

N60200.AR.001782  
NAS CECIL FIELD, FL  
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CONFIRMATORY SAMPLING REPORT FOR BUILDING 82 TANK G82 BASE REALIGNMENT  
AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK  
GREY SITES NAS CECIL FIELD FL  
4/1/1999  
HARDING LAWSON ASSOCIATES

**CONFIRMATORY SAMPLING REPORT**  
**BUILDING 82, TANK G82**  
**BASE REALIGNMENT AND CLOSURE**  
**UNDERGROUND STORAGE TANK AND**  
**ABOVEGROUND STORAGE TANK GREY SITES**  
**NAVAL AIR STATION CECIL FIELD**  
**JACKSONVILLE, FLORIDA**

SAR  
SAR 505/21/7/99

Mike Goff

**Unit Identification Code: N60200**  
**Contract No.: N62467-89-D-0317/090**

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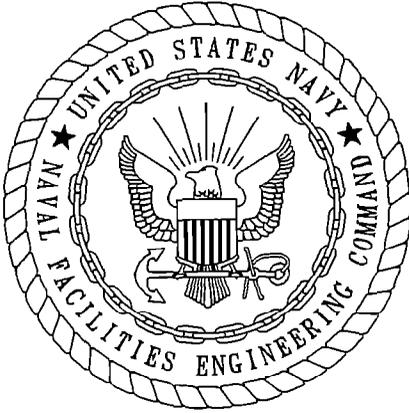
**Prepared for:**

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**April 1999**

**Revision 0.0**



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 7, 1999

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(DFAR 252.227-7036)

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
BEI	Bechtel Environmental, Inc.
FDEP	Florida Department of Environmental Protection
$\mu\text{g}/\ell$	micrograms per liter
NAS	Naval Air Station
TRPH	total recoverable petroleum hydrocarbons
UST	underground storage tank

## 1.0 INTRODUCTION

Harding Lawson Associates, under contract to the Southern Division, Naval Facilities Engineering Command, has completed confirmatory sampling for Tank G82 at Naval Air Station (NAS) Cecil Field in Jacksonville, Florida. This report summarizes the related field operations, results, conclusions, and recommendations.

Tank G82 was an underground storage tank (UST) located near the northeast corner of Building 82, which is the air traffic control tower (Figure 1). The UST, which was installed in 1987, had a 1,000-gallon capacity and was used to store diesel fuel for an emergency generator at Building 82. Tank G82 was removed by Bechtel Environmental, Inc. (BEI), on June 6, 1997. A closure assessment report was prepared for Tank G82 and submitted to the Florida Department of Environmental Protection (FDEP) (BEI, 1998). However, no monitoring well was installed during the closure assessment. ABB Environmental Services installed and sampled monitoring well CEF-G82-1S in January 1998. Groundwater analytical results indicated that the concentration of 1-Methylnaphthalene (29 micrograms per liter [ $\mu\text{g}/\ell$ ]) and 2-Methylnaphthalene (27  $\mu\text{g}/\ell$ ) exceeded the FDEP cleanup target levels. Therefore, to evaluate the current condition of groundwater at the Tank G82 site, the NAS Cecil Field petroleum subcommittee requested the monitoring well at the Tank G82 site be resampled.

## 2.0 FIELD INVESTIGATION

The confirmatory sampling for Tank G82 was initiated in January, 1999 and included

- the collection and analysis of one groundwater sample.

A groundwater sample was collected from monitoring well CEF-G82-1S and analyzed for the Kerosene Analytical Group parameters. A general site plan indicating the location of the monitoring well is presented on Figure 2.

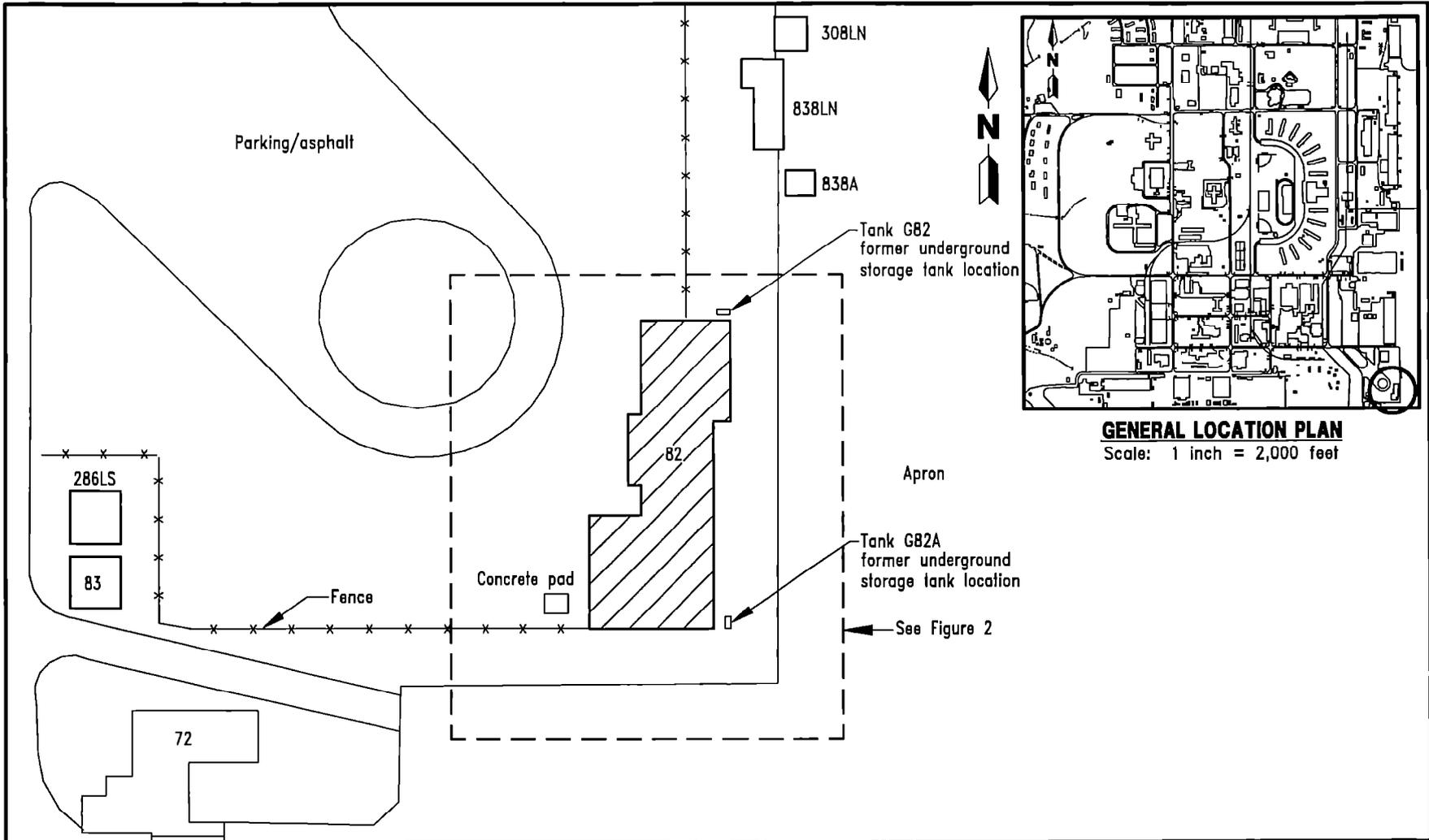
## 3.0 SCREENING AND ANALYTICAL RESULTS

The results of the resampling of monitoring well CEF-G82-1S indicate that 1-Methylnaphthalene is still present at a concentration (24  $\mu\text{g}/\ell$ ) above the cleanup target level. A summary of the groundwater analytical results is presented in Table 1. The complete analytical data set is presented in Appendix A.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Data obtained during the confirmatory sampling of Tank G82 indicated the presence of groundwater contamination above the cleanup target level. It is recommended that additional ~~investigation~~ take place at the Tank G82 site.

Site Assessment

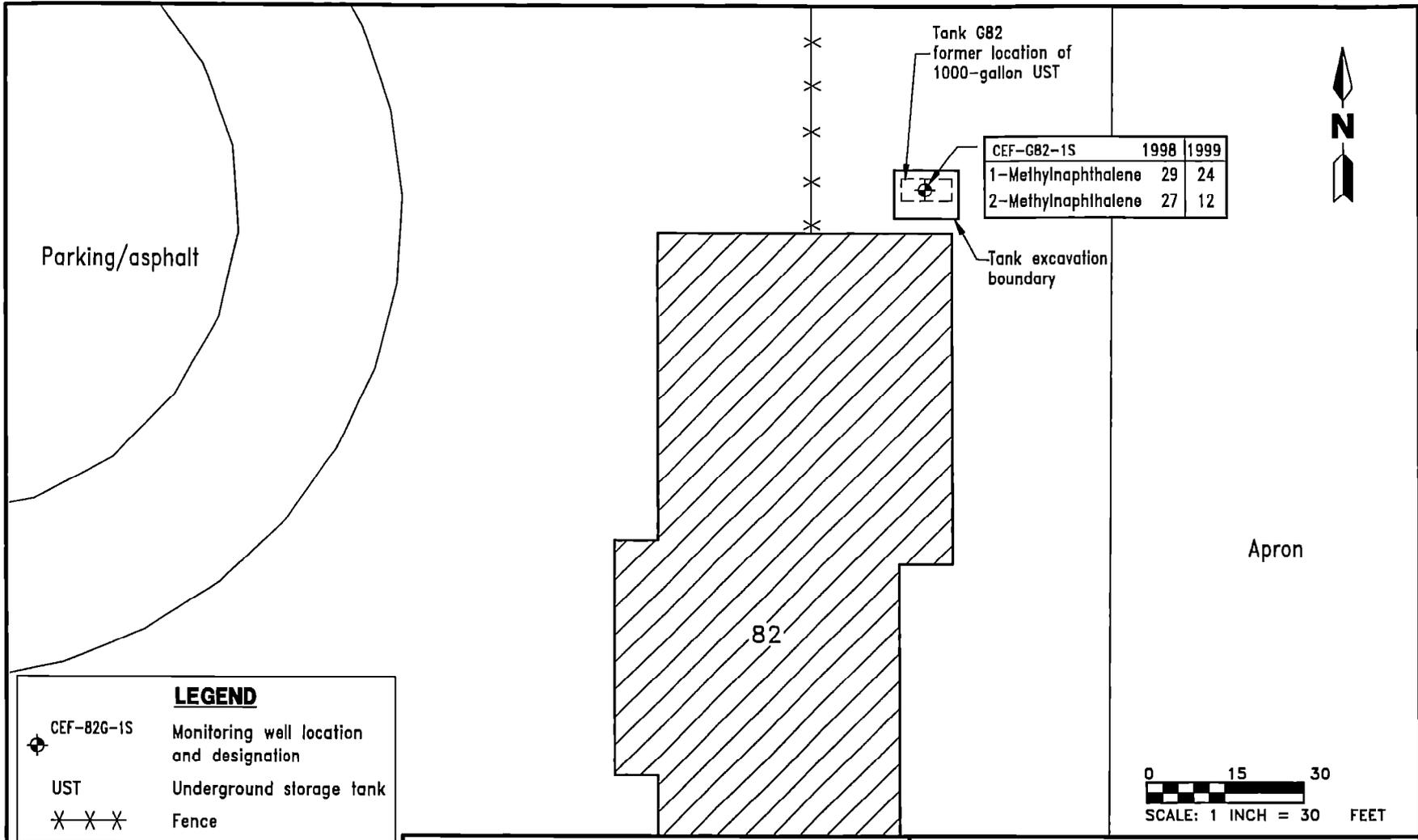


**FIGURE 1**  
**TANK G82**  
**AIR TRAFFIC CONTROL TOWER**



**CONFIRMATORY SAMPLING REPORT**  
**BUILDING 82, TANK G82**

**NAVAL AIR STATION CECIL FIELD**  
**JACKSONVILLE, FLORIDA**



**FIGURE 2  
TANK G82  
SOIL BORING AND MONITORING WELL  
LOCATIONS**



**CONFIRMATORY SAMPLING REPORT  
BUILDING 82, TANK G82**

**NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA**

**Table 1**  
**Summary of Groundwater Analytical Results**

Confirmatory Sampling Report  
Building 82, Tank G82  
Naval Air Station Cecil Field  
Jacksonville, Florida

Compound	CEF-G82-1S		Groundwater Cleanup Target Levels <sup>1</sup>
	January 1998	January 1999	
<b><u>Volatile Organic Aromatics (USEPA Method 601/602) (<math>\mu\text{g}/\ell</math>)</u></b>			
Ethylbenzene	5.5	2	30
Xylenes	9.9	8	20
<b><u>Polynuclear Aromatic Hydrocarbons (USEPA Method 625) (<math>\mu\text{g}/\ell</math>)</u></b>			
1-Methylnaphthalene	<b>29</b>	<b>24</b>	NA
2-Methylnaphthalene	<b>27</b>	12	NA
Naphthalene	8.4	15	20
Pyrene	0.26	ND	210
Anthracene	ND	0.43	2,100
Fluorene	ND	3.6	280
Phenanthrene	ND	2.3	210
<b><u>Total Recoverable Petroleum Hydrocarbons (TRPH) (FL-PRO) (mg/l)</u></b>			
	1.5	ND	5
<sup>1</sup> Chapter 62-770, Florida Administrative Code (FAC).			
Notes: Bold indicates concentration exceeds cleanup target level.			
USEPA = U.S. Environmental Protection Agency.			
$\mu\text{g}/\ell$ = micrograms per liter.			
NA = not applicable, Chapter 62-785 value is 20 $\mu\text{g}/\ell$ .			
FL-PRO = Florida Petroleum Residual Organics.			
$\text{mg}/\ell$ = milligrams per liter.			

REFERENCE

Bechtel Environmental, Inc. 1998. *Closure Report for the Petroleum Storage Tanks and Pipe Removal, Naval Air Station, Cecil Field, Florida*. Prepared for Southern Division, Naval Facilities Engineering Command, North Charleston, South Carolina.

**APPENDIX A**  
**ANALYTICAL DATA**

NAS CECIL FIELD -- TANK GB2 -- JANUARY 1998 SAMPLING  
GROUNDWATER -- ANALYTICAL DATA -- REPORT REQUEST NO. 10880

Lab Sample Number: A8A3101030  
Site: UST GREY  
Locator: CEF-82G-1S  
Collect Date: 28-JAN-98

VALUE QUAL UNITS DL

METHOD 601

Dichlorodifluoromethane	1 U	ug/l	1
Chloromethane	1 U	ug/l	1
Vinyl chloride	1 U	ug/l	1
Bromomethane	1 U	ug/l	1
Chloroethane	1 U	ug/l	1
Trichlorofluoromethane	1 U	ug/l	1
1,1-Dichloroethene	1 U	ug/l	1
Methylene chloride	5 U	ug/l	5
trans-1,2-Dichloroethene	1 U	ug/l	1
1,1-Dichloroethane	1 U	ug/l	1
Chloroform	1 U	ug/l	1
1,1,1-Trichloroethane	1 U	ug/l	1
Carbon tetrachloride	1 U	ug/l	1
1,2-Dichloroethane	1 U	ug/l	1
Trichloroethene	1 U	ug/l	1
1,2-Dichloropropane	1 U	ug/l	1
Bromodichloromethane	1 U	ug/l	1
cis-1,3-Dichloropropene	1 U	ug/l	1
trans-1,3-Dichloropropene	1 U	ug/l	1
1,1,2-Trichloroethane	1 U	ug/l	1
Tetrachloroethene	1 U	ug/l	1
Dibromochloromethane	1 U	ug/l	1
Chlorobenzene	1 U	ug/l	1
Bromoform	1 U	ug/l	1
1,1,2,2-Tetrachloroethane	1 U	ug/l	1
1,3-Dichlorobenzene	1 U	ug/l	1
1,4-Dichlorobenzene	1 U	ug/l	1
1,2-Dichlorobenzene	1 U	ug/l	1

METHOD 602

Benzene	1 U	ug/l	1
Toluene	1 U	ug/l	1
Chlorobenzene	1 U	ug/l	1
Ethylbenzene	5.5	ug/l	1
Xylenes (total)	9.9	ug/l	1
1,3-Dichlorobenzene	1 U	ug/l	1
1,4-Dichlorobenzene	1 U	ug/l	1
1,2-Dichlorobenzene	1 U	ug/l	1

FLA PRO

TPH C8-C40	1.5	mg/l	.5
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METHOD 8310

Naphthalene	8.4	ug/l	1
Acenaphthylene	1 U	ug/l	1
1-Methylnaphthalene	29	ug/l	1
2-Methylnaphthalene	27	ug/l	1
Acenaphthene	1 U	ug/l	1
Fluorene	1 U	ug/l	1
Phenanthrene	1 U	ug/l	1

NAS CECIL FIELD -- TANK G82 -- JANUARY 1998 SAMPLING  
GROUNDWATER -- ANALYTICAL DATA -- REPORT REQUEST NO. 10880

Lab Sample Number: ABA3101030  
Site: UST GREY  
Locator: CEF-82G-1S  
Collect Date: 28-JAN-98

VALUE QUAL UNITS DL

Anthracene	.1	U	ug/l	.1
Fluoranthene	.1	U	ug/l	.1
Pyrene	.26		ug/l	.1
Benzo (a) anthracene	.1	U	ug/l	.1
Benzo (b) fluoranthene	.1	U	ug/l	.1
Benzo (k) fluoranthene	.05	U	ug/l	.05
Chrysene	.1	U	ug/l	.1
Benzo (a) pyrene	.1	U	ug/l	.1
Dibenzo (a,h) anthracene	.1	U	ug/l	.1
Benzo (g,h,i) perylene	.1	U	ug/l	.1
Indeno (1,2,3-cd) pyrene	.1	U	ug/l	.1

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

NAS CECIL FIELD -- TANK G82 -- JANUARY 1999 SAMPLING  
GROUNDWATER -- ANALYTICAL DATA -- REPORT REQUEST NO. 10879

Lab Sample Number: JR50721  
Site: UST GREY  
Locator: CEF-G82-1S  
Collect Date: 21-JAN-99

VALUE QUAL UNITS DL

601/602

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-Dichloroethane	1 U	ug/l	1
1,2-Dichloropropane	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
Benzene	1 U	ug/l	1
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	2 U	ug/l	2
Chloroform	1 U	ug/l	1
Dibromochloromethane	1 U	ug/l	1
Dichlorodifluoromethane	1 U	ug/l	1
Ethylbenzene	2	ug/l	1
Methylene chloride	2 U	ug/l	2
Tetrachloroethene	1 U	ug/l	1
Toluene	1 U	ug/l	1
Trichloroethene	1 U	ug/l	1
Trichlorofluoromethane	2 U	ug/l	2
Vinyl chloride	1 U	ug/l	1
m,p-Xylene	8	ug/l	1
o-Xylene	1 U	ug/l	1
cis-1,2-Dichloroethene	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
Methyl tert-butyl ether	2 U	ug/l	2
FLA PRO			
TPH C8-C40	.2 U	mg/l	.2
METHOD 8310			
Naphthalene	15	ug/l	.5
Acenaphthylene	1 U	ug/l	1
1-Methylnaphthalene	24	ug/l	.5
2-Methylnaphthalene	12	ug/l	.5
Acenaphthene	.5 U	ug/l	.5
Fluorene	3.6	ug/l	.1
Phenanthrene	2.3	ug/l	.05
Anthracene	.43	ug/l	.05
Fluoranthene	.1 U	ug/l	.1
Pyrene	.05 U	ug/l	.05

NAS CECIL FIELD -- TANK G82 -- JANUARY 1999 SAMPLING  
GROUNDWATER -- ANALYTICAL DATA -- REPORT REQUEST NO. 10879

Lab Sample Number: JR50721  
Site: UST GREY  
Locator: CEF-G82-1S  
Collect Date: 21-JAN-99

VALUE QUAL UNITS DL

Benzo (a) anthracene	.05 U	ug/l	.05
Benzo (b) fluoranthene	.1 U	ug/l	.1
Benzo (k) fluoranthene	.05 U	ug/l	.05
Chrysene	.05 U	ug/l	.05
Benzo (a) pyrene	.05 U	ug/l	.05
Dibenzo (a,h) anthracene	.1 U	ug/l	.1
Benzo (g,h,i) perylene	.1 U	ug/l	.1
Indeno (1,2,3-cd) pyrene	.05 U	ug/l	.05

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