered to Navy approved laboratory for analysis by the following methods:

- EPA Method 8021B — VOCs
- EPA Method 8310 — extractable organic compounds
- FL-PRO — total petroleum hydrocarbons

The confirmatory soil sampling location is shown on Figure 2-1. The results of the laboratory analysis of the confirmatory soil sample indicate no contaminant concentrations above SCTLs. The analytical results are summarized in Table 2-3. A copy of the analytical laboratory report is provided in Appendix E.

2.4.3 Collection and Laboratory Analyses of Groundwater Samples

No groundwater samples were collected during the source removal activities.

TABLE 2-3
Summary of KAG Analyses for Soil

Sample Location	Depth	Sample ID	Date	TRPH	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (ghi) Perylene	Benzo (k) Fluoranthene	Chrysene	Dibenzo (ah) Anthracene	Fluoranthene	Fluorene	Indeno (123cd) Pyrene	Phenanthrene	Pyrene	Naphthalene	1- Methylnaphthalene	2- Methylnaphthalene	Benzene	Ethylbenzene	Toluene	Xylenes	MTBE
North Wall	5'	002-82CS1-S-1010-00	10/10/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South Wall	5"	002-82CS2-S-1010-00	10/10/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FDEP Soil Cleanup Target Levels*				340	2.1	27	2500	1.4	0.1	1.4	2300	15	77	0.1	1200	160	1.5	250	880	1.7	2.2	6.1	0.007	0.6	0.5	0.2	0.2

Notes:
Values reported in milligrams per kilogram (mg/kg).
ND = Not Detected
*SCTLs as specified in Chapter 62-777, FAC, Lower of A) Direct Exposure - Residential; B)- Direct Exposure, Industrial; or C) Leachability
*See Appendix E for detection limits.

3.0 Conclusions

Source emoval activities conducted at Building 82 generated a total of 148.10 tons of petroleum-contaminated soil that has been disposed offsite by thermal treatment/recycling. The soil was excavated to the water table, which was encountered at a depth of approximately 6 feet bls, and soil was then slightly over-excavated in order to ensure that all contaminated soil was excavated.

Soil samples collected for field screening from the north and south walls of the excavation exhibited OVA headspace concentrations of less than 10 ppm. Soil samples collected from the east wall of the excavation continued to exhibit OVA headspace concentrations in excess of the 10 ppm target level; however, excavation was discontinued along the eastern perimeter at the direction of the Navy, in order to prevent damage to the adjacent concrete aircraft-parking apron. Likewise, soil samples collected from the west wall of the excavation continued to exhibit OVA headspace concentrations in excess of the 10 ppm target level; however, excavation was discontinued in that direction at the direction of the Navy due to the threat of damage to Building 82 through undermining.

Following completion of the soil excavation activities, confirmatory soil samples were collected from the north and south walls of the excavation for laboratory analysis. Each of those samples were collected from locations selected as representative of the apparent worst-case location from the respective wall, and were analyzed for those compounds listed in the KAG. The results of the laboratory analysis of the two confirmatory soil samples were below SCTLs for all compounds of concern, confirming that petroleum contaminated soil above SCTLs has been removed within the horizontal limits of in the north and south direction, consistent with the recommendations of the Site Assessment Report (TtNUS, 2000).

4.0 References

TetraTech NUS, Inc., August 2000, Site Assessment Report for Building 82, Tank G82; Base Realignment and Closure; NAS Cecil Field, Jacksonville, Florida; Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract.

CH2MHILL Constructors, Inc., November 1998, Base wide Work Plan Revision 01, NAS Cecil Field, Jacksonville, Florida.

CH2MHILL Constructors, Inc., May 2000, Work Plan Addendum Number 5, Removal of North Fuel Tank Farm and Removals at Various Tank Sites, NAS Cecil Field, Jacksonville, Florida.

APPENDIX C

SOIL ANALYTICAL DATA

"AS - IS" RESULTS

Report of Analysis

Client Sample ID:	CEF-G82-SU-101-06		
Lab Sample ID:	F7899-1	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H009725.D	50	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1260	3100	ug/kg	J
71-43-2	Benzene	ND	310	ug/kg	
75-27-4	Bromodichloromethane	ND	310	ug/kg	
75-25-2	Bromoform	ND	310	ug/kg	
108-90-7	Chlorobenzene	ND	310	ug/kg	
75-00-3	Chloroethane	ND	310	ug/kg	
67-66-3	Chloroform	ND	310	ug/kg	
75-15-0	Carbon disulfide	ND	630	ug/kg	
56-23-5	Carbon tetrachloride	ND	310	ug/kg	
75-34-3	1,1-Dichloroethane	ND	310	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	310	ug/kg	
107-06-2	1,2-Dichloroethane	ND	310	ug/kg	
78-87-5	1,2-Dichloropropane	ND	310	ug/kg	
124-48-1	Dibromochloromethane	ND	310	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	310	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	310	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	310	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	310	ug/kg	
100-41-4	Ethylbenzene	ND	310	ug/kg	
591-78-6	2-Hexanone	ND	630	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	630	ug/kg	
74-83-9	Methyl bromide	ND	310	ug/kg	
74-87-3	Methyl chloride	ND	310	ug/kg	
75-09-2	Methylene chloride	ND	630	ug/kg	
78-93-3	Methyl ethyl ketone	ND	630	ug/kg	
100-42-5	Styrene	ND	310	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	310	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	310	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	310	ug/kg	
127-18-4	Tetrachloroethylene	ND	310	ug/kg	
108-88-3	Toluene	ND	310	ug/kg	
79-01-6	Trichloroethylene	ND	310	ug/kg	
75-01-4	Vinyl chloride	ND	310	ug/kg	
1330-20-7	Xylene (total)	ND	940	ug/kg	

ND = Not detected
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-G82-SU-101-06		
Lab Sample ID:	F7899-1	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.7
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		71-122%
2037-26-5	Toluene-D8	101%		73-128%
460-00-4	4-Bromofluorobenzene	98%		53-158%
17060-07-0	1,2-Dichloroethane-D4	102%		71-122%

(a) Dilution required due to matrix interference (non-target analytes present above calibration range).

ND = Not detected
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-G82-SU-101-06		
Lab Sample ID:	F7899-1	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	85.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA004919.D	5	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	3900	ug/kg	
208-96-8	Acenaphthylene	ND	3900	ug/kg	
120-12-7	Anthracene	ND	1900	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1900	ug/kg	
50-32-8	Benzo(a)pyrene	ND	390	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	390	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	390	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	390	ug/kg	
218-01-9	Chrysene	ND	1900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	390	ug/kg	
206-44-0	Fluoranthene	ND	1900	ug/kg	
86-73-7	Fluorene	ND	1900	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	390	ug/kg	
91-20-3	Naphthalene	ND	1900	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1900	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1900	ug/kg	
85-01-8	Phenanthrene [b]	ND	3800	ug/kg	
129-00-0	Pyrene	ND	1900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		22-130%
92-94-4	p-Terphenyl	96%		53-130%

(a) Dilution required due to matrix interference.
(b) Elevated reporting limits due to matrix interference.

ND = Not detected
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-G82-SU-101-06		
Lab Sample ID:	F7899-1	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	85.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11505.D	40	10/24/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	1300	390	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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-G82-SU-102-06		
Lab Sample ID:	F7899-2	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H009726.D	100	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2470	5400	ug/kg	J
71-43-2	Benzene	ND	540	ug/kg	
75-27-4	Bromodichloromethane	ND	540	ug/kg	
75-25-2	Bromoform	ND	540	ug/kg	
108-90-7	Chlorobenzene	ND	540	ug/kg	
75-00-3	Chloroethane	ND	540	ug/kg	
67-66-3	Chloroform	ND	540	ug/kg	
75-15-0	Carbon disulfide	ND	1100	ug/kg	
56-23-5	Carbon tetrachloride	ND	540	ug/kg	
75-34-3	1,1-Dichloroethane	ND	540	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	540	ug/kg	
107-06-2	1,2-Dichloroethane	ND	540	ug/kg	
78-87-5	1,2-Dichloropropane	ND	540	ug/kg	
124-48-1	Dibromochloromethane	ND	540	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	540	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	540	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	540	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	540	ug/kg	
100-41-4	Ethylbenzene	2010	540	ug/kg	
591-78-6	2-Hexanone	ND	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1100	ug/kg	
74-83-9	Methyl bromide	ND	540	ug/kg	
74-87-3	Methyl chloride	ND	540	ug/kg	
75-09-2	Methylene chloride	ND	1100	ug/kg	
78-93-3	Methyl ethyl ketone	ND	1100	ug/kg	
100-42-5	Styrene	ND	540	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	540	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	540	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	540	ug/kg	
127-18-4	Tetrachloroethylene	ND	540	ug/kg	
108-88-3	Toluene	ND	540	ug/kg	
79-01-6	Trichloroethylene	ND	540	ug/kg	
75-01-4	Vinyl chloride	ND	540	ug/kg	
1330-20-7	Xylene (total)	9810	1600	ug/kg	

ND = Not detected
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-G82-SU-102-06		
Lab Sample ID:	F7899-2	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		71-122%
2037-26-5	Toluene-D8	104%		73-128%
460-00-4	4-Bromofluorobenzene	103%		53-158%
17060-07-0	1,2-Dichloroethane-D4	98%		71-122%

ND = Not detected
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-G82-SU-102-06		
Lab Sample ID:	F7899-2	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA004920.D	20	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	15000	ug/kg	
208-96-8	Acenaphthylene	ND	15000	ug/kg	
120-12-7	Anthracene	ND	7700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7700	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1500	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1500	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1500	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1500	ug/kg	
218-01-9	Chrysene	ND	7700	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1500	ug/kg	
206-44-0	Fluoranthene	ND	7700	ug/kg	
86-73-7	Fluorene	7220	7700	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1500	ug/kg	
91-20-3	Naphthalene	7060	7700	ug/kg	J
90-12-0	1-Methylnaphthalene	28300	7700	ug/kg	
91-57-6	2-Methylnaphthalene	35600	7700	ug/kg	
85-01-8	Phenanthrene	13700	7700	ug/kg	
129-00-0	Pyrene	ND	7700	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	61%		22-130%
92-94-4	p-Terphenyl	62%		53-130%

ND = Not detected
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-G82-SU-102-06		
Lab Sample ID:	F7899-2	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11506.D	80	10/24/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3370	770	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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-G82-SU-103-06		
Lab Sample ID:	F7899-3	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H009727.D	100	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2730	6000	ug/kg	J
71-43-2	Benzene	ND	600	ug/kg	
75-27-4	Bromodichloromethane	ND	600	ug/kg	
75-25-2	Bromoform	ND	600	ug/kg	
108-90-7	Chlorobenzene	ND	600	ug/kg	
75-00-3	Chloroethane	ND	600	ug/kg	
67-66-3	Chloroform	ND	600	ug/kg	
75-15-0	Carbon disulfide	ND	1200	ug/kg	
56-23-5	Carbon tetrachloride	ND	600	ug/kg	
75-34-3	1,1-Dichloroethane	ND	600	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	600	ug/kg	
107-06-2	1,2-Dichloroethane	ND	600	ug/kg	
78-87-5	1,2-Dichloropropane	ND	600	ug/kg	
124-48-1	Dibromochloromethane	ND	600	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	600	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	600	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	600	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	600	ug/kg	
100-41-4	Ethylbenzene	3330	600	ug/kg	
591-78-6	2-Hexanone	ND	1200	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	1200	ug/kg	
74-83-9	Methyl bromide	ND	600	ug/kg	
74-87-3	Methyl chloride	ND	600	ug/kg	
75-09-2	Methylene chloride	ND	1200	ug/kg	
78-93-3	Methyl ethyl ketone	ND	1200	ug/kg	
100-42-5	Styrene	ND	600	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	600	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	600	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	600	ug/kg	
127-18-4	Tetrachloroethylene	ND	600	ug/kg	
108-88-3	Toluene	248	600	ug/kg	J
79-01-6	Trichloroethylene	ND	600	ug/kg	
75-01-4	Vinyl chloride	ND	600	ug/kg	
1330-20-7	Xylene (total)	15700	1800	ug/kg	

ND = Not detected
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-G82-SU-103-06		
Lab Sample ID:	F7899-3	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		71-122%
2037-26-5	Toluene-D8	102%		73-128%
460-00-4	4-Bromofluorobenzene	103%		53-158%
17060-07-0	1,2-Dichloroethane-D4	100%		71-122%

ND = Not detected
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-G82-SU-103-06		
Lab Sample ID:	F7899-3	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA004921.D	10	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	7400	ug/kg	
208-96-8	Acenaphthylene	ND	7400	ug/kg	
120-12-7	Anthracene	ND	3700	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3700	ug/kg	
50-32-8	Benzo(a)pyrene	ND	740	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	740	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	740	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	740	ug/kg	
218-01-9	Chrysene	ND	3700	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	740	ug/kg	
206-44-0	Fluoranthene	ND	3700	ug/kg	
86-73-7	Fluorene	2230	3700	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	740	ug/kg	
91-20-3	Naphthalene	ND	3700	ug/kg	
90-12-0	1-Methylnaphthalene	9120	3700	ug/kg	
91-57-6	2-Methylnaphthalene	11000	3700	ug/kg	
85-01-8	Phenanthrene	3970	3700	ug/kg	
129-00-0	Pyrene	2040	3700	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	114%		22-130%
92-94-4	p-Terphenyl	96%		53-130%

ND = Not detected
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-G82-SU-103-06		
Lab Sample ID:	F7899-3	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11507.D	400	10/24/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	10900	3700	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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-G82-SU-104-06		
Lab Sample ID:	F7899-4	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H009728.D	50	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1210	2700	ug/kg	J
71-43-2	Benzene	ND	270	ug/kg	
75-27-4	Bromodichloromethane	ND	270	ug/kg	
75-25-2	Bromoform	ND	270	ug/kg	
108-90-7	Chlorobenzene	ND	270	ug/kg	
75-00-3	Chloroethane	ND	270	ug/kg	
67-66-3	Chloroform	ND	270	ug/kg	
75-15-0	Carbon disulfide	ND	540	ug/kg	
56-23-5	Carbon tetrachloride	ND	270	ug/kg	
75-34-3	1,1-Dichloroethane	ND	270	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	270	ug/kg	
107-06-2	1,2-Dichloroethane	ND	270	ug/kg	
78-87-5	1,2-Dichloropropane	ND	270	ug/kg	
124-48-1	Dibromochloromethane	ND	270	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	270	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	270	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	270	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	270	ug/kg	
100-41-4	Ethylbenzene	118	270	ug/kg	J
591-78-6	2-Hexanone	ND	540	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	540	ug/kg	
74-83-9	Methyl bromide	ND	270	ug/kg	
74-87-3	Methyl chloride	ND	270	ug/kg	
75-09-2	Methylene chloride	ND	540	ug/kg	
78-93-3	Methyl ethyl ketone	ND	540	ug/kg	
100-42-5	Styrene	ND	270	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	270	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	270	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	270	ug/kg	
127-18-4	Tetrachloroethylene	ND	270	ug/kg	
108-88-3	Toluene	ND	270	ug/kg	
79-01-6	Trichloroethylene	ND	270	ug/kg	
75-01-4	Vinyl chloride	ND	270	ug/kg	
1330-20-7	Xylene (total)	4460	810	ug/kg	

ND = Not detected
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-G82-SU-104-06		
Lab Sample ID:	F7899-4	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	105%		53-158%
17060-07-0	1,2-Dichloroethane-D4	98%		71-122%

ND = Not detected
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-G82-SU-104-06		
Lab Sample ID:	F7899-4	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA004922.D	10	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	7500	ug/kg	
208-96-8	Acenaphthylene	ND	7500	ug/kg	
120-12-7	Anthracene	ND	3800	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3800	ug/kg	
50-32-8	Benzo(a)pyrene	ND	750	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	750	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	750	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	750	ug/kg	
218-01-9	Chrysene	ND	3800	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	750	ug/kg	
206-44-0	Fluoranthene	ND	3800	ug/kg	
86-73-7	Fluorene	1770	3800	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	750	ug/kg	
91-20-3	Naphthalene	ND	3800	ug/kg	
90-12-0	1-Methylnaphthalene	4620	3800	ug/kg	
91-57-6	2-Methylnaphthalene	5920	3800	ug/kg	
85-01-8	Phenanthrene	3120	3800	ug/kg	J
129-00-0	Pyrene	ND	3800	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	110%		22-130%
92-94-4	p-Terphenyl	97%		53-130%

ND = Not detected
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-G82-SU-104-06		
Lab Sample ID:	F7899-4	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11508.D	100	10/24/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3050	940	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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-G82-SU-105-06		
Lab Sample ID:	F7899-5	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H009729.D	50	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1490	3200	ug/kg	J
71-43-2	Benzene	ND	320	ug/kg	
75-27-4	Bromodichloromethane	ND	320	ug/kg	
75-25-2	Bromoform	ND	320	ug/kg	
108-90-7	Chlorobenzene	ND	320	ug/kg	
75-00-3	Chloroethane	ND	320	ug/kg	
67-66-3	Chloroform	ND	320	ug/kg	
75-15-0	Carbon disulfide	ND	650	ug/kg	
56-23-5	Carbon tetrachloride	ND	320	ug/kg	
75-34-3	1,1-Dichloroethane	ND	320	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	320	ug/kg	
107-06-2	1,2-Dichloroethane	ND	320	ug/kg	
78-87-5	1,2-Dichloropropane	ND	320	ug/kg	
124-48-1	Dibromochloromethane	ND	320	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	320	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	320	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	320	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	320	ug/kg	
100-41-4	Ethylbenzene	2190	320	ug/kg	
591-78-6	2-Hexanone	ND	650	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	650	ug/kg	
74-83-9	Methyl bromide	ND	320	ug/kg	
74-87-3	Methyl chloride	ND	320	ug/kg	
75-09-2	Methylene chloride	ND	650	ug/kg	
78-93-3	Methyl ethyl ketone	415	650	ug/kg	J
100-42-5	Styrene	ND	320	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	320	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	320	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	320	ug/kg	
127-18-4	Tetrachloroethylene	ND	320	ug/kg	
108-88-3	Toluene	ND	320	ug/kg	
79-01-6	Trichloroethylene	ND	320	ug/kg	
75-01-4	Vinyl chloride	ND	320	ug/kg	
1330-20-7	Xylene (total)	4900	970	ug/kg	

ND = Not detected
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-G82-SU-105-06		
Lab Sample ID:	F7899-5	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	106%		53-158%
17060-07-0	1,2-Dichloroethane-D4	98%		71-122%

ND = Not detected
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-G82-SU-105-06		
Lab Sample ID:	F7899-5	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA004923.D	20	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	15000	ug/kg	
208-96-8	Acenaphthylene	ND	15000	ug/kg	
120-12-7	Anthracene	ND	7500	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7500	ug/kg	
50-32-8	Benzo(a)pyrene	ND	1500	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	1500	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	1500	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	1500	ug/kg	
218-01-9	Chrysene	ND	7500	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	1500	ug/kg	
206-44-0	Fluoranthene	ND	7500	ug/kg	
86-73-7	Fluorene	6320	7500	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1500	ug/kg	
91-20-3	Naphthalene	5860	7500	ug/kg	J
90-12-0	1-Methylnaphthalene	27500	7500	ug/kg	
91-57-6	2-Methylnaphthalene	35500	7500	ug/kg	
85-01-8	Phenanthrene	11100	7500	ug/kg	
129-00-0	Pyrene	5650	7500	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		22-130%
92-94-4	p-Terphenyl	65%		53-130%

ND = Not detected
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-G82-SU-105-06		
Lab Sample ID:	F7899-5	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11509.D	100	10/24/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3620	940	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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-G82-SU-106-06		
Lab Sample ID:	F7899-6	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H009730.D	50	10/23/00	NAF	n/a	n/a	VH207
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1350	2900	ug/kg	J
71-43-2	Benzene	ND	290	ug/kg	
75-27-4	Bromodichloromethane	ND	290	ug/kg	
75-25-2	Bromoform	ND	290	ug/kg	
108-90-7	Chlorobenzene	ND	290	ug/kg	
75-00-3	Chloroethane	ND	290	ug/kg	
67-66-3	Chloroform	ND	290	ug/kg	
75-15-0	Carbon disulfide	ND	590	ug/kg	
56-23-5	Carbon tetrachloride	ND	290	ug/kg	
75-34-3	1,1-Dichloroethane	ND	290	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	290	ug/kg	
107-06-2	1,2-Dichloroethane	ND	290	ug/kg	
78-87-5	1,2-Dichloropropane	ND	290	ug/kg	
124-48-1	Dibromochloromethane	ND	290	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	290	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	290	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	290	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	290	ug/kg	
100-41-4	Ethylbenzene	205	290	ug/kg	J
591-78-6	2-Hexanone	ND	590	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	590	ug/kg	
74-83-9	Methyl bromide	ND	290	ug/kg	
74-87-3	Methyl chloride	ND	290	ug/kg	
75-09-2	Methylene chloride	ND	590	ug/kg	
78-93-3	Methyl ethyl ketone	ND	590	ug/kg	
100-42-5	Styrene	ND	290	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	290	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	290	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	290	ug/kg	
127-18-4	Tetrachloroethylene	ND	290	ug/kg	
108-88-3	Toluene	ND	290	ug/kg	
79-01-6	Trichloroethylene	ND	290	ug/kg	
75-01-4	Vinyl chloride	ND	290	ug/kg	
1330-20-7	Xylene (total)	617	880	ug/kg	J

ND = Not detected
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-G82-SU-106-06		
Lab Sample ID:	F7899-6	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		71-122%
2037-26-5	Toluene-D8	104%		73-128%
460-00-4	4-Bromofluorobenzene	106%		53-158%
17060-07-0	1,2-Dichloroethane-D4	93%		71-122%

(a) Dilution required due to matrix interference (non-target analytes present above calibration range).

ND = Not detected
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-G82-SU-106-06		
Lab Sample ID:	F7899-6	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3550B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA004924.D	5	10/25/00	MRE	10/20/00	OP2203	GAA161
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	3900	ug/kg	
208-96-8	Acenaphthylene	ND	3900	ug/kg	
120-12-7	Anthracene	ND	1900	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1900	ug/kg	
50-32-8	Benzo(a)pyrene	ND	390	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	390	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	390	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	390	ug/kg	
218-01-9	Chrysene	ND	1900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	390	ug/kg	
206-44-0	Fluoranthene	ND	1900	ug/kg	
86-73-7	Fluorene	ND	1900	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	390	ug/kg	
91-20-3	Naphthalene	ND	1900	ug/kg	
90-12-0	1-Methylnaphthalene	1880	1900	ug/kg	J
91-57-6	2-Methylnaphthalene	2290	1900	ug/kg	
85-01-8	Phenanthrene	1560	1900	ug/kg	J
129-00-0	Pyrene	ND	1900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		22-130%
92-94-4	p-Terphenyl	88%		53-130%

ND = Not detected
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-G82-SU-106-06		
Lab Sample ID:	F7899-6	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3550B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP11511.D	100	10/25/00	KP	10/20/00	OP2202	GOP468
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3220	970	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		40-140%

(a) Outside control limits due to dilution.

ND = Not detected
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

SPLP LEACHATE RESULTS

Report of Analysis

Client Sample ID:	CEF-G82-SU-101-06		
Lab Sample ID:	F7899-1A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	85.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00177.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-102-06		
Lab Sample ID:	F7899-2A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B002534.D	1	10/31/00	JG	10/30/00	MS776	VB84
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	0.0047			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.253			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	0.0149			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-102-06		
Lab Sample ID:	F7899-2A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-120%
2037-26-5	Toluene-D8	103%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%
17060-07-0	1,2-Dichloroethane-D4	100%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-102-06		
Lab Sample ID:	F7899-2A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3510C	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA005186.D	1	11/07/00	MRE	11/03/00	OP2264	GAA172
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.040	mg/l	
208-96-8	Acenaphthylene	ND			0.040	mg/l	
120-12-7	Anthracene	ND			0.020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.0020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.0020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.0020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.0020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.0020	mg/l	
218-01-9	Chrysene	ND			0.020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.0020	mg/l	
206-44-0	Fluoranthene	ND			0.020	mg/l	
86-73-7	Fluorene	ND			0.020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.0020	mg/l	
91-20-3	Naphthalene	ND			0.020	mg/l	
90-12-0	1-Methylnaphthalene	0.0685			0.020	mg/l	
91-57-6	2-Methylnaphthalene	0.0138			0.020	mg/l	J
85-01-8	Phenanthrene	ND			0.020	mg/l	
129-00-0	Pyrene	ND			0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		29-133%
92-94-4	p-Terphenyl	63%		33-133%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-102-06		
Lab Sample ID:	F7899-2A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	86.7
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00178.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	3.24			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	103%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-103-06		
Lab Sample ID:	F7899-3A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B002535.D	1	10/31/00	JG	10/30/00	MS776	VB84
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	0.0085			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.243			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	0.0214			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-103-06		
Lab Sample ID:	F7899-3A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%
17060-07-0	1,2-Dichloroethane-D4	97%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-103-06		
Lab Sample ID:	F7899-3A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3510C	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA005187.D	1	11/07/00	MRE	11/03/00	OP2264	GAA172
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.040	mg/l	
208-96-8	Acenaphthylene	ND			0.040	mg/l	
120-12-7	Anthracene	ND			0.020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.0020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.0020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.0020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.0020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.0020	mg/l	
218-01-9	Chrysene	ND			0.020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.0020	mg/l	
206-44-0	Fluoranthene	ND			0.020	mg/l	
86-73-7	Fluorene	ND			0.020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.0020	mg/l	
91-20-3	Naphthalene	0.0491			0.020	mg/l	
90-12-0	1-Methylnaphthalene	0.0926			0.020	mg/l	
91-57-6	2-Methylnaphthalene	0.0908			0.020	mg/l	
85-01-8	Phenanthrene	ND			0.020	mg/l	
129-00-0	Pyrene	ND			0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		29-133%
92-94-4	p-Terphenyl	78%		33-133%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-103-06		
Lab Sample ID:	F7899-3A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	89.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00179.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	2.11			2.5	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-104-06		
Lab Sample ID:	F7899-4A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B002536.D	1	10/31/00	JG	10/30/00	MS776	VB84
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.243			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	0.0011			0.0060	mg/l	J

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-104-06		
Lab Sample ID:	F7899-4A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	97%		80-120%
17060-07-0	1,2-Dichloroethane-D4	103%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-104-06		
Lab Sample ID:	F7899-4A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3510C	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA005189.D	1	11/07/00	MRE	11/03/00	OP2264	GAA172
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.040	mg/l	
208-96-8	Acenaphthylene	ND			0.040	mg/l	
120-12-7	Anthracene	ND			0.020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.0020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.0020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.0020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.0020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.0020	mg/l	
218-01-9	Chrysene	ND			0.020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.0020	mg/l	
206-44-0	Fluoranthene	ND			0.020	mg/l	
86-73-7	Fluorene	ND			0.020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.0020	mg/l	
91-20-3	Naphthalene	ND			0.020	mg/l	
90-12-0	1-Methylnaphthalene	0.0117			0.020	mg/l	J
91-57-6	2-Methylnaphthalene	0.0088			0.020	mg/l	J
85-01-8	Phenanthrene	ND			0.020	mg/l	
129-00-0	Pyrene	ND			0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		29-133%
92-94-4	p-Terphenyl	75%		33-133%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-104-06		
Lab Sample ID:	F7899-4A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	88.4
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00180.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-105-06		
Lab Sample ID:	F7899-5A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B002537.D	1	10/31/00	JG	10/30/00	MS776	VB84
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	0.0053			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.240			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	0.00077			0.0020	mg/l	J
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	0.0160			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-105-06		
Lab Sample ID:	F7899-5A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	96%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
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-G82-SU-105-06		
Lab Sample ID:	F7899-5A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	EPA 8310 SW846 3510C	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA005190.D	1	11/07/00	MRE	11/03/00	OP2264	GAA172
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.040	mg/l	
208-96-8	Acenaphthylene	ND			0.040	mg/l	
120-12-7	Anthracene	ND			0.020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.0020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.0020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.0020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.0020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.0020	mg/l	
218-01-9	Chrysene	ND			0.020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.0020	mg/l	
206-44-0	Fluoranthene	ND			0.020	mg/l	
86-73-7	Fluorene	ND			0.020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.0020	mg/l	
91-20-3	Naphthalene	ND			0.020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.020	mg/l	
85-01-8	Phenanthrene	ND			0.020	mg/l	
129-00-0	Pyrene	ND			0.020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	48%		29-133%
92-94-4	p-Terphenyl	56%		33-133%

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Report of Analysis

Client Sample ID:	CEF-G82-SU-105-06		
Lab Sample ID:	F7899-5A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	88.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00181.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		40-140%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-G82-SU-106-06		
Lab Sample ID:	F7899-6A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B002538.D	1	10/31/00	JG	10/30/00	MS776	VB84
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone	ND			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.243			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

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Report of Analysis

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Lab Sample ID:	F7899-6A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	SW846 8260B	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		69-128%

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Report of Analysis

Client Sample ID:	CEF-G82-SU-106-06		
Lab Sample ID:	F7899-6A	Date Sampled:	10/17/00
Matrix:	SO - Soil	Date Received:	10/18/00
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	85.6
Project:	Cecil Field-Bldg 82 CTO108		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF00183.D	1	11/08/00	KP	11/03/00	OP2263	GZF9
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		40-140%

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