N60200.AR.001242
NAS CECIL FIELD, FL
5090.3a

CONFIRMATORY SAMPLING REPORT FOR QUARTERS J TANK QUARTERS J BASE REALIGNMENT AND CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK GREY SITES NAS CECIL FIELD FL

3/1/1998

ABB ENVIRONMENTAL SERVICES INC

CONFIRMATORY SAMPLING REPORT

QUARTERS J, TANK QUARTERS J

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-0317/139

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

March 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-0317/139 are complete and accurate and comply with all requirements of this contract.

DATE: March 5, 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)

CF-QtrJ.CSR
SAS.03.98

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Naval Air Station Cecil Field
Jacksonville, Florida

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Naval Air Station Cecil Field
Jacksonville, Florida

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1	Tank Quarters J, Base Family Housing	2
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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
FAC	Florida Administrative Code
ISI	Innovative Services International, Inc.
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 the Quarters J tank at Naval Air Station Cecil Field in Jacksonville, Florida. This report summarizes the related field operations, results, conclusions, and recommendations of the confirmatory sampling.

The Quarters J tank was an underground storage tank (UST) located on the east side of Quarters J, a house for junior officers (Figure 1). The UST, which was installed in 1955, had a 350-gallon capacity and was used to store fuel oil for onsite heating (ABB-ES, 1997). The Quarters J tank was removed by Innovative Services International, Inc. (ISI), on May 30, 1995. A closure assessment report (Appendix A) was prepared for the Quarters J tank and submitted to the Florida Department of Environmental Protection (ISI, 1995). The closure assessment report indicated that groundwater analytical results (toluene at 180 micrograms per liter) were above State target levels. To assess the current groundwater quality at Quarters J, a contamination assessment plan was prepared by ABB-ES in November 1996 (ABB-ES, 1996).

2.0 FIELD INVESTIGATION

The confirmatory sampling at Quarters J was initiated in July 1997 and included

- the installation of one shallow groundwater monitoring well, and
- collection and analysis of one groundwater sample.

One monitoring well, CEF-J-1S, was installed at the former UST location to a depth of 15 feet below land surface. One groundwater sample was collected on August 7, 1997, and analyzed for the Kerosene Analytical Group parameters. A general site plan indicating the location of monitoring well CEF-J-1S is presented on Figure 2. The monitoring well installation detail is included in Appendix B.

3.0 SCREENING AND ANALYTICAL RESULTS

No contaminants were detected in the groundwater sample collected from monitoring well CEF-J-1S. Analytical results from the closure assessment and the confirmatory sampling event are summarized in Table 2. The complete analytical data set is presented in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

No contaminants were detected in the groundwater sample collected from monitoring well CEF-J-1S. Therefore, no further action is recommended for the Quarters J tank site.

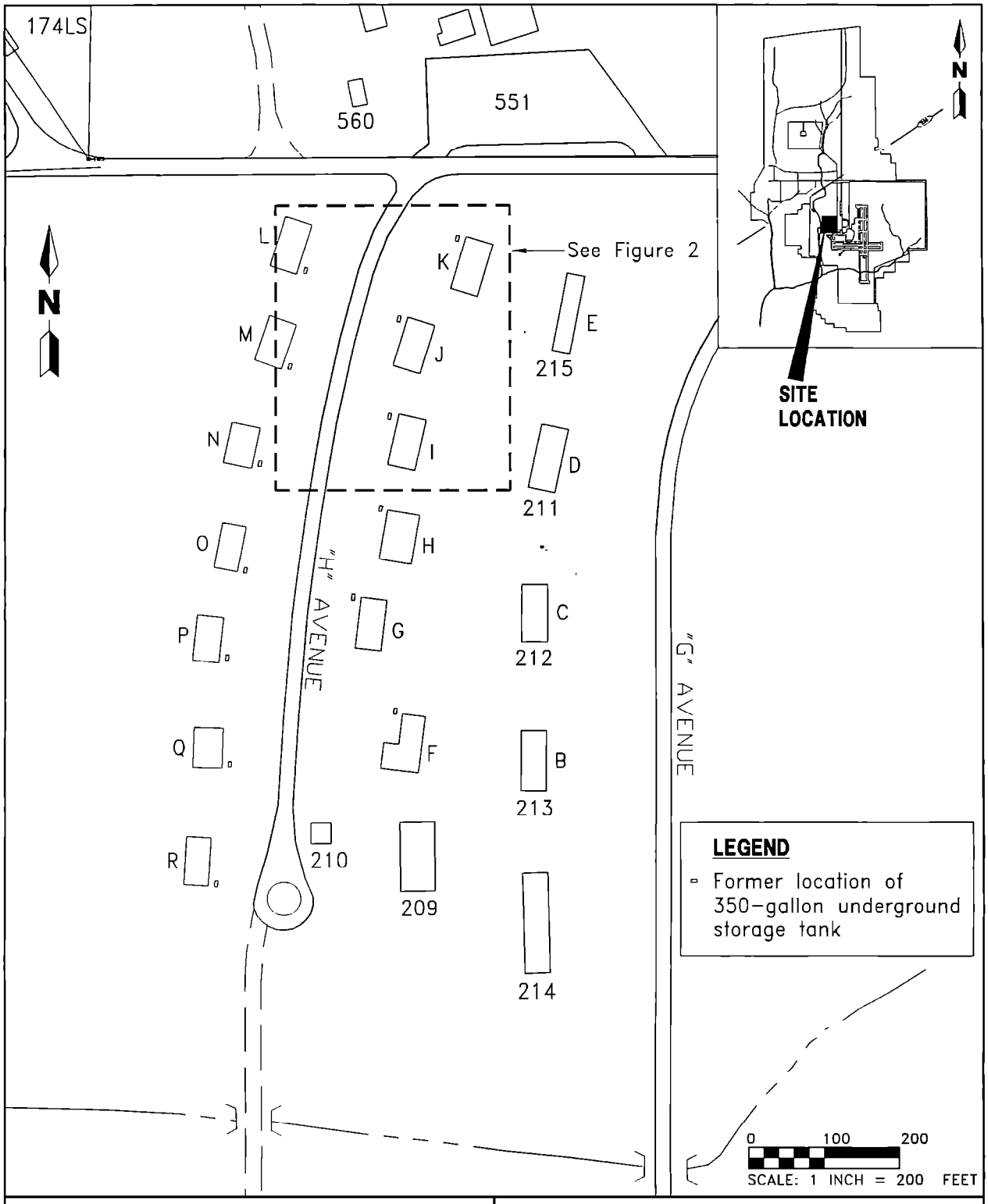

FIGURE 1
TANK QUARTERS J
BASE FAMILY HOUSING

CONFIRMATORY SAMPLING REPORT
QUARTERS J, TANK QUARTERS J

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

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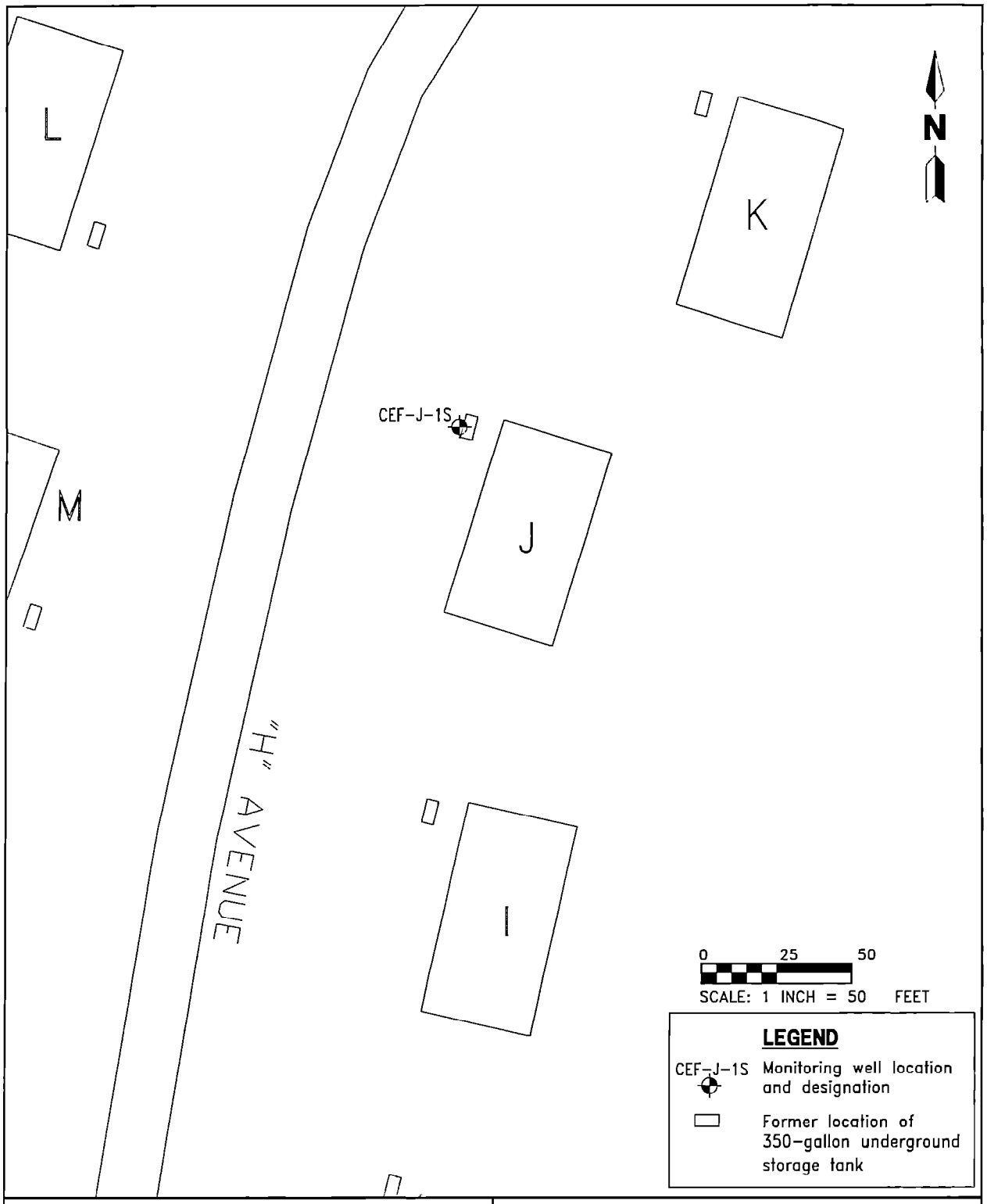


FIGURE 2
MONITORING WELL LOCATION

K:\02549\02549-03\CAR\02549551 DWG, NP 01/08/98 13:35 07, AutoCAD R12

CONFIRMATORY SAMPLING REPORT
QUARTERS J, TANK QUARTERS J

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CF-QtrJ.CSR
SAS.01.98

Table 1
Summary of Groundwater Analytical Detections

Confirmatory Sampling Report
Quarters J, Tank Quarters J
Naval Air Station Cecil Field
Jacksonville, Florida

Compound	Monitoring Wells		Groundwater Cleanup Target Levels[1]
	ISI Temporary Well	CEF-J-1S	
Volatile Organic Aromatics (USEPA Method 601/602) (μg/ℓ)			
Toluene	180	ND	40
Polynuclear Aromatic Hydrocarbons (USEPA Method 610) (μg/ℓ)			
No compounds detected.			
Total Recoverable Petroleum Hydrocarbons (TRPH) (FL-PRO) (mg/ℓ)			
TRPH	0.553	ND	5
Lead (USEPA Method 239.2) (μg/ℓ)			
Lead	153	ND	15

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

Notes: Groundwater samples were collected by ISI on June 26, 1995, and by ABB Environmental Services, Inc., on August 7, 1997.
TRPH was analyzed by USEPA Method 418.1 during the 1995 sampling event.

ISI = Innovative Services International, Inc.
USEPA = U.S. Environmental Protection Agency.
μg/ℓ = micrograms per liter.
ND = compound not detected.
FL-PRO = Florida-Petroleum Residual Organic.
mg/ℓ = milligrams per liter.

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).

Innovative Services International, Inc. 1995. *Closure Report for Underground Storage Tank Removals, Naval Air Station Cecil Field, Jacksonville, Florida*.

APPENDIX A

CLOSURE ASSESSMENT REPORT

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form # 17-761.600(6)
Form Title: Closure Assessment Form
Effective Date: December 10, 1990
DER Application No. _____
(Assigned by DER)

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 storag system closure assesment was performed in accordance with Rule 17-761 or 17-762, Florida Administrative Code. Eligible Early Detection Incen tive (EDI) and Reimbursement Program sites do not have to perform a closure assessment.

Please Print or Type
Complete All Applicable Blanks

1. Date: July 10, 1995
2. DER Facility ID Number: N/A 3. County: Duval
4. Facility Name: Naval Air Station - Cecil Field Officer Housing Unit "J"
5. Facility Owner: U.S. Navy
6. Facility Address: Naval Air Station - Cecil Field
7. Mailing Address: Naval Air Station - Cecil Field
8. Telephone Number: (_____) _____ 9. Facility Operator: U.S. Navy
10. Are the Storage Tank(s): **(Circle one or both)** A. Aboveground or XB. Underground
11. Type of Product(s) Stored: #2 Heating Oil
12. Were the Tank(s): **(Circle one)** A. Replaced XB. Removed C. Closed in Place D. Upgraded (aboveground tanks only
13. Number of Tanks Closed: One (1) 14. Age of Tanks: Unknown

Facility Assessment Information

Yes	No	Not Applicable	
☐	☒		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: _____ Where: _____
☒	☐		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 level (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 ¼ of a mile radius of the facility?
☐	☒		11. Is there a surface water body within ¼ mile radius of the site? If yes, indicate distance: _____

DER Form 17-761.900(1)
Form Title: Closure Assessment Form
Effective Date: December 10, 1990
DER Application No. _____
(Filled in by DER)

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	Date
Signature of Person Performing Assessment	7/12/95 Date
Professional Geologist Title of Person Performing Assessment	

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

State ground water target levels are as follows:

1. For gasoline (EPA Method 602):
   a. Benzene — 1 ug/l
   b. Total VOA — 50 ug/l
      - Benzene
      - Toluene
      - Total Xylenes
      - Ethylbenzene
   c. Methyl Test-Butyl Ether (MTBE) — 50 ug/l

2. For kerosene/diesel (EPA Method 610):
   a. Polynuclear Aromatic Hydrocarbons (PAHS) (Best achievable detection limit, 10 ug/l maximum)

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form # 17-761.900(5)
Form Title: Underground Storage Tank Installation & Removal Form for Certified Contractors
Effective Date: December 10 1990
DER Application No. _____ (Filled in by DER)

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 17-761.200, 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 Department Reference Standards.

General Facility Information

1. DER Facility Identification No.: N/A
2. Facility Name: Naval Air Station - Cecil Field Enlist Telephone: (____) _____
3. Street Address (physical location): Naval Air Station - Cecil Field Housing Unit "J"
4. Owner Name: U.S. Navy Telephone: (____) _____
5. Owner Address: Naval Air Station - Cecil Field
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: 5/30/95 9. Date Work Completed: 6/2/95

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 overfill 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

Closure assessment performed in accordance with Section 17-761.800, F.A.C. ☒

Underground tank removed and disposed of as specified in API 1604 in acordance with Section 17-761.800, F.A.C. ☒

Northwest District 160 Governmental Center Pensacola, Florida 32501-5794 | Northeast District 7825 Baymeadows Way, Suite B-200 Jacksonville, Florida 32256 | Central District 3319 Maguire Blvd, Suite 232 Orlando, Florida 32803 | Southwest District 4520 Oak Fair Blvd | South District 2269 Bay St | Southeast District 1801 S. Congress Ave, Suite A

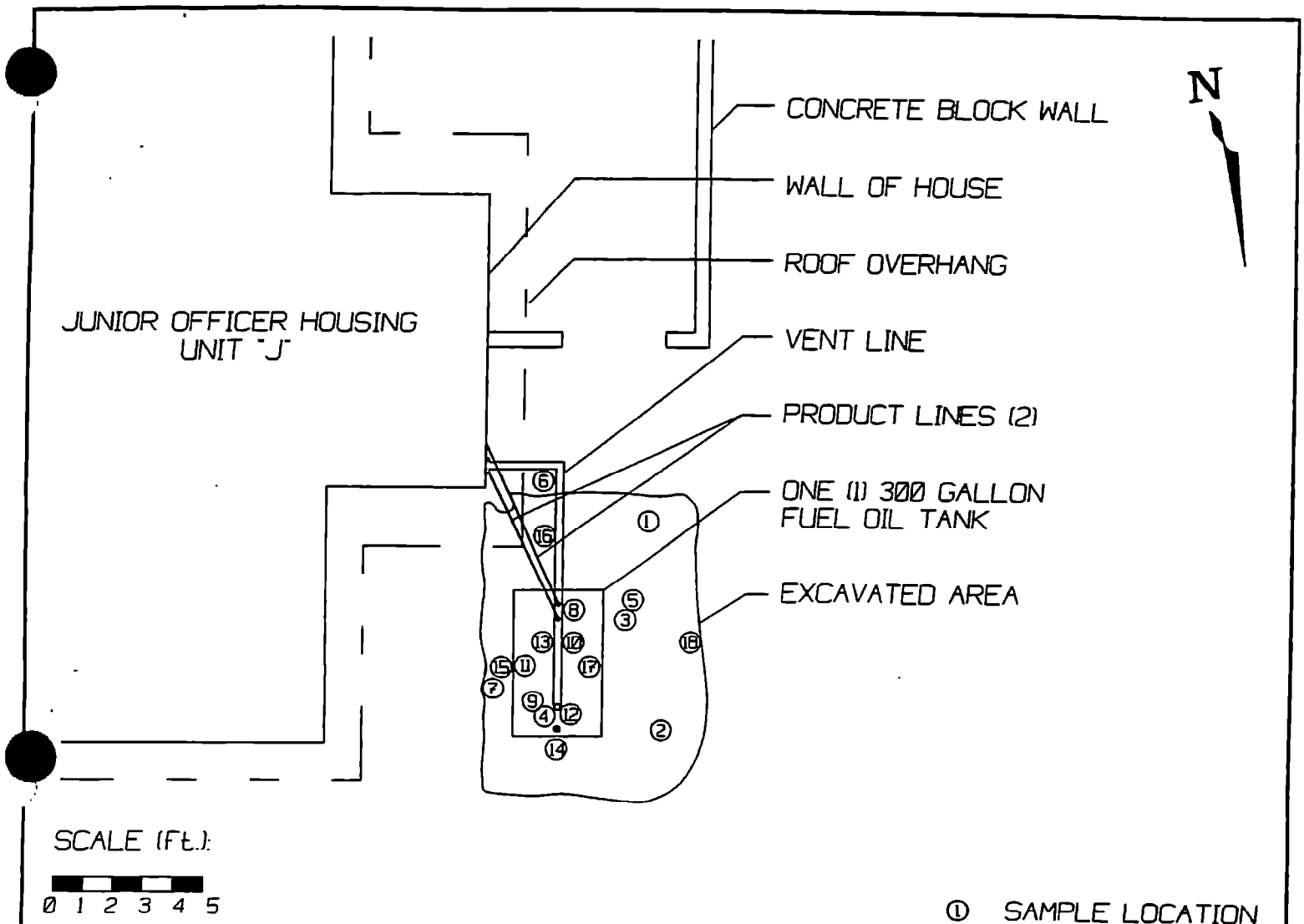
DER Form 17-761.900(5)
Form Title: Underground Storage Tank Installation & Removal Form for Certified Contractors
Effective Date: December 10, 1990
DER Application No. _____ (Filled in by DER)

Certification

I hereby certify and attest that I am familiar with the facility that is registered with the Florida Department of Environmental Regulation; that to 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 publications and standards of the National Fire Protection Association (NFPA), the American Petroleum Institute (API), the National Association of Corrosion Engineers (NACE), American Society for Testing and Materials (ASTM); Petroleum Equipment Institute (PEI); Steel Tank Institute (STI); Underwriters Laboratory (UL); and the tank and integral piping manufacturers' specifications; and that the operations on the checklist were performed accordingly.

Robert M. Boardman (Type or Print) Certified Pollutant Tank Contractor Name Pollutant Storage System Specialty Contractor License Number (PSSSC)	PCC 054952 PSSSC Number
Certified Tank Contractor Signature	7-12-95 Date
VERNON McKINNON (Type or Print) Field Supervisor Name	7-12-95 Date
Vernon McKinnon Field Supervisor Signature	7-12-95 Date

The owner or operator of the facility must register the tanks with the Department at least 10 days before the 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 at the top of page one.



SAMPLE #	HC	DEPTH	TIME (Collected/Read)	SAMPLE #	HC	DEPTH	TIME (Collected/Read)
1	1.1	1.5'	9:26/9:35	10	11.1	2.5'	10:19/10:22
2	1.4	4'	9:27/9:35	11	11.1	4'	10:37/10:40
3	0.7	1.5'	9:30/9:35	12	0.7	4'	10:37/10:40
4	2.6	0.5'	9:31/9:36	13	49.2	6.5'	10:56/11:03
5	0.4	1.5'	9:40/9:45	14	2.9	5.5'	10:56/11:05
6	10.5	1'	9:40/9:46	15	0.0	5'	10:57/11:05
7	6.4	1'	9:57/10:02	16	3.9	5'	10:57/11:06
8	16.5	1.5'	10:12/10:16	17	19.2	5.5'	10:57/11:07
9	1.1	1.5'	10:18/10:21	18	2.3	5'	10:58/11:07

ALL SAMPLES ANALYZED WITH A THERMO ENVIRONMENTAL INSTRUMENTS MODEL 580B PHOTOIONIZATION DETECTOR.

INNOVATIVE SERVICES INTERNATIONAL, INC.

SITE PLAN

JUNIOR OFFICER HOUSING UNIT "J"

NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

GeoS inc.

GEOLOGICAL, ENVIRONMENTAL AND OCEANOGRAPHIC SCIENCES, INC.

ANALYTICAL LABORATORY & CORPORATE OFFICES (904) 786-8340
1057 NORTH ELLIS ROAD, SUITE 17 (800) 770-4367 (GEOS)
JACKSONVILLE, FLORIDA 32254-2249 FAX: (904) 786-7

ENVIRONMENTAL SPECIALTY LABORATORY (813) 626-0101
5909A BRECKENRIDGE PARKWAY FAX: (813) 626-0746
TAMPA, FLORIDA 33610-4237

ISI100014396
Attn: RON BOARDMAN

P.O. BOX 150016
NAS CECIL FIELD, FL
32215

6 Jul 1995
Report J5-06-239-01
LAB ID. 82223/E82101

Sample Description:
CECIL FIELD OFFICER HOUSING/ CECIL FIELD N.A.S.
TEMP. WELL @ JR. OFFICER UNIT "J"
GROUNDWATER

SAMPLE ID.: JO-J-6-95
COLLECTED: 06/26/95 14:34
RECEIVED: 06/26/95
COLLECTED BY: S. VOCKELL

Parameter	Result		Units	Method		Det. Limit	Extracted	Analyzed	Analyst
Job: TEMP_W TEMP. WELL ANALYSIS									
Hydrocarbons, Total IR	0.553		mg/L	418.1		0.200	06/29/95	06/29/95	AM
Lead, Total	0.153		mg/L	239.2		0.025	06/29/95	07/05/95	JC
Polynuclear Aromatics				625\8270					
Naphthalene	BDL		µg/L			10	06/29/95	06/30/95	AT
Acenaphthylene	BDL		µg/L			10	06/29/95	06/30/95	AT
1-Methylnaphthalene	BDL		µg/L			10	06/29/95	06/30/95	AT
2-Methylnaphthalene	BDL		µg/L			10	06/29/95	06/30/95	AT
Acenaphthene	BDL		µg/L			10	06/29/95	06/30/95	AT
Fluorene	BDL		µg/L			10	06/29/95	06/30/95	AT
Phenanthrene	BDL		µg/L			10	06/29/95	06/30/95	AT
Anthracene	BDL		µg/L			10	06/29/95	06/30/95	AT
Fluoranthene	BDL		µg/L			10	06/29/95	06/30/95	AT
Pyrene	BDL		µg/L			10	06/29/95	06/30/95	AT
Benzo(a)anthracene	BDL		µg/L			10	06/29/95	06/30/95	AT
Chrysene	BDL		µg/L			10	06/29/95	06/30/95	AT
Benzo(b)fluoranthene	BDL		µg/L			10	06/29/95	06/30/95	AT
Benzo(k)fluoranthene	BDL		µg/L			10	06/29/95	06/30/95	AT
Benzo(a)pyrene	BDL		µg/L			10	06/29/95	06/30/95	AT
Indeno(1,2,3-c,d)pyrene	BDL		µg/L			10	06/29/95	06/30/95	AT
Dibenzo(a,h)anthracene	BDL		µg/L			10	06/29/95	06/30/95	AT
Benzo(g,h,i)perylene	BDL		µg/L			10	06/29/95	06/30/95	AT
Surrogates									
Nitrobenzene-d5	99	Min: 35			Max: 114				
2-Fluorobiphenyl	81	Min: 43			Max: 116				
4-Terphenyl-d14	89	Min: 33			Max: 141				
Volatile Aromatics				602					
Methyl-tert-butyl ether	BDL		µg/L			5.0	06/27/95	06/27/95	MD
Benzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Toluene	180		µg/L			1.0	06/27/95	06/27/95	MD
Ethyl benzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD

ISI100014396
Attn: RON BOARDMAN

P.O. BOX 150016
NAS CECIL FIELD, FL
32215

6 Jul 1995
Report J5-06-239-01
LAB ID. 82223/E82101

Parameter	Result		Units	Method		Det. Limit	Extracted	Analyzed	Analyst
Xylene, Total	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Chlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,4-Dichlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,3-Dichlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,2-Dichlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Surrogates									
Bromobenzene	102	Min: 70			Max: 130				
Volatile Halocarbons				601					
Dichlorodifluoromethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Chloromethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Bromomethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Vinyl chloride	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Chloroethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Methylene chloride	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Trichlorofluoromethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,1-Dichloroethene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,1-Dichloroethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
total-1,2-Dichloroethene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Chloroform	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,2-Dichlorethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,1,1-Trichloroethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Carbon tetrachloride	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Bromodichloromethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,2-Dichloropropane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
trans-1,3-Dichloropropene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Trichloroethene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Dibromochloromethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,1,2-Trichloroethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
cis-1,3-Dichloropropene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
2-Chloroethylvinyl ether	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Bromoform	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,1,2,2-Tetrachloroethane	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Tetrachloroethene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
Chlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD
1,3-Dichlorobenzene	BDL		µg/L			1.0	06/27/95	06/27/95	MD

ISII00014396
Attn: RON BOARDMAN

P.O. BOX 150016
NAS CECIL FIELD, FL
32215

6 Jul 1995
Report J5-06-239-01
LAB ID. 82223/E82101

Parameter	Result	Units	Method	Det. Limit	Extracted	Analyzed	Analyst
1,2-Dichlorobenzene	BDL	µg/L		1.0	06/27/95	06/27/95	MD
1,4-Dichlorobenzene	BDL	µg/L		1.0	06/27/95	06/27/95	MD
Surrogates							
Bromobenzene	101	Min: 70	Max: 130				

Lotta L. Hamilton for
Karen Foreman, Laboratory Director
Karen Foreman

CHAIN OF CU[illegible] RECORD

Geos Inc.

☐ 1057 N. ELLIS ROAD, SUITE 17, JACKSONVILLE, FL 32254-2249 • (904) 786-8340
☐ 5909A BRECKENRIDGE PARKWAY, TAMPA, FL 33610-4237 • (813) 626-0101

[redacted]

CLIENT NAME: ISI	PROJECT NAME: Cecil Field Officer Housing
ADDRESS: P.O. Box 050016 Cecil Field Jacksonville, Fl 32216	P. O. NUMBER / PROJECT NUMBER
PHONE: 778-2904 FAX:	PROJECT LOCATION: Cecil Field
CONTACT: R. Boardman	SAMPLED BY: S. Vockell
TURN AROUND TIME or RESULTS DUE BY: ☐ STANDARD ☐ VERBAL ☒ RUSH 72 hour Turnaround ☐ FAX ☐ OTHER ☐ HARD COPY	SPECIAL INSTRUCTIONS: 72 hour Turnaround

SAMPLE ID							601/602	Pb	610	TPH				
							40 Glass	500 Plastic	1000 AG	1000 AG				
							HCL	HNO3	UN	HCL				
							3	1	1	1				
JO-J-6-95	Groundwater	J.O. Unit J	6/26	1434	GW	6	X	X	X	X				

* GW—Groundwater SW—Surface Water DW—Drinking Water WW—Wastewater SO—Solid/Soil SL—Sludge HW—Hazardous Waste A—Air

FIELD PARAMETERS / COMMENTS:

TRANS. NO.	TRANSFERS RELINQUISHED BY:	ACCEPTED BY:	DATE	TIME
1	Scott W. Vockell	K Gawrill	6/26/95	1651
2				
3				

CONTAINERS/SEALS INTAKE ☐ YES ☐ NO SHIPPED VIA

DISTRIBUTION: White—Client Copy Yellow—Lab Copy Pink—Sample Copy

APPENDIX B

MONITORING WELL INSTALLATION DETAIL

PROJECT: NAS Cecil Field BRAC UST Site		**LOG of WELL:** CEF-J-1S	**BORING NO.** CEF-J-1S
CLIENT: SOUTHDIVNAVFACENGCOM	**PROJECT NO:** 8571-03	**DATE STARTED:** 7-17-97	**COMPLETED:** 7-17-97
DRILLING SUBCONTRACTOR: Alliance		**SITE:** Quarter J (Housing)	**MONITOR INST.** FID
METHOD: 6.25" ID HSA	**WELL CASE DIAM.:** 2"	**SCREEN INT.:** 5-15 FT.	**SCREEN SLOT SIZE:** 0
TOC ELEVATION: FT. NGVD	**GROUND ELEV.:** FT. NGVD	**NORTHING:**	**EASTING:**
WELL DEVELOP. DATE: 8-7-97	**TOTAL DEPTH:** 18 FT. BLS	**DEPTH TO ∇** 7.00 FT. BLS	**LOGGED BY:** R Holloway

DEPTH FT.	SAMPLE INTERVAL	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
			0	SILTY SAND: Light gray, fine to very fine grain, subangular to subrounded.		SM	posthole
			0	SILTY SAND: As above.			posthole
5		NA	83	SILTY SAND: Dark gray, fine to very fine grain, subangular to subrounded.			post hole
10		NA	84	SILTY SAND: Light brown, fine to very fine grain, slightly clayey, some iron oxide staining.			post hole
15							
20							

WELL DATA

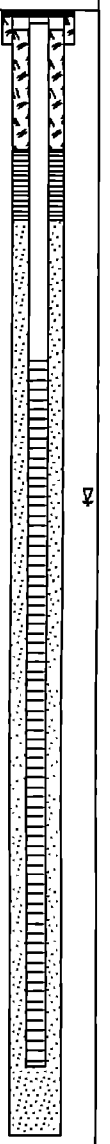


ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX C

GROUNDWATER ANALYTICAL DATA

NAS CECIL FIELD -- BRAC UST GREY BASE FAMILY HOUSING
GROUNDWATER -- ANALYTICAL DATA -- QTRS J -- REPORT NO. 9541

Lab Sample Number:	B7H0801410			
Site	BRACGREY			
Locator	CEF-J-1S			
Collect Date:	07-AUG-97			
	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	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	5	U	ug/L	5
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 -- BRAC UST GREY BASE FAMILY HOUSING
GROUNDWATER -- ANALYTICAL DATA -- QTRS J -- REPORT NO. 9541

Lab Sample Number:	B7H0801410			
Site	BRACGREY			
Locator	CEF-J-1S			
Collect Date:	07-AUG-97			
	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

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