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RELEASE DETECTION PROGRAM FOR UNDERGROUND STORAGE TANKS NAS SAUFLEY FIELD FL

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E.C. JORDAN COMPANY

RELEASE DETECTION PROGRAM FOR UNDERGROUND STORAGE TANKS

NAVAL AIR STATION SAUFLEY FIELD
PENSACOLA, FLORIDA

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FOREWORD

Subtitle I of the Hazardous and Solid Waste Amendments (HSWA) of 1984 to the Solid Waste Disposal Act (SWDA) of 1965 established a national regulatory program for managing underground storage tanks (USTs) containing hazardous materials, especially petroleum products. Hazardous wastes stored in USTs were already regulated under the Resource Conservation and Recovery Act (RCRA) of 1976, which was also an amendment to SWDA. Subtitle I requires that the U.S. Environmental Protection Agency (USEPA) promulgate UST regulations. The program was designed to be administered by the states, who were allowed to develop more stringent, but not less stringent standards. Local governments were permitted to establish regulatory programs and standards that are more stringent, but not less stringent than either State or Federal regulations. The USEPA UST regulations are found in the Code of Federal Regulations, Title 40, Part 280 (40 CFR 280) (Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks) and 40 CFR 281 (Approval of State Underground Storage Tank Programs). 40 CFR 280 was revised and published on 23 September 1988 and became effective 22 December 1988.

The Navy's UST Program policy is to comply with all Federal, State, and local regulations pertaining to USTs. This manual was prepared to be used as a tool for the Navy and Marine Corps activities to maintain compliance with the regulatory agencies on release detection requirements.

Questions regarding this report should be addressed to the Commanding Officer, Naval Air Station (NAS) Saufley Field or to Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), Code 1152, at AUTOVON 563-0580 or 803-743-0580.

EXECUTIVE SUMMARY

The Release Detection Program was designed by Southern Division for the purpose of investigating the potential for leaking petroleum and hazardous substances from underground storage tanks (USTs) at naval activities in Florida. The program was initiated to satisfy Federal and State UST regulation requirements and a State Alternate Procedure Program. For the Release Detection Program, standardized record keeping forms were developed for tank inventory requirements, precision tank testing, and monitoring well inspections. Standard Operating Procedures were developed that provide the naval activities with specific information needed for complying with regulatory inspection, testing, and record keeping. Finally, a demonstration of monitoring well inspection procedures and UST inventory procedures was provided to key personnel at the activity.

At Naval Air Station Saufley Field the Release Detection Program included the following.

1. Inventory records were assessed for the Motor Pool and the Base Exchange Service Station. Specific recommendations were made to each facility to bring their inventory and record keeping procedures into regulatory compliance.

2. Precision tank testing was conducted on three USTs, 2439-A through 2439-C. The test results indicate that the tanks are tight, but product lines of these tanks could not be isolated for testing.

3. Compliance monitoring wells were installed around tank 2439-D at the Base Exchange Service Station. No apparent petroleum contamination was encountered in the soils or groundwater at this site.

ACKNOWLEDGMENTS

In preparing this manual, the Underground Storage Tank personnel at E.C. Jordan commends the unwavering support, assistance, and cooperation provided by the personnel at NAS Saufley Field, Florida and Southern Division, Naval Facilities Engineering Command. In particular, we acknowledge the outstanding effort, dedication, and professionalism provided by the following people in the preparation of this manual.

NAME	TITLE	POSITION	LOCATION
John Albrecht	Env. Engineer	Engineer in Charge	SOUTHNAVFACENGCOM
Warrant Officer Giger	Environmental Coordinator	Environmental Coordinator	NAS Saufley

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ACRONYMS, INITIALISMS, AND ABBREVIATIONS

The following list contains many of the acronyms, initialisms, abbreviations, and units of measure used in this report.

ACRONYMS, INITIALISMS, AND ABBREVIATIONS

API	American Petroleum Institute
bls	below land surface
CFR	Code of Federal Regulations
CNO	Chief of Naval Operations
DOD	Department of Defense
EFD	Engineering Field Division
FAC	Florida Administrative Code
FDER	Florida Department of Environmental Regulation
HSWA	Hazardous and Solid Waste Amendments of 1984
I.D.	inside diameter
Jordan	E.C. Jordan Co.
JP	jet petroleum
MOGAS	motor gasoline
NAS	Naval Air Station
OVA	Organic Vapor Analyzer
O.D.	outside diameter
ppm	parts per million
psi	pounds per square inch
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
SOP	standard operating procedure(s)
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SouthDIV	Southern Division Naval Facilities Engineering Command
STMPs	Storage Tank Management Plans
SWDA	Solid Waste Disposal Act of 1965
UIC	uniform identification code
USEPA	United States Environmental Protection Agency
UST	underground storage tank

1.0 INTRODUCTION

The Naval Facilities Engineering Command, Southern Division (SouthDIV), has contracted with E.C. Jordan Co. (Jordan) to perform underground storage tank (UST) testing, compliance monitoring well installation, and a procedures assessment program as part of a Release Detection Program for naval activities in the State of Florida.

1.1 PURPOSE. The purpose of the Release Detection Program is to investigate the potential for leaking petroleum and hazardous substances from USTs at naval activities in Florida. The program is being initiated to satisfy the requirements of the Florida Department of Environmental Regulation's (FDER) Chapter 17-61, Florida Administrative Code (FAC), and the U.S. Environmental Protection Agency (USEPA) Title 40, Code of Federal Regulations (CFR), Part 280. In addition, the Release Detection Program will satisfy portions of an Alternate Procedures Program previously agreed upon by the Navy and FDER.

1.2 SCOPE. The Release Detection Program at Naval Air Station (NAS) Saufley Field includes:

- development of standardized forms;
- assessment of inventory records and demonstration of UST inventory procedures at the Motor Pool and the Base Exchange Service Station;
- precision tank testing of three USTs at the Base Exchange Service Station (2439-A, 2439-B, and 2439-C) (see figures in Appendix A);
- the installation of compliance monitoring wells around one UST (2439-D) as part of a release detection system (see figures in Appendix A); and
- the demonstration of monitoring well inspection procedures.

In addition, upon completion of the inventory record assessment and inventory and monitoring well procedure demonstrations, and after discussing the particular needs of the different groups at the activities that control the USTs, Standard Operating Procedures (SOPs) were developed to assist in the daily, weekly, and monthly UST inventory and inspection procedures at the naval activities. These SOPs are contained in Appendix B.

1.3 BACKGROUND. Various studies performed on USTs have concluded that USTs begin to leak with time depending on the tank age, tank construction, and surrounding soil conditions. The USEPA has assessed this information and incorporated it into 40 CFR 280, Technical Standards for Underground Storage Tanks. The regulation sets forth a schedule for tank retrofitting and replacement action. Many of the Navy-owned USTs are 1940 to 1950 vintage and are constructed of steel with no coating or cathodic protection. These tanks have a high likelihood of leaking and, in accordance with the schedule set forth in 40 CFR 280, require action by December 22, 1989, to assess their

potential for leakage. The Release Detection Program involves the use of required release detection methods (monitoring wells and precision tank testing) to determine if the selected tanks at the activities are leaking. The activities will assume responsibility of the Release Detection Program upon completion of this project.

FDER began a Stationary Storage Tank Program in 1984 that required action similar to the USEPA requirements. FDER initiated Chapter 17-61, FAC, because the majority of Florida's potable water sources is groundwater and FDER believed that many of the USTs in the State were leaking. The FDER program began prior to the USEPA program and required a more stringent retrofitting and assessment schedule. The Navy requested an Alternate Procedure from the retrofitting schedule because of funding constraints. As part of this Alternate Procedure request, Storage Tank Management Plans (STMPs) were developed that proposed annual and biennial tank testing and other retrofit options for existing tanks as a form of interim compliance. The STMPs and interim compliance measures have been approved and will be implemented by the Navy until such time that final compliance action (tank replacement, removal, or upgrade) takes place.

2.0 DEVELOPMENT OF STANDARDIZED FORMS

Standardized forms for operation of a UST were developed by Jordan, SouthDIV, and SouthDIV contractors and finalized by SouthDIV. The standardized forms include:

Form #1 U.S. Navy Daily Inventory Control Form,

Form #2 U.S. Navy Monthly Inventory Control Form,

Form #2A Weekly Tank Inventory Control Form for the State of Florida,

Form #3 U.S. Navy Storage Tank Delivery Form,

Form #4 U.S. Navy Manual Tank Gauging Form,

Form #5 U.S. Navy Periodic Tank Testing Form,

Form #6 U.S. Navy Monitoring Well Inspection Form, and

Form #7 U.S. Navy Bulk Storage Inventory Control Form.

These forms were developed to standardize inventory and record keeping, to manage nearly every UST at the naval activities, and to comply with the Federal, State, and Navy UST regulations. In addition, the forms bring consistency in the record keeping and management of the USTs. The forms are intended to assist each of the activities. Existing activity forms may be used in place of these standardized forms providing they contain the inventory, reconciliation, and inspection information necessary to comply with all UST regulations. Blank copies of the forms are contained in Appendix C. A discussion of the regulatory requirements for inventory, reconciliation, and inspection of USTs and a detailed discussion of the standardized forms are contained in Appendix B.

3.0 NAS SAUFLEY FIELD RELEASE DETECTION PROGRAM

This section contains information about the activity background and the Release Detection Program that was conducted at NAS Saufley Field.

3.1 ACTIVITY BACKGROUND. The activity background includes the activity location and description of the activity mission, the hydrogeologic setting at the activity, a discussion of the regulated storage systems at the activity, and the action to be conducted on select USTs as part of the Release Detection Program.

3.1.1 Activity Description. NAS Saufley Field is located in Escambia County, Florida and lies northwest of NAS Pensacola. The mission of the activity is to prepare training manuals and exams for the Naval Technical Training Center. The activity is under the command of the Chief of Naval Education and Training. The airstrip at the base is used by NAS Whiting Field for T-34 training. U.S. Customs also maintains helicopters and Leer jets at the field.

3.1.2 Hydrogeologic Setting. NAS Saufley Field is underlain by three water-bearing zones. These include Sand and Gravel aquifer, the upper Floridan aquifer and the lower Floridan aquifer.

The Pleistocene terrace deposits and Citronelle Formation and Miocene coarse clastics that contain the Sand and Gravel aquifer extend to a depth of approximately 400 feet below land surface (bls) at NAS Saufley Field Pensacola. These deposits are comprised predominantly of poorly sorted fine to coarse sands with numerous lenses and layers of clay and gravel (up to 60 feet thick). There is a great lithologic variability in these formations. The clay lenses and the presence of hardpan layers within the Sand and Gravel aquifer are responsible for the occurrence of perched water tables and artesian conditions (Musgrove et al., 1965). Groundwater flow is generally topographically controlled. Recharge to the aquifer is derived almost entirely from local rainfall. Virtually all groundwater usage in the area comes from the Sand and Gravel aquifer.

The lower Miocene to upper Oligocene Chickasawhay and Tampa Formations that contain the upper Floridan aquifer are approximately 380 feet thick in the area of NAS Saufley Field Pensacola (Marsh, 1966). The formations that make up the aquifer are characterized typically as a brown to light gray hard dolomitic limestone or dolomite with a distinctive spongy looking texture and containing abundant shell fragments. The overlying Pensacola Clay is approximately 1,000 feet thick in this area and forms an effective confining unit between the Sand and Gravel aquifer and the upper Floridan aquifer (Marsh, 1966). The upper Floridan aquifer is recharged by rainfall where it outcrops in Conecuh, Escambia, and Monroe counties southeast toward the Gulf of Mexico (Healy, 1980). The groundwater in the upper Floridan aquifer is mineralized in this area and is not used as a water supply.

The upper Eocene and other limestones of middle Eocene age that contain the lower Floridan aquifer are approximately 500 feet thick in the area of NAS Saufley Field Pensacola (Marsh, 1966). The formations that make up the aquifer are characterized as a white to grayish cream, soft, and chalky

limestone. The lower Floridan aquifer is confined from above by the Bucatunna Clay Member of the Byram Formation of middle Oligocene age and from below by gray shale and clay of middle Eocene age. The Bucatunna Clay is approximately 170 feet thick in the area of Saufley field (Musgrove et al., 1965). Groundwater flow in the aquifer is to the southeast toward the Gulf of Mexico (Healy, 1980). The water quality is poor because of high mineralization.

3.1.3 Regulated Storage Systems and Proposed Action. There are 4 underground and 1 above ground tanks on record at Saufley Field that are regulated by FDER. The regulated tanks include 1 tank at facility 807, 1 tank at the Motor Pool, and 3 tanks at the Base Exchange Service Station. In addition, there are 2 tanks containing waste oil that are under the USEPA regulations. Many of these tanks have been or are scheduled for removal, replacement, or upgrading. The scope of services for the Release Detection Program provides information on the potential for leaking on several of the regulated tanks and satisfies portions of an Alternate Procedures Program previously agreed upon by the Navy and FDER. The scope of services included precision tank testing and the installation of compliance monitoring wells at selected regulated storage systems. The program called for actions at the following storage tanks.

Tank No.	Year installed	Capacity (gallons)	Contents	Construction	Action
2439-A	1970	10,000	Leaded	Steel	Tank test
2439-B	1970	10,000	Unleaded	Steel	Tank test
2439-C	1970	10,000	Unleaded	Steel	Tank test
2439-D	1971	200	Waste Oil	Steel	Compliance Wells

3.2 INVENTORY REVIEW AND FIELD DEMONSTRATION. Inventory records at NAS Saufley Field were reviewed for the Motor Pool and the Base Exchange Service Station. A demonstration was conducted that overviewed techniques on gauging the tanks and recording the daily inventory measurements and readings along with weekly and monthly procedures for various release detection methods. During the demonstration, the monthly inspection of compliance monitoring wells around USTs was discussed with base personnel who will be responsible for this task. Three 2-foot, clear, polyvinyl chloride (PVC) bailers with cases were presented to the base Environmental Coordinator for distribution and use in inspecting these wells. Instructions on using the bailers and proper procedures for cleaning the bailers between wells were discussed. A more detailed discussion of these techniques and procedures is presented in Appendix B.

The Federal and State regulations require inventory control on all USTs with capacities greater than 110 gallons containing petroleum products, solvents, and chemicals. The regulations do not apply to those systems that store heating oil for consumptive use on the premises. The naval activities in Florida contain numerous USTs such as waste oil tanks, oil-water separators, solvent and chemical tanks, and new oil tanks that currently do not have any inventory control. These tanks will be inspected under an FDER program in the future. It is recommended that inventory control procedures as discussed in Appendix B be initiated at these storage tank systems.

The assessment of the inventory records for the Motor Pool and the Base Exchange Service Station are presented below.

3.2.1 Motor Pool. The Motor Pool at NAS Saufley Field operates under appropriated funds. The Motor Pool consists of a 5,000 gallon double walled fiberglass clad steel UST (tank 2418), installed in 1988, that contains unleaded gasoline. The tank system has an interstitial monitoring system to detect tank leaks. The tank is gauged and the meter is read every morning. Currently, water in the tank is not being checked; however, the Motor Pool will obtain the necessary equipment and will begin this procedure on a weekly schedule. The facility dispenses approximately 1,260 gallons of fuel per month. The tank system has an electronic system to record sales; however, a discrepancy has been showing between the computer reading of volume of fuel dispensed and the dispensing pump meter. Preliminary assessment indicates a calibration or rounding off problem. The Motor Pool does not routinely calibrate the dispensing meter; however, arrangements will be made to have this procedure performed twice a year. Inventory records are checked daily and reconciliation is performed monthly based on sales.

It is recommended that the Motor Pool use standardized forms #1, #2, #2A, and #3 presented in Appendix C and the daily inventory and weekly reconciliation procedures presented in Appendix B. The regulations require that operators check for water in the USTs at least once a week. All records involved in the installation, use, and operation of an UST must be maintained for a two year period and are subject to FDER inspection.

3.2.2 Base Exchange Service Station.. The Base Exchange Service Station operates under non-appropriated funds. This facility contains three 10,000 gallon USTs (2439-A, 2439-B, and 2439-C) that dispense unleaded gasoline. The tanks are gauged and the dispensing pump meters are read at the closing of every business day. In addition, the tanks are gauged and the meters are recorded before and after each product delivery. The tanks are checked for water every week. The dispensing pumps are calibrated weekly. Daily inventory and monthly reconciliation are performed on form SS/163 that records total fuel dispensed rather than fuel dispensed by each separate UST.
It is recommended that the Base Exchange Service Station use standardized forms #1, #2, #2A, and #3 presented in Appendix C and the daily inventory and weekly reconciliation procedures presented in Appendix B in addition to the SS/163 form. Existing information contained in the SS/163 forms can be transferred to the standardized forms and the necessary calculations can be conducted to bring the Base Exchange Service Station into regulatory record keeping compliance. All records involved in the installation, use, and operation of an UST must be maintained for a two year period and are subject to FDER inspection.

3.3 PRECISION TANK TESTING. Precision tank testing was performed at NAS Saufley Field on the underground storage tanks at the Base Exchange Service Station building 2439 on October 30 and 31, 1989. The locations of these tanks are presented in Figure 1 in Appendix A. The tank testing program is part of the Navy Release Detection Program for USTs to bring about compliance with the Federal and State UST regulations and as a requirement of the Alternate Procedures agreement between the Navy and FDER.

The underground storage tanks were tested using the "leak computer" system by AcuTest Corporation. For tanks with suction pump delivery systems, the tanks were first tested at a high level leak rate. This testing method measures product loss in the tank, vent pipe, and delivery line (full system) and will indicate if the system has a leak. The tanks were then tested at a low level leak rate where product loss was measured only in the tank. The results of these two tests indicate whether the system has a leak, substantiates the results of the high level test, and determines whether the leak is occurring in the tank or the piping. For tanks with submersible pump delivery systems, the tanks were tested at high and low product levels after the product delivery line had been isolated. The results of the high and low level tests for the submersible pump systems provided the same information as suction pump systems except the product delivery line's integrity was determined with the delivery line pressure test. The delivery line test consisted of isolating and pressurizing the line with nitrogen to 40 pounds per square inch (psi) and monitoring for a pressure drop for a 30-minute time period. The results of the precision tank testing are presented in Table 1.

Precision tank testing results by AcuTest for the tank systems are presented in Appendix D. Completed #5 Forms for each of the tanks that were tested are included in this section of the report.

3.3.1 Tanks 2439-A, 2439-B, and 2439-C. Tanks 2439-A, 2439-B and 2439-C were precision tested by Acutest on October 30 and 31, 1989. The tanks passed both the tank only test and the full system test. A pressure test was not conducted on the product lines of these tanks because the lines could not be isolated from the tank without cutting them. Jordan recommends that the Navy install a line leak detector which has valves and pipe connections that allows the product lines to be easily isolated for pressure testing.

3.4 MONITORING WELL INSTALLATION. On November 17, 1989, Jordan field personnel supervised the drilling and installation of compliance monitoring wells around tank 2439-D. The location of this tank is presented on Figure 1 in Appendix A.

The installation of these wells is part of the Navy's Release Detection Program for USTs to bring about compliance with the Federal and State UST regulations and is a requirement of the UST Alternate Procedures agreement between the Navy and FDER.

Boreholes were drilled and monitoring wells installed with a SIMCO Model 2800 HS drill rig using 8.0-inch O.D. hollow stem augers. The boreholes were advanced to a depth of approximately 13 feet bls. Monitoring wells were installed in the boreholes to a depth where approximately 2 to 3 feet of well screen were placed above the water table. The wells were constructed of 2-inch I.D. flush threaded, schedule 40 PVC casing with 10 feet of 0.010-inch

TABLE 1
PRECISION TANK TEST RESULTS
OCTOBER 30 and 31, 1989
RELEASE DETECTION PROGRAM
NAS Saufley Field

SITE: Base Exchange Service Station
DATE: October 30 and 31, 1989

Tank No.	Product	Tank Volume (gallons)	High Level Leak Rate (GPH)	Low Level Leak Rate (GPH)	Full System	Tank Only	Distribution Piping Only
2439-A	Unleaded	10,000	0.04	0.01	Pass	Pass	Not Tested
2439-B	Unleaded	10,000	0.00	0.01	Pass	Pass	Not Tested
2439-C	Unleaded	10,000	0.02	0.02	Pass	Pass	Not Tested

Notes: -- Product delivery lines could not be isolated for precision testing.
GPH = Gallons per hour.

FORM #5
US NAVY
PERIODIC TANK TESTING FORM

Tank No. 2439-A

Activity Name: NAS Saufley Field

Facility Name: Base Exchange Service Station Building Number: 2439

Tank Contents: Unleaded	Size: 10,000 gallons
Tank Construction: Steel	Piping Construction: Steel

TANK TESTING DATE	TIME OF TEST	TANK FILLING DATA		TESTING COMPANY	TEST METHOD	TESTER'S CERTIFICATION NO.	TESTER'S NAME	LEAKAGE INDICATED (gal/hr.)	PASS OR FAIL?
		DATE	TIME						
10/31/89	PM	10/27/89	PM	AcuTest Houston, TX	Leak Computer System	D.G. VanDelinder A/T #049	Matt Morey	0.01 Low 0.04 High	Pass

COMMENTS: Product delivery line was not tested because it could not be isolated for the tank.

FORM #5
US NAVY
PERIODIC TANK TESTING FORM

Tank No. 2439-B

Activity Name: NAS Saufley Field

Facility Name: Base Exchange Service Station Building Number: 2439

Tank Contents: Unleaded	Size: 10,000 gallons
Tank Construction: Steel	Piping Construction: Steel

TANK TESTING DATE	TIME OF TEST	TANK FILLING DATA DATE	TANK FILLING DATA TIME	TESTING COMPANY	TEST METHOD	TESTER'S CERTIFICATION NO.	TESTER'S NAME	LEAKAGE INDICATED (gal/hr.)	PASS OR FAIL?
10/31/89	PM	10/27/89	PM	AcuTest Houston, TX	Leak Computer System	D.G. VanDelinder A/T #049	Matt Morey	0.01 Low, 0.00 High	Pass

COMMENTS: Product delivery line was not tested because it could not be isolated from the tank.

FORM #5
US NAVY
PERIODIC TANK TESTING FORM

Tank No. 2439-C

Activity Name: NAS Saufley Field

Facility Name: Base Exchange Service Station Building Number: 2439

Tank Contents: Unleaded	Size: 10,000 gallons
Tank Construction: Steel	Piping Construction: Steel

TANK TESTING DATE	TIME OF TEST	TANK FILLING DATA DATE	TANK FILLING DATA TIME	TESTING COMPANY	TEST METHOD	TESTER'S CERTIFICATION NO.	TESTER'S NAME	LEAKAGE INDICATED (gal/hr.)	PASS OR FAIL?
10/31/89	PM	10/27/89	PM	AcuTest Houston, TX	Leak Computer System	D.G. VanDelinder A/T #049	Matt Morey	0.02 Low 0.02 High	Pass

COMMENTS: Product delivery line was not tested because it could not be islolated from the tank.

slot screen. The annulus around the well screen was filter packed with No. 20-30 graded silica sand and capped with a 1-foot bentonite seal. The remainder of the annular space was grouted to the surface with cement/bentonite grout. The wells were finished below grade in a subsurface vault with a concrete pad that is sloped to prevent surface water runoff from entering the vault. Each of the monitoring wells is secured with keyed alike padlocks to ensure well integrity. Monitoring well installation reports that include boring logs and construction details for each well are presented in Appendix E. A typical monitoring well installation diagram is presented as Figure 2 in Appendix A.

The monitoring wells were developed using a pneumatic pump. Each well was pumped until the purged water was sediment free or as clear as the aquifer allowed in a reasonable amount of time.

3.4.1 Tank 2439-D. Three compliance monitoring wells were installed around tank 1429-D on November 17, 1989. These wells were numbered SFY-1429-D-1 through SFY-1429-D-3. Presented in Figure 3 in Appendix A is a site map showing the locations of the compliance monitoring wells for this tank. Groundwater was not encountered in these borings. Petroleum contamination was not detected in the soils or groundwater at the site.

3.5 REPORTING PROCEDURES. The facility supervisor should be contacted and that person should notify the base Environmental Coordinator for procedural instructions and notification to the proper authorities as defined in the regulations in the event that any of the following occur:

- o environmental mechanical signs, such as inspections of monitoring wells (odor, sheen, or free product in the well), indicate that fuel is being lost from a storage system;
- o mechanical signs, such as a precision tank test failure or line leak detector shutoff, that indicate that fuel is being lost from a storage system;
- o the daily inventory records indicate that a leak may be occurring;
- o the tank gauging stick is warped, worn, or defective; or
- o customers are complaining that the fuel is being dispensed too slowly.

The base Environmental Coordinator for Naval Air Station Saufley Field is:

Warrant Officer Giger Phone 452-1322

4.0 SUMMARY AND RECOMMENDATIONS

The Release Detection Program at NAS Saufley Field was conducted to bring the UST inventory, reconciliation, and record keeping for the activity into compliance with Federal and State regulations, to perform precision tank testing, and to install monitoring wells at select USTs to comply with an Alternate Procedures Program between the Navy and FDER. The standard operating procedures described in Appendix B provide activities with specific information needed for complying with regulatory inspection, testing, and record keeping.

Inventory record assessments and a demonstration of inventory procedures were conducted at the Motor Pool and the Base Exchange Service Station. The record keeping procedures currently used at these facilities and recommendations for bringing these procedures into regulatory compliance are presented in Section 3.2. Detailed information on these procedures is contained in the Standard Operating Procedures (see Appendix B). Standardized record keeping forms for all recommended procedures are presented in Appendix C. The implementation of the SOP presented in Appendix B will provide uniform procedures at all the naval activities in Florida and record keeping compliance with existing Federal and State UST regulations.

Precision tank testing at NAS Saufley Field was conducted on tanks 2439-A, 2439-B and 2439-C by Acutest. Acutest has concluded, based on the testing results, that these tanks are tight; however, because the product delivery lines could not be isolated from the tanks, precision testing of these lines could not be conducted. Therefore, the delivery lines for these tanks are not in compliance with Federal and State UST regulations for release detection. Jordan recommends that line leak detectors be installed on these tanks that will allow the line to be isolated from the tank for testing. Details of the tests and results can be found in Section 3.3 and Appendix D.

Groundwater monitoring wells were installed around tank 2439-D to comply with the Federal UST regulations regarding leak detection. These wells should be inspected on a monthly basis as described in Appendix B. The monitoring wells around tank 2439-D did not intersect the groundwater table; therefore, these wells will require the use of the vapor monitoring technique described in Appendix B.

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