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NAS CECIL FIELD, FL  
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CONFIRMATORY SAMPLING REPORT FOR BUILDING 541 TANK G541 BASE  
REALIGNMENT AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND  
STORAGE TANK GREY SITES NAS CECIL FIELD FL  
10/1/1997  
ABB ENVIRONMENTAL SERVICES INC

**CONFIRMATORY SAMPLING REPORT**

**BUILDING 541, TANK G541**

**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:**

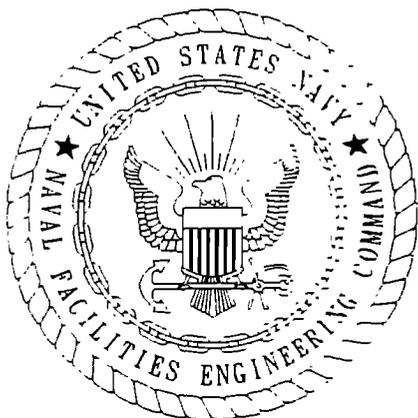
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**Prepared for:**

**Department of the Navy, Southern Division  
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**October 1997**



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: October 17, 1997

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(DFAR 252.227-7036)

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## GLOSSARY

ABB-ES	ABB Environmental Services, Inc
BEI	Bechtel Environmental Incorporated
bls	below land surface
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 G541 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 G541 was an underground storage tank (UST) located at Building 541, which is used to house an emergency generator for Building 540 (Figure 1). The UST, which was installed in 1979, had a 250-gallon capacity and was used to store diesel fuel for the generator (ABB-ES, 1997). A Contamination Assessment Plan for the assessment of soil and groundwater at Tank G541 was prepared by ABB-ES in November 1996 (ABB-ES, 1996).

Tank G541 was removed by Bechtel Environmental, Inc. (BEI), on May 22, 1997. Ten tons of excessively contaminated soil were removed at that time. A Closure Report was prepared for Tank G541 and submitted to the Florida Department of Environmental Protection in July of 1997 (BEI, 1997).

## 2.0 FIELD INVESTIGATION

The confirmatory sampling for Tank G541 was initiated in January 1997 (before the UST was removed) and included

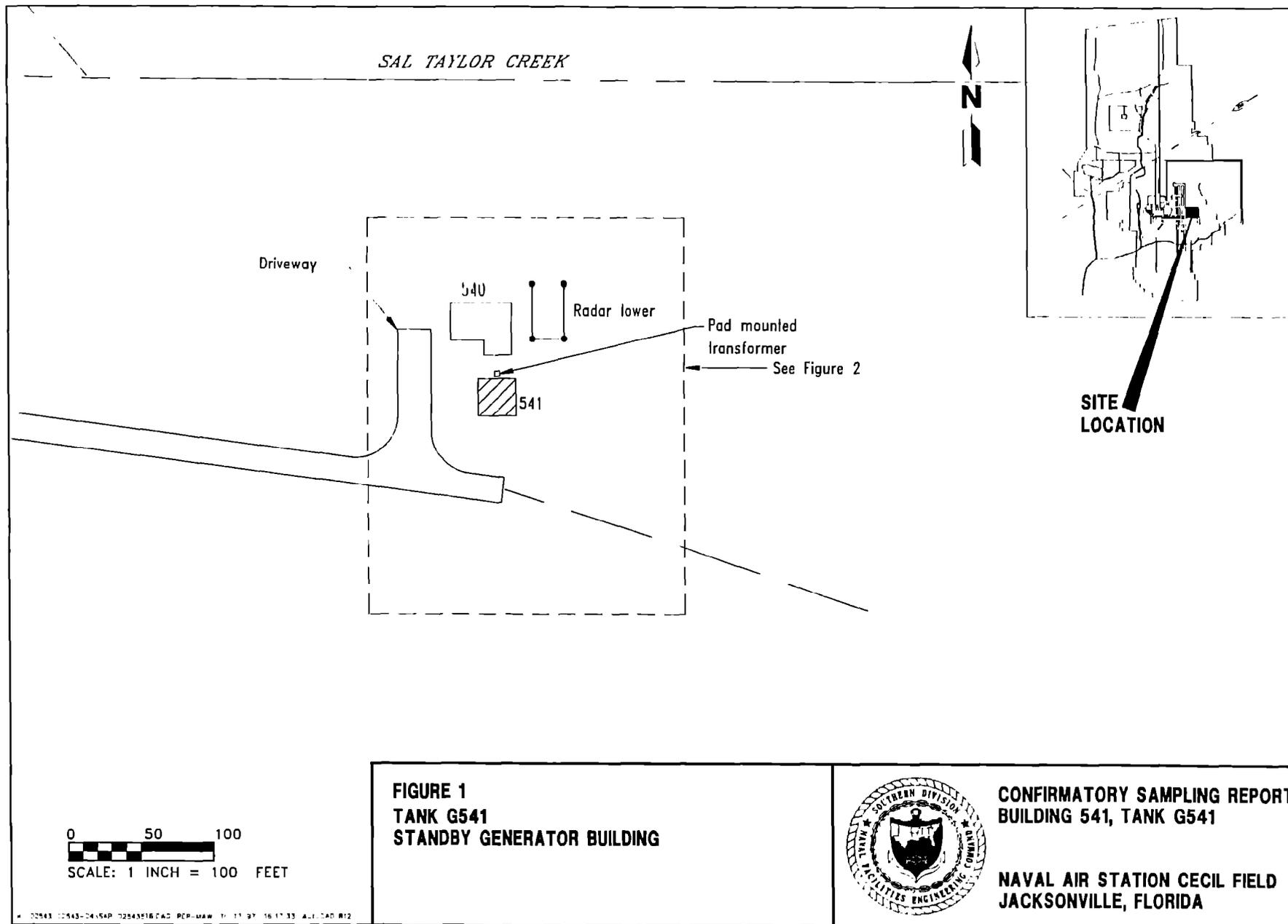
- the advancement of four soil borings to the water table,
- the installation of one shallow groundwater monitoring well, and
- collection and analysis of one groundwater sample.

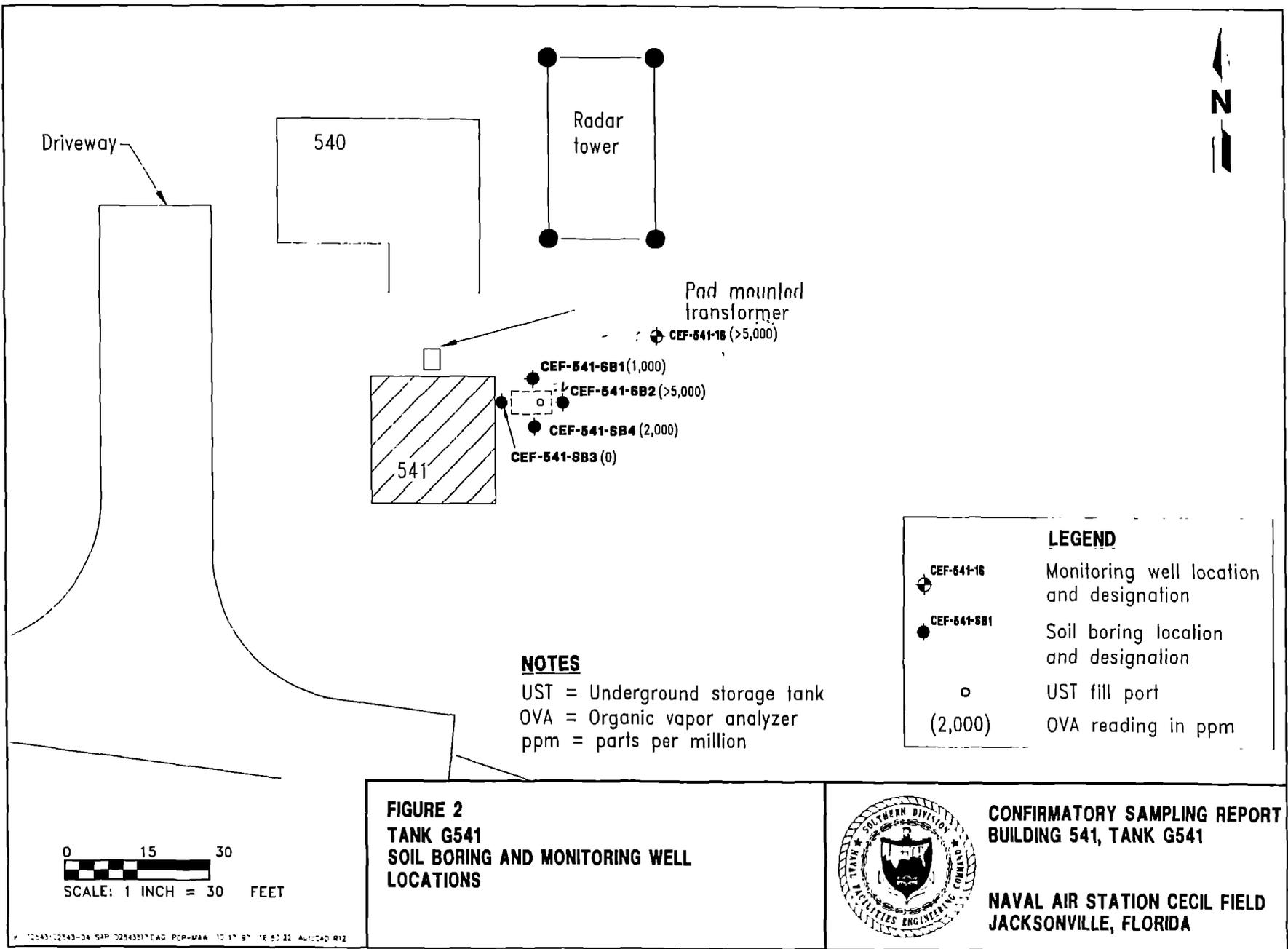
Soil samples were collected from each boring at depth intervals of 1-foot below land surface (bls) and every 2 feet thereafter to the water table. These samples were screened for hydrocarbon vapors with an organic vapor analyzer (OVA).

A monitoring well, CEF-541-1S, was installed east of the UST near the location of soil boring CEF-541-SB2 to a depth of 12 feet bls. One groundwater sample was collected from the 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 installation detail is included in Appendix A.

## 3.0 SCREENING AND ANALYTICAL RESULTS

Excessively contaminated soil (greater than 50 parts per million [ppm] on an OVA) was detected in three of the four soil borings and during the installation of the monitoring well. The highest OVA reading (>5,000 ppm) was detected at 1 and 3 feet bls during the advancement of monitoring well CEF-541-1S and at 3 feet bls in soil boring CEF-541-SB2. The soil OVA data are summarized in Table 1 and are presented on Figure 2.





Driveway

540

Radar tower

Pad mounted transformer

CEF-541-16 (>5,000)

CEF-541-SB1 (1,000)

CEF-541-SB2 (>5,000)

CEF-541-SB4 (2,000)

CEF-541-SB3 (0)

541

**LEGEND**

CEF-541-16

Monitoring well location and designation

CEF-541-SB1

Soil boring location and designation

○

UST fill port

(2,000)

OVA reading in ppm

**NOTES**

UST = Underground storage tank  
 OVA = Organic vapor analyzer  
 ppm = parts per million

0 15 30  
 SCALE: 1 INCH = 30 FEET

**FIGURE 2  
 TANK G541  
 SOIL BORING AND MONITORING WELL  
 LOCATIONS**



**CONFIRMATORY SAMPLING REPORT  
 BUILDING 541, TANK G541**  
  
**NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA**

**Table 1  
Soil Screening Results**

Confirmatory Sampling Report  
Building 541, Tank G541  
Naval Air Station Cecil Field  
Jacksonville, Florida

Location	OVA Concentration (ppm)			
	Depth (feet bls)	Unfiltered	Filtered	Actual
CEF-541-SB1	1	140	0	140
	3	1,000	0	1,000
	4.5 (wet)	2,000	0	2,000
CEF-541-SB2	1	230	0	230
	3	>5,000	0	>5,000
	4.5 (wet)	>5,000	0	>5,000
CEF-541-SB3	1	0	-	0
	3 (wet)	0	-	0
CEF-541-SB4	1	38	-	38
	3	2,000	-	2,000
	4 (wet)	>5,000	-	>5,000
CEF-541-1S	1	>5,000	-	>5,000
	3	>5,000	-	>5,000
	5 (wet)	>5,000	-	>5,000
	11 (wet)	1,100	-	1,100

Notes: All soil samples were collected on January 21, 1997.  
Monitoring well CEF-541-1S was installed on February 26, 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.  
> = greater than.  
- = filtered readings were not collected.

Groundwater contamination was not detected at concentrations exceeding requirements 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 G541 site did not provide an adequate assessment of the horizontal and vertical extent of excessively contaminated soil. The subsequent removal of Tank G541 did not remove all the excessively contaminated soil. No contaminants were detected above the regulatory standards specified in Chapter 62-770, FAC, in the groundwater sample collected from monitoring well CEF-541-1S. Therefore, it is recommended that additional confirmatory sampling be conducted to assess the extent of excessively contaminated soil at the Tank G541 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**

TITLE: NAS Cecil Field		LOG of WELL: 1EF-541-15	BORING NO. 1EF-541-15
CLIENT: SOUTHDIVNAVFAACENCOM			PROJECT NO: 8542-03
CONTRACTOR: GEOTEK		DATE STARTED: 1-20-97	COMPLTD: 2-20-97
METHOD: 6.25" HSA	CASE SIZE: 2"	SCREEN INT.: 2-12	PROTECTION LEVEL: 0
TOC ELEV.: FEET.	MONITOR INST.: F10	TOT DPTH: 14 FEET.	DPTH TO $\nabla$ : 10.4 FEET
LOGGED BY: J Koch		WELL DEVELOPMENT DATE: 1-24-97	SITE: Bldg 303 F41

DEPTH F.T.	LABORATORY SAMPLE ID.	RECO. PER HEADSPACE % (ft)	SOIL/ROCK DESCRIPTION AND COMMENTS	UNIFORMITY COEFFICIENT	SOIL CLASS	BLOWS/6-IN	WELL LOG
5.000			SILTY SAND. Light grey to medium grey, fine grain, moderate petroleum odor.		SM	posthole	
5.000			SILTY SAND. Light grey to medium grey, fine grain, moderate petroleum odor.			posthole	
5.000		25%	SILTY SAND. Light grey to medium grey, fine grain, moderate petroleum odor.			1,1,10	
15.000		100%	SILTY SAND. Light brown to dark grey, fine grain, no apparent petroleum odor.			2,4,8,12	

**APPENDIX B**  
**GROUNDWATER ANALYTICAL DATA**

NAS CECIL FIL. -- TANK 541  
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9397

Lab Sample Number:	B7C2201010	B7C2201010	
Site	BRACGREY	BRACGREY	
Locator	CEF5411S	CEF5411S	
Collect Date:	20-MAR-97	20-MAR-97	
	VALUE	QUAL UNITS	DL
	VALUE	QUAL UNITS	DL

BRACGREY ANALYTICAL 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	1 U	ug/l	1	-
1,3-Dichlorobenzene	1 U	ug/l	1	-
1,4-Dichlorobenzene	1.1	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	71.5	ug/l	25	-
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	-

MAS CECIL FIELD -- TANK 541  
 UST GREY ANALYTICAL PARAMETERS -- REPORT NO. 9397

Lab Sample Number:	87C2201010			87C2201010		
Site	BRACGREY			BRACGREY		
Locator	CEF5411S			CEF5411S		
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	-				34.8	ug/l
						10

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