

N60200.AR.001272
NAS CECIL FIELD, FL
5090.3a

CONFIRMATORY SAMPLING REPORT FOR BUILDING 859 TANK G859U 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 859, TANK G859U
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:

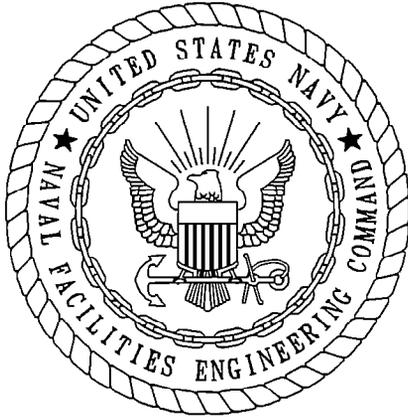
ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301

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)

TABLE OF CONTENTS

Confirmatory Sampling Report
Building 859, Tank G859U
Naval Air Station Cecil Field
Jacksonville, Florida

<u>Chapter</u>	<u>Title</u>	<u>Page No.</u>
1.0	INTRODUCTION	1
2.0	FIELD INVESTIGATION	1
3.0	SCREENING AND ANALYTICAL RESULTS	1
4.0	CONCLUSIONS AND RECOMMENDATIONS	5

REFERENCES

APPENDICES

- Appendix A: Monitoring Well Installation Details
- Appendix B: Groundwater Analytical Data

LIST OF FIGURES

Confirmatory Sampling Report
Building 859, Tank G859U
Naval Air Station Cecil Field
Jacksonville, Florida

<u>Figure</u>	<u>Title</u>	<u>Page No.</u>
1	Tank G859U Antisubmarine Warfare Operations Center	2
2	Tank G859U Soil Boring and Monitoring Well Locations	3

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page No.</u>
1	Soil Screening Results	4
2	Summary of Groundwater Analytical Results	6

GLOSSARY

ABB-ES	ABB Environmental Services, Inc
BEI	Bechtel Environmental Incorporated
bls	below land surface
FAC	Florida Administrative Code
$\mu\text{g}/\ell$	micrograms per liter
OVA	organic vapor analyzer
ppm	parts per million
TRPH	total recoverable petroleum hydrocarbons
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 G859U 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 G859U was an underground storage tank (UST) located at Building 859, which serves as the operations center for the Antisubmarine Warfare Unit (Figure 1). The UST, which was installed in 1986, had a 1,000-gallon capacity and was used to store diesel for the diesel generators (ABB-ES, 1997). A Contamination Assessment Plan for the assessment of soil and groundwater at Tank G859U was prepared by ABB-ES in November 1996 (ABB-ES, 1996).

Tank G859U was removed by Bechtel Environmental, Inc. (BEI), on May 12, 1997. No soil was removed at that time. A Closure Report was prepared for Tank G859U and submitted to the Florida Department of Environmental Protection in July of 1997 (BEI, 1997).

2.0 FIELD INVESTIGATION

The confirmatory sampling for Tank G859U was initiated in January 1997 (before the UST was removed) and included

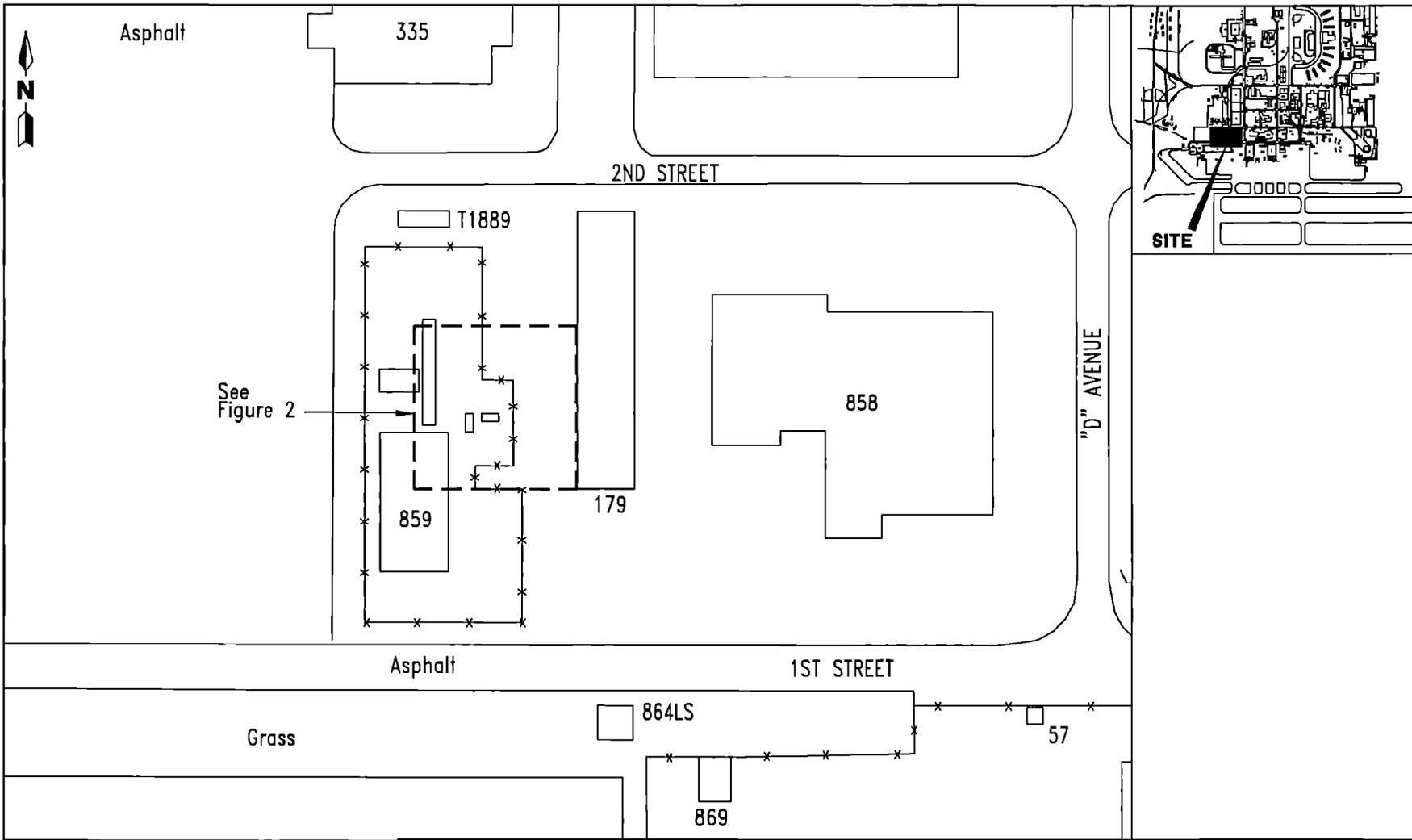
- the advancement of four soil borings to the water table,
- the installation of one shallow groundwater monitoring well, and
- collection and analysis of one groundwater sample.

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

A monitoring well, CEF-859-1S, was installed in March 1997 east of the UST near the location of soil boring CEF-859-SB3 to a depth of 13 feet bls. One groundwater sample was collected from the well on March 24, 1997, and analyzed for the Kerosene Analytical Group parameters. Monitoring well CEF-859-1S was destroyed during the tank removal. A second well, monitoring well CEF-859-2S, was installed 10 feet east of the former well on July 24, 1997. This well was sampled and analyzed for the Kerosene Analytical Group parameters in August of 1997. A general site plan indicating the location of the soil borings and monitoring well CEF-859-1S is presented on Figure 2. The monitoring well installation details are included 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 the tank removal (BEI, 1997). The soil OVA data are summarized in Table 1 and presented on Figure 2.



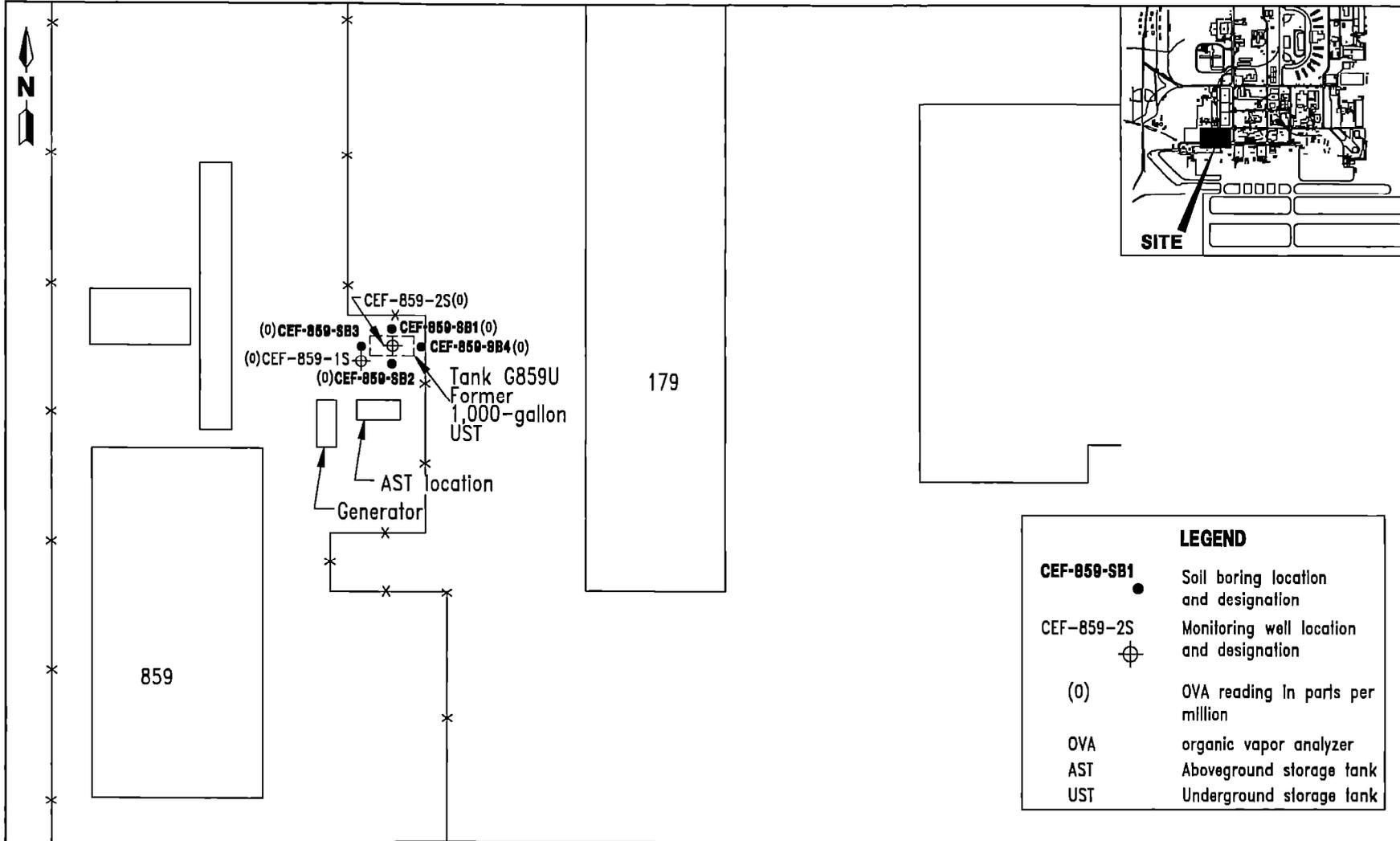
0 50 100
SCALE: 1 INCH = 100 FEET

FIGURE 1
TANK G859U
ANTISUBMARINE WARFARE OPERATIONS CENTER



CONFIRMATORY SAMPLING REPORT
BUILDING 859, TANK G859U

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA



LEGEND	
●	CEF-859-SB1 Soil boring location and designation
⊕	CEF-859-2S Monitoring well location and designation
(0)	OVA reading in parts per million
OVA	organic vapor analyzer
AST	Aboveground storage tank
UST	Underground storage tank

FIGURE 2
TANK G859U
SOIL BORING AND MONITORING WELL LOCATIONS



CONFIRMATORY SAMPLING REPORT
BUILDING 859, TANK G859U

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

**Table 1
Soil Screening Results**

Confirmatory Sampling Report
Building 859, Tank G859U
Naval Air Station Cecil Field
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
CEF-G859-SB1	1	0	-	0
	3	0	-	0
	5 (wet)	0	-	0
CEF-G859-SB2	1	0	-	0
	3	0	-	0
	5	0	-	0
CEF-G859-SB3	1	0	-	0
	3	0	-	0
	5	0	-	0
CEF-G859-SB4	1	0	-	0
	3	0	-	0
	5 (moist)	0	-	0
CEF-859-1S	1	0	-	0
	3	0	-	0
	5	0	-	0
	11 (wet)	0	-	0
CEF-859-2S	1	0	-	0
	3	0	-	0
	5	0	-	0
	9 (wet)	0	-	0

Notes: All soil samples were collected on January 21, 1997.
Monitoring well CEF-859-1S was installed on March 7, 1997.
Monitoring well CEF-859-2S was installed on July 29, 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.
wet = soil sample was completely saturated when analyzed.
moist = soil sample was partially saturated when analyzed.

The concentration of benzene in groundwater collected from monitoring well CEF-859-1S on March 24, 1997 was 1 micrograms per liter ($\mu\text{g}/\ell$), which is equal to the requirement of 1 $\mu\text{g}/\ell$ specified in Chapter 62-770 of the Florida Administrative Code (FAC). Other contaminants did not exceed their respective regulatory standards or guidance concentrations. At the request of the Naval Air Station Cecil Field partnering team, monitoring well CEF-859-2S was sampled on August 7, 1997 and no kerosene analytical group parameters were detected at concentrations above Chapter 62-770, FAC standards. A summary of the groundwater analytical results is presented in Table 2. The complete analytical data set is presented in Appendix B.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Contaminated soil was not detected during the confirmatory sampling or the tank removal. No contaminants were detected above the regulatory standards specified in Chapter 62-770, FAC, in the two groundwater samples collected from monitoring well CEF-859-1S. Therefore, No Further Action is recommended for the Tank G859U site.

**Table 2
Summary of Groundwater Analytical Results**

Confirmatory Sampling Report
Building 859, Tank G859U
Naval Air Station Cecil Field
Jacksonville, Florida

Compound	CEF-859-1S	CEF-859-2S	Chapter 62-770, FAC Regulatory Standards Draft July/August 1997
	March 1997	August 1997	
Volatile Organic Aromatics (USEPA Method 601/602) ($\mu\text{g}/\ell$)			
Chlorobenzene	1.4	ND	NA
1,2-Dichlorobenzene	¹ 1.6/1.9	ND	NA
1,3-Dichlorobenzene	¹ 1.6/2.3	ND	NA
1,4-Dichlorobenzene	¹ 1.6/1.8	ND	NA
Methylene chloride	1.7	ND	NA
Benzene	1	ND	1
Toluene	1	ND	40
Total Xylenes	2.3	ND	20
¹ Groundwater contaminant detected in samples analyzed by USEPA Methods 601 and 602.			
Notes: FAC = Florida Administrative Code. USEPA = U.S. Environmental Protection Agency. $\mu\text{g}/\ell$ = micrograms per liter. ND = not detected. NA = not applicable.			

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 (SOUTHNAVFACENGCOC), North Charleston, South Carolina (November).

ABB-ES. 1997. *Base Realignment and Closure Tank Management Plan, Naval Air Station Cecil Field, Jacksonville, Florida*. Prepared for SOUTHNAVFACENGCOC, 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 DETAILS

TITLE: NAS Cecil Field		LOG of WELL: DEF-854-1S	BORING NO. DEF-854-1S
CLIENT: SOUTH DIV NAV FAC ENGCORP		PROJECT NO: 8542-01	
CONTRACTOR: GEOTEK		DATE STARTED: 3-7-97	COMPLTD: 3-7-97
METHOD: 6.25" HSA	CASE SIZE: 2"	SCREEN INT.: 3-13	PROTECTION LEVEL: 0
TOC ELEV.: FEET.	MONITOR INST.: FID	TOT DPTH: 14 FEET.	DPTH TO ∇ : 6.14 FEET.
LOGGED BY: J Koch	WELL DEVELOPMENT DATE: 3-10-97		SITE: Building 859

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: Light brown to dark brown, fine grained, no petroleum odor.		SM	posthole	
0				SILTY SAND: As above, no petroleum odor.			posthole	
5		100%	0	SILTY SAND: As above, saturated, no petroleum odor.			7,12,15,18	
10		100%	0	SILTY SAND: Brown, fine grained, no petroleum odor.				
10			0	CLAYEY SAND: Dark brown, fine grained, no petroleum odor.		SC	1,1,1,4	

TITLE: NAS Cecil Field		LOG of WELL: CEF-859-25	BORING NO. CEF-859-25
CLIENT: SOUTHDIVNAVFACENCOM			PROJECT NO: 8542-03
CONTRACTOR: GEOTEK		DATE STARTED: 7-24-97	COMPLTD: 7-24-97
METHOD: 6.25" HSA	CASE SIZE: 2"	SCREEN INT.: 3-13	PROTECTION LEVEL: 0
TOC ELEV.: FEET.	MONITOR INST.: FID	TOT DPTH: 14 FEET.	DPTH TO ∇ 0.14 FEET.
LOGGED BY: J Tarr	WELL DEVELOPMENT DATE: 7-24-97		SITE: Building 859

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
0				SILTY SAND: Light brown to dark brown, fine grained.		SM	posthole	
0			SILTY SAND: As above.	posthole				
5			SILTY SAND: As above, saturated.					
0			SILTY SAND: As above, wet.					
10								
15								
20								

APPENDIX B
GROUNDWATER ANALYTICAL DATA

NAS CECIL FIELD -- TANK G859
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9399

Lab Sample Number:	B7C2501210	B7C2501210	B7H0801410	B7H0801410
Site	BRACGREY	BRACGREY	BRACGREY	BRACGREY
Locator	CEF8591S	CEF8591S	CEF-859-2S	CEF-859-2S
Collect Date:	24-MAR-97	24-MAR-97	07-AUG-97	07-AUG-97
	VALUE QUAL UNITS DL			

BRACGREY ANALYTICAL PARAMETERS

1,1,1-Trichloroethane	1 U	ug/l	1	-	1 U	ug/L	1	-
1,1,2,2-Tetrachloroethane	1 U	ug/l	1	-	1 U	ug/L	1	-
1,1,2-Trichloroethane	1 U	ug/l	1	-	1 U	ug/L	1	-
1,1-Dichloroethane	1 U	ug/l	1	-	1 U	ug/L	1	-
1,1-Dichloroethene	1 U	ug/l	1	-	1 U	ug/L	1	-
1,2-Dichlorobenzene	1.6	ug/l	1	-	1 U	ug/L	1	-
1,3-Dichlorobenzene	1.6	ug/l	1	-	1 U	ug/L	1	-
1,4-Dichlorobenzene	1.8	ug/l	1	-	1 U	ug/L	1	-
1,2-Dichloroethane	1 U	ug/l	1	-	1 U	ug/L	1	-
1,2-Dichloropropane	1 U	ug/l	1	-	1 U	ug/L	1	-
1-Methylnaphthalene	2 U	ug/l	2	-	2 U	ug/L	2	-
2-Methylnaphthalene	2 U	ug/l	2	-	2 U	ug/L	2	-
Acenaphthene	2 U	ug/l	2	-	2 U	ug/L	2	-
Acenaphthylene	2 U	ug/l	2	-	2 U	ug/L	2	-
Anthracene	2 U	ug/l	2	-	2 U	ug/L	2	-
Benzene	1	ug/l	1	-	1 U	ug/L	1	-
Benzo (a) anthracene	.1 U	ug/l	.1	-	.1 U	ug/L	.1	-
Benzo (a) pyrene	.1 U	ug/l	.1	-	.1 U	ug/L	.1	-
Benzo (b) fluoranthene	.1 U	ug/l	.1	-	.1 U	ug/L	.1	-
Benzo (g,h,i) perylene	.2 U	ug/l	.2	-	.2 U	ug/L	.2	-
Benzo (k) fluoranthene	.15 U	ug/l	.15	-	.15 U	ug/L	.15	-
Bromodichloromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Bromoform	1 U	ug/l	1	-	1 U	ug/L	1	-
Bromomethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Carbon tetrachloride	1 U	ug/l	1	-	1 U	ug/L	1	-
Chlorobenzene	1.4	ug/l	1	-	1 U	ug/L	1	-
Chloromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Chloroform	1 U	ug/l	1	-	1 U	ug/L	1	-
Chloromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Chrysene	.1 U	ug/l	.1	-	.1 U	ug/L	.1	-
Dibenzo (a,h) anthracene	.2 U	ug/l	.2	-	.2 U	ug/L	.2	-
Dibromochloromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Dichlorodifluoromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Ethylbenzene	1 U	ug/l	1	-	1 U	ug/L	1	-
Ethylene dibromide	.02 U	ug/l	.02	-	.02 U	ug/L	.02	-
Fluoranthene	.2 U	ug/l	.2	-	.2 U	ug/L	.2	-
Fluorene	2 U	ug/l	2	-	2 U	ug/L	2	-
Indeno (1,2,3-cd) pyrene	.1 U	ug/l	.1	-	.1 U	ug/L	.1	-
Lead	5 U	ug/l	5	-	5 U	ug/L	5	-
Methyl tert-butyl ether	1 U	ug/l	1	-	1 U	ug/L	1	-
Methylene chloride	1.7	ug/l	1	-	5 U	ug/L	5	-
Naphthalene	2 U	ug/l	2	-	2 U	ug/L	2	-
Phenanthrene	2 U	ug/l	2	-	2 U	ug/L	2	-
Pyrene	.2 U	ug/l	.2	-	.2 U	ug/L	.2	-
Tetrachloroethene	1 U	ug/l	1	-	1 U	ug/L	1	-
Toluene	1	ug/l	1	-	1 U	ug/L	1	-
Total petroleum hydrocarbons	.5 U	mg/l	.5	-	.5 U	mg/l	.5	-
Trichloroethene	1 U	ug/l	1	-	1 U	ug/L	1	-
Trichlorofluoromethane	1 U	ug/l	1	-	1 U	ug/L	1	-
Vinyl chloride	1 U	ug/l	1	-	1 U	ug/L	1	-

NAS CECIL FIELD -- TANK G859
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9399

Lab Sample Number:
 Site
 Locator
 Collect Date:

B7C2501210
 BRACGREY
 CEF8591S
 24-MAR-97
 VALUE QUAL UNITS DL

B7C2501210
 BRACGREY
 CEF8591S
 24-MAR-97
 VALUE QUAL UNITS DL

B7H0801410
 BRACGREY
 CEF-859-2S
 07-AUG-97
 VALUE QUAL UNITS DL

B7H0801410
 BRACGREY
 CEF-859-2S
 07-AUG-97
 VALUE QUAL UNITS DL

	VALUE	QUAL UNITS	DL									
Xylenes (total)	2.3	ug/l	1	-			1 U	ug/L	1	-		
cis-1,3-Dichloropropene	1 U	ug/l	1	-			1 U	ug/L	1	-		
trans-1,2-Dichloroethene	1 U	ug/l	1	-			1 U	ug/L	1	-		
trans-1,3-Dichloropropene	1 U	ug/l	1	-			1 U	ug/L	1	-		
Lead-DISS	-			5 U	ug/l	5	-			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