

N60200.AR.001269
NAS CECIL FIELD, FL
5090.3a

CONFIRMATORY SAMPLING REPORT FOR BUILDING 82 TANK 82A BASE REALIGNMENT
AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK
GREY SITES NAS CECIL FIELD FL
4/1/1998
ABB ENVIRONMENTAL SERVICES INC

CONFIRMATORY SAMPLING REPORT
BUILDING 82, TANK 82A
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-0317/131

Prepared by:

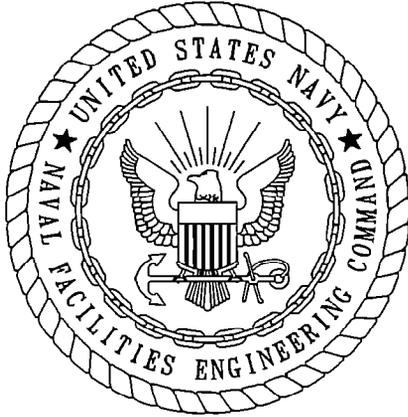
ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301

Prepared for:

Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29418

Bryan Kizer, Code 1842, Engineer-in-Charge

April 1998



CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/131 are complete and accurate and comply with all requirements of this contract.

DATE: April 17, 1998

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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Building 82, Tank 82A
Naval Air Station Cecil Field
Jacksonville, Florida

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Building 82, Tank 82A
Naval Air Station Cecil Field
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GLOSSARY

ABB-ES	ABB Environmental Services, Inc
BEI	Bechtel Environmental Incorporated
FAC	Florida Administrative Code
OVA	organic vapor analyzer
ppm	parts per million
UST	underground storage tank

1.0 INTRODUCTION

ABB Environmental Services, Inc. (ABB-ES), under contract to the Southern Division, Naval Facilities Engineering Command, has completed the confirmatory sampling for Tank 82A 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 82A was an underground storage tank (UST) located at the southeast corner of Building 82, the air traffic control tower and disaster preparedness center (Figure 1). The UST, which was installed in 1987, had a 1,000-gallon capacity and was used to store fuel oil for backup heating for the building (ABB-ES, 1997). A Contamination Assessment Plan for the assessment of soil and groundwater at Tank 82A was prepared by ABB-ES in November 1996 (ABB-ES, 1996).

Tank 82A was removed by Bechtel Environmental, Inc. (BEI), on June 3, 1997. Three tons of excessively contaminated soil were removed at that time. A Closure Report was prepared for Tank 82A and submitted to the Florida Department of Environmental Protection in July of 1997 (BEI, 1997).

2.0 FIELD INVESTIGATION

The confirmatory sampling at Tank 82A was initiated in January 1997 (before the UST was removed) and included the following:

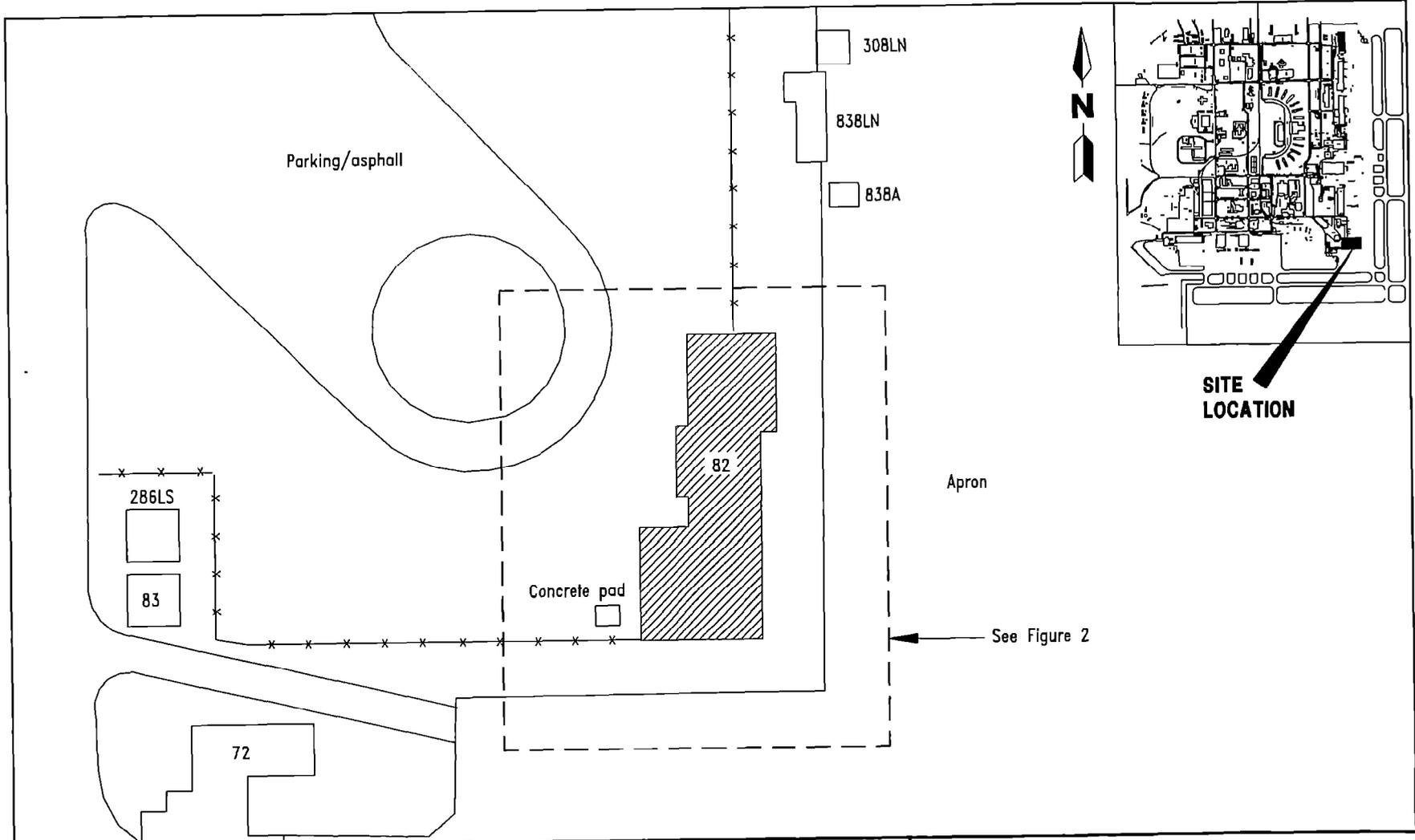
- the advancement of three soil borings to the water table,
- the installation of one shallow groundwater monitoring well, and
- collection and analysis of one groundwater sample.

Soil samples were collected at depth intervals of 1-foot below land surface and every 2 feet thereafter to the water table. These samples were screened for hydrocarbon vapors with an organic vapor analyzer (OVA).

A monitoring well, CEF-82-1S, was installed south of the UST near soil boring CEF-82A-SB2 to a depth of 15 feet below land surface. One groundwater sample was collected on March 21, 1997, and analyzed for the Kerosene Analytical Group parameters. A general site plan indicating the location of the soil borings and monitoring well CEF-82-1S is presented on Figure 2. The monitoring well installation detail is presented in Appendix A.

3.0 SCREENING AND ANALYTICAL RESULTS

Excessively contaminated soil was not detected in soil samples collected from the unsaturated zone during the confirmatory sampling and closure (BEI, 1997). The soil OVA data collected during the confirmatory sampling are summarized in Table 1 and is presented on Figure 2.



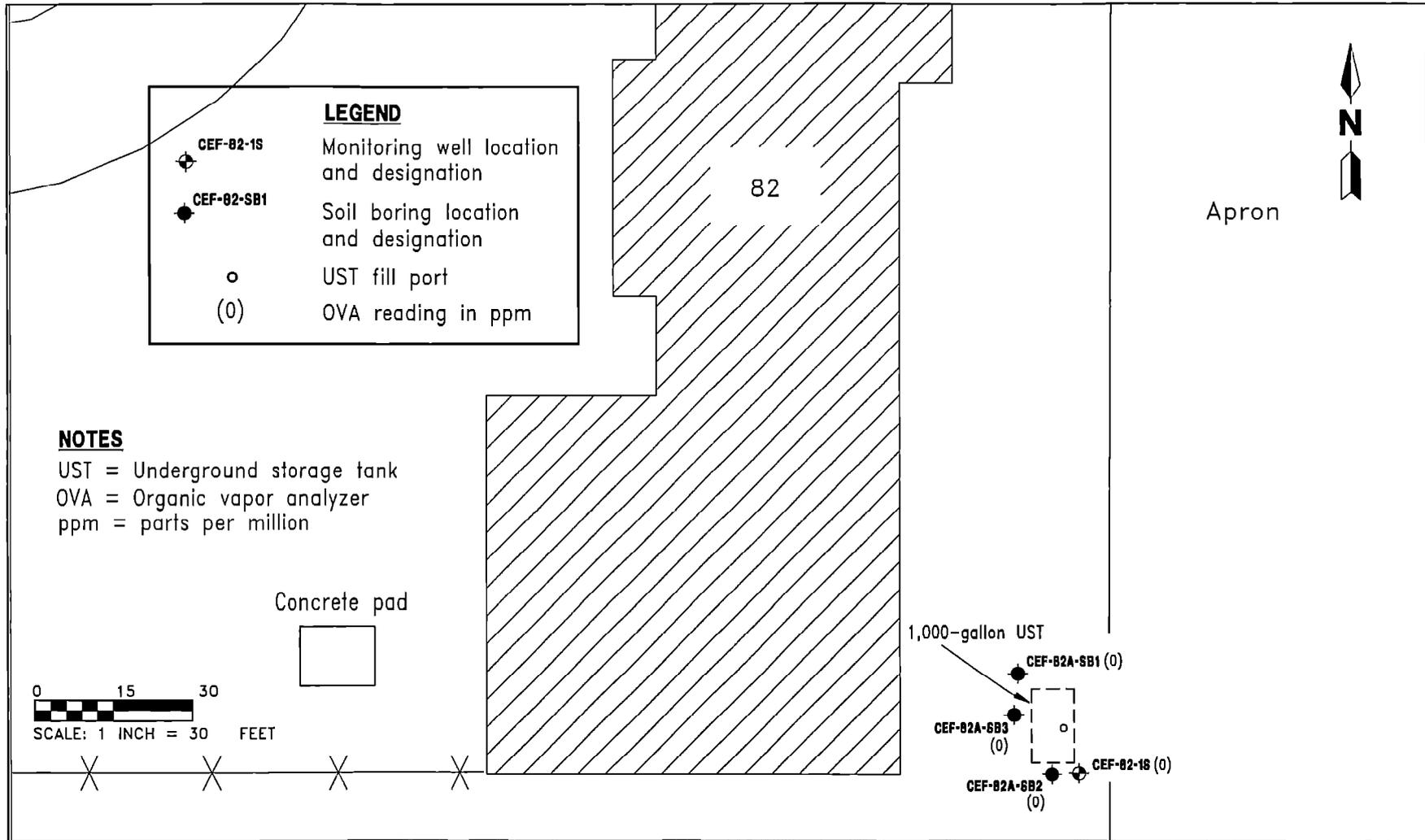
0 50 100
SCALE: 1 INCH = 100 FEET

FIGURE 1
TANK 82A
AIR TRAFFIC CONTROL TOWER AND
DISASTER PREPAREDNESS CENTER



CONFIRMATORY SAMPLING REPORT
BUILDING 82, TANK 82A

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA



**FIGURE 2
TANK 82A
SOIL BORING AND MONITORING WELL
LOCATIONS**



**CONFIRMATORY SAMPLING REPORT
BUILDING 82, TANK 82A
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

**Table 1
Soil Screening Results**

Confirmatory Sampling Report
Building 82, Tank 82A
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
CEF-82A-SB1	1	0	-	0
	3	0	-	0
	5	0	-	0
	7	0	-	0
	8 (wet)	0	-	0
CEF-82A-SB2	1	0	-	0
	3	0	-	0
	5	0	-	0
	7	0	-	0
	8.5 (wet)	11	0	11
¹ CEF-82A-SB3	1	0	-	0
	3	0	-	0
CEF-82-1S	1	0	-	0
	3	0	-	0
	5	0	-	0
	11 (wet)	0	-	0

¹ Met refusal at 3.5 feet below land surface.

Notes: All soil samples were collected on January 14, 1997.
Monitoring well CEF-82-1S was installed on March 10, 1997.
Soil samples were filtered with carbon to determine the methane concentration.

OVA = organic vapor analyzer.
ppm = parts per million.
bls = below land surface.
wet = soil sample was completely saturated when analyzed.
moist = soil sample was partially saturated when analyzed.
- = filtered readings were not collected.

Contaminant concentrations in groundwater were below the regulatory standards specified in Chapter 62-770 of the Florida Administrative Code (FAC). The complete analytical data set is presented in Appendix B.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Data obtained during the confirmatory sampling at the Tank 82A site did not indicate the presence of contaminated soil. Based on the groundwater sample collected from monitoring well CEF-82A-1S, concentrations do not exceed regulatory requirements specified in Chapter 62-770, FAC. Therefore, No Further Action is recommended for the Tank 82A 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. 1997. *Base Realignment and Closure Tank Management Plan, Naval Air Station Cecil Field, Jacksonville, Florida*. Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (January).

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

APPENDIX A
MONITORING WELL INSTALLATION DETAIL

PROJECT: NAS Cecil Field		LOG of WELL: CEF-82-IS		BORING NO. CEF-82-IS	
CLIENT: SOUTHDIVNAVFACENGCOM		PROJECT NO: 8542-03		DATE STARTED: 3-10-97	
DRILLING SUBCONTRACTOR: GEOTEK		SITE: Building 82		COMPLETED: 3-10-97	
METHOD: 8.25" HSA		WELL CASE DIAM.: 2"		SCREEN INT.: 5-15 FT.	
TOC ELEVATION: FT. NGVD		GROUND ELEV.: FT. NGVD		SCREEN SLOT SIZE: 0	
WELL DEVELOP. DATE: 3-11-97		TOTAL DEPTH: 18 FT. BLS		NORTHING: 2141483	
		DEPTH TO ∇ 7.95 FT. BLS		EASTING: 378079.2	
				LOGGED BY: J Koch	

DEPTH FT.	SAMPLE INTERVAL RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
0			GRAVEL AND SILTY SAND. Light grey to dark grey, no petroleum odor.	0000000000	GM		posthde
0			SILTY SAND. Dark brown, fine grain, no petroleum odor.	diagonal lines	SM		posthde
5	100%	0	SILTY SAND. Dark brown, fine grain, no petroleum odor.	diagonal lines		2.4, 4.7	
10	100%	0	SILTY SAND. Dark brown, fine grain, no petroleum odor.	diagonal lines		13.4, 6	
15							
20							

APPENDIX B
GROUNDWATER ANALYTICAL DATA

NAS CECIL FIELD -- TANK B2A
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9391

Lab Sample Number:	B7C2501210	B7C2501210
Site	BRACGREY	BRACGREY
Locator	CEFB21S	CEFB21S
Collect Date:	24-MAR-97	24-MAR-97
VALUE	QUAL UNITS	DL

BRACGREY ANALYTICAL PARAMETERS

	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
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	1 U	ug/l	1	-		
1,3-Dichlorobenzene	1 U	ug/l	1	-		
1,4-Dichlorobenzene	1 U	ug/l	1	-		
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	2 U	ug/l	2	-		
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	.2 U	ug/l	.2	-		
Benzo (k) fluoranthene	.15 U	ug/l	.15	-		
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	.1 U	ug/l	.1	-		
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	.2 U	ug/l	.2	-		
Fluorene	2 U	ug/l	2	-		
Indeno (1,2,3-cd) pyrene	.1 U	ug/l	.1	-		
Lead	5 U	ug/l	5	-		
Methyl tert-butyl ether	1 U	ug/l	1	-		
Methylene chloride	1 U	ug/l	1	-		
Naphthalene	2 U	ug/l	2	-		
Phenanthrene	2 U	ug/l	2	-		
Pyrene	.2 U	ug/l	.2	-		
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 82A
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9391

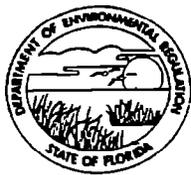
Lab Sample Number:	B7C2501210	B7C2501210
Site:	BRACGREY	BRACGREY
Locator:	CEF821S	CEF821S
Collect Date:	24-MAR-97	24-MAR-97

	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

UST BUILDING 82A

1. Underground Storage Tank Installation and Removal Form for Certified Contractors
2. Closure Assessment Form
3. Sketch of Excavation
4. Headspace Analysis Sheet
5. Groundwater Analytical Data
6. Waste Manifest



Underground Storage Tank Installation and Removal Form
For Certified Contractors

Pollutant Storage System Specialty Contractors as defined in Section 489.113, Florida Statutes (Certified contractors as defined in Section 17-761.20 Florida Administrative Code) shall use this form to certify that the installation, replacement or removal of the storage tank system(s) located at the address listed below was performed in accordance with the Department Reference Standards.

General Facility Information

- 1. DER Facility Identification No.: 168507293
2. Facility Name: Naval Air Station Cecil Field Telephone (904) 778-6040
3. Street Address (physical location): Building 82A Tank Location, NAS Cecil Field, Florida
4. Owner Name: NAS Cecil Field Public Works Dept., Environmental Div. Telephone (904) 778-6040
5. Owner Address Base Environmental Division, Public Works Dept., NAS Cecil Field, Florida
6. Number of Tanks: a. Installed at this time b. Removed at this time One
7. Tank(s) Manufactured by: Unknown
8. Date Work Initiated: 6-3-97 9. Date Work Completed: 6-3-97

Underground Pollutant Tank Installation Checklist

Please certify the completion of the following installation requirements by placing an (X) in the appropriate box.

- 1. The tanks and piping are corrosion resistant and approved for use by State and Federal Laws.
2. Excavation, backfill and compaction completed in accordance with NFPA (National Fire Protection Association) 30(87), API (American Petroleum Institute) 1615, PEI (Petroleum Equipment Institute) RP100-87 and the manufacturers' specifications.
3. Tanks and piping pretested and installed in accordance with NFPA 30(87), API 1615, PEI/RP100(87) and the manufacturers' specifications.
4. Steel tanks and piping are cathodically protected in accordance with NFPA 30(87), API 1632, UL (Underwriters Laboratory) 1746, STI (Steel Tank Institute) R892-89 and the manufacturer's specifications.
5. Tanks and piping tested for tightness after installation in accordance with NFPA 30(87) and PEI/RP100-87.
6. Monitoring well(s) or other leak detection devices installed and tested in accordance with Section 17-761.640, Florida Administrative Code (F.A.C.)
7. Spill and overflow protection devices installed in accordance with Section 17-761.500, F.A.C.
8. Secondary containment installed for tanks and piping as applicable in accordance with Section 17-761.500, F.A.C.

Please Note: The numbers following the abbreviations (e.g. API 1615) are publication or specification numbers issued by these institutions.

Underground Pollutant Tank Removal Checklist

- 1. Closure assessment performed in accordance with Section 17-761.800, F.A.C.
2. Underground tank removed and disposed of as specified in API 1604 in accordance with Section 17-761.800, F.A.C.

Certification

I hereby certify and attest that I am familiar with the facility that is registered with the Florida Department of Environmental Regulation; that the best of my knowledge and belief, the tank installation, replacement or removal at this facility was conducted in accordance with Chapter 489 and Section 376.303, Florida Statutes and Chapter 17-761, Florida Administrative Code (and its adopted reference sources from public tions and standards of the National Fire Protection Association (NFPA); the American Petroleum Institute (API), the National Association Corrosion Engineers (NACE), American Society for Testing and Materials (ASTM); Petroleum Equipment Institute (PEI); Steel Tank Instit. (STI); Underwriters Laboratory (UL); and the tank and integral piping manufacturers' specifications; and that the operations on the check were performed accordingly.

Roland M. Boardman

 (Type or Print)
 Certified Pollutant Tank Contractor Name
 Pollutant Storage System Specialty Contractor License Number (PSSSC)

PCC054952

 PSSSC Number

Roland M. Boardman

 Certified Tank Contractor Signature

6-12-97

 Date

Roland M. Boardman

 (Type or Print)
 Field Supervisor Name

6-12-97

 Date

Roland M. Boardman

 Field Supervisor Signature

6-12-97

 Date

The owner or operator of the facility must register the tanks with the Department at least 10 days before installation. The installer must submit this form no more than 30 days after the completion of installation to the Department of Environmental Regulation at the address printed the top of page one.



Closure Assessment Form

Owners of storage tank systems that are replacing, removing or closing in place storage tanks shall use this form to demonstrate that a storage system closure assessment was performed in accordance with Rule 17-761 or 17-762, Florida Administrative Code. Eligible Early Detection Incentive (EDI) and Reimbursement Program sites do not have to perform a closure assessment.

Please Print or Type
Complete All Applicable Blanks

- 1. Date: 6-3-97
2. DER Facility ID Number: 168507293
3. County: Duval
4. Facility Name: Naval Air Station Cecil Field, Florida
5. Facility Owner: NAS Cecil Field Public Works Department, Environmental Division
6. Facility Address: Tank at Building 82A, NAS Cecil Field, Florida
7. Mailing Address: NAS Cecil Field, Public Works Department, Environmental Division
8. Telephone Number: (904) 778-6040
9. Facility Operator: Public Works Dept., Environmental Division
10. Are the Storage Tank(s): (Circle one or both) A. Aboveground or B. Underground
11. Type of Product(s) Stored: Fuel Oil
12. Were the Tank(s): (Circle one) A. Replaced B. Removed C. Closed in Place D. Upgraded (aboveground tanks only)
13. Number of Tanks Closed: One
14. Age of Tanks: Unknown

Facility Assessment Information

Table with 3 columns: Yes, No, Not Applicable. Contains checkboxes for facility assessment questions.

- 1. Is the facility participating in the Florida Petroleum Liability Insurance and Restoration Program (FPLIRP)?
2. Was a Discharge Reporting Form submitted to the Department? If yes, When: 6/26/97 Where: JEPB
3. Is the depth to ground water less than 20 feet?
4. Are monitoring wells present around the storage system? If yes, specify type: Water monitoring Vapor monitoring
5. Is there free product present in the monitoring wells or within the excavation?
6. Were the petroleum hydrocarbon vapor levels in the soils greater than 500 parts per million for gasoline? Specify sample type: Vapor Monitoring wells Soil sample(s)
7. Were the petroleum hydrocarbon vapor levels in the soils greater than 50 parts per million for diesel/kerosene? Specify sample type: Vapor Monitoring wells Soil sample(s)
8. Were the analytical laboratory results of the ground water sample(s) greater than the allowable state target levels (See target levels on reverse side of this form and supply laboratory data sheets)
9. If a used oil storage system, did a visual inspection detect any discolored soil indicating a release?
10. Are any potable wells located within 1/4 of a mile radius of the facility?
11. Is there a surface water body within 1/4 mile radius of the site? If yes, indicate distance:

12. A detailed drawing or sketch of the facility that includes the storage system location, monitoring wells, buildings, storm drains, sample locations and dispenser locations must accompany this form.
13. If a facility has a pollutant storage tank system that has both gasoline and kerosene/diesel stored on site, both EPA Method 602 and EPA Method 610 must be performed on the ground water samples obtained.
14. Amount of soils removed and receipt of proper disposal.
15. If yes is answered to any one of questions 5-9, a Discharge Reporting Form 17-761.900(1) indicating a suspected release shall be submitted to the Department within one working day.
16. A copy of this form and any attachments must be submitted to the Department's district office in your area and to the locally administered program office under contract with the Department within 60 days of completion of tank removal or filling a tank with an inert material.

 Signature of Owner

JE Rountree

 Signature of Person Performing Assessment

Tom Rountree, Site Safety & Health Representative

 Title of Person Performing Assessment

 Date

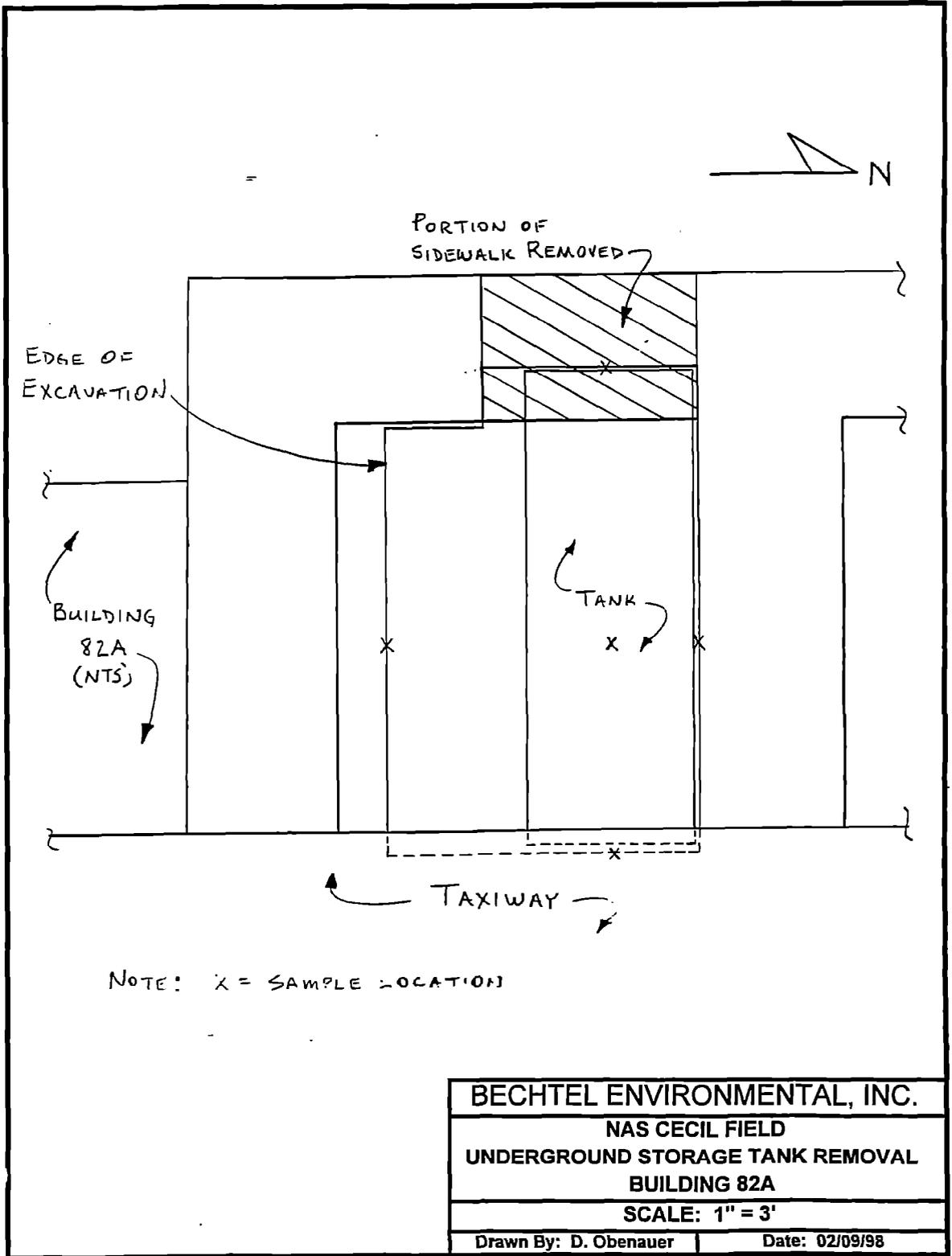
6/23/97

 Date

State Ground Water Target Levels That Affect A Pollutant Storage Tank System Closure Assessment

State ground water target levels are as follows:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. For gasoline (EPA Method 602): <ol style="list-style-type: none"> a. Benzene 1 ug/l b. Total VOA 50 ug/l <ul style="list-style-type: none"> - Benzene - Toluene - Total Xylenes - Ethylbenzene c. Methyl Tertiary-Butyl Ether (MTBE) 50 ug/l | <ol style="list-style-type: none"> 2. For kerosene/diesel (EPA Method 610): <ol style="list-style-type: none"> a. Polynuclear Aromatic Hydrocarbons (PAHS)
 (Best achievable detection limit, 10 ug/l maximum) |
|--|---|



BECHTEL ENVIRONMENTAL, INC.	
NAS CECIL FIELD	
UNDERGROUND STORAGE TANK REMOVAL	
BUILDING 82A	
SCALE: 1" = 3'	
Drawn By: D. Obenauer	Date: 02/09/98

HEADSPACE ANALYSIS SHEET - BUILDING 82

Instrument

HeathTech OVD S/N 1041-3 :
 Foxboro TVA-1000B S/N - 566 : X
 Thermo Environmental Instr. Model 580 S/N 5808-28648-232 :

Field Response Check

Battery : X
 Challenge Gas : X

Weather

Sunny, 80° F

Head space Analysis Readings

Location	Reading without Filter	Reading with Filter	Net Reading	Comments
5 th Bucket	0 ppm	-	0 ppm	
10 th Bucket	25 ppm	-	25 ppm	
15 th Bucket	35 ppm	-	35 ppm	
20 th Bucket	23 ppm	-	23 ppm	
North Wall	85 ppm	0 ppm	85 ppm	
South Wall	120 ppm	0 ppm	120 ppm	
East Wall	250 ppm	0 ppm	250 ppm	
West Wall	110 ppm	110 ppm	110 ppm	
Bottom	451 ppm	130 ppm	321 ppm	
North Wall	0 ppm	-	0 ppm	(1)
South Wall	0 ppm	-	0 ppm	(1)
East Wall	0 ppm	-	0 ppm	(2)
West Wall	0 ppm	-	0 ppm	(3)
Bottom	5.1 ppm	-	5.1 ppm	(4)

- (1) 18" beyond first excavation
- (2) 6" beyond excavation
- (3) removed soils adhering to concrete wall of the vault
- (4) Removed approximately 12" of soil to hard pan

- Did not use charcoal filter

T.E. Rountree
 T.E. Rountree
 EH&S Specialist

6/24/97
 Date

Groundwater Analytical Data

Groundwater monitoring well installation and sampling were conducted by ABB Environmental Services, Inc. (ABB-ES) in accordance with the *Tank Management Plan, Naval Air Station Cecil Field, Jacksonville, Florida*, ABB-ES, 1996. Prior to well installation, soil borings were advanced on each side of the tank and soil samples were collected and screened with an organic vapor analyzer (OVA). The monitoring well was installed in the boring with highest OVA reading. If no contamination was detected in the borings or if the OVA readings were equal in all borings, the monitoring well was installed on the downgradient side of the tank. The downgradient side was selected based on U.S. Geological Survey (USGS) modeling and research as presented in *Groundwater Flow in the Surficial Aquifer System and Potential Movement of Contaminants from Selected Waste Disposal Sites at Cecil Field Naval Air Station, Jacksonville, Florida*, 1996.

Client Sample ID: CRF-82-1S

GC Volatiles

Lot-Sample #...: B7C250121-005 Work Order #...: C8Q1J102 Matrix.....: WATER
 Date Sampled...: 03/24/97 Date Received...: 03/25/97
 Prep Date.....: 04/03/97 Analysis Date...: 04/03/97
 Prep Batch #...: 7093225

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Bromodichloromethane	ND	1.0	ug/L	CFR136A 601
Bromoform	ND	1.0	ug/L	CFR136A 601
Bromomethane	ND	1.0	ug/L	CFR136A 601
Carbon tetrachloride	ND	1.0	ug/L	CFR136A 601
Chlorobenzene	ND	1.0	ug/L	CFR136A 601
Chloroethane	ND	1.0	ug/L	CFR136A 601
2-Chloroethyl vinyl ether	ND	--	ug/L	CFR136A 601
Chloroform	ND	1.0	ug/L	CFR136A 601
Chloromethane	ND	1.0	ug/L	CFR136A 601
Dibromochloromethane	ND	1.0	ug/L	CFR136A 601
1,2-Dichlorobenzene	ND	1.0	ug/L	CFR136A 601
1,3-Dichlorobenzene	ND	1.0	ug/L	CFR136A 601
1,4-Dichlorobenzene	ND	1.0	ug/L	CFR136A 601
Dichlorodifluoromethane	ND	1.0	ug/L	CFR136A 601
1,1-Dichloroethane	ND	1.0	ug/L	CFR136A 601
1,2-Dichloroethane	ND	1.0	ug/L	CFR136A 601
1,1-Dichloroethene	ND	1.0	ug/L	CFR136A 601
trans-1,2-Dichloroethene	ND	1.0	ug/L	CFR136A 601
1,2-Dichloropropane	ND	1.0	ug/L	CFR136A 601
cis-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 601
trans-1,3-Dichloropropene	ND	1.0	ug/L	CFR136A 601
Methylene chloride	ND	1.0	ug/L	CFR136A 601
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	CFR136A 601
Tetrachloroethene	ND	1.0	ug/L	CFR136A 601
1,1,1-Trichloroethane	ND	1.0	ug/L	CFR136A 601
1,1,2-Trichloroethane	ND	1.0	ug/L	CFR136A 601
Trichloroethene	ND	1.0	ug/L	CFR136A 601
Trichlorofluoromethane	ND	1.0	ug/L	CFR136A 601
Vinyl chloride	ND	1.0	ug/L	CFR136A 601

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	91	(70 - 130)

NOTE(S) :

2-Chloroethyl vinyl ether is susceptible to degradation in acid conditions. No quantitation is available.

Client Sample ID: CRP-82-1S

GC Volatiles

Lot-Sample #....: B7C250121-005 Work Order #....: C8Q1J103 Matrix.....: WATER
 Date Sampled....: 03/24/97 Date Received...: 03/25/97
 Prep Date.....: 04/03/97 Analysis Date...: 04/03/97
 Prep Batch #....: 7093226

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Methyl tert-butyl ether	ND	1.0	ug/L	CFR136A 602
Benzene	ND	1.0	ug/L	CFR136A 602
Ethylbenzene	ND	1.0	ug/L	CFR136A 602
Toluene	ND	1.0	ug/L	CFR136A 602
Chlorobenzene	ND	1.0	ug/L	CFR136A 602
1,2-Dichlorobenzene	ND	1.0	ug/L	CFR136A 602
1,3-Dichlorobenzene	ND	1.0	ug/L	CFR136A 602
1,4-Dichlorobenzene	ND	1.0	ug/L	CFR136A 602
Xylenes (total)	ND	1.0	ug/L	CFR136A 602
		<u>PERCENT</u>	<u>RECOVERY</u>	
<u>SURROGATE</u>		<u>RECOVERY</u>	<u>LIMITS</u>	
4-Bromofluorobenzene		93	(70 - 130)	

ABB ENVIRONMENTAL SERVICES

Client Sample ID: CRF-82-1S

GC Semivolatiles

Lot-Sample #....: B7C250121-005 Work Order #....: C8Q1J101 Matrix.....: WATER
Date Sampled...: 03/24/97 Date Received...: 03/25/97
Prep Date.....: 03/26/97 Analysis Date...: 03/27/97
Prep Batch #....: 7085192

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Ethylene dibromide	ND	0.020	ug/L	EPA-DW 504
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
1,1,1,2-Tetrachloroethane	107	(72 - 134)		

ABB ENVIRONMENTAL SERVICES

Client Sample ID: CKF-82-15

HPLC

Lot-Sample #...: B7C250121-005 Work Order #...: C8Q1J105 Matrix.....: WATER
 Date Sampled...: 03/24/97 Date Received...: 03/25/97
 Prep Date.....: 03/26/97 Analysis Date...: 04/01/97
 Prep Batch #...: 7085216

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acenaphthene	ND	2.0	ug/L	CFR136A 610
Acenaphthylene	ND	2.0	ug/L	CFR136A 610
Anthracene	ND	2.0	ug/L	CFR136A 610
Benzo (a) anthracene	ND	0.10	ug/L	CFR136A 610
Benzo (a) pyrene	ND	0.10	ug/L	CFR136A 610
Benzo (b) fluoranthene	ND	0.10	ug/L	CFR136A 610
Benzo (ghi) perylene	ND	0.20	ug/L	CFR136A 610
Benzo (k) fluoranthene	ND	0.15	ug/L	CFR136A 610
Chrysene	ND	0.10	ug/L	CFR136A 610
Dibenz (a, h) anthracene	ND	0.20	ug/L	CFR136A 610
Fluoranthene	ND	0.20	ug/L	CFR136A 610
Fluorene	ND	2.0	ug/L	CFR136A 610
Indeno (1, 2, 3-cd) pyrene	ND	0.10	ug/L	CFR136A 610
1-Methylnaphthalene	ND	2.0	ug/L	CFR136A 610
2-Methylnaphthalene	ND	2.0	ug/L	CFR136A 610
Naphthalene	ND	2.0	ug/L	CFR136A 610
Phenanthrene	ND	2.0	ug/L	CFR136A 610
Pyrene	ND	0.20	ug/L	CFR136A 610
	PERCENT	RECOVERY		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
Carbazole	58	(30 - 130)		

ABB ENVIRONMENTAL SERVICES

Client Sample ID: CRF-82-1S

GC Semivolatiles

Lot-Sample #...: B7C250121-005 Work Order #...: C8Q1J106 Matrix.....: WATER
 Date Sampled...: 03/24/97 Date Received...: 03/25/97
 Prep Date.....: 03/28/97 Analysis Date...: 04/04/97
 Prep Batch #...: 7087154

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
TPH (C8-C40)	ND	0.50	mg/L	FL-DEP FL-PRO
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
o-Terphenyl	90	(33 - 162)		
Nonatriacontane	56	(10 - 109)		

Client Sample ID: CEF-82-1S

TOTAL Metals

Lot-Sample #...: B7C250121-005
 Date Sampled...: 03/24/97

Date Received...: 03/25/97

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 7085119 Lead	ND	5.0	ug/L	MCAWW 239.2	03/26/97	C8Q1J104

Client Sample ID: CRP-82-1S

DISSOLVED Metals

Lot-Sample #...: B7C250121-006

Matrix.....: WATER

Date Sampled...: 03/24/97

Date Received...: 03/25/97

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 7084180						
Lead	ND	5.0	ug/L	MCAWW 239.2	03/25/97	C8Q1L101