N60200.AR.001779
NAS CECIL FIELD, FL
5090.3a

CONFIRMATORY SAMPLING REPORT FOR BUILDING 80 TANK 80-OW3 BASE REALIGNMENT AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK GREY SITES REVISION 1 NAS CECIL FIELD FL

4/1/1999

HARDING LAWSON ASSOCIATES

CONFIRMATORY SAMPLING REPORT

BUILDING 80, TANK 80-OW3 WOS 0004

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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April 1999

Revision 1.0

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: April 8, 1999

NAME AND TITLE OF CERTIFYING OFFICIAL: Rao Angara
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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Naval Air Station Cecil Field
Jacksonville, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
FAC	Florida Administrative Code
HLA	Harding Lawson Associates
OVA	organic vapor analyzer

1.0 INTRODUCTION

Harding Lawson Associates (HLA), under contract to the Southern Division, Naval Facilities Engineering Command, has completed the confirmatory sampling for the oil-water separator, 80-OW3, at Naval Air Station Cecil Field in Jacksonville, Florida. This report summarizes the related field operations, results, conclusions, and recommendations of the confirmatory sampling.

Tank 80-OW3 is an underground storage tank for an oil-water separator located south of Building 80, which originally served as an automotive maintenance and repair shop (Figure 1). The separator has a 1,000-gallon capacity and is used to separate and store waste oil (ABB Environmental Services, Inc. [ABB-ES], 1997). A Contamination Assessment Plan for the assessment of soil and groundwater at Building 80 was prepared by HLA (then ABB-ES) in November 1996 (ABB-ES, 1996).

2.0 FIELD INVESTIGATION

The confirmatory sampling for Tank 80-OW3 was initiated in February 1997. It included

- the advancement of four soil borings to the water table,
- the collection and analysis of one groundwater sample from a nearby monitoring well, and
- The collection and analysis of one subsurface soil sample.

Soil samples were collected from each boring at depth intervals of 1 foot below land surface (bls) and every 2 feet thereafter to the water table. These samples were screened for hydrocarbon vapors with an organic vapor analyzer (OVA). One subsurface soil sample, CEF-80OW3-SB1, was collected from 3 feet bls at soil boring location SB1 and analyzed for used oil group parameters.

Monitoring well CEF-80-4S was installed southeast of the Tank 80-OW3 under the Base Realignment and Closure program. One groundwater sample was collected from this well and analyzed for the Kerosene Analytical Group parameters. A general site plan indicating the location of the soil borings and the monitoring well is presented on Figure 2. The monitoring well construction is presented as Appendix A.

3.0 SCREENING AND ANALYTICAL RESULTS

Excessively contaminated soil (greater than 50 parts per million on an OVA) was not detected during the confirmatory sampling. The soil OVA data are summarized in Table 1 and presented on Figure 2.

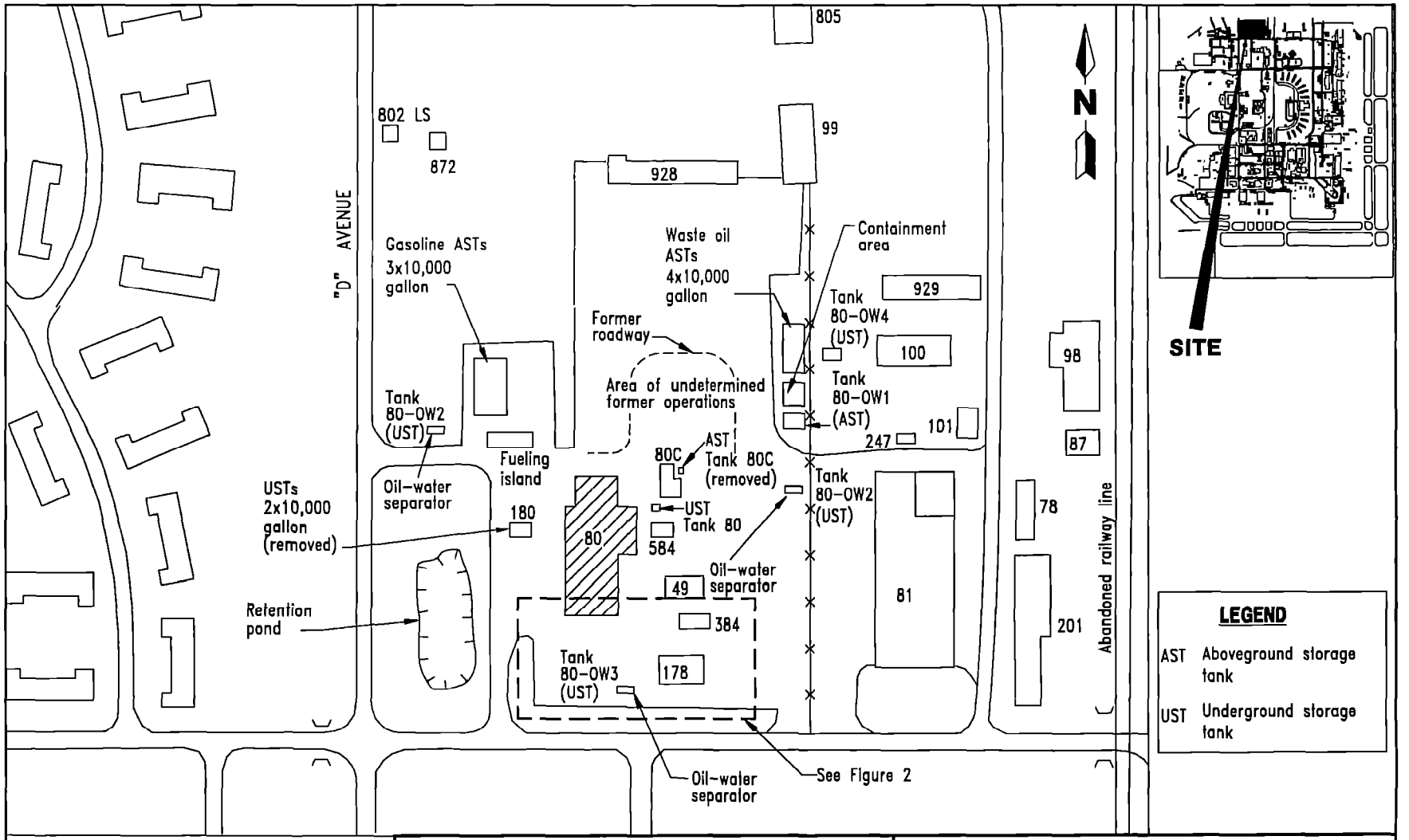

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FIGURE 1
TANK 80-OW3
TRANSPORTATION AND FUEL MANAGEMENT COMPOUND

CONFIRMATORY SAMPLING REPORT
BUILDING 80, TANK 80-OW3

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Table 1
Soil Screening Results

Confirmatory Sampling Report
Building 80, Tank 80-OW3
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
SB1	1	0	–	0
	3	29	0	29
	4.5 (moist)	21	0	21
SB2	1	0	–	0
	3	0	–	0
	5 (wet)	0	–	0
SB3	1	0	–	0
	3	0	–	0
	4 (refusal)			
SB4	1	0	–	0
	2.5 (refusal)	0	–	0

Notes: All soil samples were collected on February 5, 1997.
Soil samples were filtered with carbon to determine the methane concentration.

OVA = organic vapor analyzer.
ppm = parts per million.
bls = below land surface.
– = filtered readings were not collected.
moist = soil sample was partially saturated when analyzed.
wet = soil sample was completely saturated when analyzed.
refusal = subsurface obstruction encountered during boring advancement; no further samples collected at this location.

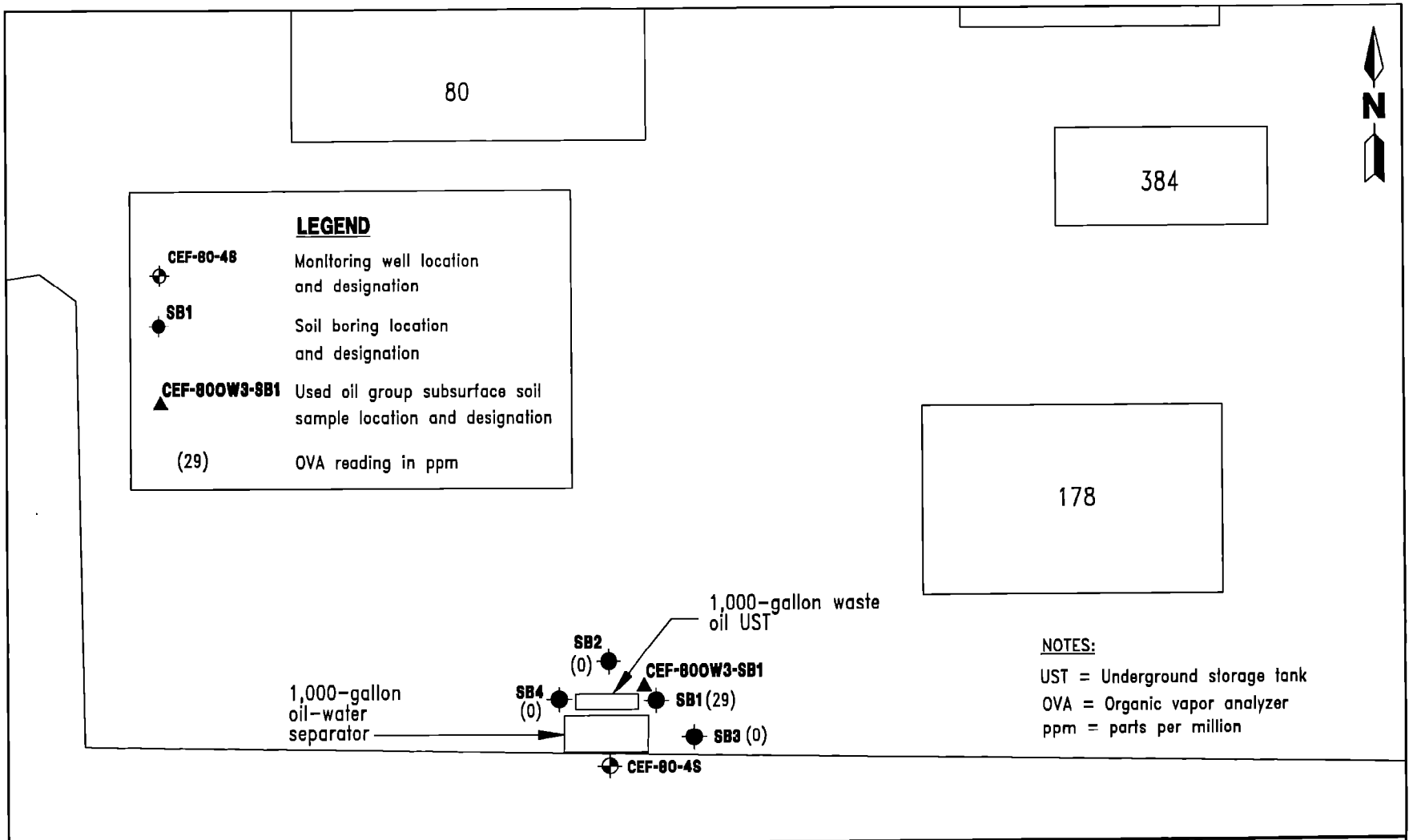

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FIGURE 2
TANK 80-OW3
SOIL BORING AND MONITORING WELL LOCATIONS

CONFIRMATORY SAMPLING REPORT
BUILDING 80, TANK 80-OW3

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

No contaminants were detected above cleanup target levels in the subsurface soil sample CEF-80OW3-SB1 with the exception of arsenic. Analytical results are summarized in Table 2 and presented in Appendix B.

Contaminant concentrations in groundwater were below the regulatory standards for Class G-II groundwater as specified in Chapter 62-770 of the Florida Administrative Code (FAC). The complete analytical data set is summarized in Table 3 and presented in Appendix B.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Data obtained during the confirmatory sampling at the Tank 80-OW3 site did not indicate the presence of contaminated soil above cleanup target levels with the exception of arsenic. Although arsenic exceeded the direct exposure I cleanup target level, the sample was collected from 3 feet bls which is below the direct exposure I exposure scenario range of 0 to 2 feet bls. The arsenic detection is also below the direct exposure II cleanup target level of 3.7 mg/kg.

No contaminants were detected above regulatory standards specified in Chapter 62-770, FAC, in the groundwater sample collected from monitoring well CEF-80-1S.

Therefore, no further action is recommended for the Tank 80-OW3 site until proper tank closure and removal is performed.

Table 2
Summary of Subsurface Soil Analytical Detections

Confirmatory Sampling Report
Building 80, Tank 80-OW3
Naval Air Station Cecil Field
Jacksonville, Florida

Compound	CEF-80OW3-SB1 (3 feet bls; OVA = NA)	Soil Cleanup Target Levels[1]
Volatile Organic Aromatics (USEPA Method 8020) (mg/kg)		
Toluene	0.0019 J	300/0.4
Polynuclear Aromatic Hydrocarbons (USEPA Method 8310) (mg/kg)		
No compounds detected.		
Total Recoverable Petroleum Hydrocarbons (TRPH) (FL-PRO) (mg/kg)		
Not detected.		
Inorganic Analytes (mg/kg)		
Arsenic	**1.6 J**	0.8/TCLP
Chromium	4.8	290/TCLP
Lead	9 J	500/TCLP

[1] Chapter 62-770, Florida Administrative Code: Direct Exposure 1/Leachability, Table V.

Notes: Bold indicates concentration exceeds cleanup target level.

bls = below land surface.
OVA = organic vapor analyzer.
NA = not available.
USEPA = U.S. Environmental Protection Agency.
mg/kg = milligrams per kilogram.
J = estimated value.
FL-PRO = Florida-Petroleum Residual Organics.
TCLP = toxicity characteristic leaching procedure.
Bold = exceeds cleanup target level.

Table 3
Summary of Groundwater Analytical Detections

Confirmatory Sampling Report
Building 80, Tank 80-OW3
Naval Air Station Cecil Field
Jacksonville, Florida

Compound	Monitoring Well CEF-80-4S	Groundwater Cleanup Target Levels[1]
Volatile Organic Aromatics (USEPA Method 601/602) (μg/ℓ)		
No compounds detected.		
Polynuclear Aromatic Hydrocarbons (USEPA Method 610) (μg/ℓ)		
No compounds detected.		
Total Recoverable Petroleum Hydrocarbons (FL-PRO) (μg/ℓ)		
No compounds detected.		

[1] Chapter 62-770, Florida Administrative Code.

Notes: Groundwater samples were collected on March 20, 1997.

USEPA = U.S. Environmental Protection Agency.
μg/ℓ = micrograms per liter.
FL-PRO = Florida-Petroleum Residual Organic.

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

APPENDIX A

MONITORING WELL CONSTRUCTION DETAIL

TITLE: NAS Cecil Field	LOG of WELL: CEF-80-4S	BORING NO. CEF-80-4S
IENT: SOUTHDIVNAVFACENGCOM		PROJECT NO: 8520-85
CONTRACTOR: Alliance Environmental, Inc.	DATE STARTED: 10-23-96	COMPLTD: 10-23-96
METHOD: 6.25" HSA	CASE SIZE: 2"	SCREEN INT.: 5-15	PROTECTION LEVEL: D
TOC ELEV.: FEET.	MONITOR INST.: FID	TOT DPTH: 16 FEET.	DPTH TO ∇ 7 FEET.
LOGGED BY: R Holloway	WELL DEVELOPMENT DATE: 10-23-96	SITE: 87 - 80 Transportation Bldg.

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				0	SILTY SAND (SM): 100%, quartz, light gray, fine to very fine-grained sub-angular to sub-rounded.		SM	posthole	
				0				posthole	
5			100%	0	CLAYEY SAND (SC): 100%, quartz, light gray, very fine-grained, sub- angular to sub-rounded, moist, iron-oxide staining present.		SC	1,6,7,9	
			100%	3.6	SILTY SAND (SM): 100%, quartz, light gray, fine-to very fine-grained, sub-angular to sub-rounded.		SM	5,8,9,12	∇
10									
15									

 ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX B

ANALYTICAL DATA

NAS CECIL FIEL[illegible] TANK BO-OW4
UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9413

Lab Sample Number:	B7C2201010				B7C2201010		
Site	BRACGREY				BRACGREY		
Locator	CEF804S				CEF804S		
Collect Date:	20-MAR-97				20-MAR-97		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
BRACGREY ANAYLTICAL PARAMETERS								
1,1,1-Trichloroethane	1	U	ug/l	1	-			
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	-			
1,1,2-Trichloroethane	1	U	ug/l	1	-			
1,1-Dichloroethane	1	U	ug/l	1	-			
1,1-Dichloroethene	1	U	ug/l	1	-			
1,2-Dichlorobenzene	10	U	ug/l	10	-			
1,3-Dichlorobenzene	10	U	ug/l	10	-			
1,4-Dichlorobenzene	10	U	ug/l	10	-			
1,2-Dichloroethane	1	U	ug/l	1	-			
1,2-Dichloropropane	1	U	ug/l	1	-			
1-Methylnaphthalene	2	U	ug/l	2	-			
2-Methylnaphthalene	2	U	ug/l	2	-			
Acenaphthene	2	U	ug/l	2	-			
Acenaphthylene	10	U	ug/l	10	-			
Anthracene	2	U	ug/l	2	-			
Benzene	1	U	ug/l	1	-			
Benzo (a) anthracene	.1	U	ug/l	.1	-			
Benzo (a) pyrene	.1	U	ug/l	.1	-			
Benzo (b) fluoranthene	.1	U	ug/l	.1	-			
Benzo (g,h,i) perylene	10	U	ug/l	10	-			
Benzo (k) fluoranthene	10	U	ug/l	10	-			
Bromodichloromethane	1	U	ug/l	1	-			
Bromoform	1	U	ug/l	1	-			
Bromomethane	1	U	ug/l	1	-			
Carbon tetrachloride	1	U	ug/l	1	-			
Chlorobenzene	1	U	ug/l	1	-			
Chloromethane	1	U	ug/l	1	-			
Chloroform	1	U	ug/l	1	-			
Chloromethane	1	U	ug/l	1	-			
Chrysene	10	U	ug/l	10	-			
Dibenzo (a,h) anthracene	.2	U	ug/l	.2	-			
Dibromochloromethane	1	U	ug/l	1	-			
Dichlorodifluoromethane	1	U	ug/l	1	-			
Ethylbenzene	1	U	ug/l	1	-			
Ethylene dibromide	.02	U	ug/l	.02	-			
Fluoranthene	10	U	ug/l	10	-			
Fluorene	10	U	ug/l	10	-			
Indeno (1,2,3-cd) pyrene	10	U	ug/l	10	-			
Lead	5	U	ug/l	5	-			
Methyl tert-butyl ether	1	U	ug/l	1	-			
Methylene chloride	1	U	ug/l	1	-			
Naphthalene	10	U	ug/l	10	-			
Phenanthrene	2	U	ug/l	2	-			
Pyrene	10	U	ug/l	10	-			
Tetrachloroethene	1	U	ug/l	1	-			
Toluene	1	U	ug/l	1	-			
Total petroleum hydrocarbons	.5	U	mg/l	.5	-			
Trichloroethene	1	U	ug/l	1	-			
Trichlorofluoromethane	1	U	ug/l	1	-			
Vinyl chloride	1	U	ug/l	1	-			

NAS CECIL FIELD -- TANK 80-OW4
UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9413

Lab Sample Number:	B7C2201010				B7C2201010			
Site	BRACGREY				BRACGREY			
Locator	CEF804S				CEF804S			
Collect Date:	20-MAR-97				20-MAR-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Xylenes (total)	1	U	ug/l	1	-			
cis-1,3-Dichloropropene	1	U	ug/l	1	-			
trans-1,2-Dichloroethene	1	U	ug/l	1	-			
trans-1,3-Dichloropropene	1	U	ug/l	1	-			
Lead-DISS	-				5	U	ug/l	5

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

NAS CECIL FIELD -- OIL/WATER SEPARATOR AT FACILITY 80-OW3
SUBSURFACE SOIL -- ANALYTICAL DATA -- REPORT REQUEST NO. 10551

Lab Sample Number:	JR36666
Site	UST GREY
Locator	CEF-800W3-SB1
Collect Date:	14-OCT-98

	VALUE	QUAL	UNITS	DL
BRAC VOLATILES				
1,1,1-Trichloroethane	1	U	ug/kg	1
1,1,2,2-Tetrachloroethane	1	U	ug/kg	1
1,1,2-Trichloroethane	1	U	ug/kg	1
1,1-Dichloroethane	1	U	ug/kg	1
1,1-Dichloroethene	1	U	ug/kg	1
1,2-Dichlorobenzene	390	U	ug/kg	390
1,2-Dichloroethane	1	U	ug/kg	1
1,2-Dichloropropane	1	U	ug/kg	1
1,3-Dichlorobenzene	390	U	ug/kg	390
1,4-Dichlorobenzene	390	U	ug/kg	390
Benzene	1	U	ug/kg	1
Bromodichloromethane	1	U	ug/kg	1
Bromoform	1	U	ug/kg	1
Bromomethane	1	U	ug/kg	1
Carbon tetrachloride	1	U	ug/kg	1
Chlorobenzene	1	J	ug/kg	1
Chloroethane	1	U	ug/kg	1
Chloroform	1	U	ug/kg	1
Chloromethane	1	U	ug/kg	1
Dibromochloromethane	1	U	ug/kg	1
Ethyl benzene	1	U	ug/kg	1
Methyl chloride	1	U	ug/kg	1
Tetrachloroethene	4	U	ug/kg	4
Toluene	1.9	J	ug/kg	1
Trichloroethene	1	U	ug/kg	1
Vinyl chloride	1	U	ug/kg	1
cis-1,3-Dichloropropene	1	U	ug/kg	1
m,p-Xylene	1	U	ug/kg	1
o-Xylene	1	U	ug/kg	1
trans-1,2-Dichloroethene	1	U	ug/kg	1
trans-1,3-Dichloropropene	1	U	ug/kg	1
BRAC SEMIVOLATILES				
Phenol	390	U	ug/kg	390
bis(2-Chloroethyl)ether	390	U	ug/kg	390
1,3-Dichlorobenzene	390	U	ug/kg	390
1,4-Dichlorobenzene	390	U	ug/kg	390
1,2-Dichlorobenzene	390	U	ug/kg	390
N-Nitroso-di-n-propylamine	390	U	ug/kg	390
Hexachloroethane	390	U	ug/kg	390
Nitrobenzene	390	U	ug/kg	390
Isophorone	390	U	ug/kg	390
2-Nitrophenol	390	U	ug/kg	390
2,4-Dimethylphenol	390	U	ug/kg	390
bis(2-Chloroethoxy) methane	390	U	ug/kg	390
2,4-Dichlorophenol	390	U	ug/kg	390
1,2,4-Trichlorobenzene	390	U	ug/kg	390
Naphthalene	390	U	ug/kg	390
Hexachlorobutadiene	390	U	ug/kg	390
4-Chloro-3-methylphenol	390	U	ug/kg	390

NAS CECIL FIELD -- OIL/WATER SEPARATOR AT FACILITY 80-OW3
SUBSURFACE SOIL -- ANALYTICAL DATA -- REPORT REQUEST NO. 10551

Lab Sample Number:	JR36666			
Site	UST GREY			
Locator	CEF-800W3-SB1			
Collect Date:	14-OCT-98			
	VALUE	QUAL	UNITS	DL
2-Methylnaphthalene	390	U	ug/kg	390
2,4,6-Trichlorophenol	390	U	ug/kg	390
2-Chloronaphthalene	390	U	ug/kg	390
Dimethylphthalate	390	U	ug/kg	390
Acenaphthylene	390	U	ug/kg	390
2,4-Dinitrophenol	1900	U	ug/kg	1900
3- & 4-Methylphenol (2)	390	U	ug/kg	390
4-Nitrophenol	390	U	ug/kg	390
2,4-Dinitrotoluene	390	U	ug/kg	390
Diethylphthalate	390	U	ug/kg	390
4-Chlorophenyl-phenylether	390	U	ug/kg	390
Fluorene	390	U	ug/kg	390
4,6-Dinitro-2-methylphenol	1200	U	ug/kg	1200
4-Bromophenyl-phenylether	390	U	ug/kg	390
Hexachlorobenzene	390	U	ug/kg	390
Pentachlorophenol	390	U	ug/kg	390
Phenanthrene	390	U	ug/kg	390
Anthracene	390	U	ug/kg	390
Di-n-butylphthalate	390	U	ug/kg	390
Fluoranthene	390	U	ug/kg	390
Pyrene	390	U	ug/kg	390
3,3-Dichlorobenzidine	780	U	ug/kg	780
Benzo (a) anthracene	390	U	ug/kg	390
Chrysene	390	U	ug/kg	390
bis(2-Ethylhexyl) phthalate	390	U	ug/kg	390
Di-n-octylphthalate	390	U	ug/kg	390
Benzo (b) fluoranthene	390	U	ug/kg	390
Benzo (k) fluoranthene	390	U	ug/kg	390
Benzo (a) pyrene	390	U	ug/kg	390
Indeno (1,2,3-cd) pyrene	390	U	ug/kg	390
Dibenzo (a,h) anthracene	390	U	ug/kg	390
Benzo (g,h,i) perylene	390	U	ug/kg	390
FLA PRO				
TPH C8-C40	7.8	U	mg/kg	7.8
Arsenic	1.6	J	mg/kg	.6
Barium	24	U	mg/kg	24
Cadmium	1	U	mg/kg	1
Chromium	4.8		mg/kg	1
Lead	9	J	mg/kg	8
Mercury	.01	U	mg/kg	.01
Selenium	2	U	mg/kg	2
Silver	2	U	mg/kg	2

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