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NAS PENSACOLA
5090.3a

STORAGE TANK CLOSURE ASSESSMENT AND DISCHARGE REPORT FOR
UNDERGROUND STORAGE TANKS 681 AND 682 NAS PENSACOLA FL
8/29/1995
NAS PENSACOLA



DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAS PENSACOLA
190 RADFORD BLVD
PENSACOLA, FLORIDA 32508-5217

SOW 110
02310209

5090 IN REPLY REFER TO
Ser 00500/333/ 1 7 1 1
29 AUG 1995

Mr. W. E. Grimsley
Environmental Supervisor II
Environmental Health Services
Petroleum Tank Section
1190 West Leonard Street, Suite 2
Pensacola, FL 32501

Re: STORAGE TANK CLOSURE, FLORIDA DEPARTMENT OF ENVIRONMENTAL
PROTECTION 62-761.800

Dear Mr. Grimsley:

The Closure Assessment Form and the Discharge Report Form, for the Underground Storage
Tanks (UST) at Buildings 681 and 682 on board Naval Air Station Pensacola, are enclosed.

Both soil and groundwater sampling data is included in this closure report. All sampling data will
be included with the contamination assessment report (CAR) to be submitted in the future.

Should you have any questions or require further information, please contact Mr. Dean Spencer,
P.E., at (904) 452-3900.

Sincerely,

William H. Taylor, Jr.
WILLIAM H. TAYLOR, JR.
Environmental Officer
By direction of
the Commanding Officer

Encl:

- (1) Closure Assessment Form
- (2) Discharge Report Form
- (3) Closure Assessment Report

Copy to:
SOUTHNAVFACENCOM (Mr. B. Glover)
FDEP Pensacola (Mr. E. Ericson)
FDEP Tallahassee (Mr. E. Nuzie)



Florida Department of Environmental Regulation

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

DER Form: 17 (5/1/99)
 Form Title: Closure Assessment Form
 Effective Date: December 10, 1999
 DER Approver Title: _____
 (Filled in 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 storage tank closure assessment was performed in accordance with Rule 17-761 or 17-762, Florida Administrative Code. Eligible Early Detection Inc live (EDI) and Reimbursement Program sites do not have to perform a closure assessment.

Please Print or Type
Complete All Applicable Blanks

- Date: July 19, 1995
- DER Facility ID Number: 17 / 9202973
- County: Escambia
- Facility Name: Pensacola Naval Air Station
- Facility Owner: United States Navy
- Facility Address: 190 Radford Blvd, Pensacola, FL 32508
- Mailing Address: 190 Radford Blvd.
- Telephone Number: (904) 452-3900
- Facility Operator: USN
- Are the Storage Tank(s): (Circle one or both) A. Aboveground or B. Underground
- Type of Product(s) Stored: Diesel Fuel Marine
- Were the Tank(s): (Circle one) A. Replaced B. Removed C. Closed in Place D. Upgraded (aboveground tanks only)
- Number of Tanks Closed: 2 (Tank#681 & Tank#682)
- Age of Tanks: 52 years

Facility Assessment Information

- | Yes | No | Not Applicable | |
|-------------------------------------|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Is the facility participating in the Florida Petroleum Liability Insurance and Restoration Program (FPLIRP)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Was a Discharge Reporting Form submitted to the Department?
If yes, When: _____ Where: _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Is the depth to ground water less than 20 feet? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Are monitoring wells present around the storage system?
If yes, specify type: <input checked="" type="checkbox"/> Water monitoring <input type="checkbox"/> Vapor monitoring |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. Is there free product present in the monitoring wells or within the excavation? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Were the petroleum hydrocarbon vapor levels in the soils greater than 500 parts per million for gasoline?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input checked="" type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Were the petroleum hydrocarbon vapor levels in the soils greater than 50 parts per million for diesel/kerosene?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input checked="" type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. If a used oil storage system, did a visual inspection detect any discolored soil indicating a release? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Are any potable wells located within 1/4 of a mile radius of the facility? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. Is there a surface water body within 1/4 mile radius of the site? If yes, indicate distance: _____ |



Florida Department of Environmental Regulation

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

DER Form #	17-761-2003-11
Form Title	Discharge Reporting Form
Effective Date	December 10, 1990
DER Approval No.	

Discharge Reporting Form

Use this form to notify the Department of Environmental Regulation of:

1. Results of tank tightness testing that exceed allowable tolerances within ten days of receipt of test result.
2. Petroleum discharges exceeding 25 gallons on pervious surfaces as described in Section 17-761.460 F.A.C. within one working day of discovery.
3. Hazardous substance (CERCLA regulated), discharges exceeding applicable reportable quantities established in 17-761.460(2) F.A.C., within one working day of the discovery.
4. Within one working day of discovery of suspected releases confirmed by: (a) released regulated substances or pollutants discovered in the surrounding area, (b) unusual and unexplained storage system operating conditions, (c) monitoring results from a leak detection method or from a tank closure assessment that indicate a release may have occurred, or (d) manual tank gauging results for tanks discharging more than 100 gallons or less, exceeding ten gallons per weekly test or five gallons averaged over four consecutive weekly tests.

Mail to the DER District Office in your area listed on the reverse side of this form

PLEASE PRINT OR TYPE
Complete all applicable blanks

1. DER Facility ID Number: 17 / 9202973 2. Tank Number: 681 & 682 3. Date: 7 / 19 / 95

4. Facility Name: Pensacola Naval Air Station

Facility Owner or Operator: United States Navy

Facility Address: 190 Radford Blvd. Pensacola, FL 32508

Telephone Number: (904) 452-3900 County: Escambia

Mailing Address: 190 Radford Blvd. Pensacola, FL 32508

5. Date of receipt of test results or discovery: July 5, 1995 7 / 5 / 95 month/day/year

6. Method of initial discovery, (circle one only)

A. Liquid detector (automatic or manual)

B. Vapor detector (automatic or manual)

C. Tightness test (underground tanks only).

D. Emptying and inspection.

E. Inventory control.

F. Vapor or visible signs of a discharge in the vicinity.

G. Closure: Monitor Well (explain)

H. Other: _____

7. Estimated number of gallons discharged: Unknown

8. What part of storage system has leaked? (circle all that apply) A. Dispenser B. Pipe C. Fitting D. Tank E. Unknown

9. Type of regulated substance discharged, (circle one)

A. leaded gasoline

D. vehicular diesel

L. used/waste oil

V. hazardous substance includes pesticides, ammonia, chlorine and derivatives (write in name or Chemical Abstract Service CAS number) _____

B. unleaded gasoline

F. aviation gas

M. diesel

C. gasohol

G. jet fuel

O. new/lube oil

Z. other (write in name) _____

10. Cause of leak, (circle all that apply)

A. Unknown

C. Loose connection

E. Puncture

G. Spill _____

I. Other (specify) _____

B. Split

D. Corrosion

F. Installation failure

H. Overfill _____

11. Type of financial responsibility, (circle one)

A. Third party insurance provided by the state insurance contractor

C. Not applicable

B. Self-insurance pursuant to Chapter 17-769.500 F.A.C.

D. None

12. To the best of my knowledge and belief all information submitted on this form is true, accurate, and complete.

William H. Taylor, Jr.

William H. Taylor, Jr.

Printed Name of Owner, Operator or Authorized Representative

Signature of Owner, Operator or Authorized Representative

DER Form #	17-761.900(8)
Form Title	Closure Assessment Form
Effective Date	December 10, 1990
DER Application No.	(Filed 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.

William H. Taylor Jr.

Signature of Owner

Date

7/19/95

Date

James A. Stidham

Signature of Person Performing Assessment

James A. Stidham-President-Jim Stidham & Associates, Inc.

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 Tert-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)

**TANK CLOSURE ASSESSMENT
REPORT**

**PENSACOLA NAVAL AIR STATION
PENSACOLA, FLORIDA**

**FACILITY I.D. #179202973
TANK #681 AND TANK #682**

PREPARED FOR:

**ESCAMBIA COUNTY PUBLIC HEALTH UNIT
1190 WEST LEONARD STREET, SUITE 2
PENSACOLA, FLORIDA 32501**

PREPARED BY:

**JIM STIDHAM & ASSOCIATES, INC.
POST OFFICE BOX 13861
TALLAHASSEE, FLORIDA 32317-3861**

**CLOSURE ASSESSMENT REPORT
PENSACOLA NAVAL AIR STATION
FACILITY ID # 179202973**

INTRODUCTION

On April 6, 1995 Jim Stidham & Associates, Inc. (JSA) began performance of closure assessment on two underground storage tanks (USTs). The tanks are located south of Farrar Street, Pensacola Naval Air Station, Pensacola, Florida 32508 (Figure 1). These tanks were taken out of service and closed in place by Phoenix Construction Services and Environmental Recovery, Inc.

JSA visited the site on April 6, 1995 and met with Jim Checkovich and Terry Wilson of Phoenix Construction Services to discuss the tank closure assessment for tank #681 and tank #682 at the above mentioned facility. The following summarizes the work which occurred at this facility as a part of this Tank Closure Assessment Report.

SITE HISTORY

The petroleum storage facility consisting of tank #681 and tank #682 contains two tanks that are each 102.5 feet in diameter and 21 feet in depth. Each tank has an approximate volume of 1.102 million gallons. The contents of each of these tanks consisted of diesel fuel marine (DFM). These tanks were installed in December, 1943.

**Florida Department of Environmental Protection's
Stationary Tank Registration**

<u>Tank #</u>	<u>Gallons</u>	<u>Contents</u>	<u>Year Installed</u>
681	1,102,000	Diesel Fuel Marine	12/43
682	1,102,000	Diesel Fuel Marine	12/43

TANK CLOSURE ASSESSMENT (TCA)

Beginning on April 6, 1995 and concluding on June 29, 1995, JSA performed tank closure assessments for tank #681 and tank #682.

The threshold for excessively contaminated soil was set at 50 parts per million (ppm) following Chapter 62-770.200(2) for diesel contaminated sources. The Closure Assessment Form is included in Appendix A.

The initial phase of the Tank Closure assessment was performed by JSA on April 6 and April 7, 1995. This assessment consisted of installing soil borings on the tops of each tank in question to determine the status of the soil. Soil samples were collected on a twenty foot interval basis in a grid pattern that encompassed the area above each tank (Figure 2). At each soil boring location, a sample was collected for analysis at intervals of one foot and four foot below land surface (Table 1 and Table 2). Upon determining the soil was free from contamination, JSA contacted Terry Wilson of Phoenix Construction so that the in place tank closure could incorporate this soil as part of the material used to fill in the tank areas.

On April 25 and April 26, 1995 JSA performed the second phase of the Tank Closure Assessment. This phase consisted of installing soil borings around tank #681 and tank #682. These soil borings were located at 40 foot intervals around each tank as part of the closure assessment (Figure 3). The depths of each of these soil borings were 18 feet below land surface. Soil samples were collected for analysis at three foot intervals in each soil boring (Table 3 and Table 4).

In addition to the above mentioned soil borings, JSA also performed soil borings along the product lines between tank #681 and tank #682. These soil borings (Table 5) were located at 20 foot intervals (Figure 3) and were installed to ten feet so as to encompass the soil below the product lines.

The soil collected for analysis was scanned with a Foxboro Century 128, organic vapor analyzer (OVA). This instrument is a flame ionization detector (FID) used to conduct field analysis of soil samples. Standard manufacturers operating procedures were followed and all field calibrations were made according to manufacturer's recommendations.

The soil samples were sealed in half-filled 16 ounce glass jars and the OVA readings were taken in the headspace above the soil as recommended by FDEP's Guidelines for Assessments and Remediation of Petroleum Contaminated Soils and in accordance with Florida Administrative Code (FAC) Chapter 62-770.200(2). Duplicate soil samples were collected from each test site so that samples could be analyzed for total biogenic content using a carbon filter attachment. Total Volatile Hydrocarbons (TVH) were then determined by subtracting the biogenic reading from the OVA reading.

The final phase of this Tank Closure Assessment was performed on June 29, 1995 when JSA installed four temporary monitoring wells around tank #681 and tank #682 (Figure 3). The placement of these temporary monitoring wells was restricted by several factors that limited access of the drill rig. The site immediately around tank #681 and tank #682 possesses a great deal of sand and large trees that limited the mobility of the drill rig. TW-1 and TW-2 were placed around tank #682 as close to opposite each other as conditions would allow. The ideal location for TW-3 is in the vicinity of soil boring 20 (SB-20); however, sloping topography and some large oak trees required TW-3 to be located in an alternate area. The current location to the south of the proposed well was chosen because this area is downgradient (Figure 3). TW-4 was installed opposite MW-100, an on-site existing monitoring well. The temporary wells were installed for the purpose of obtaining a groundwater sample for analysis from the surficial aquifer. The soil from each of these temporary monitoring wells were collected for OVA analysis at five foot intervals below land surface (Table 6).

Groundwater samples were collected from each of the four temporary monitoring wells (TW-1, TW-2, TW-3, and TW-4) and also from an on-site existing monitoring well (MW-100). The locations of the existing monitoring well and the temporary monitoring wells are shown in Figure 3. Groundwater samples were collected for EPA methods 602 and 610 and were shipped to Environmental Conservation Laboratory (ENCO) for analysis.

Excessive levels of contamination were encountered in the groundwater sample from the temporary monitoring well four (TW-4) located at the south side of tank #681 (Figure 3). The remaining

three temporary wells (TW-1, TW-2, and TW-3) and the on-site existing monitoring well (MW-100) do not indicate presence of any Diesel Fuel Marine constituents. A Discharge Reporting Form (Appendix B) was submitted on July 20, 1995 to Dean Spencer of the Department of the Navy for review and submittal. This form will then be sent to Escambia County Public Health Unit. The laboratory results of this analysis are included in Appendix C and a summary of the analytical results are displayed in Table A below.

TABLE A

PARAMETER	TW-1 (ug/L)	TW-2 (ug/L)	TW-3 (ug/L)	TW-4 (ug/L)	MW-100 (ug/L)	FDEP TARGET LEVELS (ug/L)
BENZENE	<1	<1	<1	2	<1	1.0
TOLUENE	<1	<1	<1	5	<1	
ETHYLBENZENE	<1	<1	<1	81	<1	
XYLENE	<1	<1	<1	148	<1	
TOTAL BTEX	<1	<1	<1	236	<1	50
MTBE	<1	<1	<1	<1	<1	50
NAPHTHALENE	<1	<1	<1	<1	<1	100

(Photographs of the site are located in Appendix D)

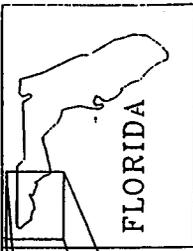
SUMMARY

During Tank Closure Assessment activities of tank #681 and tank #682 JSA installed seventy-two soil borings in the soil located above each tank. JSA also installed 24 soil borings around the two tanks and the related product lines as part of the Tank Closure Assessment. Four temporary monitoring wells were also installed and sampled, and an existing on-site monitoring well was sampled as part of this assessment. Groundwater samples from three of the temporary monitoring wells and the existing on-site monitoring well revealed no Diesel Fuel Marine constituents.

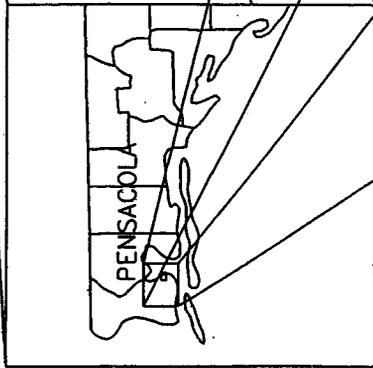
Temporary Monitoring Well Four (TW-4), however, revealed levels of groundwater contamination greater than FDEP target levels and a Discharge Reporting Form was prepared for submittal. After

reviewing the site history with base employees it was brought to JSA's attention that a condensate line from tank #681 was repaired several years ago. This condensate line collected moisture that accumulated around the tank heater while in operation. The line was repaired and the system placed back into service.

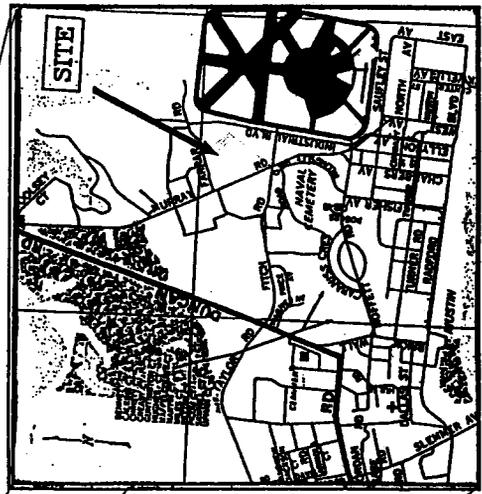
FIGURES



FLORIDA



PENSACOLA



LOCATION MAP

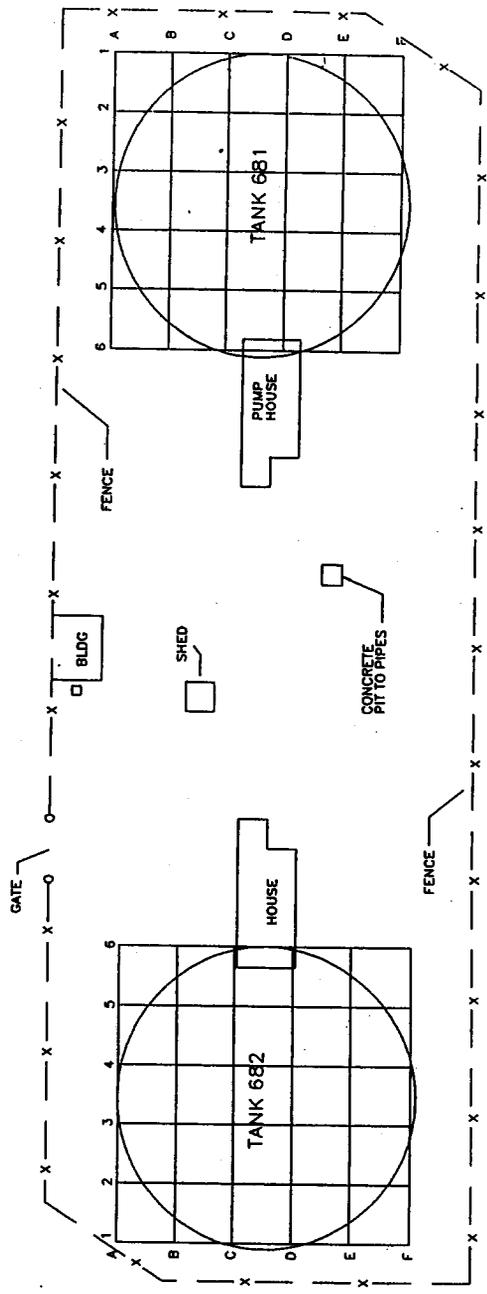
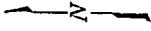
FIGURE 1

SCALE: NONE
DATE: 7/18/93
DRAWN BY: PK
REVISION:

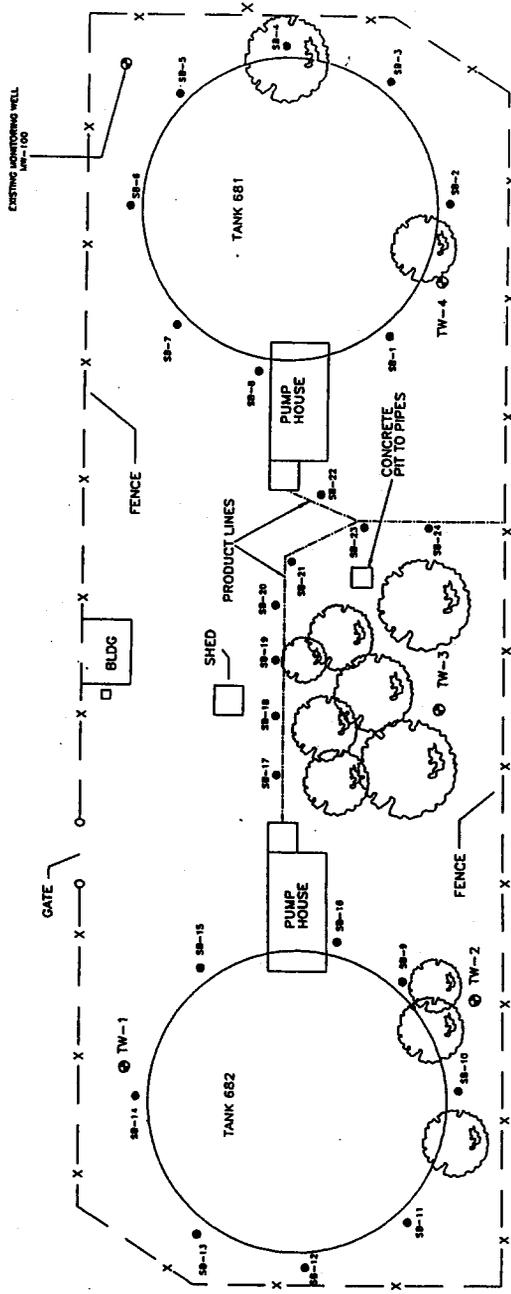
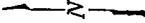
AN STEPHAN & ASSOCIATES, INC.
TALAHASSEE, FLORIDA
PROJECT NAME: EASTPORT
PENSACOLA, FLORIDA



DRAWING NO.:
SHEET NO.:



TOP OF TANK SOIL BORING DIAGRAM	
SCALE: 1" = 30'	DRAWN BY: PH
DATE: 5 / 31 / 95	REVISED: RK
J&G	
J&G ENGINEERING & ASSOCIATES, INC.	
TALLAHASSEE, FLORIDA	
PENACOLA NAVAL AIR STATION	
PENACOLA, FLORIDA	
DRAWING NO.: A1-NASPB5B1	



LEGEND	
	TEMPORARY MONITORING WELL
	MONITORING WELL
	SOIL BORING
	PRODUCT LINE
	OAK TREE

SITE DIAGRAM	
SCALE: 1" = 50'	DRAWN BY: PM
DATE: 5/31/85	REVISED: PM
JIM STUBBAM & ASSOCIATES, INC.	
PENSACOLA MARINE AIR STATION	
TALLAHASSEE, FLORIDA	
PENSACOLA, FLORIDA	
DRAWING NO.: 15878A	

TABLES

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: TOP OF TANK #681

TABLE 1

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
A-1	1'	<1	<1	<1	TAN SAND
A-1	4'	<1	<1	<1	TAN SAND
A-2	1'	<1	<1	<1	WHITE SAND
A-2	4'	<1	<1	<1	TAN SAND
A-3	1'	<1	<1	<1	TAN SAND
A-3	4'	<1	<1	<1	WHITE SAND
A-4	1'	<1	<1	<1	TAN SAND
A-4	4'	<1	<1	<1	TAN SAND
A-5	1'	<1	<1	<1	BROWN SAND
A-5	4'	<1	<1	<1	BROWN SAND
A-6	1'	<1	<1	<1	TAN SAND
A-6	4'	<1	<1	<1	TAN SAND
B-1	1'	<1	<1	<1	WHITE SAND
B-1	4'	<1	<1	<1	WHITE SAND
B-2	1'	<1	<1	<1	BROWN SAND
B-2	4'	<1	<1	<1	WHITE SAND
B-3	1'	<1	<1	<1	TAN SAND
B-3	4'	<1	<1	<1	TAN SAND
B-4	1'	<1	<1	<1	TAN SAND
B-4	4'	<1	<1	<1	TAN SAND
B-5	1'	<1	<1	<1	TAN SAND
B-5	4'	<1	<1	<1	TAN SAND
B-6	1'	<1	<1	<1	TAN SAND
B-6	4'	<1	<1	<1	TAN SAND
C-1	1'	<1	<1	<1	WHITE SAND
C-1	4'	<1	<1	<1	WHITE SAND
C-2	1'	<1	<1	<1	TAN SAND
C-2	4'	<1	<1	<1	TAN SAND
C-3	1'	<1	<1	<1	BROWN SAND
C-3	4'	<1	<1	<1	BROWN SAND
C-4	1'	<1	<1	<1	BROWN SAND
C-4	4'	<1	<1	<1	BROWN SAND
C-5	1'	<1	<1	<1	BROWN SAND
C-5	4'	<1	<1	<1	BROWN SAND
C-6	1'	<1	<1	<1	TAN SAND
C-6	4'	<1	<1	<1	BROWN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: TOP OF TANK #681

TABLE 1 (CONT.)

SOIL BORING I	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
D-1	1'	<1	<1	<1	WHITE SAND
D-1	4'	<1	<1	<1	WHITE SAND
D-2	1'	<1	<1	<1	BROWN SAND
D-2	4'	<1	<1	<1	BROWN SAND
D-3	1'	<1	<1	<1	BROWN SAND
D-3	4'	<1	<1	<1	BROWN SAND
D-4	1'	<1	<1	<1	TAN SAND
D-4	4'	<1	<1	<1	TAN SAND
D-5	1'	<1	<1	<1	TAN SAND
D-5	4'	<1	<1	<1	TAN SAND
D-6	1'	<1	<1	<1	TAN SAND
D-6	4'	<1	<1	<1	TAN SAND
E-1	1'	<1	<1	<1	TAN SAND
E-1	4'	<1	<1	<1	WHITE SAND
E-2	1'	<1	<1	<1	WHITE SAND
E-2	4'	<1	<1	<1	WHITE SAND
E-3	1'	<1	<1	<1	WHITE SAND
E-3	4'	<1	<1	<1	WHITE SAND
E-4	1'	<1	<1	<1	WHITE SAND
E-4	4'	<1	<1	<1	TAN SAND
E-5	1'	<1	<1	<1	WHITE SAND
E-5	4'	<1	<1	<1	WHITE SAND
E-6	1'	<1	<1	<1	WHITE SAND
E-6	4'	<1	<1	<1	TAN SAND
F-1	1'	<1	<1	<1	TAN SAND
F-1	4'	<1	<1	<1	WHITE SAND
F-2	1'	<1	<1	<1	TAN SAND
F-2	4'	<1	<1	<1	WHITE SAND
F-3	1'	<1	<1	<1	WHITE SAND
F-3	2.5'	<1	<1	<1	WHITE SAND
F-4	1'	<1	<1	<1	WHITE SAND
F-4	2'	<1	<1	<1	WHITE SAND
F-5	1'	<1	<1	<1	WHITE SAND
F-5	4'	<1	<1	<1	WHITE SAND
F-6	1'	<1	<1	<1	WHITE SAND
F-6	4'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: TOP OF TANK #682

TABLE 2

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
A-1	1'	<1	<1	<1	TAN SAND
A-1	4'	<1	<1	<1	TAN SAND
A-2	1'	<1	<1	<1	BROWN SAND
A-2	4'	<1	<1	<1	TAN SAND
A-3	1'	<1	<1	<1	WHITE SAND
A-3	4'	<1	<1	<1	TAN SAND
A-4	1'	<1	<1	<1	WHITE SAND
A-4	4'	<1	<1	<1	TAN SAND
A-5	1'	<1	<1	<1	TAN SAND
A-5	4'	<1	<1	<1	TAN SAND
A-6	1'	<1	<1	<1	TAN SAND
A-6	4'	<1	<1	<1	TAN SAND
B-1	1'	<1	<1	<1	WHITE SAND
B-1	4'	<1	<1	<1	WHITE SAND
B-2	1'	<1	<1	<1	TAN SAND
B-2	4'	<1	<1	<1	TAN SAND
B-3	1'	<1	<1	<1	WHITE SAND
B-3	4'	<1	<1	<1	WHITE SAND
B-4	1'	<1	<1	<1	WHITE SAND
B-4	4'	<1	<1	<1	WHITE SAND
B-5	1'	<1	<1	<1	WHITE SAND
B-5	4'	<1	<1	<1	WHITE SAND
B-6	1'	<1	<1	<1	WHITE SAND
B-6	4'	<1	<1	<1	TAN SAND
C-1	1'	<1	<1	<1	WHITE SAND
C-1	4'	<1	<1	<1	WHITE SAND
C-2	1'	<1	<1	<1	WHITE SAND
C-2	4'	<1	<1	<1	WHITE SAND
C-3	1'	<1	<1	<1	WHITE SAND
C-3	4'	<1	<1	<1	TAN SAND
C-4	1'	<1	<1	<1	WHITE SAND
C-4	4'	<1	<1	<1	WHITE SAND
C-5	1'	<1	<1	<1	TAN SAND
C-5	4'	<1	<1	<1	TAN SAND
C-6	1'	<1	<1	<1	WHITE SAND
C-6	4'	<1	<1	<1	WHITE SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: TOP OF TANK #682

TABLE 2 (CONT.)

SOIL BORING I	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
D-1	1'	<1	<1	<1	WHITE SAND
D-1	4'	<1	<1	<1	TAN SAND
D-2	1'	<1	<1	<1	WHITE SAND
D-2	4'	<1	<1	<1	WHITE SAND
D-3	1'	<1	<1	<1	WHITE SAND
D-3	4'	<1	<1	<1	WHITE SAND
D-4	1'	<1	<1	<1	WHITE SAND
D-4	4'	<1	<1	<1	WHITE SAND
D-5	1'	<1	<1	<1	WHITE SAND
D-5	4'	<1	<1	<1	WHITE SAND
D-6	1'	<1	<1	<1	WHITE SAND
D-6	4'	<1	<1	<1	WHITE SAND
E-1	1'	<1	<1	<1	WHITE SAND
E-1	4'	<1	<1	<1	WHITE SAND
E-2	1'	<1	<1	<1	TAN SAND
E-2	4'	<1	<1	<1	TAN SAND
E-3	1'	<1	<1	<1	WHITE SAND
E-3	4'	<1	<1	<1	WHITE SAND
E-4	1'	<1	<1	<1	WHITE SAND
E-4	4'	<1	<1	<1	TAN SAND
E-5	1'	<1	<1	<1	WHITE SAND
E-5	4'	<1	<1	<1	WHITE SAND
E-6	1'	<1	<1	<1	WHITE SAND
E-6	4'	<1	<1	<1	WHITE SAND
F-1	1'	<1	<1	<1	WHITE SAND
F-1	4'	<1	<1	<1	WHITE SAND
F-2	1'	<1	<1	<1	WHITE SAND
F-2	4'	<1	<1	<1	WHITE SAND
F-3	1'	<1	<1	<1	WHITE SAND
F-3	4'	<1	<1	<1	WHITE SAND
F-4	1'	<1	<1	<1	WHITE SAND
F-4	2'	<1	<1	<1	WHITE SAND
F-5	1'	<1	<1	<1	WHITE SAND
F-5	4'	<1	<1	<1	WHITE SAND
F-6	1'	<1	<1	<1	WHITE SAND
F-6	4'	<1	<1	<1	WHITE SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS TANK #681

TABLE 3

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
SB-1	1'	<1	<1	<1	WHITE SAND
SB-1	4'	<1	<1	<1	WHITE SAND
SB-1	7'	<1	<1	<1	TAN SAND
SB-1	10'	<1	<1	<1	TAN SAND
SB-1	13'	<1	<1	<1	WHITE SAND
SB-1	16'	<1	<1	<1	WHITE SAND
SB-1	18'	<1	<1	<1	WHITE SAND
SB-2	1'	<1	<1	<1	WHITE SAND
SB-2	4'	<1	<1	<1	WHITE SAND
SB-2	7'	<1	<1	<1	TAN SAND
SB-2	10'	<1	<1	<1	TAN SAND
SB-2	13'	<1	<1	<1	TAN SAND
SB-2	16'	<1	<1	<1	TAN SAND
SB-2	18'	<1	<1	<1	TAN SAND
SB-3	1'	<1	<1	<1	WHITE SAND
SB-3	4'	<1	<1	<1	TAN SAND
SB-3	7'	<1	<1	<1	TAN SAND
SB-3	10'	<1	<1	<1	TAN SAND
SB-3	13'	<1	<1	<1	TAN SAND
SB-3	16'	<1	<1	<1	TAN SAND
SB-3	18'	<1	<1	<1	TAN SAND
SB-4	1'	<1	<1	<1	WHITE SAND
SB-4	4'	<1	<1	<1	WHITE SAND
SB-4	7'	<1	<1	<1	TAN SAND
SB-4	10'	<1	<1	<1	TAN SAND
SB-4	13'	<1	<1	<1	TAN SAND
SB-4	16'	<1	<1	<1	TAN SAND
SB-4	18'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS TANK #681

TABLE 3 (CONT.)

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
SB-5	1'	<1	<1	<1	WHITE SAND
SB-5	4'	<1	<1	<1	TAN SAND
SB-5	7'	<1	<1	<1	TAN SAND
SB-5	10'	<1	<1	<1	TAN SAND
SB-5	13'	<1	<1	<1	WHITE SAND
SB-5	16'	<1	<1	<1	WHITE SAND
SB-5	18'	<1	<1	<1	WHITE SAND
SB-6	1'	<1	<1	<1	TAN SAND
SB-6	4'	<1	<1	<1	TAN SAND
SB-6	7'	<1	<1	<1	TAN SAND
SB-6	10'	<1	<1	<1	WHITE SAND
SB-6	13'	<1	<1	<1	WHITE SAND
SB-6	16'	<1	<1	<1	WHITE SAND
SB-6	18'	<1	<1	<1	WHITE SAND
SB-7	1'	<1	<1	<1	TAN SAND
SB-7	4'	<1	<1	<1	TAN SAND
SB-7	7'	<1	<1	<1	TAN SAND
SB-7	10'	<1	<1	<1	TAN SAND
SB-7	13'	<1	<1	<1	TAN SAND
SB-7	16'	<1	<1	<1	WHITE SAND
SB-7	18'	<1	<1	<1	WHITE SAND
SB-8	1'	<1	<1	<1	TAN SAND
SB-8	4'	<1	<1	<1	TAN SAND
SB-8	7'	<1	<1	<1	TAN SAND
SB-8	10'	<1	<1	<1	TAN SAND
SB-8	13'	<1	<1	<1	TAN SAND
SB-8	16'	<1	<1	<1	TAN SAND
SB-8	18'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS TANK #682

TABLE 4

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
SB-9	1'	<1	<1	<1	WHITE SAND
SB-9	4'	<1	<1	<1	TAN SAND
SB-9	7'	<1	<1	<1	TAN SAND
SB-9	10'	<1	<1	<1	TAN SAND
SB-9	13'	<1	<1	<1	TAN SAND
SB-9	16'	<1	<1	<1	TAN SAND
SB-9	18'	<1	<1	<1	TAN SAND
SB-10	1'	<1	<1	<1	WHITE SAND
SB-10	4'	<1	<1	<1	TAN SAND
SB-10	7'	<1	<1	<1	WHITE SAND
SB-10	10'	<1	<1	<1	WHITE SAND
SB-10	13'	<1	<1	<1	WHITE SAND
SB-10	16'	<1	<1	<1	WHITE SAND
SB-10	18'	<1	<1	<1	WHITE SAND
SB-11	1'	<1	<1	<1	TAN SAND
SB-11	4'	<1	<1	<1	TAN SAND
SB-11	7'	<1	<1	<1	TAN SAND
SB-11	10'	<1	<1	<1	TAN SAND
SB-11	13'	<1	<1	<1	TAN SAND
SB-11	16'	<1	<1	<1	TAN SAND
SB-11	18'	<1	<1	<1	TAN SAND
SB-12	1'	<1	<1	<1	WHITE SAND
SB-12	4'	<1	<1	<1	WHITE SAND
SB-12	7'	<1	<1	<1	WHITE SAND
SB-12	10'	<1	<1	<1	WHITE SAND
SB-12	13'	<1	<1	<1	WHITE SAND
SB-12	16'	<1	<1	<1	WHITE SAND
SB-12	18'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS TANK #682

TABLE 4 (CONT)

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
SB-13	1'	<1	<1	<1	TAN SAND
SB-13	4'	<1	<1	<1	TAN SAND
SB-13	7'	<1	<1	<1	TAN SAND
SB-13	10'	<1	<1	<1	TAN SAND
SB-13	13'	<1	<1	<1	TAN SAND
SB-13	16'	<1	<1	<1	TAN SAND
SB-13	18'	<1	<1	<1	TAN SAND
SB-14	1'	<1	<1	<1	TAN SAND
SB-14	4'	<1	<1	<1	TAN SAND
SB-14	7'	<1	<1	<1	TAN SAND
SB-14	10'	<1	<1	<1	TAN SAND
SB-14	13'	<1	<1	<1	TAN SAND
SB-14	16'	<1	<1	<1	TAN SAND
SB-14	18'	<1	<1	<1	BROWN SAND
BS-15	1'	<1	<1	<1	WHITE SAND
BS-15	4'	<1	<1	<1	WHITE SAND
BS-15	7'	<1	<1	<1	TAN SAND
BS-15	10'	<1	<1	<1	TAN SAND
BS-15	13'	<1	<1	<1	TAN SAND
BS-15	16'	<1	<1	<1	TAN SAND
BS-15	18'	<1	<1	<1	TAN SAND
SB-16	1'	<1	<1	<1	WHITE SAND
SB-16	4'	<1	<1	<1	WHITE SAND
SB-16	7'	<1	<1	<1	TAN SAND
SB-16	10'	<1	<1	<1	TAN SAND
SB-16	13'	<1	<1	<1	TAN SAND
SB-16	16'	<1	<1	<1	TAN SAND
SB-16	18'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: PRODUCT LINES TO TANK #681
 AND TANK #682

TABLE 5

SOIL BORING ID	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
SB-17	1'	<1	<1	<1	TAN SAND
SB-17	4'	<1	<1	<1	TAN SAND
SB-17	7'	<1	<1	<1	TAN SAND
SB-17	10'	<1	<1	<1	TAN SAND
SB-18	1'	<1	<1	<1	TAN SAND
SB-18	4'	<1	<1	<1	TAN SAND
SB-18	7'	<1	<1	<1	TAN SAND
SB-18	10'	<1	<1	<1	TAN SAND
SB-19	1'	<1	<1	<1	TAN SAND
SB-19	4'	<1	<1	<1	TAN SAND
SB-19	7'	<1	<1	<1	TAN SAND
SB-19	10'	<1	<1	<1	TAN SAND
SB-20	1'	<1	<1	<1	TAN SAND
SB-20	4'	<1	<1	<1	WHITE SAND
SB-20	7'	<1	<1	<1	TAN SAND
SB-20	10'	<1	<1	<1	TAN SAND
SB-21	1'	<1	<1	<1	TAN SAND
SB-21	4'	<1	<1	<1	WHITE SAND
SB-21	7'	<1	<1	<1	TAN SAND
SB-21	10'	<1	<1	<1	TAN SAND
SB-22	1'	<1	<1	<1	TAN SAND
SB-22	4'	<1	<1	<1	WHITE SAND
SB-22	7'	<1	<1	<1	WHITE SAND
SB-22	10'	<1	<1	<1	WHITE SAND
SB-23	1'	<1	<1	<1	TAN SAND
SB-23	4'	<1	<1	<1	TAN SAND
SB-23	7'	<1	<1	<1	TAN SAND
SB-23	10'	<1	<1	<1	TAN SAND
SB-24	1'	<1	<1	<1	TAN SAND
SB-24	4'	<1	<1	<1	TAN SAND
SB-24	7'	<1	<1	<1	TAN SAND
SB-24	10'	<1	<1	<1	TAN SAND

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

PENSACOLA NAVAL AIR STATION
 FDEP FACILITY ID # 179202973
 PENSACOLA NAS: TEMPORARY WELL LOGS

TABLE 6'

TEMPORARY WELL #	DEPTH (FT)	OVA (PPM)	BIO (PPM)	TVH (PPM)	SOIL DESCRIPTION
TW-1	5'	<1	<1	<1	BLACK SAND
TW-1	10'	<1	<1	<1	DARK GREY SAND
TW-1	15'	<1	<1	<1	DARK GREY SAND
TW-1	20'	<1	<1	<1	TAN SAND
TW-1	25'	<1	<1	<1	LIGHT GREY SAND (DAMP)
TW-1	30'	<1	<1	<1	LIGHT GREY SAND (WET)
TW-2	5'	<1	<1	<1	BROWN SAND
TW-2	10'	<1	<1	<1	BROWN SAND
TW-2	15'	<1	<1	<1	TAN SAND
TW-2	20'	2.8	<1	2.8	WHITE SAND (DAMP)
TW-2	25'	1.4	<1	1.4	WHITE SAND (WET)
TW-3	5'	<1	<1	<1	BROWN SAND
TW-3	10'	<1	<1	<1	TAN SAND
TW-3	15'	<1	<1	<1	TAN SAND
TW-3	20'	<1	<1	<1	WHITE SAND (DAMP)
TW-3	25'	<1	<1	<1	WHTIE SAND (WET)
TW-4	5'	<1	<1	<1	TAN SAND
TW-4	10'	<1	<1	<1	TAN SAND
TW-4	15'	<1	<1	<1	TAN SAND
TW-4	20'	<1	<1	<1	TAN SAND (DAMP)
TW-4	25'	94	<1	94	LIGHT GREY SAND (WET)

OVA: ORGANIC VOLATILE ANALYZER
 BIO: BIOGENIC READING
 TVH: TOTAL VOLATILE HYDROCARBONS
 PPM: PARTS PER MILLION

APPENDIX A



Florida Department of Environmental Regulation

7141 Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Form No. Closure Assessment Form
Effective Date: December 10, 1990
DEN Application No. (Filed on by DEN)

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

Please Print or Type
Complete All Applicable Blanks

- 1. Date: July 19, 1995
2. DER Facility ID Number: 17 / 9202973
3. County: Escambia
4. Facility Name: Pensacola Naval Air Station
5. Facility Owner: United States Navy
6. Facility Address: 190 Radford Blvd. Pensacola, FL 32508
7. Mailing Address: 190 Radford Blvd.
8. Telephone Number: (904) 452-3900
9. Facility Operator: USN
10. Are the Storage Tank(s): (Circle one or both) A. Aboveground or B. Underground
11. Type of Product(s) Stored: Diesel Fuel Marine
12. Were the Tank(s): (Circle one) A. Replaced B. Removed C. Closed in Place D. Upgraded (aboveground tank)
13. Number of Tanks Closed: 2 (Tank#681 & Tank#682)
14. Age of Tanks: 52 years

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/kero?
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? (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 1/4 of a mile radius of the facility?
11. Is there a surface water body within 1/4 mile radius of the site? If yes, indicate distance:

DCA Form	17-761.900(8)
Form Title	Closure Assessment Form
Effective Date	December 10, 1990
DCA Application No.	Filed in by

12. A detailed drawing or sketch of the facility that includes the storage system location, monitoring wells, buildings, storm drains, sample location 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

7/19/95

Date

Signature of Person Performing Assessment

James A. Stidham-President-Jim Stidham & Associates, Inc.

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)

APPENDIX B



Florida Department of Environmental Regulation

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

DER Form #	17-761202(1)
Form Title	Discharge Reporting Form
Effective Date	December 10, 1990
DER Approval No.	
	If used by DER

Discharge Reporting Form

Use this form to notify the Department of Environmental Regulation of:

1. Results of tank tightness testing that exceed allowable tolerances within ten days of receipt of test result.
2. Petroleum discharges exceeding 25 gallons on pervious surfaces as described in Section 17-761.460 F.A.C. within one working day of discovery.
3. Hazardous substance (CERCLA regulated), discharges exceeding applicable reportable quantities established in 17-761.460(2) F.A.C., within one working day of the discovery.
4. Within one working day of discovery of suspected releases confirmed by: (a) released regulated substances or pollutants discovered in the surrounding area, (b) unusual and unexplained storage system operating conditions, (c) monitoring results from a leak detection meter or from a tank closure assessment that indicate a release may have occurred, or (d) manual tank gauging results for tanks of 250 gal or less, exceeding ten gallons per weekly test or five gallons averaged over four consecutive weekly tests.

Mail to the DER District Office in your area listed on the reverse side of this form

PLEASE PRINT OR TYPE
Complete all applicable blanks

1. DER Facility ID Number: 17 / 9202973 2. Tank Number: 681 & 682 3. Date: 7 / 19 / 95
4. Facility Name: Pensacola Naval Air Station
Facility Owner or Operator: United States Navy
Facility Address: 190 Radford Blvd. Pensacola, FL 32508
Telephone Number: (904) 452-3900 County: Escambia
Mailing Address: 190 Radford Blvd. Pensacola, FL 32508
5. Date of receipt of test results or discovery: July 5, 1995 7 / 5 / 95 month/day/yr
6. Method of initial discovery. (circle one only)
A. Liquid detector (automatic or manual) D. Emptying and Inspection. F. Vapor or visible signs of a discharge in the vicinity
B. Vapor detector (automatic or manual) E. Inventory control. **G. Closure: Monitor Well** (expl: _____)
C. Tightness test (underground tanks only). H. Other: _____
7. Estimated number of gallons discharged: Unknown
8. What part of storage system has leaked? (circle all that apply) A. Dispenser B. Pipe C. Fitting D. Tank **E. Unknown**
9. Type of regulated substance discharged. (circle one)
A. leaded gasoline **D. vehicular diesel** L. used/waste oil V. hazardous substance includes pesticides, ammonium chloride and derivatives (write in name or Chemical Abstract Service CAS number) _____
B. unleaded gasoline F. aviation gas M. diesel Z. other (write in name) _____
C. gasohol G. jet fuel O. new/lube oil
10. Cause of leak. (circle all that apply)
A. Unknown C. Loose connection E. Puncture G. Spill _____ I. Other (specify) _____
B. Split D. Corrosion F. Installation failure H. Overfill _____
11. Type of financial responsibility. (circle one)
A. Third party insurance provided by the state insurance contractor **C. Not applicable**
B. Self-insurance pursuant to Chapter 17-769.500 F.A.C. D. None
12. To the best of my knowledge and belief all information submitted on this form is true, accurate, and complete.

Printed Name of Owner, Operator or Authorized Representative

Signature of Owner, Operator or Authorized Representative

APPENDIX C

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
Tel 904 / 296-3007
Fax 904 / 296-6210



Laboratories

DHRS Certification No. E82277, 82417

CLIENT : Jim Stidham & Associates
ADDRESS: P.O. Box 13861
Tallahassee, FL 32317

REPORT # : JR9055
DATE SUBMITTED: July 1, 1995
DATE REPORTED : July 5, 1995

PAGE 1 OF 6

ATTENTION: Chris Brockmeier

SAMPLE IDENTIFICATION

Aqueous samples submitted and
identified by client as:

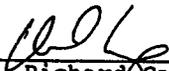
PROJECT #: 3900

Pensacola NAS

06/29/95

#1	- MW-1 - GRAB @ 8:00
#2	- TW-1 - GRAB @ 9:30
#3	- TW-2 - GRAB @ 11:00
#4	- TW-3 - GRAB @ 11:45
#5	- TW-4 - GRAB @ 12:30

LABORATORY MANAGER


Richard Camp

ENCO LABORATORIES

REPORT # : JR9055
 DATE REPORTED: July 5, 1995
 REFERENCE : 3900
 PROJECT NAME : Pensacola NAS

PAGE 2 OF 6

RESULTS OF ANALYSIS

EPA METHOD 602 -
VOLATILE AROMATICS

	<u>MW-1</u>	<u>TW-1</u>	<u>TW-2 *</u>	<u>UNITS</u>
Methyl tert-butyl ether	1 U	1 U	1 U	µg/L
Benzene	1 U	1 U	1 U	µg/L
Toluene	1 U	1 U	1 U	µg/L
Chlorobenzene	1 U	1 U	1 U	µg/L
Ethylbenzene	1 U	1 U	1 U	µg/L
m-Xylene & p-Xylene	1 U	1 U	1	µg/L
o-Xylene	1 U	1 U	3	µg/L
1,3-Dichlorobenzene	1 U	1 U	1 U	µg/L
1,4-Dichlorobenzene	1 U	1 U	1 U	µg/L
1,2-Dichlorobenzene	1 U	1 U	1 U	µg/L
Total Xylenes	1 U	1 U	4	µg/L
<u>Surrogate:</u>	<u>% REC</u>	<u>% REC</u>	<u>% REC</u>	<u>LIMIT</u>
Bromofluorobenzene (surr)	88	88	92	64-12
Date Analyzed	07/02/95	07/03/95	07/03/95	

* = Results confirmed by secondary analysis
 U = Compound was analyzed for but not detected

ENCO LABORATORIES
 REPORT # : JR9055
 DATE REPORTED: July 5, 1995
 REFERENCE : 3900
 PROJECT NAME : Pensacola NAS

PAGE 3 OF 6

RESULTS OF ANALYSIS

EPA METHOD 610 -

POLY AROMATIC HYDROCARBONS

	<u>MW-1</u>	<u>TW-1</u>	<u>TW-2</u>	<u>UNITS</u>
Naphthalene	10 U	10 U	10 U	µg/L
2-Methylnaphthalene	10 U	10 U	10 U	µg/L
1-Methylnaphthalene	10 U	10 U	10 U	µg/L
Acenaphthylene	10 U	10 U	10 U	µg/L
Acenaphthene	10 U	10 U	10 U	µg/L
Fluorene	10 U	10 U	10 U	µg/L
Phenanthrene	10 U	10 U	10 U	µg/L
Anthracene	10 U	10 U	10 U	µg/L
Fluoranthene	10 U	10 U	10 U	µg/L
Pyrene	10 U	10 U	10 U	µg/L
Chrysene	10 U	10 U	10 U	µg/L
Benzo(a)anthracene	10 U	10 U	10 U	µg/L
Benzo(b)fluoranthene	10 U	10 U	10 U	µg/L
Benzo(k)fluoranthene	10 U	10 U	10 U	µg/L
Benzo(a)pyrene	10 U	10 U	10 U	µg/L
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	µg/L
Dibenzo(a,h)anthracene	10 U	10 U	10 U	µg/L
Benzo(g,h,i)perylene	10 U	10 U	10 U	µg/L

Surrogate:

	<u>% REC</u>	<u>% REC</u>	<u>% REC</u>	<u>LIMIT</u>
2-Fluorobiphenyl (surr)	46	59	49	34-14
Date Extracted	07/03/95	07/03/95	07/03/95	
Date Analyzed	07/03/95	07/03/95	07/03/95	

U = Compound was analyzed for but not detected

ENCO LABORATORIES

REPORT # : JR9055
 DATE REPORTED: July 5, 1995
 REFERENCE : 3900
 PROJECT NAME : Pensacola NAS

PAGE 4 OF 6

RESULTS OF ANALYSIS

EPA METHOD 602 -
VOLATILE AROMATICS

	<u>TW-3</u>	<u>TW-4</u>	<u>LAB BLANK</u>	<u>UNITS</u>
Methyl tert-butyl ether	1 U	1 U	1 U	µg/L
Benzene	1 U	2	1 U	µg/L
Toluene	1 U	5	1 U	µg/L
Chlorobenzene	1 U	1 U	1 U	µg/L
Ethylbenzene	1 U	81	1 U	µg/L
m-Xylene & p-Xylene	1 U	108	1 U	µg/L
o-Xylene	1 U	40	1 U	µg/L
1,3-Dichlorobenzene	1 U	1 U	1 U	µg/L
1,4-Dichlorobenzene	1 U	1 U	1 U	µg/L
1,2-Dichlorobenzene	1 U	1 U	1 U	µg/L
Total Xylenes	1 U	148	1 U	µg/L
<u>Surrogate:</u>	<u>% REC</u>	<u>% REC</u>	<u>% REC</u>	<u>LIMIT</u>
Bromofluorobenzene (surr)	88	80	88	64-12
Date Analyzed	07/03/95	07/03/95	07/02/95	

U = Compound was analyzed for but not detected

ENCO LABORATORIES

REPORT # : JR9055
 DATE REPORTED: July 5, 1995
 REFERENCE : 3900
 PROJECT NAME : Pensacola NAS

PAGE 5 OF 6

RESULTS OF ANALYSIS

EPA METHOD 610 -

POLY AROMATIC HYDROCARBONS

	<u>TW-3</u>	<u>TW-4 *</u>	<u>LAB BLANK</u>	<u>UNITS</u>
Naphthalene	10 U	100 U	10 U	µg/L
2-Methylnaphthalene	10 U	100 U	10 U	µg/L
1-Methylnaphthalene	10 U	100 U	10 U	µg/L
Acenaphthylene	10 U	100 U	10 U	µg/L
Acenaphthene	10 U	100 U	10 U	µg/L
Fluorene	10 U	100 U	10 U	µg/L
Phenanthrene	10 U	100 U	10 U	µg/L
Anthracene	10 U	100 U	10 U	µg/L
Fluoranthene	10 U	100 U	10 U	µg/L
Pyrene	10 U	100 U	10 U	µg/L
Chrysene	10 U	100 U	10 U	µg/L
Benzo(a)anthracene	10 U	100 U	10 U	µg/L
Benzo(b)fluoranthene	10 U	100 U	10 U	µg/L
Benzo(k)fluoranthene	10 U	100 U	10 U	µg/L
Benzo(a)pyrene	10 U	100 U	10 U	µg/L
Indeno(1,2,3-cd)pyrene	10 U	100 U	10 U	µg/L
Dibenzo(a,h)anthracene	10 U	100 U	10 U	µg/L
Benzo(g,h,i)perylene	10 U	100 U	10 U	µg/L

Surrogate:

	<u>% REC</u>	<u>% REC</u>	<u>% REC</u>	<u>LIMIT</u>
2-Fluorobiphenyl (surr)	58	43	78	34-14
Date Extracted	07/03/95	07/03/95	07/03/95	
Date Analyzed	07/03/95	07/05/95	07/03/95	

= Sample chromatogram reflects characteristic diesel pattern; lower dilution impractical due to non-target constituents.

U = Compound was analyzed for but not detected

ENCO LABORATORIES
 REPORT # : JR9055
 DATE REPORTED: July 5, 1995
 REFERENCE : 3900
 PROJECT NAME : Pensacola NAS

PAGE 6 OF 6

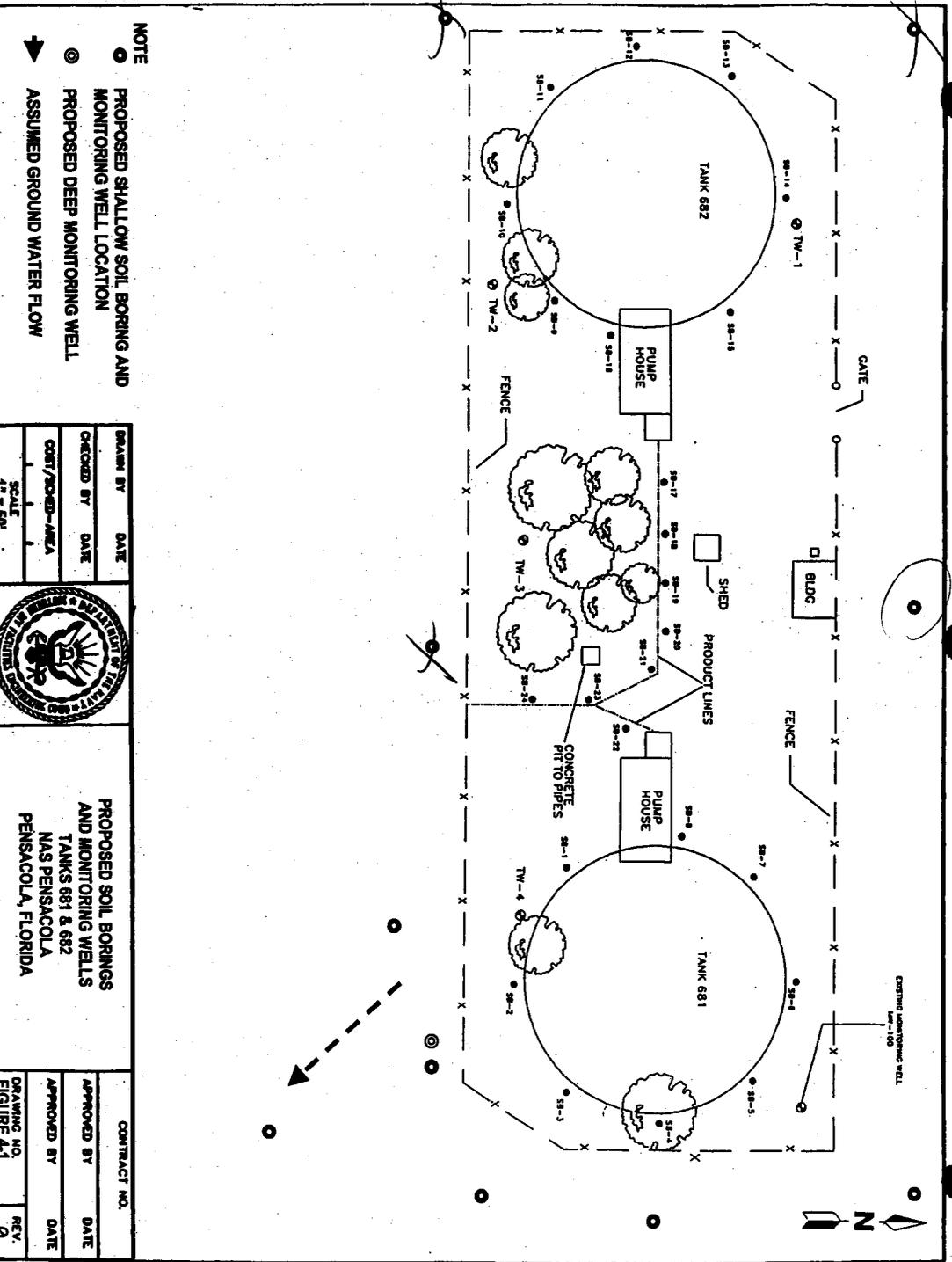
QUALITY CONTROL DATA

<u>Parameter</u>	<u>% RECOVERY</u> <u>MS/MSD/LCS</u>	<u>ACCEPT</u> <u>LIMITS</u>	<u>% RPD</u> <u>MS/MSD</u>	<u>ACCEPT</u> <u>LIMITS</u>
<u>EPA Method 602</u>				
Benzene	96/ 96/ 94	69-134	<1	17
Toluene	98/ 98/ 96	52-144	<1	14
Ethylbenzene	88/ 90/ 94	33-157	2	14
m-Xylene & p-Xylene	104/103/101	50-151	<1	14
<u>EPA Method 610</u>				
2-Methylnaphthalene	77/ 72/ 82	40-130	7	31
1-Methylnaphthalene	68/ 66/ 76	47-146	3	32
Acenaphthylene	76/ 78/ 88	52-148	2	2
Fluorene	76/ 81/ 74	70-144	6	17
Pyrene	97/ 97/100	62-170	<1	20

Environmental Conservation Laboratories Comprehensive QA Plan #910190G

< = Less Than
 MS = Matrix Spike
 MSD = Matrix Spike Duplicate
 LCS = Laboratory Control Standard
 RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory.



- NOTE**
- PROPOSED SHALLOW SOIL BORING AND MONITORING WELL LOCATION
 - ⊙ PROPOSED DEEP MONITORING WELL
 - ➔ ASSUMED GROUND WATER FLOW

DRAWN BY	DATE
CHECKED BY	DATE
COST/SCOPE-A&E/A	
SCALE	
1" = 50'	



PROPOSED SOIL BORINGS
AND MONITORING WELLS
TANKS 681 & 682
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO.	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV.
FIGURE 4-1	0

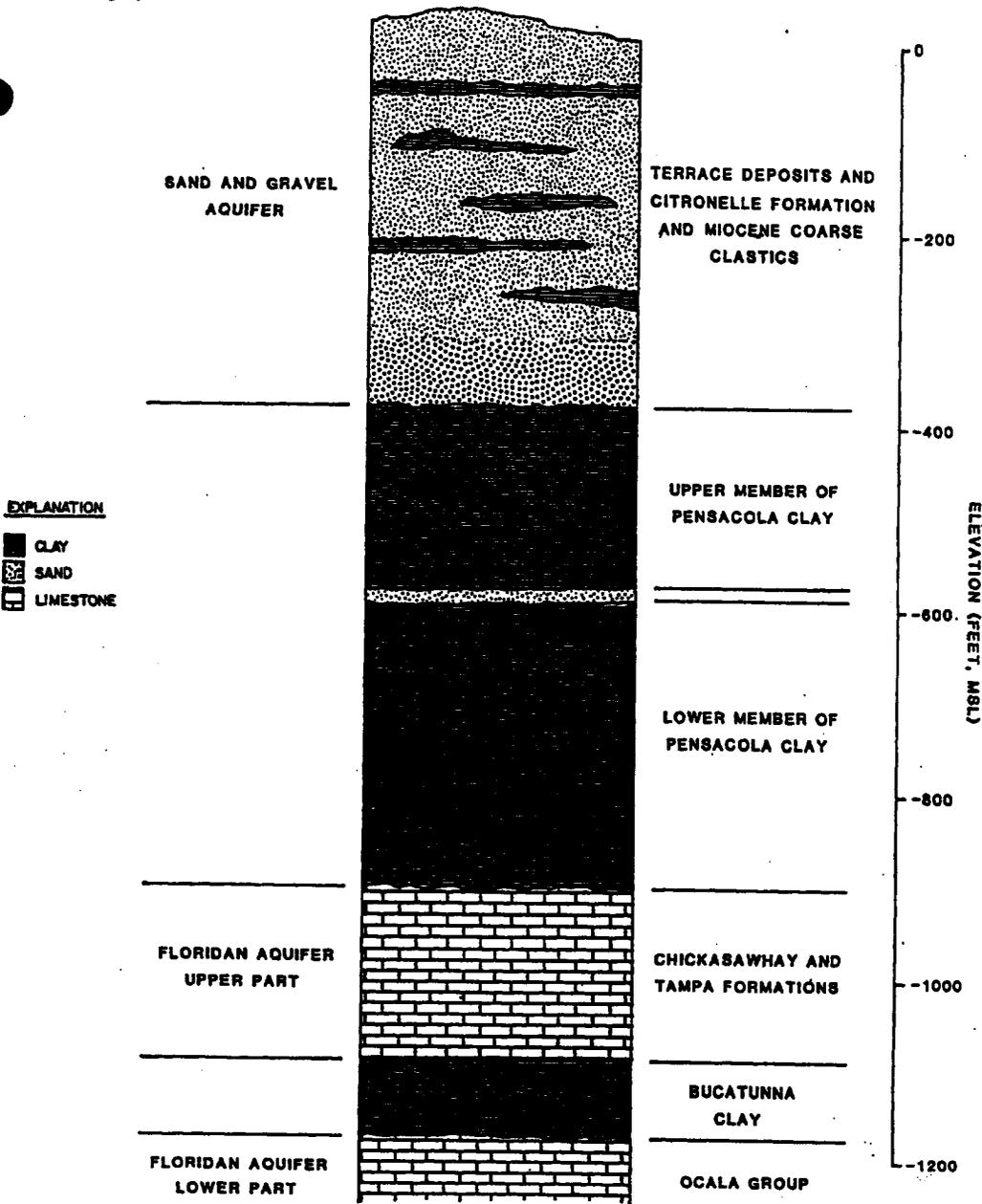


Figure 2. Generalized Geologic Column for the NAS Pensacola Area.

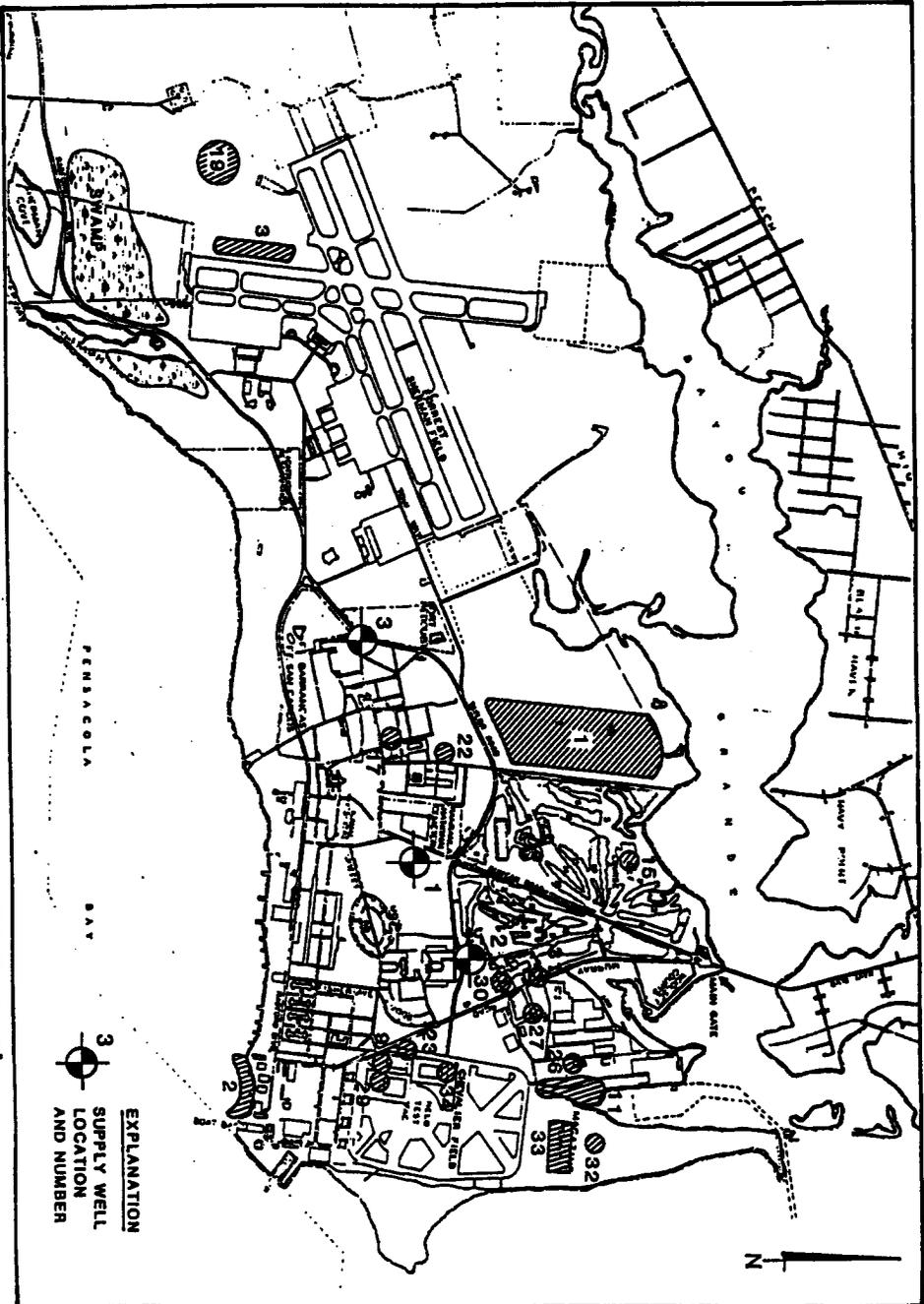


Figure 1. Locations of IAS sites and Water-Supply Wells at NWS Pensacola.

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
 2048 W. Park Place Blvd.
 Stone Mountain, GA 30087
 NAS / Pensacola, FL
 CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99482

BTX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

SAMPLE ID	DATE COLLECTED	DATE ANALYZED	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZ (ug/L)	XYLENES (ug/L)	TOT. BTX (ug/L)	Surrogate Recovery (%)	Data Qualifiers	POL
METHOD BLANK	-----	10/13/99	ND	ND	ND	ND	ND	105.4		2.0
SB01GW	10/13/99	10/13/99	ND	ND	ND	ND	ND	114.2		2.0
SB02GW	10/13/99	10/13/99	ND	ND	ND	ND	ND	103.2		2.0
SB03GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	105.1		2.0
SB04GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	98.8		2.0
SB05GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	106.9		2.0
SB06GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	105.3		2.0
SB07GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	77.7		2.0
SB08GW	10/14/99	10/14/99	ND	ND	ND	ND	ND	100.8		2.0
SB09GW	10/15/99	10/15/99	ND	ND	ND	5.8	5.8	78.7		2.0
SB10GW	10/15/99	10/15/99	ND	ND	3.0	2.4	5.4	102.7		2.0
SB05GW (Duplicate)	10/14/99	10/14/99	ND	ND	ND	ND	ND	85.8		2.0

ND INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PRACTICAL QUANTITATION LIMITS (PQL'S)

ANALYSIS PERFORMED IN TEG'S CERTIFIED LABORATORY
 ANALYSIS PERFORMED BY: Henry C. Greene

DATA QUALIFIER#

CTO 098.xls

QA/QC DATA REPORT

Tetra Tech NUS, Inc.
2046 W. Park Place Blvd.
Stone Mountain, GA 30087

NAS / Pensacola, FL
CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99482

BTEX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPS)

DATE ANALYZED:
SAMPLE SPOKED:

BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZ (ug/L)	XYLENES (ug/L)
-------------------	-------------------	---------------------	-------------------

MATRIX SPIKE

SPIKED CONC.	50.0	50.0	50.0	150.0
MEASURED CONC.				
% RECOVERY	0.0%	0.0%	0.0%	0.0%

MATRIX SPIKE DUPLICATE

SPIKED CONC.	50.0	50.0	50.0	150.0
MEASURED CONC.				
% RECOVERY	0.0%	0.0%	0.0%	0.0%

RELATIVE PERCENT DIFFERENCE (RPD)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
--------------------------------------	---------	---------	---------	---------

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
2046 W. Park Place Blvd.
Stone Mountain, GA 30087

NAS / Pensacola, FL
CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99482

BTEX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

MI = MATRIX INTERFERENCE

DO = SURROGATE SPIKE DILUTED OUT

D = ALL SAMPLE VALUES OBTAINED BY DILUTION, POL IS ADJUSTED ACCORDINGLY

d = INDIVIDUAL VALUE OBTAINED BY DILUTION

E = ESTIMATED CONCENTRATION(S)

QA/QC DATA REPORT

Tetra Tech NUS, Inc.
2046 W. Park Place Blvd.
Stone Mountain, GA 30087

NAS / Pensacola, FL
CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99482

BTEX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

PRELIMINARY DATA REPORT

Tetra Tech NUS, Inc.
2046 W. Park Place Blvd.
Stone Mountain, GA 30087

NAS / Pensacola, FL
CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99482

BTEX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

QA/QC DATA REPORT

Tetra Tech NUS, Inc.
2046 W. Park Place Blvd.
Stone Mountain, GA 30087

NAS / Panasola, FL
CLIENT PROJECT # CTO 098

TEG PROJECT # 3-99A82

BTEX ANALYSIS OF WATER (EPA METHOD 8021B)

DATA REPORTED IN MICROGRAMS PER LITER (PPB)
