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NAS CECIL FIELD
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SITE ASSESSMENT REPORT BUILDING 880 AND G880B BASE REALIGNMENT AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK GREY SITES NAS CECIL FIELD FL

9/1/1998

HARDING LAWSON ASSOCIATES

SITE ASSESSMENT REPORT

BUILDING 880, TANK G880B

BASE REALIGNMENT AND CLOSURE

UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK GREY SITES

NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

Unit Identification Code: N60200

Contract No.: N62467-89-D-0317/090

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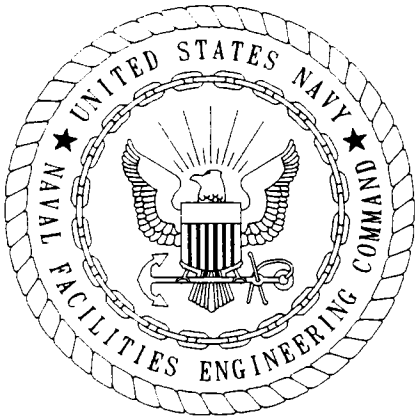

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, Harding Lawson Associates, hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/090 are complete and accurate and comply with all requirements of this contract.

DATE: September 28, 1998

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Task Order Manager

NAME AND TITLE OF CERTIFYING OFFICIAL: Eric A. Blomberg, P.G.
Project Technical Lead

(DFAR 252.227-7036)

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
BEI	Bechtel Environmental, Inc.
bls	below land surface
CSR	confirmatory sampling report
FDEP	Florida Department of Environmental Protection
HLA	Harding Lawson Associates
KAG	Kerosene Analytical Group
OVA	organic vapor analyzer
SA	site assessment
TRPH	total recoverable petroleum hydrocarbons
UST	underground storage tank

1.0 INTRODUCTION

Harding Lawson Associates (HLA), under contract to the Southern Division, Naval Facilities Engineering Command, has completed the site assessment (SA) for Tank G880B at Naval Air Station Cecil Field in Jacksonville, Florida. This report summarizes the related field operations, results, conclusions, and recommendations of the SA.

Tank G880B was an underground storage tank (UST) located at Building 880, a cinderblock building used to house electronic equipment and operations for Radar Air Traffic Control (Figure 1). The UST, which was installed in 1976, had a 275-gallon capacity and was used to store diesel fuel (ABB Environmental Services, Inc. [ABB-ES], 1997a). A contamination assessment plan for the assessment of soil and groundwater at Tank G880B was prepared by HLA (then ABB-ES) in November 1996 (ABB-ES, 1996). Results of the contamination assessment are presented in the Confirmatory Sampling Report (CSR), which recommended that an SA be conducted to delineate the extent of excessively contaminated soil (ABB-ES, 1997b).

Tank G880B was removed by Bechtel Environmental, Inc. (BEI), on May 12, 1997. No excessively contaminated soil was removed at that time. A Closure Report was prepared for Tank G880B and submitted to the Florida Department of Environmental Protection (FDEP) (BEI, 1997).

2.0 FIELD INVESTIGATION

The SA for Tank G880B was initiated in October 1997 and included the advancement of eight soil borings to the water table. Soil samples were collected at depth intervals of 1 foot below land surface (bls) and every 2 feet thereafter to the water table and screened for hydrocarbon vapors with an organic vapor analyzer (OVA).

One subsurface soil sample was collected on September 9, 1998, and analyzed for the Kerosene Analytical Group (KAG) parameters. Sample CEF-880B-SB5 was collected from 5 to 6 feet bls. A general site plan indicating the location of the soil borings is presented on Figure 2.

3.0 SCREENING AND ANALYTICAL RESULTS

Excessively contaminated soil (greater than 50 parts per million [ppm] on an OVA) was detected in two soil borings. The extent of excessively contaminated soil is presented on Figure 2. The soil OVA data are summarized in Table 1.

Benzo(a)anthracene and total recoverable petroleum hydrocarbons (TRPH) were detected at concentrations above FDEP soil cleanup target levels in the subsurface soil samples collected for KAG analysis. Subsurface soil analytical results are summarized in Table 2 and presented in Appendix A.

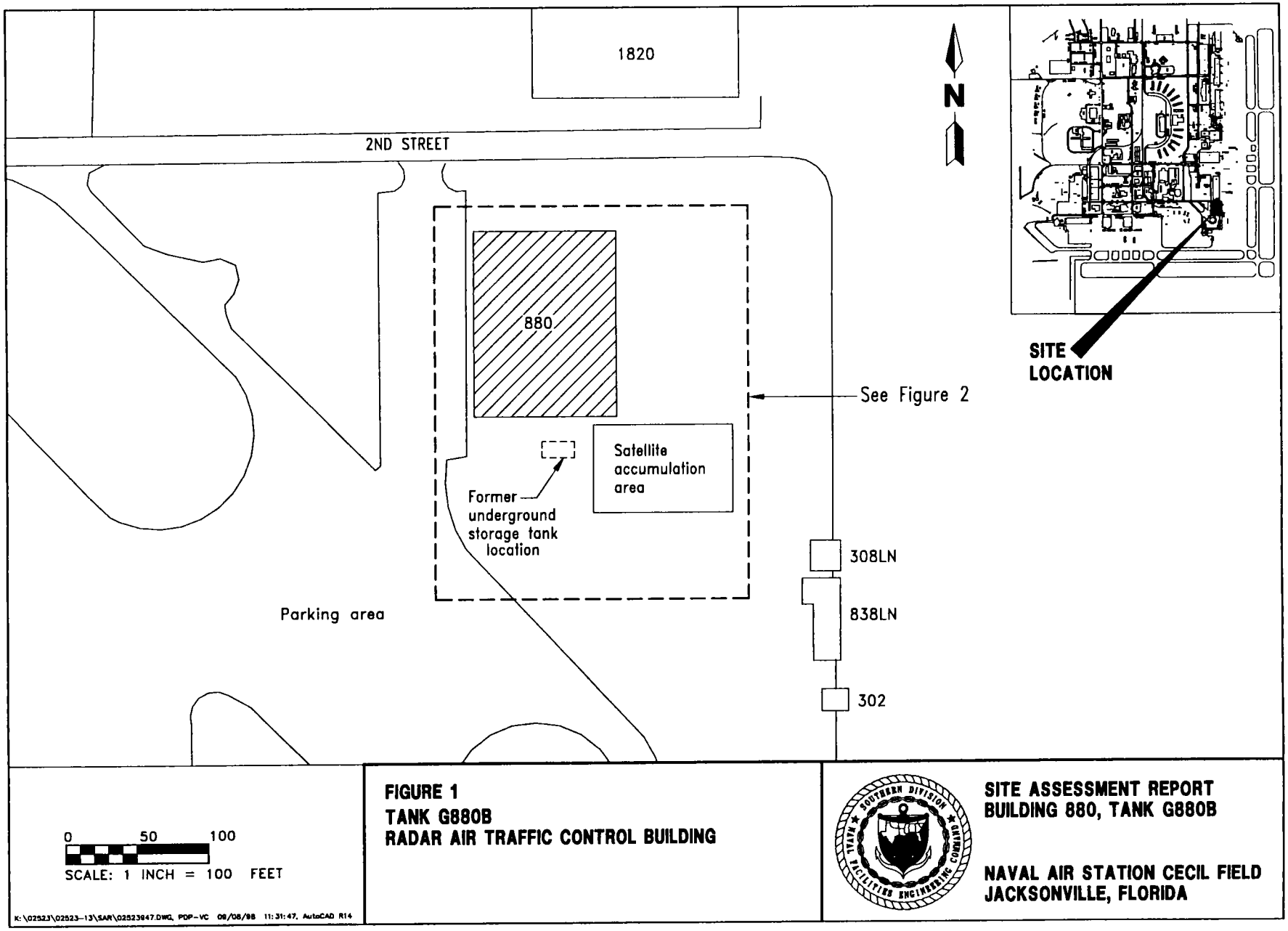

FIGURE 1
TANK G880B
RADAR AIR TRAFFIC CONTROL BUILDING

SITE ASSESSMENT REPORT
BUILDING 880, TANK G880B

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

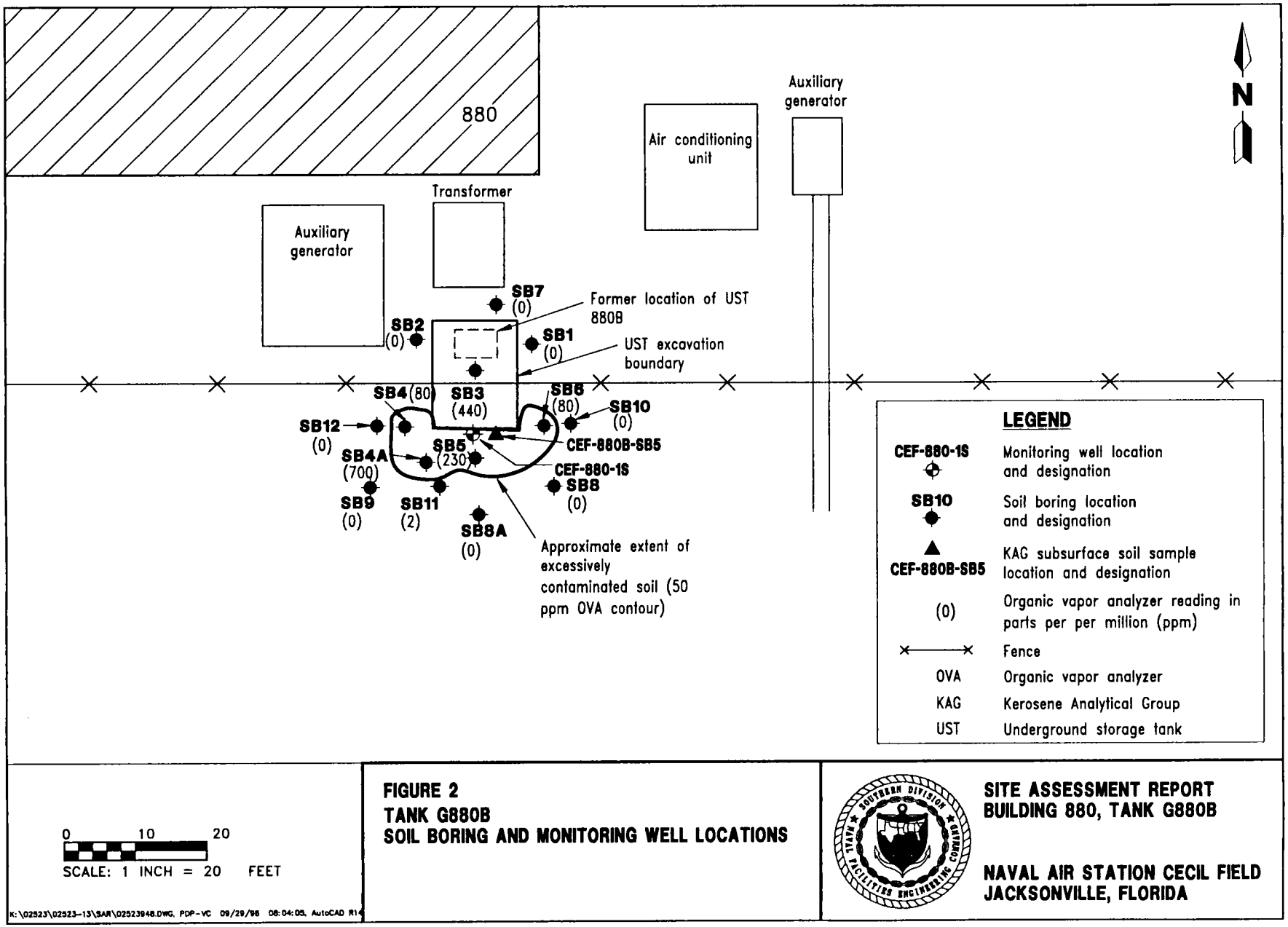

FIGURE 2
TANK G880B
SOIL BORING AND MONITORING WELL LOCATIONS

SITE ASSESSMENT REPORT
BUILDING 880, TANK G880B

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Table 1
Soil Screening Results

Site Assessment Report
Building 880, Tank G880B
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
SB1	1	0	–	0
	3	0	–	0
	5	0	–	0
	7	0	–	0
	9 (wet)	130	0	130
SB2	1	0	–	0
	3	0	–	0
	5	0	–	0
	7	0	–	0
	9 (wet)	38	0	38
SB3	1	0	–	0
	3	140	0	140
	5	270	0	270
	7	440	0	440
	9 (wet)	1,100	–	1,100
CEF-880-IS	1	0	–	0
	3	50	–	50
	5	340	–	340
	7	0	–	0
	10 (wet)	70	–	70
SB4	1	0	–	0
	3	80	0	80
	3.5 (refusal)	–	–	–
SB4A	1	0	–	0
	3	700	0	700
	3.5 (refusal)	–	–	–
SB5	1	0	–	0
	3	230	0	230
	3.5 (refusal)	–	–	–
SB6	1	0	–	0
	3	0	–	0
	5	0	–	0
	7	80	0	80
	9 (wet)	180	0	180

See notes at end of table.

Table 1 (Continued)
Soil Screening Results

Site Assessment Report
Building 880, Tank G880B
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
SB7	1	0	--	0
	3	0	--	0
	5	0	--	0
	6	0	--	0
	6.5 (refusal)	--	--	--
SB8	1	0	--	0
	3	0	--	0
	5	0	--	0
	7	0	--	0
	9 (wet)	0	--	0
SB8A	1	0	--	0
	3	0	--	0
	5	2	--	2
	7 (wet)	2	--	2
SB9	1	0	--	0
	3	0	--	0
SB10	1	0	--	0
	3	0	--	0
	5	0	--	0
	7	0	--	0
SB11	1	0	--	0
	3	2	--	2
SB12	1	0	--	0

Notes: Soil samples were collected on January 24, 1997, October 13, 1997, and September 9, 1998.
All concentrations are in ppm.
Soil samples were filtered with carbon to determine the methane concentration.

OVA = organic vapor analyzer.
ppm = parts per million.
bls = below land surface.
-- = readings were not collected.
wet = soil sample was completely saturated when analyzed.
refusal = subsurface obstruction encountered.

Table 2
Summary of Subsurface Soil Analytical Detections

Site Assessment Report
Building 880, Tank G880B
Naval Air Station Cecil Field
Jacksonville, Florida

Compound	CEF-880-SB5	Soil Cleanup Target Levels[1]
Volatile Organic Aromatics (USEPA Method 8020) (mg/kg)		
No compounds detected		
Polynuclear Aromatic Hydrocarbons (USEPA Method 8310) (mg/kg)		
Anthracene	2.2	2,000
Benzo(a)anthracene	**6.7**	2.9
Chrysene	2.4	80
Fluorene	4.5	550
1-Methylnaphthalene	83	NA
2-Methylnaphthalene	12	NA
Phenanthrene	8.1	120
Total Recoverable Petroleum Hydrocarbons (TRPH) (FL-PRO) (mg/kg)		
TRPH	**4,400**	340

[1] Chapter 62-770, Florida Administrative Code for Leachability, Table V.

Notes: Soil sample was collected on September 9, 1998.
Bold indicates concentration exceeded cleanup target levels.

USEPA = U.S. Environmental Protection Agency.
mg/kg = milligrams per kilogram.
NA = not applicable.
FL-PRO = Florida-Petroleum Residual Organics.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Data obtained during the SA at the Tank G880B site provided an adequate assessment of the horizontal and vertical extent of excessively contaminated soil.

Benzo(a)anthracene and TRPH were detected at concentrations above FDEP soil cleanup target levels in the subsurface soil sample collected for KAG analysis.

As described in the CSR, no contaminants were detected above the regulatory standard specified in Chapter 62-770, Florida Administrative Code, in the groundwater sample collected from monitoring well CEF-880-1S.

It is recommended that a source removal for subsurface soil take place at the Tank G880B site.

REFERENCES

ABB Environmental Services, Inc. (ABB-ES). 1996. *Contamination Assessment Plan, Naval Air Station Cecil Field, Jacksonville, Florida.* Prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charleston, South Carolina (November).

ABB-ES. 1997a. *Base Realignment and Closure Tank Management Plan, Naval Air Station Cecil Field, Jacksonville, Florida.* Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (January).

ABB-ES. 1997b. *Confirmatory Sampling Report, Building 880, Tank G880B, Base Realignment and Closure, Underground Storage Tank and Aboveground Storage Tank Grey Sites, Naval Air Station Cecil Field, Jacksonville, Florida.* Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (November).

Bechtel Environmental Incorporated. 1997. DO #59: *Closure Report for Aboveground Storage Tank/Underground Storage Tank Removals, Naval Air Station Cecil Field, Jacksonville, Florida.* (July).

APPENDIX A

ANALYTICAL DATA

NAS CECIL FIELD -- TANK G880B
SOIL DATA -- KEROSENE ANALYTICAL GROUP -- REPORT REQ NO. 10261

Lab Sample Number:	JR31632
Site	UST GREY
Locator	CEF-880-SB5
Collect Date:	09-SEP-98

	VALUE	QUAL	UNITS	DL
UST COMPOUNDS				
Benzene	120	U	ug/kg	120
Ethylbenzene	120	U	ug/kg	120
Toluene	120	U	ug/kg	120
m,p-Xylene	120	U	ug/kg	120
o-Xylene	120	U	ug/kg	120
1,1,1-Trichloroethane	120	U	ug/kg	120
1,1,2,2-Tetrachloroethane	120	U	ug/kg	120
1,1,2-Trichloroethane	120	U	ug/kg	120
1,1-Dichloroethane	120	U	ug/kg	120
1,1-Dichloroethene	120	U	ug/kg	120
1,2-Dichlorobenzene	120	U	ug/kg	120
1,2-Dichloroethane	120	U	ug/kg	120
1,2-Dichloropropane	120	U	ug/kg	120
1,3-Dichlorobenzene	120	U	ug/kg	120
1,4-Dichlorobenzene	120	U	ug/kg	120
Bromodichloromethane	120	U	ug/kg	120
Bromoform	120	U	ug/kg	120
Bromomethane	120	U	ug/kg	120
Carbon tetrachloride	120	U	ug/kg	120
Chlorobenzene	120	U	ug/kg	120
Chloroethane	230	U	ug/kg	230
Chloroform	120	U	ug/kg	120
Chloromethane	230	U	ug/kg	230
Dibromochloromethane	120	U	ug/kg	120
Dichlorodifluoromethane	120	U	ug/kg	120
Methylene chloride	230	U	ug/kg	230
Tetrachloroethene	120	U	ug/kg	120
Trichloroethene	120	U	ug/kg	120
Trichlorofluoromethane	230	U	ug/kg	230
Vinyl chloride	120	U	ug/kg	120
cis-1,3-Dichloropropene	120	U	ug/kg	120
trans-1,2-Dichloroethene	120	U	ug/kg	120
trans-1,3-Dichloropropene	120	U	ug/kg	120
1-Methylnaphthalene	83000		ug/kg	1700
2-Methylnaphthalene	12000		ug/kg	1700
Acenaphthene	1700	U	ug/kg	1700
Acenaphthylene	330	U	ug/kg	330
Anthracene	2200		ug/kg	1700
Benzo (a) anthracene	6700		ug/kg	170
Benzo (a) pyrene	170	U	ug/kg	170
Benzo (b) fluoranthene	330	U	ug/kg	330
Benzo (g,h,i) perylene	330	U	ug/kg	330
Benzo (k) fluoranthene	170	U	ug/kg	170
Chrysene	2400		ug/kg	170
Dibenzo (a,h) anthracene	330	U	ug/kg	330
Fluoranthene	330	U	ug/kg	330
Fluorene	4500		ug/kg	330
Indeno (1,2,3-cd) pyrene	170	U	ug/kg	170
Naphthalene	1700	U	ug/kg	1700
Phenanthrene	8100		ug/kg	170

NAS CECIL FIELD -- TANK G880B
SOIL DATA -- KEROSENE ANALYTICAL GROUP -- REPORT REQ NO. 10261

Lab Sample Number:		JR31632		
Site		UST GREY		
Locator		CEF-880-SB5		
Collect Date:		09-SEP-98		
	VALUE	QUAL	UNITS	DL
Pyrene	170	U	ug/kg	170
FLA PRO				
TPH C8-C40	4400		mg/kg	76

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE