

N60200.AR.001989
NAS CECIL FIELD, FL
5090.3a

SITE ASSESSMENT REPORT FOR BUILDING 367 TANK 367 BASE REALIGNMENT AND
CLOSURE UNDERGROUND STORAGE TANK AND ABOVEGROUND STORAGE TANK
GREY SITES REVISION 1 NAS CECIL FIELD FL
7/1/1999
HARDING LAWSON ASSOCIATES

SITE ASSESSMENT REPORT
BUILDING 367, TANK 367
BASE REALIGNMENT AND CLOSURE
UNDERGROUND STORAGE TANK AND
ABOVEGROUND STORAGE TANK GREY SITES
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Unit Identification Code: N60200

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Prepared by:

Harding Lawson Associates
2590 Executive Center Circle, East
Tallahassee, Florida 32301

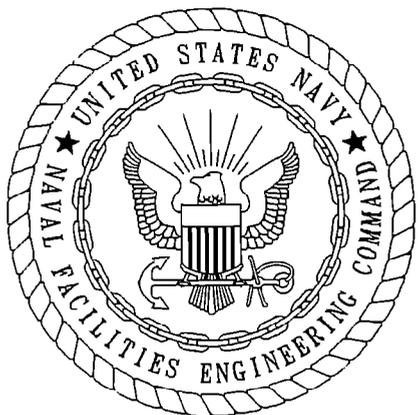
Prepared for:

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

July 1999

Revision 1.0



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: July 6, 1999

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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Naval Air Station Cecil Field
Jacksonville, Florida

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GLOSSARY

ABB-ES ABB Environmental Services, Inc.

bls below land surface

FDEP Florida Department of Environmental Protection

HLA Harding Lawson Associates

KAG Kerosene Analytical Group

OVA organic vapor analyzer

PWC Public Works Center

SA site assessment

UST underground storage tank

1.0 INTRODUCTION

Harding Lawson Associates (HLA), under contract to the Southern Division, Naval Facilities Engineering Command, has completed the site assessment (SA) for Tank 367 at Naval Air Station Cecil Field in Jacksonville, Florida. This report summarizes the related field operations, results, conclusions, and recommendations of the SA.

Tank 367 was an underground storage tank (UST) located at Building 367, a general storage shed (Figure 1). The UST had a capacity of 500 gallons and was formerly associated with a boiler furnace in Building 364 (ABB Environmental Services, Inc. [ABB-ES], 1997a). A Contamination Assessment Plan for the assessment of soil and groundwater at Tank 367 was prepared by HLA (then ABB-ES) in November 1996 (ABB-ES, 1996). Results of the contamination assessment are presented in the Confirmatory Sampling Report, which recommended that an SA be conducted to delineate the extent of excessively contaminated soil, free product, and groundwater contamination (ABB-ES, 1997b).

Tank 367 was removed by the Navy Public Works Center (PWC), Pensacola, February 28, 1997. Approximately 18 cubic yards of excessively contaminated soil were removed from the site. A Closure Report was prepared for Tank 367 and submitted to the Florida Department of Environmental Protection (FDEP) (Navy PWC, 1997).

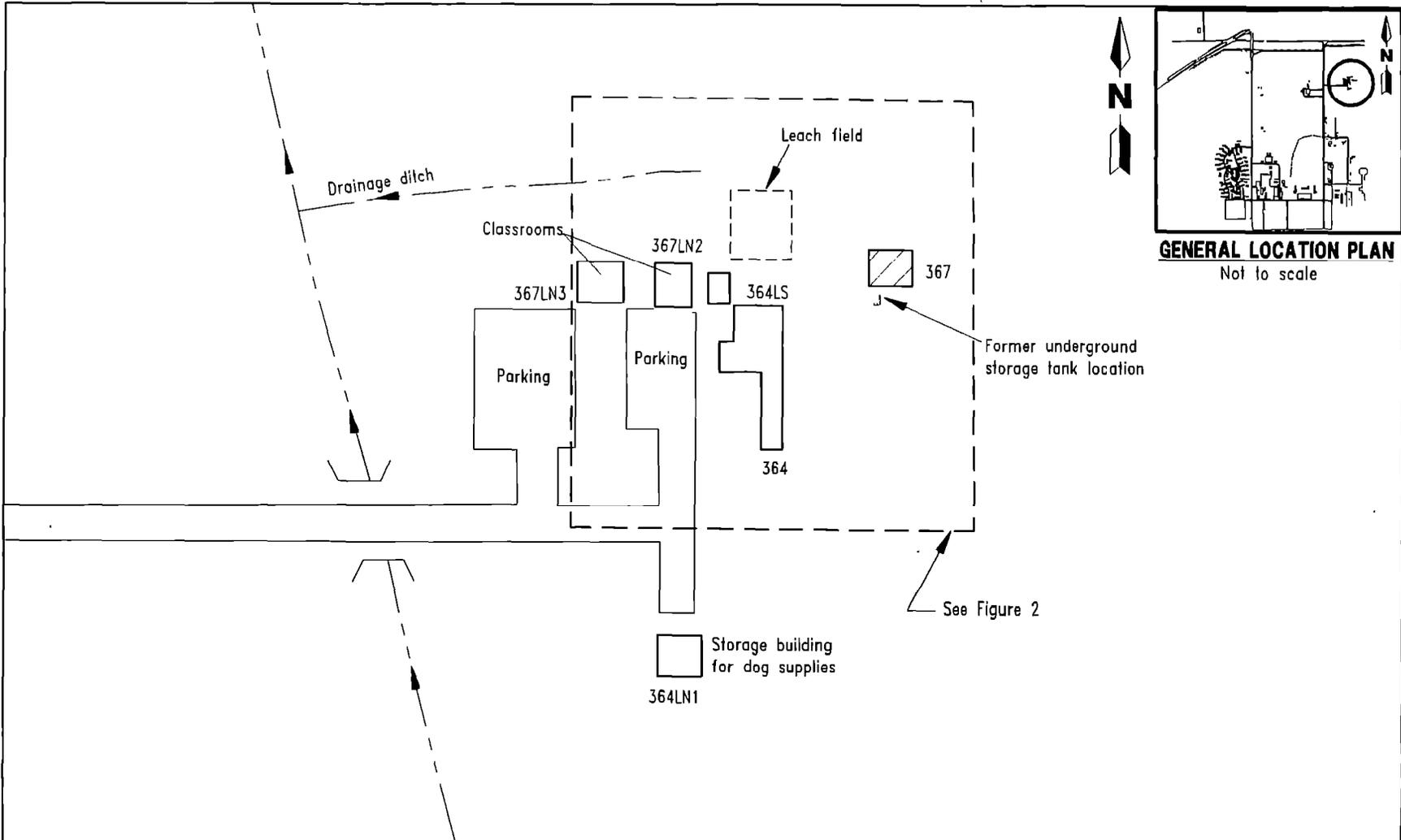
2.0 FIELD INVESTIGATION

The SA for Tank 367 was initiated in November 1997 and included

- the advancement of seven soil borings to the water table,
- installation of one deep and four shallow monitoring wells, and
- collection and analysis of two subsurface soil and four groundwater samples.

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 using an organic vapor analyzer (OVA). Two subsurface soil samples were collected on April 21, 1998, at soil boring locations with varying levels of contamination and analyzed for the Kerosene Analytical Group (KAG) parameters. Samples CEF-367-SB2L and CEF-367-SB3H were collected from 2 to 3 feet bls and from 3 to 4 feet bls, respectively.

One shallow monitoring well, CEF-367-2S, was installed south of the tank location near soil boring CEF-367-SB5 to a depth of 12 feet bls. This monitoring well replaced well CEF-367-1S, which was destroyed during the tank removal. Three additional shallow monitoring wells, CEF-367-3S, CEF-367-4S, and CEF-367-6S were installed downgradient of the former tank location. The deep source monitoring well CEF-367-5D was installed immediately downgradient of the source area and screened between 25 and 30 feet bls. The downgradient locations were selected based on the groundwater flow direction, which was assessed by measuring water levels in piezometers. A general site plan indicating the locations of the soil borings and the monitoring well locations is presented on Figure 2. The monitoring well installation detail is summarized in Table 1 and included in Appendix A.



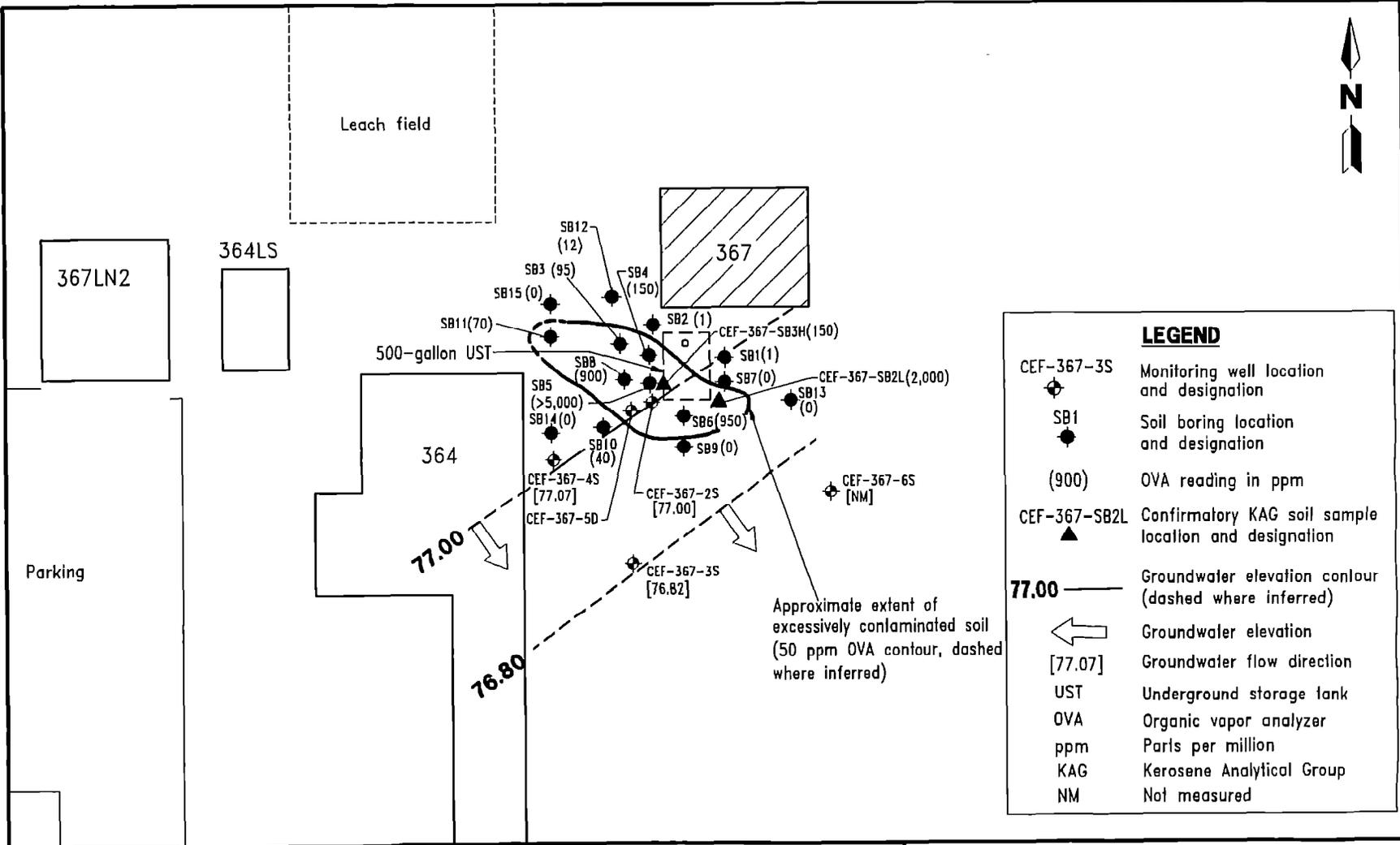
0 50 100
SCALE: 1 INCH = 100 FEET

**FIGURE 1
TANK 367
STORAGE SHED FOR BUILDING 364**



**SITE ASSESSMENT REPORT
BUILDING 367, TANK 367**

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



3

**FIGURE 2
TANK 367
SOIL BORING AND MONITORING WELL
LOCATIONS**



**SITE ASSESSMENT REPORT
BUILDING 367, TANK 367**

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

Table 1
Monitoring Well Construction Summary and Groundwater Elevation Data

Site Assessment Report
 Building 367, Tank 367
 Naval Air Station Cecil Field
 Jacksonville, Florida

| Monitoring Well No. | Total Well Depth (feet bls) | Screened Interval (feet bls) | TOC Elevation (feet NGVD) | September 9, 1998 | |
|---------------------|-----------------------------|------------------------------|---------------------------|----------------------------|-----------------------------------|
| | | | | Depth to Water (feet BTOC) | Water-Level Elevation (feet NGVD) |
| CEF-367-1S | Destroyed | - | - | - | - |
| CEF-367-2S | 12 | 2 to 12 | 78.14 | 1.14 | 77.00 |
| CEF-367-3S | 12 | 2 to 12 | 78.09 | 1.27 | 76.82 |
| CEF-367-4S | 12 | 2 to 12 | 78.96 | 1.89 | 77.07 |
| CEF-367-5D | 30 | 25 to 30 | 78.48 | 1.78 | 76.70 |
| CEF-367-6S | 11.9 | 1.9 to 11.9 | NA | NA | NA |

Notes: bls = below land surface.
 TOC = top of casing.
 NGVD = National Geodetic Vertical Datum, 1929.
 BTOC = below top of casing.
 - = not applicable.
 NA = not available.

3.0 SCREENING AND ANALYTICAL RESULTS

Groundwater flow direction was initially assessed (with piezometers) to be to the southwest. The groundwater flow direction identified during the SA was to the southeast. The groundwater at the Tank 367-site is very shallow (less than 2 feet below land surface), and it appears that the groundwater flow direction may vary throughout the year as a function of rainfall and groundwater recharge.

Excessively contaminated soil (greater than 50 parts per million on an OVA) was not detected in the seven soil borings advanced during the SA. The extent of excessively contaminated soil is presented on Figure 2. The soil OVA data are summarized in Table 2 and presented on Figure 2.

No contaminants were detected above FDEP soil cleanup target levels in the subsurface soil samples collected for KAG analysis. Subsurface soil analytical results are summarized in Table 3 and presented in Appendix B.

Free product with an apparent thickness of 1.14 feet was measured in monitoring well CEF-367-1S during the confirmatory sampling. No free product was detected during the SA.

No contaminants were detected at concentrations above cleanup target levels in groundwater samples collected from monitoring wells at the Tank 367 site. However, benzene and naphthalene were detected in groundwater collected from monitoring well CEF-367-2S at concentrations equal to cleanup target levels. Analytical results are summarized in Table 4 and presented in Appendix B.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Groundwater flow direction varies from southwest to southeast.

Data obtained during the confirmatory sampling at the Tank 367 site provided an adequate assessment of the horizontal and vertical extent of excessively contaminated soil.

No contaminants were detected above FDEP soil cleanup target levels in the subsurface soil samples collected for KAG analysis. It is recommended that no further action take place for soil at the Tank 367 site.

No contaminants were detected at concentrations above FDEP groundwater cleanup target levels in groundwater samples collected from monitoring wells for KAG analysis. However, benzene and naphthalene were detected in monitoring well CEF-367-2S at concentrations equal to the cleanup target levels.

Based on the results of the SA, it is recommended that groundwater monitoring only for natural attenuation take place at the Tank 367 site. It is recommended that monitoring wells CEF-367-2S, CEF-367-3S, CEF-367-4S, and CEF-367-6S be monitored for volatile organic compounds (USEPA Method 602) and semivolatile organic compounds (USEPA Method 8310) on a semiannual basis. The groundwater monitoring should continue until contaminant concentrations are below FDEP cleanup target levels for two consecutive sampling events.

**Table 2
Soil Screening Results**

Site Assessment Report
Building 367, Tank 367
Naval Air Station Cecil Field
Jacksonville, Florida

| Location | OVA Concentration (ppm) | | | |
|------------|-------------------------|------------|----------|--------|
| | Depth (feet bls) | Unfiltered | Filtered | Actual |
| SB1 | 1.5 | 0 | - | 0 |
| | 3 (moist) | 1 | - | 1 |
| SB2 | 1 | 1 | - | 1 |
| | 3 | 0 | - | 0 |
| SB3 | 1 | 10 | 0 | 10 |
| | 3 | 95 | 0 | 95 |
| SB4 | 1 | 0 | - | 0 |
| | 2.5 | 150 | 0 | 150 |
| SB5 | 1 | 0 | - | 0 |
| | 2.5 | >5,000 | 0 | >5,000 |
| SB6 | 1 | 90 | 0 | 90 |
| | 2.5 | 950 | 0 | 950 |
| SB7 | 1 | 0 | - | 0 |
| | 2 | 0 | - | 0 |
| SB8 | 1 | 110 | 0 | 110 |
| | 2 | 900 | 0 | 900 |
| CEF-367-1S | 2 | 180 | - | 180 |
| | 4 (moist to wet) | 1,100 | - | 1,100 |
| SB9 | 1 | 0 | - | 0 |
| | 3 (wet) | 0 | - | 0 |
| SB10 | 1 | 0 | - | 0 |
| | 3 (wet) | 240 | 200 | 40 |
| SB11 | 1 | 0 | - | 0 |
| | 3 (wet) | 100 | 30 | 70 |
| SB12 | 1 | 0 | - | 0 |
| | 3 (wet) | 18 | 6 | 12 |
| SB13 | 1 | 0 | - | 0 |
| | 3 (wet) | 0 | - | 0 |
| SB14 | 1 | 0 | - | 0 |
| | 3 (wet) | 0 | - | 0 |
| SB15 | 1 | 0 | - | 0 |
| | 3 (wet) | 0 | - | 0 |

Notes: Soil samples were collected on January 14 and November 5, 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.

moist = soil sample was partially saturated when analyzed.

> = greater than.

wet = soil sample was completely saturated when analyzed.

Table 4
Summary of Groundwater Analytical Detections

Site Assessment Report
Building 367, Tank 367
Naval Air Station Cecil Field
Jacksonville, Florida

| Compound | Monitoring Wells | | | | | Groundwater Cleanup Target Levels ¹ |
|--|------------------|------------|------------|------------|------------|--|
| | CEF-367-2S | CEF-367-3S | CEF-367-4S | CEF-367-5D | CEF-367-6S | |
| <u>Volatile Organic Aromatics (USEPA Method 601/602) ($\mu\text{g}/\text{L}$)</u> | | | | | | |
| Benzene | 1 | ND | ND | ND | ND | 1 |
| Ethylbenzene | 6 | ND | ND | ND | ND | 30 |
| <u>Polynuclear Aromatic Hydrocarbons (USEPA Method 610) ($\mu\text{g}/\text{L}$)</u> | | | | | | |
| 1-Methylnaphthalene | 24 | ND | ND | ND | 20 | NA |
| 2-Methylnaphthalene | 13 | ND | ND | ND | 11 | NA |
| Acenaphthene | 3.8 | ND | ND | ND | ND | 20 |
| Fluorene | 1.1 | ND | ND | ND | 1.8 | 280 |
| Naphthalene | 20 | ND | ND | ND | 11 | 20 |
| Phenanthrene | 0.74 | ND | ND | ND | ND | 210 |
| Anthracene | ND | ND | ND | ND | 0.43 | 2,100 |
| Benzo(a)anthracene | ND | ND | ND | ND | 0.16 | 0.2 |
| Benzo(k)fluoranthene | ND | ND | ND | ND | 0.05 | 0.5 |
| Dibenzo(g,h)anthracene | ND | ND | ND | ND | 0.11 | 0.2 |
| <u>Total Recoverable Petroleum Hydrocarbons (FL-PRO) (mg/L)</u> | | | | | | |
| No compounds detected | | | | | | |
| ¹ Chapter 62-770, Florida Administrative Code. | | | | | | |
| Notes: Groundwater samples were collected on June 18, 1998, September 9, 1998, and May 20, 1999. | | | | | | |
| USEPA = U.S. Environmental Protection Agency. $\mu\text{g}/\text{L}$ = micrograms per liter. FL-PRO = Florida-Petroleum Residual Organics. mg/L = milligrams per liter. | | | | | | |

The approved remedial action by natural attenuation monitoring period is 5 years. Milestone objectives are established if monitoring is projected to take greater than 1 year. The following are the milestone objectives that will be used for annual evaluation of remediation progress by natural attenuation. An explanation of the progress relative to these milestone objectives, and the need for corrective action (if applicable), should be provided in the annual evaluation.

Milestone Objectives ($\mu\text{g}/\ell$)

| Compound | End of | | | | |
|-------------|--------|--------|--------|--------|--------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Benzene | 1 | 1 | <1 | <1 | <1 |
| Naphthalene | 20 | 20 | <20 | <20 | <20 |

Notes: $\mu\text{g}/\ell$ = micrograms per liter.
 < = less than.

5.0 PROFESSIONAL REVIEW CERTIFICATION

The SA contained in this report was prepared using sound hydrogeologic principles and judgment. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the assessment described in this report. This SA report was developed for the Tank 367 site at NAS Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.


Eric A. Blomberg
Professional Geologist
P.G. No. 0001695

7-8-99
Date

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. 1997a. *Base Realignment and Closure Tank Management Plan, Naval Air Station Cecil Field, Jacksonville, Florida*. Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (January).
- ABB-ES. 1997b. *Confirmatory Sampling Report, Building 367, Tank 367, Base Realignment and Closure, Underground Storage Tank and Aboveground Storage Tank Grey Sites, Naval Air Station Cecil Field, Jacksonville, Florida*. Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (November).
- Navy Public Works Center, Pensacola. 1997. *Closure Assessment Underground Storage Tank Building 364, Naval Air Station Cecil Field, Jacksonville, Florida* (April).

APPENDIX A

MONITORING WELL INSTALLATION DETAIL

| | | | |
|---|---------------------------------|-------------------------|--------------------------|
| TITLE: NAS Cecil Field, Bldg. 367, Site Assessment Report | | LOG of WELL: CEF-367-2S | BORING NO. CEF-367-2S |
| CLIENT: SOUTHDIRNAVFACENGCOM | | PROJECT NO: 02523.13 | |
| CONTRACTOR: Custom Drilling | | DATE STARTED: 02-12-98 | COMPLTD: 02-12-98 |
| METHOD: HSA | CASE SIZE: 2in. | SCREEN INT.: 2-12 ft. | PROTECTION LEVEL: D |
| TOC ELEV.: 78.14 FT. | MONITOR INST.: FID | TOT DPTH: 12.5FT. | DPTH TO ∇ N/A FT. |
| LOGGED BY: J Tarr | WELL DEVELOPMENT DATE: 02-13-98 | | SITE: Building 367 |

| DEPTH FT. | LABORATORY SAMPLE ID. | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS | BLOWS/6-IN | WELL DATA |
|-----------|-----------------------|--------|----------|-----------------|--|-------------------|------------|------------|-----------|
| 1 | | | | | <> see note | | SM | | |
| 2 | | | | 1500 | SILTY SAND: light brown to gray, fine gran, slightly clayey. | | | posthole | |
| 3 | | | | | | | | | |
| 4 | | | | 1200 | | | | posthole | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | 1000 | | | | * | |
| 9 | | | | | | | | ** | |
| 10 | | | | 1200 | SILTY SAND: light gray, fine gran. | | | | |
| 11 | | | | | | | | | |
| 12 | | | | 400 | | | | | |
| 13 | | | | | <> soil description taken from CEF-367-50 | | | | |
| 14 | | | | | * no split spoon samples taken | | | | |
| 15 | | | | | ** OVA reading taken from auger cuttings | | | | |

| | | | |
|---|---------------------------------|-------------------------|---------------------------|
| TITLE: NAS Cecil Field, Bldg. 367, Site Assessment Report | | LOG of WELL: CEF-367-3S | BORING NO. CEF-367-3S |
| CLIENT: SOUTHDIRNAVFACENGCOM | | | PROJECT NO: 02523.13 |
| CONTRACTOR: Custom Drilling | | DATE STARTED: 02-12-98 | COMPLTD: 02-12-98 |
| METHOD: HSA | CASE SIZE: 2in. | SCREEN INT.: 2-12 ft. | PROTECTION LEVEL: D |
| TOC ELEV.: 78.09 FT. | MONITOR INST.: FID | TOT DPTH: 12.5FT. | DPTH TO ∇ 5.48 FT. |
| LOGGED BY: J Tarr | WELL DEVELOPMENT DATE: 02-13-98 | | SITE: Building 367 |

| DEPTH FT. | LABORATORY SAMPLE ID. | SAMPLE | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS | BLOWS/6-IN | WELL DATA |
|--------------|--------------------------|--------|----------|--------------------|--|----------------------|------------|------------|-----------|
| 1 | | | | | <> see note | | SM | | |
| 2 | | | | 1500 | SILTY SAND: light brown to gray, fine gran, slightly clayey. | | | posthole | |
| 3 | | | | | | | | | |
| 4 | | | | 200 | | | | posthole | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | 13 | | | | * | |
| 9 | | | | | | | | ** | |
| 10 | | | | | SILTY SAND: light gray, fine grain. | | | | |
| 11 | | | | | | | | | |
| 12 | | | | 5 | | | | | |
| 13 | | | | | <> soil description taken from CEF-367-5D | | | | |
| 14 | | | | | * no split spoon samples taken | | | | |
| 15 | | | | | ** OVA reading taken from auger cuttings | | | | |

| | | | |
|---|---------------------------------|-------------------------|---------------------------|
| TITLE: NAS Cecil Field, Bldg. 367, Site Assessment Report | | LOG of WELL: CEF-367-4S | BORING NO. CEF-367-4S |
| CLIENT: SOUTHDIVNAVAFACENGCOM | | PROJECT NO: 02523.13 | |
| CONTRACTOR: Custom Drilling | | DATE STARTED: 02-12-98 | COMPLTD: 02-12-98 |
| METHOD: HSA | CASE SIZE: 2in. | SCREEN INT.: 2-12 ft. | PROTECTION LEVEL: D |
| TOC ELEV.: 78.96 FT. | MONITOR INST.: FID | TOT DPTH: 12.5FT. | DPTH TO ∇ 5.85 FT. |
| LOGGED BY: J Tarr | WELL DEVELOPMENT DATE: 02-13-98 | | SITE: Building 367 |

| DEPTH FT. | LABORATORY SAMPLE ID. | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS | BLOWS/6-IN | WELL DATA |
|-----------|-----------------------|----------|-----------------|--|-------------------|------------|------------|-----------|
| 1 | | | | <> see hole | | SM | | |
| 2 | | | 0 | SILTY SAND: light brown to gray, fine gran, slightly clayey. | | | posthole | |
| 3 | | | | | | | | |
| 4 | | | 0 | | | | posthole | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | 3 | | | | * | |
| 9 | | | | | | | ** | |
| 10 | | | | SILTY SAND: light gray, fine gran. | | | | |
| 11 | | | | | | | | |
| 12 | | | 0 | | | | | |
| 13 | | | | <> soil description taken from CEF-367-5D | | | | |
| 14 | | | | * no split spoon samples taken | | | | |
| 15 | | | | ** OVA reading taken from auger cuttings | | | | |

| | | | |
|---|---------------------------------|-------------------------|---------------------------|
| TITLE: NAS Cecil Field, Bldg. 367, Site Assessment Report | | LOG of WELL: CEF-367-5D | BORING NO. CEF-367-5D |
| CLIENT: SOUTHDIVNAVFACENGCOM | | PROJECT NO: 02523.13 | |
| CONTRACTOR: Custom Drilling | | DATE STARTED: 03-16-98 | COMPLTD: 03-25-98 |
| METHOD: HSA | CASE SIZE: 2in. | SCREEN INT.: 25-30ft. | PROTECTION LEVEL: D |
| TOC ELEV.: 78.48 FT. | MONITOR INST.: FID | TOT DPTH: 30.5FT. | DPTH TO ∇ 5.65 FT. |
| LOGGED BY: J Tarr | WELL DEVELOPMENT DATE: 03-27-98 | | SITE: Building 367 |

| DEPTH F.T. | LABORATORY SAMPLE ID. | SAMPLE RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS | BLOWS/6-IN | WELL DATA |
|---------------|--------------------------|--------------------|--------------------|---|----------------------|------------|------------|-----------|
| 1 | | | | | | SM | | |
| 2 | | | 120 | | | | | posthole |
| 3 | | | | | | | | |
| 4 | | | | | | | | posthole |
| 5 | | | | | | | | |
| 6 | | 50% | 5 | SILTY SAND: light brown to gray, fine grain, slightly clayey. | | | 6,8,10,8 | ∇ |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | 75% | 24 | SILTY SAND: light gray, fine grain. | | | 4,4,3,4 | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | 100% | 10 | | | | 2,3,3,3 | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | 100% | 8 | | | | 3,2,1,3 | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |
| 35 | | | | | | | | |

| | | | |
|--|---------------------------------|-------------------------|---------------------------|
| TITLE: NAS Cecil Field, Bldg. 367 Site Assessment Report | | LOG of WELL: CEF-367-6S | BORING NO. CEF-367-6S |
| CLIENT: SOUTHDIVNAVFACENGCOM | | PROJECT NO: 02523-12 | |
| CONTRACTOR: Groundwater Protection Services | | DATE STARTED: 05-10-99 | COMPLTD: 05-10-99 |
| METHOD: HSA | CASE SIZE: 2in. | SCREEN INT.: 2-12 ft | PROTECTION LEVEL: D |
| TOC ELEV.: FT. | MONITOR INST.: FID | TOT DPTH: 12.5FT. | DPTH TO ∇ 4.60 FT. |
| LOGGED BY: H.Hooper | WELL DEVELOPMENT DATE: 05-11-99 | | SITE: Building 367 |

| DEPTH FT. | LABORATORY SAMPLE ID. | RECOVERY | HEADSPACE (ppm) | SOIL/ROCK DESCRIPTION AND COMMENTS | LITHOLOGIC SYMBOL | SOIL CLASS | BLOWS/6-IN | WELL DATA |
|-----------|-----------------------|----------|-----------------|--|-------------------|------------|------------|-----------|
| 1 | | | 0 | <> See Note | | SM | posthole | |
| 2 | | | | | | | posthole | |
| 3 | | | | SILTY SAND: light gray to gray silty fine sand. | | | * | |
| 4 | | | 0 | | | | ** | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | SILTY SAND: dark gray brown silty fine sand | | | | |
| 9 | | | 0 | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | 0 | <> Soil description taken from posthole and auger * no split spoon samples taken ** OVA readings taken at borehole | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |

APPENDIX B
ANALYTICAL RESULTS

NAS CECIL FIELD -- TANK 367
 SOIL DATA -- KEROSENE ANALYTICAL GROUP -- REPORT REQ NO. 9945

| | | | | |
|--------------------|-------------|------------|-------------|------------|
| Lab Sample Number: | A8D2201500 | | A8D2201500 | |
| Site | UST GREY | | UST GREY | |
| Locator | CEF-367-SB2 | | CEF-367-SB3 | |
| Collect Date: | 21-APR-98 | | 21-APR-98 | |
| | VALUE | QUAL UNITS | DL | VALUE |
| | | QUAL UNITS | DL | QUAL UNITS |
| | | | DL | |

UST GREY

| | | | | | | |
|--------------------------|-------|-------|-----|-------|-------|-----|
| Benzene | 1.2 U | ug/kg | 1.2 | 12 U | ug/kg | 12 |
| Ethylbenzene | 1.2 U | ug/kg | 1.2 | 12 U | ug/kg | 12 |
| Toluene | 1.2 U | ug/kg | 1.2 | 12 U | ug/kg | 12 |
| Xylenes (total) | 1.2 U | ug/kg | 1.2 | 12 U | ug/kg | 12 |
| Acenaphthene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Acenaphthylene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Anthracene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Benzo (a) anthracene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Benzo (a) pyrene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Benzo (b) fluoranthene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Benzo (g,h,i) perylene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Benzo (k) fluoranthene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Chrysene | 24 U | ug/kg | 24 | 24 U | ug/kg | 24 |
| Dibenzo (a,h) anthracene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Fluoranthene | 6.3 U | ug/kg | 5.9 | 18 J | ug/kg | 6 |
| Fluorene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Indeno (1,2,3-cd) pyrene | 5.9 U | ug/kg | 5.9 | 6 U | ug/kg | 6 |
| Naphthalene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Phenanthrene | 240 U | ug/kg | 240 | 240 U | ug/kg | 240 |
| Pyrene | 5.9 U | ug/kg | 5.9 | 9.2 | ug/kg | 6 |

FLA PRD

| | | | | | | |
|------------|------|-------|----|----|-------|----|
| TPH C8-C40 | 12 U | mg/kg | 12 | 40 | mg/kg | 12 |
|------------|------|-------|----|----|-------|----|

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

NAS CECIL FIELD -- TANK 367
 GROUNDWATER DATA -- KEROSENE ANALYTICAL GROUP -- REPORT REQ NO. 10262

Lab Sample Number: JR31631
 Site: UST GREY
 Locator: CEF-367-2S
 Collect Date: 09-SEP-98

VALUE QUAL UNITS DL

UST COMPOUNDS

| Compound Name | Value | Qual | Units | DL |
|---------------------------|-------|------|-------|-----|
| Benzene | 1 | | ug/l | 1 |
| Ethylbenzene | 6 | | ug/l | 1 |
| Toluene | 1 U | | ug/l | 1 |
| m,p-Xylene | 1 U | | ug/l | 1 |
| o-Xylene | 1 U | | ug/l | 1 |
| 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 |
| 1,2-Dichloroethane | 1 U | | ug/l | 1 |
| 1,2-Dichloropropane | 1 U | | ug/l | 1 |
| 1,3-Dichlorobenzene | 1 U | | ug/l | 1 |
| 1,4-Dichlorobenzene | 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 |
| Chloroethane | 2 U | | ug/l | 2 |
| Chloroform | 1 U | | ug/l | 1 |
| Chloromethane | 2 U | | ug/l | 2 |
| Dibromochloromethane | 1 U | | ug/l | 1 |
| Dichlorodifluoromethane | 1 U | | ug/l | 1 |
| Methylene chloride | 3 U | | ug/l | 2 |
| Tetrachloroethene | 1 U | | ug/l | 1 |
| Trichloroethene | 1 U | | ug/l | 1 |
| Trichlorofluoromethane | 2 U | | ug/l | 2 |
| Vinyl chloride | 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 |
| 1-Methylnaphthalene | 24 | | ug/l | .5 |
| 2-Methylnaphthalene | 13 | | ug/l | .5 |
| Acenaphthene | 3.8 | | ug/l | .5 |
| Acenaphthylene | .1 U | | ug/l | .1 |
| Anthracene | .5 U | | ug/l | .5 |
| Benzo (a) anthracene | .05 U | | ug/l | .05 |
| Benzo (a) pyrene | .05 U | | ug/l | .05 |
| Benzo (b) fluoranthene | .1 U | | ug/l | .1 |
| Benzo (g,h,i) perylene | .1 U | | ug/l | .1 |
| Benzo (k) fluoranthene | .05 U | | ug/l | .05 |
| Chrysene | .05 U | | ug/l | .05 |
| Dibenzo (a,h) anthracene | .1 U | | ug/l | .1 |
| Fluoranthene | .1 U | | ug/l | .1 |
| Fluorene | 1.1 | | ug/l | .1 |
| Indeno (1,2,3-cd) pyrene | .05 U | | ug/l | .05 |
| Naphthalene | .20 | | ug/l | .5 |
| Phenanthrene | .74 | | ug/l | .05 |

NAS CECIL FIELD -- TANK 367
GROUNDWATER DATA -- KEROSENE ANALYTICAL GROUP -- REPORT REQ NO. 10262

Lab Sample Number: JR31631
Site: UST GREY
Locator: CEF-367-2S
Collect Date: 09-SEP-98

| | VALUE | QUAL | UNITS | DL |
|-----------------------|-------|------|-------|-----|
| Pyrene | .05 | U | ug/l | .05 |
| FLA PRO TPH C8-C40 | .4 | U | mg/l | .4 |

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

NAS CECIL FIELD -- UST GREY TANK 367
GROUNDWATER DATA -- REPORT REQ NO. 10061

| | | | | | |
|--------------------|------------|----|------------|----|------------|
| Lab Sample Number: | A8F1901630 | | A8F1901630 | | A8F1901630 |
| Site | UST GREY | | UST GREY | | UST GREY |
| Locator | CEF-367-3S | | CEF-367-4S | | CEF-367-5D |
| Collect Date: | 18-JUN-98 | | 18-JUN-98 | | 18-JUN-98 |
| | VALUE | DL | VALUE | DL | VALUE |
| | QUAL UNITS | | QUAL UNITS | | QUAL UNITS |
| | | | | | DL |

BETA AND DICHLOROBENZENES

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

PAHs

| | | | | | | | | | |
|--------------------------|-------|------|-----|-------|------|-----|-------|------|-----|
| Acenaphthene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Acenaphthylene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Anthracene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Benzo (a) anthracene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Benzo (b) fluoranthene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Benzo (k) fluoranthene | .05 U | ug/l | .05 | .05 U | ug/l | .05 | .05 U | ug/l | .05 |
| Benzo (a) pyrene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Chrysene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Dibenzo (a,h) anthracene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Fluoranthene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Fluorene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Indeno (1,2,3-cd) pyrene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Benzo (g,h,i) perylene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| Naphthalene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Phenanthrene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| Pyrene | .1 U | ug/l | .1 | .1 U | ug/l | .1 | .1 U | ug/l | .1 |
| 1-Methylnaphthalene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |
| 2-Methylnaphthalene | 1 U | ug/l | 1 | 1 U | ug/l | 1 | 1 U | ug/l | 1 |

FLA PRO

| | | | | | | | | | |
|------------|------|------|----|------|------|----|------|------|----|
| TPH C8-C40 | .5 U | mg/l | .5 | .5 U | mg/l | .5 | .5 U | mg/l | .5 |
|------------|------|------|----|------|------|----|------|------|----|

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UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE



August 30, 1999

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Attention: Mr. Mike Deliz

**Subject: Analytical Data, Site Assessment Report for Tank 367
Naval Air Station Cecil Field
Jacksonville, Florida
Contract No. N62467-89-D-0317/090**

Dear Mr. Deliz:

On behalf of Southern Division, Naval Facilities Engineering Command, Harding Lawson Associates is pleased to submit two copies of the revised analytical dataset for the Tank 367, Site Assessment Report submitted on July 8, 1999. Please replace the existing data with the revised and updated data tables attached to this letter.

Comments or questions you may have concerning this submittal should be directed to Mr. Bryan Kizer at SOUTHNAVFACENGCOM (843-820-5896).

Sincerely,

HARDING LAWSON ASSOCIATES

A handwritten signature in cursive script, appearing to read "Rao Angara".

Rao Angara
Task Order Manager

enclosure

cc: B. Kizer, SDIV (1 copy)
S. Glass, SDIV (1 copy)
D. Vaughn-Wright, USEPA (2 copies)
D. Kruzicki, NASCF (w/o enclosure)
S. Pratt, TtNUS (2 copies)
D. Ferris, TtNUS (1 copy)
N. Hatch, CH2M Hill (1 copy)
J. Flowe, City of Jacksonville (1 copy)
file



NAS Cecil Field - Tank 367 Site Assessment Report - Soil

| Sample Identifier | CEF-367-SB2 | CEF-367-SB3 |
|---------------------|-------------|-------------|
| Sample Collect Date | 4/21/98 | 4/21/98 |
| Analyte | | |

BTEX and Petroleum Hydrocarbons

| | | |
|---------------------------------------|-------------------|-------------------|
| Benzene | 1.2 U ug/kg (1.2) | 12. U ug/kg (12.) |
| Ethylbenzene | 1.2 U ug/kg (1.2) | 12. U ug/kg (12.) |
| Toluene | 1.2 U ug/kg (1.2) | 12. U ug/kg (12.) |
| Total Petroleum Hydrocarbons (C8-C40) | 12. U mg/kg (12.) | 40. mg/kg (12.) |
| Xylenes (total) | 1.2 U ug/kg (1.2) | 12. U ug/kg (12.) |

PAHs

| | | |
|--------------------------|---------------------|---------------------|
| 1-Methylnaphthalene | 40. U ug/kg (40.) | 40. U ug/kg (40.) |
| 2-Methylnaphthalene | 40. U ug/kg (40.) | 40. U ug/kg (40.) |
| Acenaphthene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Acenaphthylene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Anthracene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Benzo (a) Anthracene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Benzo (a) Pyrene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Benzo (b) Fluoranthene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Benzo (g,h,i) Perylene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Benzo (k) Fluoranthene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Chrysene | 24. U ug/kg (24.) | 24. U ug/kg (24.) |
| Dibenzo (a,h) anthracene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Fluoranthene | 6.3 ug/kg (5.9) | 18. U ug/kg (6.) |
| Fluorene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Indeno (1,2,3-cd) pyrene | 5.9 U ug/kg (5.9) | 6. U ug/kg (6.) |
| Naphthalene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Phenanthrene | 240. U ug/kg (240.) | 240. U ug/kg (240.) |
| Pyrene | 5.9 U ug/kg (5.9) | 9.2 ug/kg (6.) |

Footnotes: Values in parentheses are detection limits

NAS Cecil Field - Tank 367 Site Assessment Report - Ground Water

| Sample Identifier | CEF-367-2S | CEF-367-3S | CEF-367-4S | CEF-367-5D |
|---------------------|------------|------------|------------|------------|
| Sample Collect Date | 9/9/98 | 6/18/98 | 6/18/98 | 6/18/98 |
| Analyte | | | | |

BTEX and Petroleum Hydrocarbons

| | | | | |
|---------------------------------------|------------------|------------------|------------------|------------------|
| Benzene | 1. ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Ethylbenzene | 6. ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| m,p-Xylene | 1. U ug/l (1.) | -- | -- | -- |
| Methyl tert-butyl ether | 2. U ug/l (2.) | -- | -- | -- |
| Toluene | 1. U ug/l (1.) |
| Total Petroleum Hydrocarbons (C8-C10) | 0.4 U mg/l (0.4) | 0.5 U mg/l (0.5) | 0.5 U mg/l (0.5) | 0.5 U mg/l (0.5) |
| Xylenes (total) | -- | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |

PAHs

| | | | | |
|--------------------------|--------------------|--------------------|--------------------|--------------------|
| 1-Methylnaphthalene | 24. ug/l (0.5) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| 2-Methylnaphthalene | 13. ug/l (0.5) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Acenaphthene | 3.8 ug/l (0.5) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Acenaphthylene | 0.1 U ug/l (0.1) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Anthracene | 0.5 U ug/l (0.5) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Benzo (a) Anthracene | 0.05 U ug/l (0.05) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) |
| Benzo (a) Pyrene | 0.05 U ug/l (0.05) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) |
| Benzo (b) Fluoranthene | 0.1 U ug/l (0.1) |
| Benzo (g,h,i) Perylene | 0.1 U ug/l (0.1) |
| Benzo (k) Fluoranthene | 0.05 U ug/l (0.05) |
| Chrysene | 0.05 U ug/l (0.05) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) |
| Dibenzo (a,h) anthracene | 0.1 U ug/l (0.1) |
| Fluoranthene | 0.1 U ug/l (0.1) |
| Fluorene | 1.1 ug/l (0.1) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Indeno (1,2,3-cd) pyrene | 0.05 U ug/l (0.05) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) |
| Naphthalene | 20. ug/l (0.5) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Phenanthrene | 0.74 ug/l (0.05) | 1. U ug/l (1.) | 1. U ug/l (1.) | 1. U ug/l (1.) |
| Pyrene | 0.05 U ug/l (0.05) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) | 0.1 U ug/l (0.1) |

Sample Identifier CEF-367-6S

Sample Collect Date 5/20/99

Analyte

BTEX and Petroleum Hydrocarbons

| | |
|--|------------------|
| Benzene | 1. U ug/l (1.) |
| Ethylbenzene | 1. U ug/l (1.) |
| m,p-Xylene | 1. U ug/l (1.) |
| Methyl tert-butyl ether | 2. U ug/l (2.) |
| Toluene | 1. U ug/l (1.) |
| Total Petroleum Hydrocarbons (C8-C40) | 0.2 U mg/l (0.2) |

PAHs

| | |
|--------------------------|--------------------|
| 1-Methylnaphthalene | 20. ug/l (1.) |
| 2-Methylnaphthalene | 11. ug/l (1.) |
| Acenaphthene | 0.5 U ug/l (0.5) |
| Acenaphthylene | 1. U ug/l (1.) |
| Anthracene | 0.43 ug/l (0.05) |
| Benzo (a) Pyrene | 0.16 ug/l (0.05) |
| Benzo (b) Fluoranthene | 0.1 U ug/l (0.1) |
| Benzo (g,h,i) Perylene | 0.1 U ug/l (0.1) |
| Benzo (k) Fluoranthene | 0.05 I ug/l (0.05) |
| Chrysene | 0.05 U ug/l (0.05) |
| Dibenzo (a,h) anthracene | 0.11 I ug/l (0.1) |
| Fluoranthene | 0.1 U ug/l (0.1) |
| Fluorene | 1.8 ug/l (0.1) |
| Indeno (1,2,3-cd) pyrene | 0.05 U ug/l (0.05) |
| Naphthalene | 11. ug/l (0.5) |
| Phenanthrene | 5. U ug/l (5.) |
| Pyrene | 0.05 U ug/l (0.05) |

Footnotes: Values in parentheses are detection limits